

THE HOME OF REAL HI-FI

# hi-fi news

## & Record Review

Exclusive

# TOWERS OF POWER

## T+A's flagship Solitaires

**NEW SERIES**

### Budget Esoterica

#### NAD's D 1050 USB DAC

### Burmester duo

#### 102/101 CD & Amp combo



### Headphone amps

#### Group Test: five of the best under £400

### Direct drive returns...

#### Germany's STST Motus II turntable



### Buying Vintage

#### Top tape decks from yesteryear

### 'Mastering metadata'

#### Making the most of your rips and downloads, p16

• **PLUS** 18 pages of music reviews & features • **CLASSIC ROCK VENUES** We revisit the Fairfield Halls  
 • **OPINION** 11 pages of letters and comment • **VINTAGE REVIEW** Naim's NAC 12/SNAPS/NAP 250  
 • **SHOW BLOG** We report from Windsor's Hi-Fi Show • **READERS' CLASSIFIEDS** Hi-fi bargains galore

UK £4.00 US \$9.99 Aus \$9.95  
 9 771472 256226 01

---

# MUSICAL FIDELITY

---

## V90-DAC | DIGITAL ANALOGUE CONVERTER

“The V90-DAC is an upsampling DAC of outstanding quality”



## High-end performance from real world sources

The V90-DAC is the perfect way to upgrade the performance of a wide range of equipment. Housed in a solid yet discreet case, it unites sleek design and technical excellence to offer unrivalled musical enjoyment.



**RIGHT:** NAD enters the headphone arena with another take on 'Room Feel' technology, see p52



**ABOVE:** A fresh name in high-end audio but with an impressive technical legacy, could the Auralic Vega be a new reference USB DAC? See p54



**VINYL:** Dusty Springfield's *In Memphis* is this month's Vinyl Icon (p72) while Steve Sutherland considers Kurt Cobain's legacy as Nirvana's *In Utero* is reissued as a 3LP 180g 20th anniversary set (p70)

**RIGHT:** *Hi-Fi News & RR* is the exclusive UK representative of EISA's Audio and Home Theatre panels. Paul Miller is EISA's Audio and HT Panel Manager

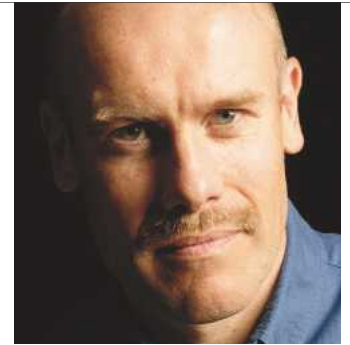


There's an underlying theme to this month's cover but I wonder how many of our worldly-wise readers have made the connection. Here's a clue – where is some of the most thoughtfully engineered high-end audio currently being designed *and* manufactured? No, not Japan, the US, Italy or the UK, though these are still havens for the art. Put it this way – where are arguably the best engineered cars currently arriving from? That'll be Germany then.

And Germany is also home to a surprising number of high-end audio manufacturers, some small enough to be described as 'boutique' brands, like the innovative STST marque, right up to the global players including T+A and Burmester.

All three grace this month's cover. The massive Solitaire CWT 2000 SE flagship speakers are the big brother of the '1000s that wowed visitors in the T+A suite at our Windsor Hi-Fi Show in late October '13. The STST Motus II turntable – an intriguing blend of direct drive with a suspended subchassis – was also demo'd for the first time in the UK at our Show [see p8]. This teutonic trio, including the Burmester 102/101 combo, are reviewed exclusively in *HFN*.

With apologies to overseas enthusiasts, our UK readers



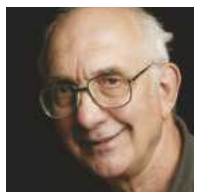
will have discovered a special Awards supplement bundled with their Jan '14 issue. The AVTech Awards 2013-2014 reflect the combined resource and experience of all four titles that comprise our technology group – *Home Cinema Choice*, *What Satellite & Digital TV*, *Hi-Fi Choice* and, naturally, *Hi-Fi News & Record Review*.

**'Germany is home to a surprising number of high-end marques'**

This strength in depth is now unique within the UK as each of our magazines focuses on bringing the most in-depth reviews of cutting-edge kit from its quarter of the specialist consumer electronics world. With hundreds of editorial pages published every month and many more hundreds of products evaluated every year between us, these Awards are as comprehensive as they are authoritative. Enjoy!

**PAUL MILLER EDITOR**

**HI-FI NEWS' EXPERT LINE UP: THE FINEST MINDS IN AUDIO JOURNALISM BRING THEIR EXPERIENCE TO BEAR ON ALL AREAS OF HI-FI & MUSIC**



**BARRY FOX**  
Investigative journalist supreme, Barry is the first with news of the latest developments in hi-fi and music technologies



**JOHN BAMFORD**  
JB brings huge industry experience, a penchant for massive speakers and a love of hi-res audio in all its diverse guises



**KEN KESSLER**  
is currently our Senior Contributing Editor and almost singularly responsible for the renaissance in valves and 'vintage hi-fi'



**KEITH HOWARD**  
has written about hi-fi for 30 years, and edited *Hi-Fi Answers* for nine. KH performs our speaker and headphone lab tests



**STEVE HARRIS**  
Former Editor of this very title from 1986 through to 2005. A lifetime in audio and a love of jazz makes Steve a goldmine



**JOHN HOWES**  
Foremost collector and archivist of vintage hi-fi, famous for the UK's bi-annual Audio Jumble, John shares his experience with *HFN*



**STEVE SUTHERLAND**  
Worked on *Melody Maker* and then edited *NME* from 1992-2000, the Britpop years. Steve brings a unique slant to our Vinyl Release pages

# The Absolute Dream



The World's First  
100%  
Mono-crystal Cable

“an abundance  
of detail...”

- Jonathan Valin, *The Absolute Sound*,  
January 2013

“For those who are only ever  
satisfied with ‘the best’,  
then here it is.”

- Paul Miller, *Hifi News*,  
October 2013

“Absolute Dream USB  
is well-named.”

- Paul Miller, *Hifi News*,  
June 2013



 **absolute sounds** Ltd.

International Distributors & Consultants of Specialised Hi-End Audio & Video Systems  
58 Durham Road, London, SW20 0TW T: +44 (0)20 89 71 39 09  
W: [www.absolutesounds.com](http://www.absolutesounds.com) E: [info@absolutesounds.com](mailto:info@absolutesounds.com)



# CONTENTS

JANUARY 14

## VINYL & RECORD REVIEWS

- 68 Vinyl Frontier**  
Chris Heard of Classic LPs brings you the best of the new reissues and re-releases on premium vinyl
- 70 Vinyl Release**  
The aim was to recapture the band's original abrasive sound. Steve Sutherland re-evaluates Nirvana's *In Utero*, now reissued as a three-disc 180g vinyl set
- 72 Vinyl Icon**  
Dusty Springfield was the greatest white soul singer of her era. Johnny Black looks at the recording of her fifth and, to many fans, finest studio album, *Dusty In Memphis*
- 78 Classic Rock Venues**  
Steve Sutherland continues his tour of the world's iconic rock venues, this month bringing you the story of Croydon's Fairfield Halls
- 85 Music Reviews**  
Our selection of audiophile LP and hi-res downloads reviewed by our specialists alongside the latest rock, jazz and classical albums

## DEFINITIVE PRODUCT REVIEWS

- 22 T+A Solitaire CWT 2000 SE**  
We hear the turbo-charged version of the German company's flagship loudspeaker – a steal at £40,000?



ABOVE: Sonus faber Venere 3.0, see p58



- 28 ST/ST Motus II**  
It's a direct-drive turntable with a difference, but can this Teutonic take on tried-and-tested tech impress?
- 32 Burmester 102/101**  
Entry-level CD/DAC and Class D amp promise 'art for the ear' at a price the company hopes will win many fans
- 41 Group Test: £170-£350 headphone amplifiers**  
Using a standalone headphone amp can truly elevate the quality of your private listening pleasure. We put five affordable models to the test in search of those that stir the soul
- 52 NAD VISO HP50**  
Another traditional hi-fi brand enters the headphone market, with a closed-back design featuring 'Room Feel'
- 54 Auralic Vega**  
USB DAC, digital preamp, computer... meet the processor ready to handle all your hi-res digital format needs
- 58 Sonus faber Venere 3.0**  
Designed in Italy, made in China... will this fine-sounding, keenly-priced speaker find a home in your system?
- 62 NAD D 1050**  
Budget DAC with 24-bit/192kHz asynchronous USB input packs premium parts at a price to appeal

## VINTAGE

- 114 Buying vintage hi-fi**  
We continue our series on how to secure the best vintage hi-fi buys with a look at what's available on the pre-owned cassette deck market
- 120 Vintage Review**  
How do the classic components of yesteryear measure up today? This month we take a listen to Naim's NAC 12/SNAPS/NAP 250 from 1975

## NEWS AND OPINION

- 06 News**  
Prime headphone amp from Meridian, Magico's S3 floorstander, new CD/DAC combo from TAD and Teac's 501 series integrated amp
- 08 Show Blog**  
Taking place at the Beaumont Estate in Windsor, the inaugural Hi-Fi Show saw visitors enjoy two full days of live music, presentations and the finest-sounding hi-fi systems around. John Bamford brings you a roundup
- 16 Investigation**  
Keith Howard looks at metadata, or data about data, and how time spent organising information about your music files will unlock your PC's often overlooked powers of search
- 98 Opinion**  
Insider comment on the audio topics of the day from Paul Miller, Barry Fox, Jim Lesurf, Steve Harris and, writing from the US, Barry Willis
- 106 Sound Off**  
Coaxial versus coplaner speakers in a small room, testing non-linear power amps, replacing classic Shure cartridges, and can isolating kit effect perceived volume levels?
- 138 Off The Leash**  
'Bored-hack media sensationalism' – Ken Kessler takes a look behind recent vinyl-revival headlines and doesn't like what he sees...



ABOVE: For our Group Test of £170-£350 headphone amps, turn to p41

SUBSCRIBE!  
**hi-finews**  
Free! Chord C-Stream Ethernet Cable See page 82

# Meridian Prime

CAMBRIDGE-BASED HI-FI INNOVATORS LAUNCH TWO-BOX HEADPHONE AMPLIFIER



With the headphone market growing at a rapid pace there's clearly a demand for very high quality headphone amplifiers – a niche that Meridian is keen to occupy with its new Prime model. Styled by Allen Boothroyd, the dual-skinned Prime is a model of understated elegance, offering a combination of 3.5mm and two low impedance 6.35mm (0.25in) headphone sockets, the former better suited to the more common in-ear style of 'phones. Conventional analogue inputs and outputs are fitted on RCAs while an asynchronous USB input connects the Prime to hi-res media up to 24-bit/192kHz via your PC or Mac. By way of upgrade, the £1200 Prime is also offered with Meridian's 'high current' outboard PSU. Built into a matching enclosure, the £800 Prime PSU offers five regulated 12V outputs to power a range of partnering Meridian products including the Meridian Audio Core 200, Meridian Director and Media Source 200, as well as the Prime. **Meridian Audio Ltd, 01480 445678; [www.meridian-audio.com](http://www.meridian-audio.com)**

## Mid Magico

S3 FLOORSTANDER PLUGS THE GAP

Audiophiles left wondering about the gap in the range between Magico's S5 (below right) and S1 (below left) aluminium-bodied floorstanders have been answered. The new S3 (below centre) is a three-way design combining two 8in 'hybrid nano-tec/aluminium' woofers with a 1in beryllium tweeter and 6in midrange unit. The latter is isolated within its own specially shaped sub-enclosure fashioned from a polycarbonate resin. Prices are £25k-28k depending on finish. **Magico LLC, 0208 971 3909; [www.magico.net](http://www.magico.net), [www.absolutesounds.com](http://www.absolutesounds.com)**



## HI-FI NEWS' NUGGETS

### ATLAS HYPER CABLE

Developed by Atlas 'in consultation with some of the UK's leading audio brands', its new Hyper 3.5 loudspeaker cable employs a pair of conductors comprising 72x0.25mm high-purity OF-copper strands insulated in a PTFE (Teflon) dielectric. Each conductor is embedded within an anti-vibration filler and finished in the familiar gloss black sleeve that distinguishes the Hyper range. Hyper 3.5 is priced at £40/m or £280 for a 2m factory-terminated pair (using Atlas' 4mm Z-plugs or spades). [www.atlascables.com](http://www.atlascables.com)

### VAD DAC

A new British design house, VAD (Valve Audio Devices), has announced the launch of its high-end DAC-10. Available in two guises, the £6499 DAC-10 offers S/PDIF, asynchronous USB and AES/EBU digital inputs with an HF triode tube in the *digital* chain as well as 6SN7 and 6N6P triodes and CV574 (rectifier) tubes in the analogue output. Another version, the £6999 DAC-10 DSD, replaces the AES/EBU input for a second USB interface, this one compatible with the DoP protocol to service DSD64 music media via your computer. [www.valveaudiodevices.co.uk](http://www.valveaudiodevices.co.uk)

## Digital Evolution

TAD RELEASES NEW CD PLAYER & USB DAC

Developed firmly with the PC market in mind, says TAD, the company is launching two new Evolution Series products – the DA1000 USB DAC and D1000 CD player. The latter is a purist design with specific emphasis on suppressing any vibration within the CD mech while the DA1000 DAC offers a broader remit, combining an asynchronous USB input (handling 32-bit/384kHz LPCM and DSD over DoP) with AES/EBU and S/PDIF inputs. Prices are to be announced. **Technical Audio Devices Laboratories Inc, 0203 5442338; <http://tad-labs.com>, [www.nunudistribution.co.uk](http://www.nunudistribution.co.uk)**



## EXtra Qute

CHORD UPGRADES QUTE DAC

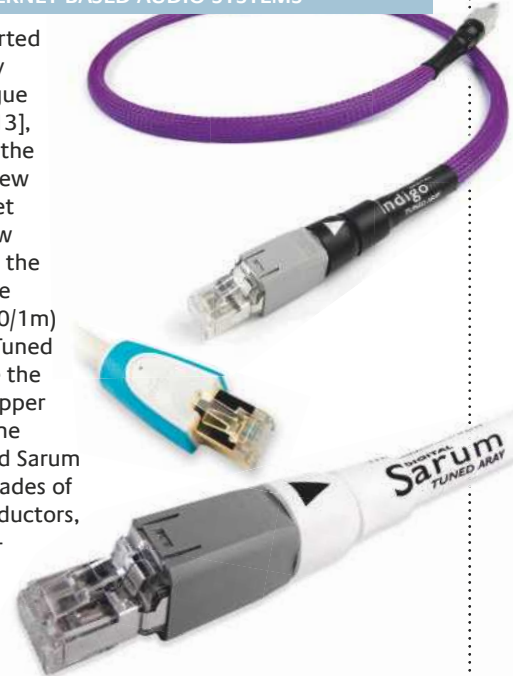
Borrowing technology from its high-end QBD76 HDSB DAC, Chord has upgraded its QuteHD USB DAC to accommodate the next-gen of hi-res media. In addition to 384kHz DXD files, the QuteEX can also process DSD 128 data using the latest DSD-over-PCM standard (DoP). The Qute EX is priced at £1195 while QuteHD owners are offered a £200 update to enable DXD/DSD operation. **Chord Electronics, 01622 721444; www.chordelectronics.co.uk**



## Chord gets networking

NEW CABLES FOR ETHERNET-BASED AUDIO SYSTEMS

*Hi-Fi News* recently reported that the Chord Company had revamped its analogue cable range [*HFN* Nov '13], a move that presaged the launch of an entirely new series of digital Ethernet cables. In fact, three new cables join the portfolio: the C-Stream (£45/1.5m), the Indigo Tuned ARAY (£850/1m) and the flagship Sarum Tuned ARAY (£1600/1m). While the C-Stream employs OF copper strands and polypropylene insulation, the Indigo and Sarum benefit from different grades of silver-plated copper conductors, PTFE dielectrics and non-compression RJ45 plugs. **The Chord Company, 01980 625700; www.chord.co.uk**



## On the move with ADL

RUGGEDISED USB DAC/HEADPHONE AMP FROM JAPAN

Part of the Furutech brand based out of Tokyo, ADL is tasked with producing stylish, high quality personal/portable media solutions. The new £395 X1 USB DAC/headphone amp looks to be just that, combining

an asynchronous mini-USB input with 24-bit/192kHz capability, connection for various iDevices, an analogue line input plus headphone output both on 3.5mm sockets (the latter incorporating an S/PDIF optical output). Fully charged, the X1's battery is rated for 7.5 hours of operation. The X1 is available in red, blue or silver.

**Sound Foundations, 0276 501 392; www.sound-foundations.co.uk; www.adl-av.com**



## HI-FI NEWS? JUST ASK...

If you can't always find a copy of this magazine, help is at hand! Complete this form, hand it in at your local store and they'll arrange for a copy of each issue to be reserved for you. Some stores may even be able to arrange for it to be delivered to your home. **Just ask!**

*Subject to availability*

Please reserve/deliver my copy of **Hi-fi News** on a regular basis, starting with issue.....

Title.....First name.....

Surname.....

Address.....

.....

.....

Postcode.....

Telephone number.....

## TEAC's mini powerhouse

NEW ADDITION TO THE REFERENCE 501 RANGE

Joining TEAC's established Reference 501 range of mini-sized hi-fi separates, already comprising a DSD-compatible CD player, headphone amplifier and outboard DAC, comes the AX-501 integrated amplifier. Described as a "fully balanced" design (with XLR ins), the AX-501 employs a large linear power supply with Class D amp modules for a rated 120W output. Price is £850. **TEAC Corporation, +49 (0) 8142 4208 141; www.teac-audio.eu**



IF YOU DON'T WANT TO MISS AN ISSUE...



## Upcoming Events

IMPORTANT DATES FOR YOUR HI-FI DIARY

- 07-10 JAN** CES, Las Vegas, USA; [www.cesweb.org](http://www.cesweb.org)
- 09 FEB** Audio Jumble 2014, The Angel Leisure Centre, Tonbridge, Kent; [www.audiojumble.co.uk](http://www.audiojumble.co.uk)
- 21-23 FEB** Sound & Vision Show, Marriott City Centre Hotel, Bristol; [www.bristolshow.co.uk](http://www.bristolshow.co.uk)
- 15-18 MAY** High End Show, M.O.C, Munich, Germany; [www.highendsociety.de](http://www.highendsociety.de)
- 30-01 JUN** T.H.E. Show, Hilton Hotel, Newport Beach, CA, USA

# The Hi-Fi Show, Windsor

Words: John Bamford; Pictures: Andrew Sydenham



Hosted at the Beaumont Conference Centre in Old Windsor, *The Hi-Fi Show 2013* provided a unique opportunity for UK enthusiasts to experience the cream of high-end audio. Exclusive UK product launches were unveiled by iconic brands including Sonus faber, Wilson Audio, TAD, VTL, Ayre, Constellation Audio, Trilogy, Wisdom Audio, Chord Electronics, T+A and

many others. The big Windsor and Wessex suites provided the ideal environment for some fantastic sounding demonstrations, most attracting long queues of eager audiophiles. Meanwhile the party atmosphere over in the Sandringham building was reminiscent of the sheer fun and *energy* we used to anticipate at UK shows. Here's a taster of the event itself...



Sound Foundations' Chris Green (right) and Mark Perfect showcased electronics from Slovakia-based valve specialist Canor. At the front end was Clearaudio's Master Innovation turntable employing technology from the marque's flagship Statement deck. Its no-contact drive system sees the main and upper platters floating on a magnetic field. [www.soundfoundations.co.uk](http://www.soundfoundations.co.uk)

A familiar face at audio shows around the globe, Jozefina Lichtenegger is founder and CEO of the Prague-based Euro Audio Team (EAT), famous for its fabulous record players and hand-crafted vacuum tubes manufactured in a portion of what was the Tesla factory. Here she holds one of EAT's KT88 Diamond valves, which features a zircon powder-coated anode and gold pins – priced £260 each or £500 for a matched pair. [www.euroaudioteam.com](http://www.euroaudioteam.com)



Robert Hay was running a series of Audioquest cable demonstrations that intrigued show visitors, revealing how different types of USB and Ethernet cables alter the performance and perceived sound quality in networked digital audio systems. The playback system used featured a Linn Akurate DSM front end to stream music with a room-friendly active sub/sat loudspeaker system from PMC. [www.audioquest.com](http://www.audioquest.com)



TAD Labs' European ambassador Frank van Leuvenhaege played the Japanese company's Reference and Evolution components through TAD's Reference One (floorstanding) and Compact Reference (standmount) speakers featuring coincident beryllium drivers. He also unveiled a forthcoming DAC, the Bo Christensen-inspired DA1000. [www.nunudistribution.co.uk](http://www.nunudistribution.co.uk)



Using several Bowers & Wilkins loudspeakers including the mightily imposing 800 Diamonds, Musical Fidelity's Richard Trotter impressed all-comers with the Wembley-based company's M8 preamplifier and M8700m 700W monoblock power amps [see *HFN* Jan '13]. The firm's M6 CD and M6 DAC were used as the system's primary source. Meanwhile, B&W's compact 805s were driven by Musical Fidelity's pure Class A AMS35i integrated amplifier to make a system ideal for smaller listening rooms. [www.musicalfidelity.com](http://www.musicalfidelity.com)



Famous audio maverick Peter Madnick, the 'director' of the Constellation Audio design project that involves a who's-who of audio engineers, poses next to the Californian marque's Virgo line stage preamplifier [featured on the cover of *HFN* Jul '13]. It was Constellation's Centaur 500W monoblocks that drove the Magico S5 floorstanders to immense sound pressure levels in the demonstration room. [www.constellationaudio.com](http://www.constellationaudio.com)

Wilson Audio's director of sales Peter McGrath (left) and Absolute Sounds' Ricardo Franassovici flank the fabulous Wilson Alexia floorstander featuring technology from the awesome Alexandria XLF. It sounded sublime driven by D'Agostino Momentum pre/power amplifiers with an Audio Research Reference CD9 CD player/DAC at the front end. Wilson Audio's new Duette Series II 'bookshelf' monitor also made its UK debut. [www.absolutesounds.com](http://www.absolutesounds.com)



Songstress Eleanor McEvoy [see p11] entranced privileged show visitors with her half-hour live performances, which were held each day in PMC's demonstration room. Throughout the duration of the show she also delighted audiophiles by graciously autographing their copies of her CDs and LPs in the lobby of Windsor's Beaumont Estate at the *Hi-Fi News* reception desk. [www.eleanormcevoy.com](http://www.eleanormcevoy.com)

# ESL 2812 & ESL 2912

*we just got closer...*

These ESLs incorporate Quad's classic electrostatic speaker design philosophy which has fed its reputation since 1957. Born from our continuous aim to further improve the ESL range; ESL 2812 and ESL 2912 represent the pinnacle of Quad's achievements. The closest approach to the original sound, *just got closer...*

**WHAT HI-FI?**  
SOUND AND VISION



Quad ESL-2812, April 2013

**HI-FI WORLD**



Quad ESL-2812, March 2013



Quad ESL-2912, January 2013





Irish singer-songwriter Eleanor McEvoy enthralled show visitors with a couple of intimate half-hour live sets performed each afternoon – showcasing her beautiful voice and multi-instrumental virtuosity. The sound was simply fabulous via PMC's Bryston amplifier-driven BB5 SE monitors. These are domestic versions of the company's professional BB5 XBD-A studio monitoring system. [www.pmc-speakers.com](http://www.pmc-speakers.com)



Talk Electronics' Kevin Edwards deserves a medal for attracting budding audiophiles of the next generation with his custom-designed Edwards Audio Apprentice entry-level system. An OEM Rega turntable, complete with arm and MM cartridge, feeds a 50W IA50 integrated amp with RIAA stage and Apprentice SP Mini speakers. The system costs just £1220. [www.talkelectronics.com](http://www.talkelectronics.com)



Jack Durant of BD Audio proved you don't need a big listening space to enjoy fine sound, his Tune Audio Prime speaker sounding exquisite in the small room he shared with Pure Sound's Guy Sergeant, using the lovely STST Motus II deck and Aurorasound Vida phono stage alongside ModWright amps. [www.bd-audio.co.uk](http://www.bd-audio.co.uk); [www.puresound.info](http://www.puresound.info)

Hi-Fi Network used a Macbook running Audirvarna software to demonstrate Elac loudspeakers, with a brand of electronics new to the UK: Norma Audio Electronics. Norma components are crafted in Cremona, Italy by designer Enrico Rossi's Opal Electronics company, as is the smart Norma Revo kit stand. [www.hifi-network.com](http://www.hifi-network.com)



European sales manager for Germany's T+A Elektroakustik Jens Welteke was demonstrating his company's EISA award-winning MP 1000 and PA 1000 HV Series components. They drove the Solitaire CWT 1000 floorstanders with electrostatic tweeter panels, whose bigger brothers are on this issue's front cover [see p22]. [www.taelektroakustik.de](http://www.taelektroakustik.de)



Peter Mackay, Krell Industries' VP of sales and marketing, proudly showed a collection of his company's high-end designs. Components included the latest Phantom II and Evolution 402e pre/power amps, Cipher CD/SACD player and Connect hi-res streamer. Krell's Foundation AV preamp/processor took a 2013 EISA Award in the high-end home theatre category. [www.krellonline.com](http://www.krellonline.com)



## SHOWBLOG Sights and sounds from around the globe



VTL's Luke Manley flew in from California to demonstrate his high-end amps – including the first UK showing of the new S-200 power amp (£9800), the latest in VTL's Signature series. A Spiral Groove SG2 turntable fitted with Centroid arm and Lyra Kleos MC fed a VTL TP-6.5 hybrid JFET/valve phono stage and TP-7.5 line preamp. Meanwhile, 450W MB-450III monoblocks drove Avalon Acoustics Compás floorstanders. [www.kogaudio.com](http://www.kogaudio.com)

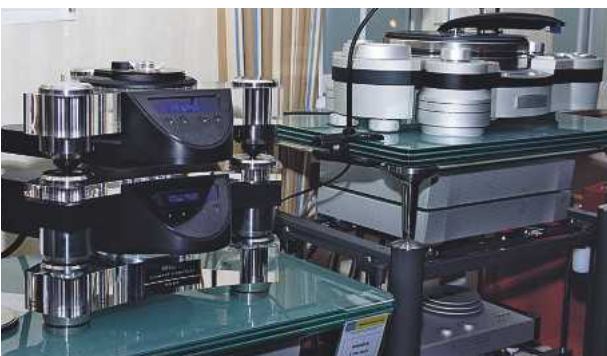


This Garrard motor unit – sporting a Pure Sound Tenuto copper alloy platter mat – is in a Hush plinth, made by RJC Audio based in Cumbria. RJC hand-crafts a range of bespoke equipment furniture together with Hush Isolation Platforms in a variety of beautiful wood finishes. [www.rjcaudio.co.uk](http://www.rjcaudio.co.uk)



Fraser Robertson of Kog Audio (standing) knocked out listeners with the striking Estelon XB and XA speakers from Alfred & Partners of Estonia, driven by electronics from Vitus Audio hooked up with Tellurium Q's Black Diamond interconnects and speaker cables. [www.kogaudio.com](http://www.kogaudio.com)

Chord Electronics' proprietor John Franks demonstrated a host of innovative digital playback systems from his company's Choral and Chordette ranges, as well as Reference products such as the DSX1000 streamer. Among new models is the CodeX network player with bespoke FPGA DAC technology, DSD 128 file support and 384kHz playback over USB. [www.chordelectronics.co.uk](http://www.chordelectronics.co.uk)



Where else but The Hi-Fi Show could visitors see and hear such high-end exotica as the flagship Kalista Ultimate CD transport and Nausicaa Signature DAC from French company Metronome Technologie? Next to it was the TechDAS Air Force One turntable from Japan, fitted with a Cobra arm from Continuum Audio Labs and Koetsu Urushi Blue moving coil. Wow! [www.absolutesounds.com](http://www.absolutesounds.com)

As well as hosting live performances by Eleanor McEvoy, the PMC demonstration room featured seminars by world-renowned mastering engineer Crispin Murray, seen here standing next to PMC's latest fact.12 three-way floorstanders and awesome BB5 SE 'prosumer' monitors powered by Bryston electronics. [www.pmc-speakers.com](http://www.pmc-speakers.com)



## SHOWBLOG Sights and sounds from around the globe



Symmetry's Nigel Crump was grinning from ear to ear at the sound produced by the Wisdom L75 planar magnetic loudspeakers. Partnering them was an SCS 'suitcase sub' and SC-1 system controller, which incorporates electronic crossovers and Audyssey room correction. Driven by Ayre Acoustics' DX-5 DSD A/V Engine and new KX-5/VX-5 pre/power combination they served up 3D images of life-sized musicians. [www.symmetry-systems.co.uk](http://www.symmetry-systems.co.uk)



Trilogy Audio Systems debuted its latest mid-sized components from designer Nic Poulson featuring the firm's proprietary TASlink comms bus. On top is the 908 single-ended tube preamp employing an ECC88 triode, its circuit pure Class A with no feedback. Partnering is a pair of 992 100W hybrid monaural power amps in equally slim casework. [www.trilogyaudio.com](http://www.trilogyaudio.com)



Mark Hockey of Harman UK had the help of his teenage son Matt to demonstrate his company's JBL, AKG and Harman-Kardon headphones, showing models to suit all budgets and tastes. New from JBL are the Synchros in-ear, on-ear and over-ear designs, while Harman's foldable Soho looked ultra-stylish with its leather finish. [www.harman.com](http://www.harman.com)

Stalwart audio enthusiast Mike Butler – whose Track Audio company makes exquisite loudspeaker support stands and a variety of isolation accessories in the precision CNC machining shop of Track Components Ltd – shows off a set of his beautifully crafted Isolation Feet with spikes and shoes. See [www.trackaudio.co.uk](http://www.trackaudio.co.uk)



As well as showing the brand new VS175 integrated amplifier from Audio Research and Sonus faber's latest Olympia speakers, UK distributor Absolute Sounds held an open house for seeing and hearing many high-end products from its portfolio – including MartinLogan, Devialet, turntables from EAT and great-value tube amps from PrimaLuna (pictured). [www.absolutesounds.com](http://www.absolutesounds.com)

In the Focal/Naim room Mark Tucker, general manager of Focal-JMLab UK, posed for our camera next to the French speaker company's Grande Utopia EM. With its 40cm electromagnet bass driver it never fails to move listeners! It was driven by a trio of Naim NAP 500s with an NDS network player source. [www.focal.com](http://www.focal.com); [www.naimaudio.com](http://www.naimaudio.com)



# OPPO®

**NEW** BDP-103D

featuring



## SEEING IS BELIEVING

Based on the multi-award-winning BDP-103EU, this new model adds Darbee's Visual Presence™ technology to establish a fundamental breakthrough in image realism.

"It's like lifting a veil." DVP embeds real depth information into a video stream, bringing unparalleled levels of clarity and depth for a more dynamic, lifelike experience.



For movie enthusiasts, audiophiles and those who take their entertainment very seriously.

[www.oppo-bluray.co.uk](http://www.oppo-bluray.co.uk)

## SHOWBLOG First sight of new products & technology



Hans Ole Vitus, energetic founder of Denmark's Vitus Audio in 1995, was on hand to explain the philosophy and engineering behind his many renowned high-end electronics designs – models including the SCD-025 CD player and DAC, SL-102 preamplifier and SS-101 power amp. His components were demonstrated sited on a Stillpoints ESS equipment rack. [www.kogaudio.com](http://www.kogaudio.com)



Musical Fidelity demonstrated a range of systems to suit all pockets, using speakers from Bowers & Wilkins. The company revealed forthcoming components in its V90 Series including a circa-£200 V90-BLU DAC with Bluetooth connectivity and £250 V90-AMP with in-built DAC and USB interface. [www.musicalfidelity.com](http://www.musicalfidelity.com)

Max Townshend was extolling the efficacy of his company's Seismic Isolation Pods/Platforms – and Isolation Bars for siting beneath speakers and subs to reduce disturbance to neighbours. He also revealed a prototype of his forthcoming Excalibur arm, which completes his Rock 7/Merlin/Excalibur vinyl playback system. [www.townshendaudio.com](http://www.townshendaudio.com)



Dutch hi-fi veteran A J van den Hul, famous the world over for his cartridge and cable designs, was also demonstrating his latest electronics components via ProAc monitors, including the Emerald preamp, Excalibur monoblocks and zero-feedback Grail SB balanced phono stage using an EAT Forte deck fitted with 12in arm and his recently introduced The Crimson MC cartridge. [www.flamingoaudio.co.uk](http://www.flamingoaudio.co.uk)

Yours truly got lost in the music listening to headphones from Stax, HiFi MAN, MrSpeakers (whose Alpha Dog is the world's first set of cans manufactured using 3D printing) and delightful Audeze LCD-2 and LCD-3 planar magnetic designs. [www.audeze.com](http://www.audeze.com)



High End Cable proprietor Dave Jackson showed a wealth of accessories for tweaking and enhancing the performance of enthusiasts' systems. His company doesn't just sell cables, but all manner of anti-vibration de-couplers, mains distribution blocks and power conditioners too. [www.highendcable.co.uk](http://www.highendcable.co.uk)



# Next month

We report from the  
Tokyo Audio Fair, 2013

# Mastering metadata

Keith Howard on how to unlock your PC's powers of search with music files

When you make the decision to embrace computer audio and set about the often daunting task of ripping your collection of CDs and perhaps other optical discs, it's all too easy to become focused on accumulating the music data itself to the exclusion of all else. But if you do, you can be left with a second project that's almost as daunting, if not more so: assembling the metadata to attach to those music files.

Metadata – which contains related information such as the name of the item of music, its performer, the date of recording, *etc, etc* – can seem of secondary importance in the rush to accumulate audio bits. But with it you can unlock powers of search and correlation that are unique to computer audio.

## ALL BECOMES POSSIBLE

Imagine, for example, being able to search your music files for all recordings made by Tony Faulkner or Rudy Van Gelder, produced by John Culshaw or Phil Spector, or which feature Hilary Hahn on violin or Stanley Clarke on electric bass. With the right metadata attached to your music files and a software player that provides database functionality, all this becomes possible.

The two audio file types of most interest to audiophiles are uncompressed WAV files and



losslessly compressed FLAC files. FLAC was conceived from the outset to include metadata provision whereas WAV – an older format – was not. This has encouraged some people to state online that WAV doesn't support metadata but that is not true: metadata may not be integral to the WAV format but it can easily be added because of the way the WAV file is structured. (The same applies to AIFF, the native audio file format for Macs.)

The simplest WAV file comprises an 'fmt' subchunk – the header that describes bit depth, sample rate, channel number, *etc* – and a 'data' subchunk that contains the audio information. But further subchunks can be added. Some of these, like the 'cue' subchunk, are defined in the WAV format description; others can contain whatever data the user wishes. But that data is useless, of course, unless player software knows how to interpret it. In fact, a properly realised player software is written in such a way that it will ignore subchunks that it doesn't recognise.

Had it been down to the record or computer industries to formalise a metadata format for WAV we might

still be waiting, but fortunately a ready-made solution was to hand in the form of ID3 tags. ID3 is a metadata file format originally created for MP3 files by Martin Nilsson, a Swede, which has been carried over to WAV files in the form of an 'ID3' subchunk (see the box-out 'ID3 Tags' opposite).

Software audio players can read this to retrieve the metadata information, and file conversion

utilities like dBpoweramp Music Converter will retain the metadata when converting between different audio file formats. So

when converting from FLAC to WAV, for instance, the metadata from the FLAC file is converted into the ID3 equivalent and written to an ID3 subchunk in the output WAV file.

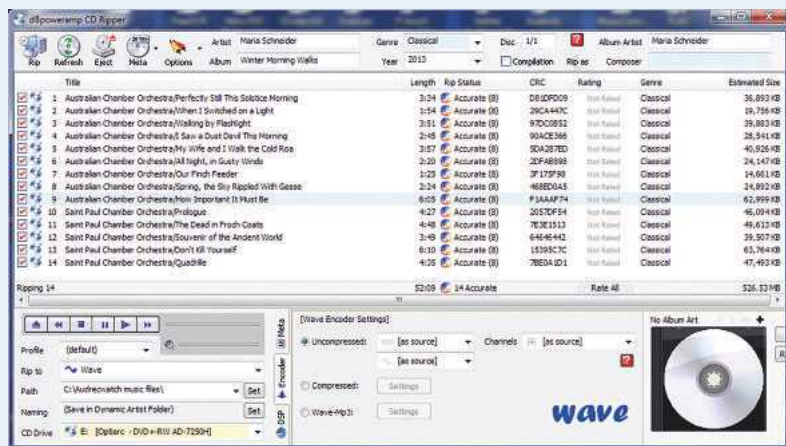
## WHERE TO LOOK

To check whether a WAV file contains ID3 metadata you have only to open the folder containing it in Windows 7 or 8 (ensuring that you have View>Details selected in the folder's right mouse button menu) and some of the metadata will appear alongside the file name. Or if you have dBpoweramp Music Converter installed then placing the

*'Some people state that WAV doesn't support metadata, but that is not true'*

**BELOW:** The first requirement if you are going to rip a CD collection is to use a ripper that quizzes a trustworthy online music database to identify the disc, apply the correct titles to each track and add metadata. Gracenote is probably the best known online music database ([www.gracenote.com](http://www.gracenote.com)) but there are a number of alternatives





**LEFT:** As well as quizzing online music databases AMG, GD3, SontasDB, MusicBrainz and freedb for metadata, dBpoweramp's ripper (see [www.dbpoweramp.com](http://www.dbpoweramp.com)) uses the AccurateRip database to ensure your rips are error-free

cursor over the file will result in a pop-up appearing that contains both file information and metadata.

So, how do you accumulate metadata to maximise your computer audio experience?

### HERE'S HOW

The first requirement if you are going to rip a CD collection is to equip yourself with a ripper that as part of the ripping process quizzes online music databases such as freedb or Gracenote (formerly CDDB) to identify the disc, apply the correct titles to each track and add metadata. I also urge you to choose a ripper like dBpoweramp ([www.dbpoweramp.com](http://www.dbpoweramp.com)) – there are others – which exploit the AccurateRip database to ensure that your rips are error-free. (As usual, with apologies to Mac users, I'm considering Windows software only here, but in most cases there are Mac equivalents.)

If you equip yourself with such a ripper before ripping any of your CDs, excellent. If you already have lots of rips on hard disk where the tracks are titled 'Track 01', 'Track 02', etc, and don't contain metadata, don't despair – as I'll describe shortly, you don't have to begin the ripping process all over again or change track names and add metadata manually.

Second, I strongly advise that you check and, if necessary (it almost certainly will be), amend and enhance the metadata immediately the disc is ripped, while the disc caddy is still to hand. It is not unusual for metadata to be incorrect or incomplete, and the best time to fix it is at the earliest opportunity. Your ripper may include an ID3 tag



editor to allow you to do this, or freeware editors are available online. Be careful about correct spelling.

### SLEEVE ART

Also at this stage, if you have a flatbed scanner, I suggest that you scan the front and back of the caddy – cropping the scan to the caddy edges – and save the images as JPEG files. I use VueScan ([www.hamrick.com](http://www.hamrick.com)) but there are numerous alternatives, and your scanner may have come bundled with suitable software. Although images are often downloaded along with metadata from online databases, they are sometimes of the wrong disc and usually of thumbnail resolution, which makes them useless if you want to display larger images on screen and particularly if you want to be able to read the tiny print so often used on the back of CDs.

I recommend using 300dpi (dots per inch) resolution and saving the files to the same folder as the music files. I also suggest that you use the scanner to create a PDF (Acrobat) file of the booklet. I use Nitro PDF for this ([www.nitropdf.com](http://www.nitropdf.com)) but

**ABOVE:** The Accuraterip landing page at [www. accuraterip.com](http://www accuraterip.com). The company claims its software is 'the only Audio CD ripping technology which can verify extracted audio files are 100% free from errors'. Access to AccurateRip is free for non-commercial usage

### ID3 TAGS

ID3 tags use a series of frames, each having a four-letter identifier, which carry different information about the file to which the metadata is attached. For instance, the TALB frame carries the title of the album, TCOM carries the name of the composer and TMCL stores a list of the musician credits.

One of the most important frames for rich metafile data is the involved people list frame, TIPL, which can carry as much information as you wish about others involved in making a particular track: producer, recording engineer, etc. Roles are not predefined but identified for each entry,



so the listing is as adaptable as you want. If, for instance, the recording engineer is Tony Faulkner and the producer is James Mallinson then the fields in the TIPL frame would be 'Recording engineer', 'Tony Faulkner', 'Producer', 'James Mallinson', etc.

As audiophiles we'd probably also like to include more geeky information, such as the recording venue and perhaps even the microphone type used for the recording and layout. No predefined frames exist for these so they would probably end up in the user-defined text information, TXXX, frame.

As ID3 is intended to be as flexible and expandable as possible it is also possible to define new frame types for such data – but they are of little use if player software skips them as unrecognised.

# REFERENCE SERIES



*“The very best that one of the most revered British speaker makers can do after decades of development”*

Home Cinema Choice, March 2009

**A. Fanthorpe Ltd**

Hull, East Yorkshire  
Telephone: 01482 223 096  
www.fanthorpes.co.uk

**Audio Affair**

Birmingham  
Telephone: 0121 224 7300  
www.audioaffair.co.uk

**Cymbiosis**

Leicester, Leicestershire  
Telephone: 0116 262 3754  
www.cymbiosis.com

**Hi Fi Excellence Ltd**

Coventry, Warwickshire  
Telephone: 02476 525200  
www.hifix.co.uk

**Lyric Hi-Fi**

Belfast, Northern Ireland  
Telephone: 02890 381296  
www.lyrichifi.com

**Musical Images (Edgware)**

Edgware, Middlesex  
Telephone: 0208 9525535  
www.musical-images.co.uk

**Quantum AV**

St Asaph, North Wales  
Telephone: 01745 582177  
www.quantumav.co.uk

**Roy Jowett Ltd**

Colne, Lancashire  
Telephone: 01282 863823  
www.royjowetthomecinema.co.uk

**Searle Audio Ltd**

Barrow-in-Furness  
Telephone: 01229 870090  
www.searleaudio.co.uk

**Sevenoaks (Bristol)**

Clifton, Bristol  
Telephone: 0117 9743727  
www.sevenoakssoundandvision.co.uk

**Sevenoaks (Cheltenham)**

Cheltenham, Gloucestershire  
Telephone: 01242 241171  
www.sevenoakssoundandvision.co.uk

**Sevenoaks (Reading)**

Reading, Berkshire  
Telephone: 0118 959 7768  
www.sevenoakssoundandvision.co.uk

**Sevenoaks (Tunbridge Wells)**

Tunbridge Wells, Kent  
Telephone: 01892 531543  
www.sevenoakssoundandvision.co.uk

**Stone Audio UK Limited**

Poole, Dorset  
Telephone: 01202 630 066  
www.stoneaudio.co.uk

**Superfi (Nottingham)**

Nottingham, Nottinghamshire  
Telephone: 0115 941 2137  
www.superfi.co.uk

**Unilet Sound And Vision Ltd**

New Malden, Surrey  
Telephone: 0208 942 9567  
www.unilet.net

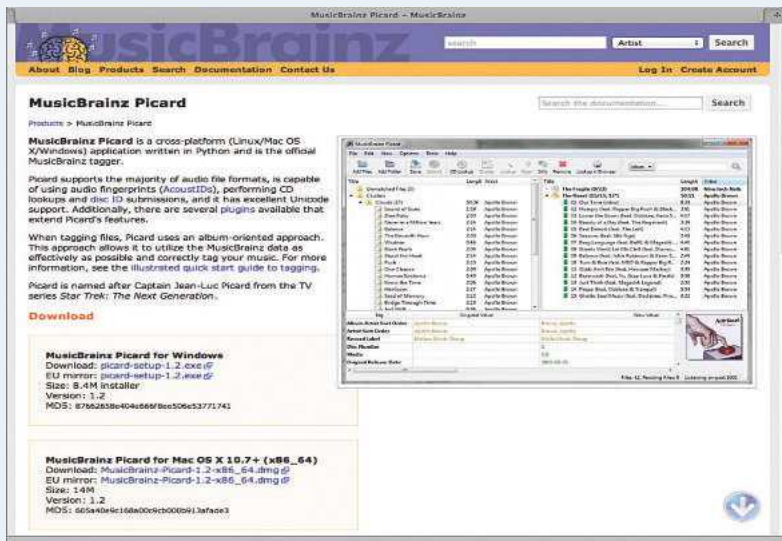
GP Acoustics (UK) Limited, Eccleston Road, Tovil, Maidstone, Kent, ME15 6QP, U.K.  
Telephone: +44 (0)1622 672261 Fax: +44 (0)1622 750653



@KEF Audio

KEF Audio UK

www.kef.com



**LEFT:** The freeware program Picard from MusicBrainz can be downloaded from [https://musicbrainz.org/doc/MusicBrainz\\_Picard](https://musicbrainz.org/doc/MusicBrainz_Picard). Named after Jean-Luc Picard of Star Trek, it is available for Linux and Mac as well as Windows

**PERSUADING PICARD**

Having sung the praises of Picard in the main text, I have to put on record that I've actually had problems with it, specifically with adding ID3 tags to WAV files. Picard has proven adept enough at recognising ripped WAV files and applying the correct album and track names, and in finding appropriate metadata. I just cannot, as yet, persuade the program to save that metadata to the files along with the amended file names.

I thought this might be an issue with WAV files lacking an ID3 subchunk to begin with but it isn't. To test this, I ripped Kraftwerk's *Autobahn* CD using dBpoweramp CD ripper, then changed the file names to 'Track01' etc and modified the metadata so that I'd know if Picard had amended it. In fact Picard reported that there was no metadata in the files and, though it found metadata for them, it didn't apply it when the files were saved with their correct track titles. Likewise, if no ID3 subchunk is present to begin with, Picard finds metadata but does not create an ID3 subchunk in the saved file. If and when I get to the bottom of this frustrating problem, I'll report back.

again there are alternatives. Once more I suggest that you use 300dpi scan resolution (even then you'll suffer nasty Moiré patterns on some photographs scanned) and save the file to the same folder as the JPEG and audio files.

This all represents a considerable expenditure of time and effort per disc, of course – it takes much longer than ripping alone – but it's worth it in the long run.

Of course, it is vital in all of this to keep track of which of your discs have been ripped and scanned. In my case I also have an Access database of my music collection (for insurance purposes if nothing else) so I use self-adhesive coloured labels to identify how far I've progressed with each disc: yellow means it's in the database,

**'So, what about hi-res files ripped from DVD-V or DVD-A discs?'**

red that it has been ripped, and green that all the scanning has been done and filenames and metadata are in place.

Getting back to metadata, what if – as I mentioned earlier – you have lots of ripped files lacking proper track names or metadata? Chin up, you need a freeware program called MusicBrainz Picard ([https://musicbrainz.org/doc/MusicBrainz\\_Picard](https://musicbrainz.org/doc/MusicBrainz_Picard)). Specifically, its Scan feature

will do for audio files what rippers like dBpoweramp will do for CD – identify the album they come from, apply the correct track names and add metadata (although see the box-out 'Persuading Picard'). If the relevant information is not in the MusicBrainz database then you will have to enter it by hand, of course – but Picard can save you a lot of slog.

**HI-RES FILES**

So much for ripping CDs. What about hi-res files liberated from DVD-V or DVD-A? Neither of the DVD rippers that I use – DVDA Explorer and DVD Audio Extractor ([www.dvdae.com](http://www.dvdae.com)) – interrogate online database services to apply track names or metadata.

In fact the WAV files created by these rippers do not even contain ID3 subchunks. But Picard helps here too. I've only just started using it so I can't give you a wide-ranging assessment of its capabilities;

**LEFT:** From the very start, try and keep track of the discs you have ripped and scanned, especially if you are working through a large collection of discs fitfully. This is the best way to avoid confusion and wasted time later on. The author uses a system of different coloured labels attached to discs, as seen here

instead I'll show the results of attempting to identify 24/96 files ripped from two DVD-As: Yes's *Fragile* and Brian Bromberg's *Jaco*, chosen because the first is from a supergroup and so likely to be in the database whereas Brian Bromberg is less well known.

As the screen-grabs overleaf show, Picard for some reason made two separate disc identifications for the *Fragile* tracks but correctly identified all the files, so when the results were saved the tracks were all present and correctly named. With the files from the Bromberg disc, again there were two disc identifications but this time saving the results resulted in an incorrect list of file numbers and titles, requiring manual correction. ☹





IN ADMIRATION OF MUSIC

# DALI EPICON

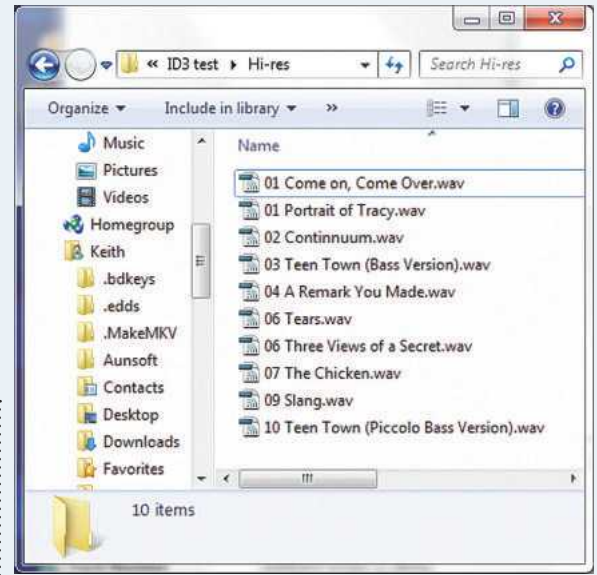
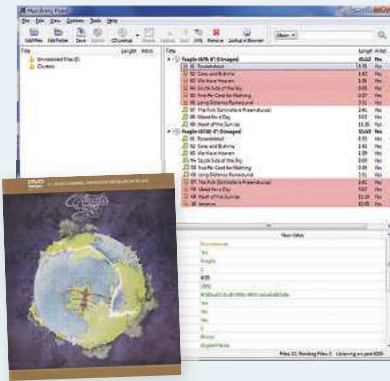
Epic musical moments to last a lifetime



Designed by and for people with a genuine passion for impeccable audio experiences, the multi-award winning DALI EPICON series delivers a mind blowing holographic sound-stage. Featuring in-house designed and manufactured driver and woofer technologies, you are truly in for a treat!

Just listen...





How commonly does this kind of problem occur with Picard? It's too early for me to comment but it reinforces what I said earlier, that intervention is often necessary with metadata (and/or track file names) both to ensure that all the information you want is included and to eliminate errors. Typical of computers, you might think, and I wouldn't argue. But I count my blessings that software exists to shoulder much of the burden of naming ripped files and adding metadata to them, particularly when – as with Picard – those who coded it and continue to improve it do so for free.

## 'How do DSDIFF files fit into the picture regarding metadata?'

### WHAT ABOUT DSD FILES?

Now that (1) a handful of record companies are selling DSD files using the Philips DSDIFF file format (file extension .dff), (2) it is possible to rip SACDs using a hacked Sony PlayStation 3 of the right vintage, and (3) an increasing number of software audio players and DACs support the DoP (DSD over PCM) interface for playing DSD files via USB connection, it is relevant to ask how DSDIFF files fit into the picture regarding metadata.

As anyone who has ripped SACD files will know, the outcome is rather different to that when using DVD rippers like DVDA Explorer or DVD Audio Extractor. Whereas in the latter case the file names are generated by the ripping software – 'track-01-01[0]-03-[L-R]-24-96000', for example – in the case of ripped SACDs (whether the SACD is ripped directly to DSDIFF files or first to an ISO image file and then converted to individual DFF files using the SACD\_Extract utility) each file is assigned the proper track name and the containing folder carries the name of the album and artist, taken from data on the disc.

So far so good, but DSDIFF itself – although a much younger file format than WAV – makes little more provision for metadata than either WAV or AIFF. This not surprising given that DSDIFF was designed for the exchange of DSD data in the course of SACD mastering and was never intended to be an audio file format for the public domain. DSDIFF files may contain an optional EMID chunk within the (also optional) DIIN chunk, but all it contains are artist and title information. DFF files

**ABOVE: Picard's attempts at identifying 24/96 files tracks ripped from *Fragile* by Yes and Brian Bromberg's *Jaco*. In both instances two separate disc identifications were made by the program [see top left] but only the track names of the *Fragile* disc were saved correctly. The *Jaco* track names were saved incorrectly [as shown above] and had to be put right manually so that they matched the running order of the tracks on the disc that was ripped**

generated by SACD\_Extract don't even contain a DIIN chunk.

So if DSDIFF ever enters the mainstream as a means of distributing audio files it will have to have metadata tacked on to it, just like WAV and AIFF. I haven't tried it but, given that applications capable of reading DSDIFF files are supposed to be tolerant of unrecognised chunks, ID3 tags should be usable here too.

### DOWNLOADABLE DSD

Less often, DSD files are downloadable in DSF (DSD stream file) format, an alternative created by Sony. This is different to DSDIFF in that it does include a pointer to a metadata chunk, although there is no requirement that the metadata chunk should exist. If it does then it must appear at the end of the file, after the obligatory 'DSD', 'fmt' and 'data' chunks, and uses the ID3v2 tagging format.

Unfortunately tag information does not appear in Windows 7 (I haven't been able to check Windows 8) as the operating system doesn't recognise DSDIFF or DSF files as audio files. Neither does the dBpoweramp pop-up. DSF metadata information can be viewed and edited in Korg AudioGate but the fields are limited to Title, Artist, Album, Genre, Location, Rec Date and Rec Time – not exactly a rich mine of information. But if available DSD files grow in number and increase in popularity, the metadata issue will surely be addressed soon. ☺



**LEFT: Sites offering DSD files for download include Acoustic Sounds Super HiRez (store.acousticsounds.com/superhirez) and Blue Coast Records (bluecoastrecords.com)**

# T+A Solitaire CWT 2000 SE

The Solitaire range is T+A Elektroakustik's flagship loudspeaker line – now enhanced with some 'SE' upgrades  
 Review: **John Bamford** Lab: **Keith Howard**

The world of high-end hi-fi is full of boutique manufacturers creating all manner of esoteric audio components. Yet there aren't many companies making entire *systems*. Germany's T+A Elektroakustik is one of a rare breed of specialist hi-fi makers which makes everything itself, in-house – from source to loudspeakers. In its design and manufacturing facility in Herford, Germany, it even has the luxury of having on site its own anechoic chamber.

'What speakers do you use to assess the sound quality of your products?' is a question I always like to ask the designers of source components, DACs and amplifiers. Since we've had nothing but praise for the source and amplifier designs produced by T+A in recent years I'd been hankering to hear the loudspeaker that the firm's engineers listen to for maximum pleasure in their R&D test room: their own flagship model.

That it's a 140-something kilogram towering line array design, with no less than a mains-powered electrostatic tweeter panel running down one edge of its baffle, made it an even more mouth-watering proposition to audition! Might the company's Solitaire CWT 2000 SE deliver audio ecstasy to music lovers who demand the wallop of a dynamic speaker – satisfying bass freaks – and also to quench the thirst of 'purist' audiophiles who crave the delicacy and transparency afforded by an electrostatic panel?

There are three line-array models dubbed CWT [Cylinder Wave Transducers] in T+A's luxurious Solitaire range. All are three-ways. The smallest 'tower' is the CWT 500 (£14,800) whose baffle sports three 120mm midrange drivers and a 460x50mm electrostatic panel. It stands 1.07m tall with 210mm woofers firing from each side

of its enclosure. The CWT 1000 (£25,200) is substantially larger with six 120mm midrange drivers, while its 50mm wide electrostatic tweeter is 92cm long. It stands 1.31m high and weighs a hefty 83kg, having four 210mm bass drivers, two on each side. Visitors to the *Hi-Fi News* show will have seen and heard this model in T+A's demonstration room [see p11 in this month's Show Blog].

## BIG DADDY OF THEM ALL

The big daddy, the flagship model, is the CWT 2000 (£32,000). While it employs the same 920x50mm tweeter panel as the '1000 it has six larger (150mm) midrange drivers in its front array. And on each side of its statuesque 1.58m-high enclosure's side walls are two whopping 250mm bass drivers. In standard form it weighs 119kg.

Solitaire CWTs are traditionally formed sealed box enclosures that some might consider a throwback in styling compared with today's myriad multiple-enclosure and creatively sculpted cabinet designs. Within the imposing towers, however, the bass, mid and tweeter drivers occupy asymmetrically-shaped individually sealed chambers, the Solitaires' baffles slightly raked backwards to afford a degree of time alignment. The high-gloss lacquered cabinets are finished in a choice of light cherry, dark walnut, Macassar ebony, or all-black or white. Custom finishes in pretty much any colour are available if specially ordered.

When discussing arrangements with T+A to review the CWT 2000, the company suggested we audition its recently turbo-

**RIGHT:** T+A's 50mm wide electrostatic tweeter panel, 92cm long in its flagship Solitaire, is made entirely in-house. Here it flanks six 150mm midrange drivers in a line array. Woofers fire outward from its side walls

'I doubt if any of the Solitaires would satisfy in a cramped room'





## LINE SOURCES

In the unlikely event that Melanie Safka had written a song about loudspeaker design rather than psychotherapy, she might have sung that 'a thing is a line source [rather than a phallic symbol] if it's longer than it's wide'. Because that's the essence of a line source loudspeaker: it has a diaphragm, or a linear array of smaller diaphragms, that is much longer in one direction (usually height) than the other. Classically the line source was used in public address applications because the narrow horizontal dimension of the diaphragm or array maintains good directivity in the horizontal plane, while the longer vertical dimension limits vertical directivity and hence floor and ceiling reflections, aiding speech intelligibility in reverberant spaces.

This directivity pattern may also be of some value in domestic loudspeakers but here there are pros and cons. The large diaphragm area reduces the excursion requirement and hence distortion (good); but listening close to a line source – in its near field, which can be expected to reach to at least 3m for a 1m length line – results in distance-dependent changes in frequency response due to the sound radiated from different parts of the line adding either constructively or destructively. In the case of a full-height line source stretching from floor to ceiling, the output declines at a steady 3dB per octave as frequency increases. KH

charged 'SE' version. It costs £5000 more, but we weren't going to argue! The special edition adds further mass to the behemoth with a supplementary vibration-absorbing plinth machined from 10mm-thick aluminium. It stands on four heavy-duty stainless steel spikes incorporating 'Silentblock' decoupling rubber dampers.

### UNHINDERED TRANSMISSION

Another tweak provided to the SE version is the replacement of the woofers' ABS 'punch net' protective grilles with covers machined from 8mm-thick aluminium plates. Their concentrically arranged apertures are designed to allow transmission of low frequencies 'without hindrance or resonance', claims the company, while their considerable mass further stiffens and damps the cabinet's side panels.

As mentioned, all drivers are made in-house – even the electrostatic tweeter. T+A has been making electrostatic drivers for some 30 years and enjoys a close working relationship with BASF which supplies the panels' Mylar film. The midrange and bass cones are formed of air-dried wood fibres mixed with graphite stiffness, with aluminium phase plugs and long-throw rubber surrounds.

I doubt any of the Solitaire line array models will wholly satisfy in a cramped listening room. If monitoring in the nearfield, an 'ideal' point source best delivers audio nirvana in my experience. But if you want to energise a large room with dynamic, powerful sound

– *without* playing music at rave party levels – a line array speaker can be just the ticket.

There's nothing quite so satisfying as experiencing a 'whoomp' in the solar plexus when a tympani strikes, a drummer kicks his foot pedal, or a bass player twangs an open E string – the more so if this can be achieved without winding a system up to 11 and having to shout at each other when attempting to converse over the music. While a point source transducer radiates spherical sound waves which reduce in level by 6dB for each doubling of distance, a line source speaker generates cylindrical sound waves that drop by only 3dB. Moreover because of a line array's constrained vertical directivity, it puts less energy into a room. Certainly a line source speaker is no panacea [see boxout, above] but in my experience it does make for a subjectively relaxed, easy-going sound if you like to sit far away from the speaker and create life-sized images of musicians performing at the end of your room.

### OUTSIDE AND IN

The Solitaires are handed. In the user manual T+A recommends positioning the CWTs with their electrostatic tweeter on the outside edges of the enclosures, the speakers slightly toed-in. And, rather than placed as an equilateral triangle, the listening distance should be 15% greater than the distance between the speakers. Place them 3m apart in a generously proportioned room and consequently one should sit at least 3.5m away. While large floorstanders tend to be more efficient ➔

# A-S3000

*Integrated Stereo Amplifier*



# CD-S3000

*CD/SACD Player with Built in USB DAC*



Peerless Craftsmanship.  
Beautiful Design.  
Sublime Sound.

The Yamaha A-S3000 and CD-S3000,  
125 Years in the making.



facebook.com/uk.yamaha.av  
<http://uk.yamaha.com>

*Powered by music*



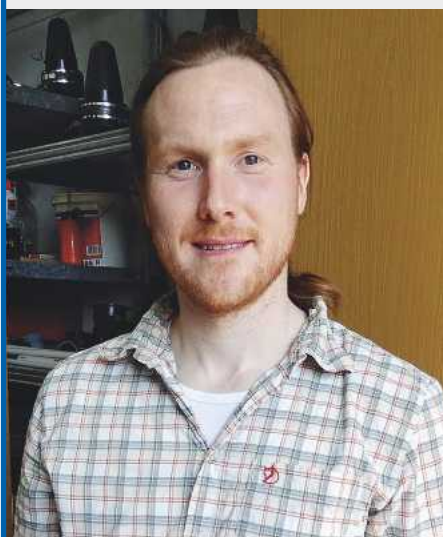
## JOCHEN FABRICIUS

In 2006 Jochen Fabricius was a student of electrical engineering at the University of Applied Sciences in Bingen am Rhein when he first met the R&D team at T+A Elektroakustik, enjoying a six-month practical work placement. After graduating he spent three years as a consumer electronics test engineer before receiving an invitation to join T+A full-time in the company's loudspeaker design department.

'I was thrilled to be invited to join T+A. My particular passion – and area of expertise – is loudspeakers, and when I started here the company was planning its new Solitaire CWT flagship range. We first demonstrated prototypes at the Munich High End exhibition in 2011 but it took us the best part of another year to finalise the models before we were happy to launch them on the market.

'Of course, because they're line sources you do have to sit down in front of them to appreciate their beguiling sound quality. This can be quite frustrating at hi-fi shows. People sometimes walk into our demonstration room, listen for 30 seconds, and walk out concluding our electrostatic tweeters sound woefully dull!

'If you're standing up they will sound dim at high frequencies. But there's a majesty to the sound of a line source that's difficult to beat. When we're successful in encouraging visitors to sit down it's a joy to see the looks on their faces change to appreciative pleasure.'



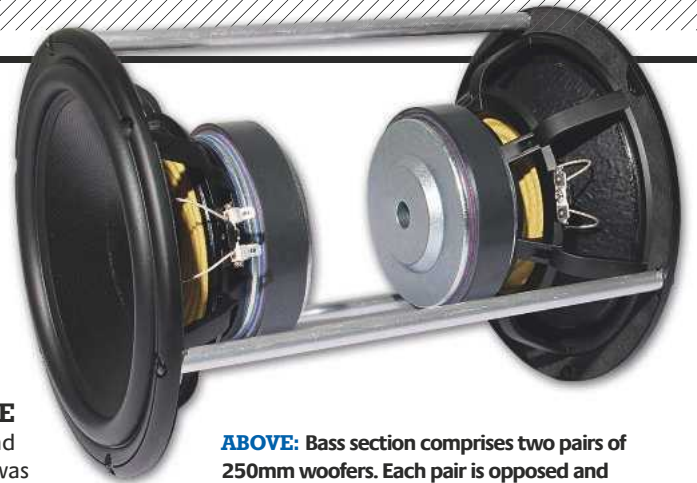
than small monitors, usually requiring only modest power to drive them to high volume, our Lab Report shows the CWT 2000 to be an awkward load. You'll need a stiff, meaty power amp to hear a Solitaire at its best.

### IN THEIR STRIDE

Observing the texture and character of bass notes was effortless with these monolithic towers, the CWT 2000 SEs taking everything in their stride with consummate ease. Although they sound 'dry', sometimes almost matter-of-fact, they simultaneously sound creamy and luscious – which I admit appears like a contradiction. Yet I've not come across a speaker that is so exquisitely detailed while also so forgiving. Of course they are delightful to listen to when playing top-notch, well-balanced recordings (what competent speaker isn't?) but they are also 'kind' when playing run-of-the-mill pop/rock fodder, forgiving of splashy, tinny and dynamically squashed recordings. Rather like JBL's mighty K2 horn-loaded loudspeaker [see *HFN* Aug '10], the CWT 2000 SE proved wonderful at revealing never-before-noticed details buried in old recordings.

The bass of virtuoso Jaco Pastorius in Joni Mitchell's 'Overture' from *Don Juan's Reckless Daughter* [Elektra/Asylum 8122 74664-2] was truly thunderous, yet dry and precisely controlled. Thanks to the transparency of the speaker this 1977 multitrack recording was torn apart: I was enthralled to hear so clearly the different acoustic settings in which the production's various elements had been assembled. I could even observe the varying tonal quality and audio processing of Joni's vocals during different parts of the song.

This big Solitaire CWT served up revelatory detail time after time. But rather than throwing a spotlight in an artificial manner it simply helped to complete musical pictures. The evocative title track from Robin Trower's *Bridge Of Sighs* remastered by Mo-Fi [MFSL UDCD 684] sounded epic, the howling wind effects and idle chatter buried behind the weeping guitar solo all melded beautifully into the piece. If there is anything to pick fault with, I would say the speaker's slightly opaque spatial imaging might prevent some audio



**ABOVE:** Bass section comprises two pairs of 250mm woofers. Each pair is opposed and braced with sturdy aluminium rods to cancel the extreme forces generated in opposite phase

enthusiasts from being overcome with joy. The scale of the sound is immense, as one might expect, but it delivers a vast wall of sound rather than a tightly focused picture – just as a video image that looks pin-sharp on a small monitor seems less so when blown up on a 12ft screen.

The CWT 2000 SE does however sound dynamically spirited and full of nuance in a gently striking way. Its clarity and dynamism extends from the deepest bass notes through to the extreme high treble, with the speaker able to track the micro-dynamic ebb and flow of music

'They sound dynamically spirited in a gently striking way'

to provide a seat-of-the-pants musical anticipation and a sense of excitement of the kind experienced at live events. Listening to jazz you can almost smell the single malt whisky and cigar smoke;

opera recordings conjure images of rich velvet curtains and wisps of fine perfume; live rock recordings bring up memories of curiously sweet scents in the air... and a damp backside from sitting on the grass.

### SCALE AND DRAMA

Such is their composure I found it difficult to trip them up, no matter what I played. If you've adequate space to accommodate them – and you relish lifelike-sized images of musicians performing at the end of your listening room – they really are marvellous for enjoying the scale and drama of large orchestral recordings and big-production progressive rock anthems. The recent eponymously titled *Lifesigns* album [Esoteric Antenna EANTCD 1011], engineered and produced by Steve Rispin and featuring guest performances by such prog-rock luminaries as Thijs van Leer, Jakko Jakszyk and Steve Hackett, sounds rich and meaty – but a tad 'dark' and shut-in at the top end when I hear it on most systems. ↻

One day,  
everyone will own a Devialet.



## The all new Devialet audio system.

Introductory offer: Free Devialet AIR streamer board option. Until September 30, 2013.



Make the move to Devialet, the most successful high-end audio system in the world, the most critically acclaimed, the most purchased, and thanks to its unique ADH® technology, the best measured performance.



**DEVIALET**

Start now on [devialet.com](http://devialet.com)

## T+A SOLITAIRE CWT 2000 SE

**BELOW:** Bi-wiring/amping terminal panel near the base of the Solitaire's rear panel sports a trio of three-position rocker switches for gently cutting or boosting bass, mid and treble responses. In a bottom chamber of the enclosure lie three separate dividing networks

Moreover when all hell lets loose during some of the album's grander moments, the sound soon becomes muddled and compressed.

It's the usual case here of too many tracks, over-production and too many layers to decipher. The grand Solitaires, such is the scale of the image they produce, allowed me to hear deeply into the recording's dense mix, the clarity and delicacy of those electrostatic HF panels helping to peel away the layers and pick out the performances of individual musicians, and observe the manner in which each constituent element had been produced.

And once again the speaker delivered immense low frequency grunt when called to do so, reproducing the grandeur of Genesis-style bass pedals down to subsonic frequencies without the merest hint of strain or compression.

### AN INTAKE OF BREATH

High-resolution recordings sounded fabulous. I was transfixed when listening to mezzo-soprano Marianne Beate Kielland accompanied by Sergej Osadchuk performing 'Come Away, Death' in a passage from Finzi's *Let Us Garlands Bring*. Recorded in DXD format (24-bit/352.8kHz) it's available as a free download sample from Norway's 2L record company [2L-064-SACD].

The piano sounded firm and 'super-clean' with glorious tonality while Kielland's pure and naked voice floated in the centre of a widescreen image with compelling presence. The CWT 2000 SE caused a sharp intake of breath from yours truly, time and time again. ☺

### HI-FI NEWS VERDICT

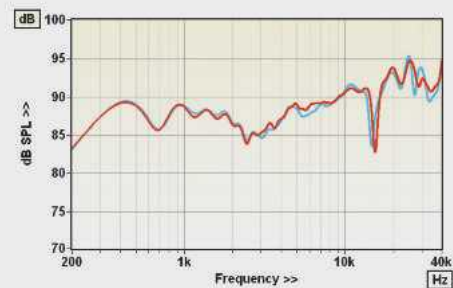
As is the case with all the T+A products assessed in *HFN* in recent years, these imposing Solitaire monoliths represent excellent value. Compared with many boutique specialists the company's relatively large scale of manufacturing brings with it considerable cost savings. Hearing your music collection through a pair of CWT 2000 SEs is a journey of discovery that any audiophile should relish. I loved them to bits.

Sound Quality: 88%

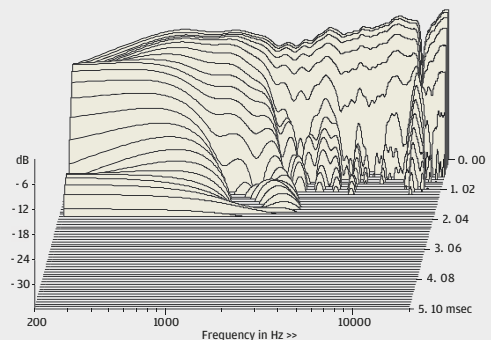


Despite its size the Solitaire is specified as having a sensitivity of just 88dB but that accords well with our measured pink noise figure of 88.6dB. This modest sensitivity notwithstanding, the Solitaire presents a fearsome amplifier load because of its capacitive electrostatic treble panel. We measured a minimum impedance modulus of 1.1ohm at 20kHz, at which frequency the phase angle is -42°, enough to reduce the EPDR (equivalent peak dissipation resistance) to a scary 0.4ohm! At the other end of the spectrum the EPDR dips to a more typical minimum of 1.7ohm at 204Hz but from a little over 3kHz it drops below that figure and is still decreasing at 20kHz.

The on-axis frequency response [see Graph 1, below] – measured at 2m at a height corresponding to the centre of the treble panel and midrange array – is characterised by an octave-wide dip of about 3dB centred on 3kHz, after which output rises steadily to beyond audibility. (Ignore the ripples and roll-off below 1kHz, which are artefacts of the short measurement time window.) This rising treble largely accounts for the higher than average ±5.5dB and ±4.8dB response errors, 400Hz to 20kHz. A slight improvement in flatness was obtained when the midrange and treble switches were in the up position, as used for the listening. Pair matching over the same frequency range is poor at ±5.0dB due to slight misalignment of the narrow notches at about 15kHz but below 13kHz it was a creditable ±0.8dB. Bass extension of 40Hz (-6dB re. 200Hz) is approximate due to an uneven near-field summed response. The CSD waterfall [Graph 2] is excellent, with a fast initial decay and little sign of resonance. KH



ABOVE: Bass and treble are very extended but there's an octave-wide dip centred around 2-3kHz



ABOVE: Fast decay and no obvious resonance modes, indicating excellent cabinet and driver behaviour

### HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	88.9dB/88.6dB/87.9dB
Impedance modulus min/max (20Hz–20kHz)	1.1ohm @ 20kHz 12.3ohm @ 875Hz
Impedance phase min/max (20Hz–20kHz)	-54° @ 11.7kHz 45° @ 239Hz
Pair matching (400Hz–20kHz)	±5.0dB
LF/HF extension (-6dB ref 200Hz/10kHz)	40Hz   >40kHz/>40kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.5% / 0.2% / <0.1%
Dimensions (HWD)	1610x350x500mm

# STST Motus II/Vertex

Hand-made in Germany, this impressive turntable system combines a custom direct-drive motor with a suspended subchassis. Is it really *absoluten Spitzenklasse*?

Review: **Steve Harris** Lab: **Paul Miller**

**W**here's the belt? That's the question you might be asking yourself when you first set eyes on the STST Motus II turntable. At first glance it seems to belong to the German 'high-mass' school of turntable design, where you will usually find a solid plinth and a heavy platter driven by a belt. But in fact, the £4995 STST Motus II is neither a solid-plinth design nor a belt-drive. It is a very rare bird indeed: a suspended-subchassis turntable with a direct-drive motor.

Based in the southern Bavarian town of Kempten, STST was set up in 1985 by Stefan Strohmetz. His STST products are hand-built in small numbers, with as many parts as possible made in-house, and the product line-up currently includes a loudspeaker and various amplifiers as well as turntables and tonearms.

## TURNED UPSIDE DOWN

A development of STST's original Motus solid-chassis model, the Motus II completely inverts the usual concept of a subchassis turntable, as introduced by Acoustic Research and Thorens and perpetuated by Linn and others. In those designs, the suspended subchassis, concealed inside, is usually hung on springs attached to the top plate of the plinth. But in the Motus II, everything is different.

Although the 'plinth' is a substantial component made of 20mm MDF, in reality it is just a cover. Once the platter and arm have been removed, it too can be detached and lifted off to reveal the whole mechanism [see picture, right]. You (or your dealer) can then put the platter and arm back on, and run the turntable without the plinth while setting up and fine-tuning.

So, the foundation for this turntable is not the enclosing plinth, but a solid baseboard of 12mm-thick laminated material, which stands on three feet, each

with a ball-bearing as the point of contact. The subchassis is again a laminated board, this time 13mm thick. It is suspended at its extremities on three tension springs, housed in massive-looking bridges at the left and right front corners and at the centre rear.

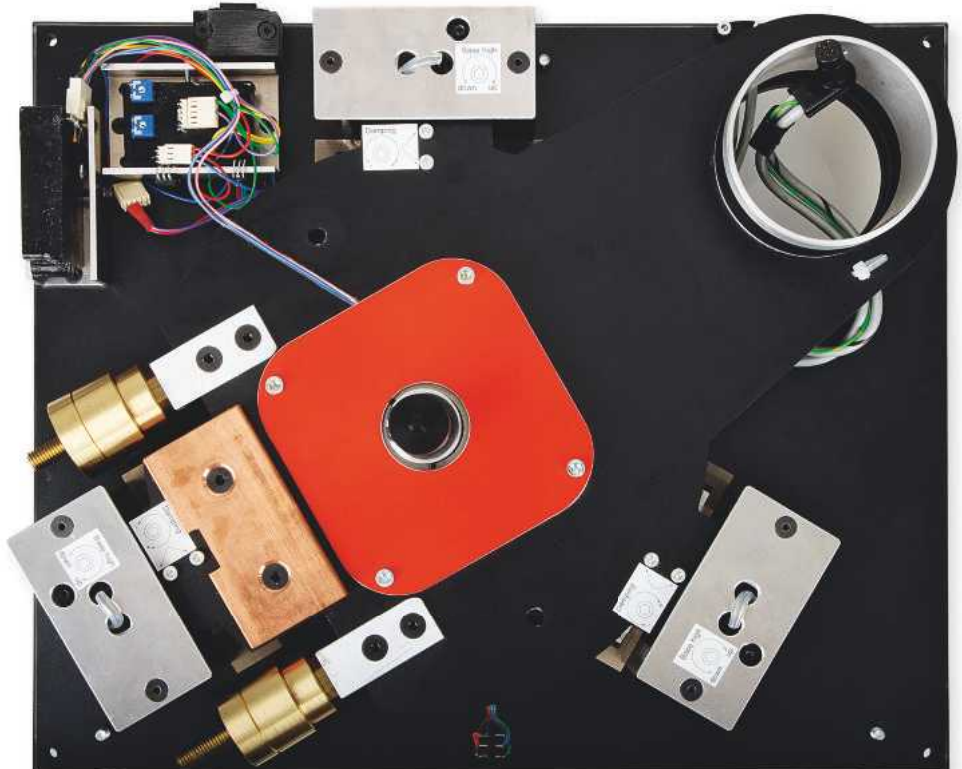
Each spring has height adjustment screw levelling, but the mass distribution can be adjusted first by means of large brass weights, which counterbalance the mass of the tonearm at the opposite corner. With different weights, even the heaviest tonearm can be accommodated.

Just inboard of the main suspension points are dampers in the form of auxiliary leaf springs. These are double-ended and attached at their centres to the underside of the subchassis, so that their free ends make contact with pads on the baseboard, and they can be adjusted from above by two bolts. The correct setting has been achieved when, if the subchassis is

displaced and released, it oscillates up and down from four to six times before settling.

In the centre of the subchassis is the main bearing housing, a massive component that looks as if it ought to be part of a car engine. It rotates around an inverted bearing post that uses a ceramic ball and Teflon thrust plate at the top, with a sleeve of special plastic encircling the fixed shaft.

Integral with the foot of the rotating housing is the rotor element of the direct-drive motor. This is designed and built by STST, with even the coil-winding done in-house. At the back left corner of the turntable base are the phase-locked-loop servo electronics which control the motor, the circuits potted in black pitch while the connecting wires are left rather untidily exposed. There is no user adjustment, just a small three-position rocker switch under the front edge of the base to give 33.3/45rpm and off. A separate mains



**RIGHT:** STST's suspended subchassis is stabilised by three adjustable leaf springs while two brass counterweights compensate for the weight of your choice of tonearm



power supply unit provides the necessary 18 volts DC via a two-pin connector at the back of the turntable.

#### NO-FUSS STARTUP

With a motor that provides just enough torque to drive the 6kg platter, STST makes no attempt to emulate the rapid start-up of a DJ turntable. It takes the Motus under ten seconds to get to 33.3rpm from rest. This is much the same run-up time as you'd expect from a heavyweight belt-drive turntable, but there is none of the usual groaning or straining, because the Motus reaches its playing speed smoothly with absolutely no fuss. When switched off, it takes at least a minute and a half to come to rest again, but this is no hardship, because if you can't wait to change the record, the turntable won't mind if you just slow down the platter by hand. It just seems much less fussy to handle than most belt-drive decks.

The platter itself is machined from a polymer material, its 25mm central hole

'The big band came in as if appearing out of inky blackness'

such a good fit on the bearing that it can be quite difficult to remove. It has a recessed centre to give clearance for record labels and is bevelled at the outer edge, which will clear a lip on the record edge if there is one, and also make it easier to lift the record off. No record-clamping device is needed or supplied.

Instead of a conventional armboard, the STST subchassis has a large-diameter cylindrical well. The machined-polymer arm mounting-base fits over this like a cap, and is clamped circumferentially by a hex bolt. As the arm pillar is placed eccentrically in the base, this can be rotated to set the distance from arm pivot to turntable centre spindle, making it easy to accommodate arms of different lengths and geometry, within limits. A special version of the turntable can be ordered to suit 12in arms.

STST's own Vertex arm comes in 9in and 12in versions, as well as the 10in type fitted to our review sample. It uses conventionally arrayed gimbal bearings

**ABOVE:** Our Motus II was in maple, with an alloy/carbon fibre laminated top plate, but many other finishes are available. Carbon fibre is also used in the STST Vertex arm tube

in a very rugged housing, while the arm tube is of carbon-fibre. Two alternative counterweights are supplied, the heavier one to balance out cartridges weighing more than around 8g. Bias compensation is by a thread and weight arrangement, STST claiming that it is beneficial to place the compensator in front of the arm pivots rather than behind.

At the front end, the machined alloy headshell is adjustable for azimuth and a gauging block is provided to help get it exactly parallel with the record. Unlike so many others, the headshell is designed to make it easy to align the cartridge. In plan view, its straight front edge is exactly aligned with the standard stylus position, while its outer edge is cut at 90° to this.

#### EVERYTHING IN PLACE

It wasn't long before I was happily up and running, with a Benz Micro Glider SL cartridge installed, and I quickly discovered that music with the STST Motus II could be enjoyably foot-tapping. For example, with Eric Clapton and *Backless* [RSO Deluxe RSD 5001], the STST did a great job on the bass-heavy opening track, 'Walk Out In The Rain', with a bottom end that was powerful but quick, and kept the music sounding clear and not too grungy. Then it really did well on the uptempo 'Watch Out For Lucy', where the striding bass line had its proper authority while everything else fell happily into place, Marcy Levy's background vocals clearly placed and the mixed-down harmonica bubbling along. Clapton's lithe guitar – which of course really makes this number – was a real joy. ➔

#### DIRECT DRIVE MODE

Before 1970, turntables were either idler-drive or belt drive. Then from Matsushita Electric of Japan came the first Technics direct-drive decks, claiming better measured speed stability than with even the best belt-drives. In reality, though, their biggest advantage was fast start-up. With a powerful servo-controlled motor and a relatively light platter, they could get up to speed in a fraction of a revolution, which was just what was needed by disc jockeys. While the high-grade SP-10 sold into broadcast studios, the cost-effective SL-1200 became the standard DJ turntable. With minor updates, it kept the Technics brand alive until Matsushita finally closed down turntable production in 2010. Today, the SP-10 has its own cult following too. But the STST remains practically unique as a serious, audiophile direct-drive deck in current production.

# Aria 900

## Innovation Extraordinaire.

Focal research has led to the creation of a new breed of loudspeaker.



### Flax Technology

Aria's unique speaker diaphragms consist of a layer of Flax encased in an ultra-thin fiberglass skin. This hybrid material is as rigid as Kevlar and twice as light as traditional polyglass, making it an excellent choice for sound quality.



### Performance

Aria drivers feature a new Zamak (zinc/aluminum/magnesium/copper) basket and tweeters are suspended using Poron, a 'memory foam' material developed for the reference Utopia range which reduces distortion three-fold in critical areas of the audio spectrum.



### Choice

Choose the compact bookshelf 906 or the floorstanding 926. Both are available in Walnut or Black High Gloss finishes with real leather front panels. Designed and manufactured in the heart of France.

## Exclusive Offer

We have teamed up with our partners, Naim Audio, and select UK retailers to offer you a special introductory price on the Aria 906, 926 and the award-winning NaimUniti 2 all-in-one player.

To find out more and for a list of participating retailers visit:  
[www.focal.com/aria-uniti](http://www.focal.com/aria-uniti)



## STST MOTUS II/VERTEX



**ABOVE:** Rear view shows the low-voltage DC inlet for the motor. While the arm has a Linn-standard 40mm pillar, the large base can be rotated for correct positioning

The STST could dig deeply into the sound of familiar albums too, even from the mono era. Putting on *The Best Of Muddy Waters* [Pye NPL 28040] I soon felt the sheer power of Muddy's presence, and the raw vitality of his great band. Instruments leapt out of the background to transport you back to the moment when they were taped.

But this turntable combination worked just as well on more sophisticated studio recordings, as I discovered with the Thad Jones/ Mel Lewis big band's 1970 Blue Note recording *Consummation* [Pure Pleasure PPAN BST 84346]. The STST excelled here, sounding smooth yet not rounded-off. After Richard Davis's bass intro, the band came in as if appearing out of inky blackness, with a wonderful sense of space and depth, and above all, I think, a feeling of stability. There couldn't be a much better test of speed stability than the long hanging notes from pianist Roland Hanna at the start of 'A Child Is Born,' but the STST was solid as a rock there.

And on a recent all-analogue jazz recording, Nathan Haines's *The Poet's Embrace* [Haven/ Warner2564652180], I was very taken by the old-time airy spaciousness of the sound in general and particularly by the lightly breathy quality of Thomas Botting's bass playing.

With nicely-miked classical recordings, the STST could deliver a poised, balanced and effortless sound. Holst's *St Paul's Suite*, from a 1970s recording by the Bournemouth Sinfonietta under George Hurst [RCA Red Seal 25071], was a case in point. Here the STST really conveyed the recording's reverberant, deep and slightly hazy perspectives. The orchestral basses underpinned everything with notably good definition, with Holst's joyful rhythms well brought out.

I also really enjoyed an album of French music, with Daniel Barenboim conducting the Orchestre de Paris [DG 2531 331]. I could really wallow in the fabulous orchestral colours of the Bacchanale from *Samson And Delilah* while the STST gave a wonderfully crisp, detailed and dynamic presentation of *The Sorcerer's Apprentice*.

### WHAT SURFACE NOISE?

Finally, on some treasured but battered albums, I became aware that the STST combination with the Benz seemed good at suppressing surface noise. One of these gems was Joan Armatrading's amazing first album, *Whatever's For Us*.

Here, the STST was able to give real clarity to the big production sound of the opener, 'My Family,' where the studio echo is really a too-thick layer of icing on the cake, but also to the evocative and almost equally echoey 'Visionary Mountains', with Davey Johnstone's strangely Celtic-sounding sitar in the background. But then the STST Motus II was also breathtaking in the way it presented the more natural sound of Joan and her guitars on the title track. A very satisfying result. ☺

### HI-FI NEWS VERDICT

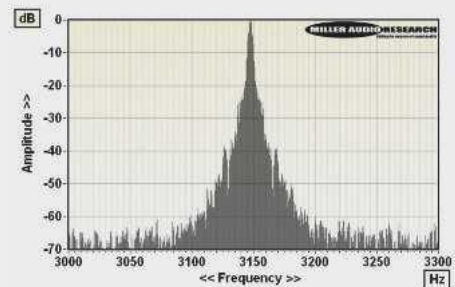
With an approach that's very different from the direct-drives of yore, STST has quite successfully reinterpreted the idea from an audiophile perspective. Used with the STST Vertex arm, the Motus II gave a sound that had tremendous stability and very 'black' backgrounds, free of any noticeable colorations and with an authoritative and responsive bass. This could indeed offer the best of both worlds.

Sound Quality: 84%

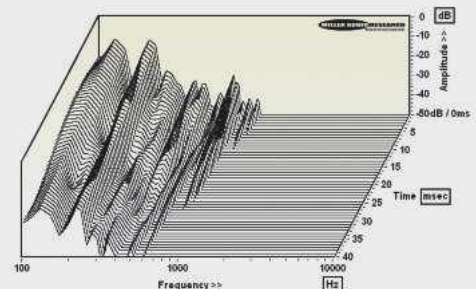


Unlike the very high-torque motor systems employed in many earlier direct-drive decks, which for pro duty were required to be up-to-speed in a half-revolution, the torque developed by STST's AC motor is sufficient to have the 6kg POM platter to 33.33rpm (33.31rpm in this instance) within six seconds. Speed stability is excellent with a very low peak-weighted wow and flutter of just 0.04% [see Graph 1, below] although there's still some slight motor noise escaping up through the 'bearing' and spindle to realise a rumble figure of -66.7dB (DIN-B weighted). This is around 5dB higher than the very best decks but with only -68.0dB making it through to the (silent) vinyl groove, will not prove subjectively distracting.

The partnering 10in version of STST's Vertex tonearm offers very low levels of friction but there was just a hint of play in those titanium gimbal bearings. The damped carbon-fibre armtube might suggest a low effective mass (like the Pro-Ject models) but the alloy headshell brings it to a medium figure of 11g complete with the smaller of the two counterweights. Perhaps because of the added mass of the headshell, the main 125Hz beam mode is also slightly lower in frequency than Pro-Ject's full-carbon models, with a higher-Q secondary mode at 225Hz [see Graph 2]. Some of the smaller structures on the arm (bias flywheel and cueing arm) are probably responsible for the lower-level modes in the midband at 750Hz and 820Hz. Nevertheless this is a tidy enough looking result. Readers are invited to view full QC Suite reports for STST's Motus II turntable and Vertex tonearm by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



**ABOVE:** Wow and flutter re. 3150Hz tone at 5cm/sec (plotted ±150Hz, 5Hz per minor division). The custom direct-drive motor confers excellent speed stability



**ABOVE:** Cumulative tonearm resonant decay spectrum, illustrating various bearing, pillar and 'tube' vibration modes spanning 100Hz-10kHz over 40msec

### HI-FI NEWS SPECIFICATIONS

Turntable speed error at 33.33rpm	33.31rpm (-0.08%)
Time to audible stabilisation	6sec
Peak Wow/Flutter	0.02% / 0.02%
Rumble (silent groove, DIN B wtd)	-68.0dB
Rumble (through bearing, DIN B wtd)	-66.7dB
Hum & Noise (unwtd, rel. to 5cm/sec)	-54.4dB
Power Consumption	3-12W
Dimensions (WHD)	480x220x400mm

# Burmester 102/101

Derived from the Reference Line and Top Line models, this handsome, plated pair forms the German brand's current entry-level offering. So what's behind the chrome?

Review: **Steve Harris** Lab: **Paul Miller**

In the hi-fi world, 'chrome' and 'Burmester' are almost synonymous. Many designers have tried to give their products a unique visual identity, but few have succeeded as well as Dieter Burmester, whose company has grown, in its 35-year history, to become one of the most successful German audio brands and the most instantly recognisable of all high-end marques.

Burmester's model numbers might seem confusing until you know that they indicate the year and month that the prototype was originated. So the very first preamplifier, the 777, was started in July 1977, and was then marketed in the year the company was formed, 1978. It was fairly quickly followed by the slim, chrome-fronted 785, from May '78 and on sale in 1979.

## WALL TO WALL CHROME

Essentially, the 101 integrated amplifier and 102 CD player reviewed here form Burmester's current entry-level range, and can be seen as replacements for the old Rondo 991 amp and 992 CD player.

By contrast with Burmester's more massive, top-loading belt-drive players, the £4357 102 is a slim standard-sized unit, which would look conventional if it weren't for that chrome. Behind its shiny metal front, the CD drawer has a plastic tray, but it operates with a solid and reassuring precision when you touch the leftmost button on the fascia. The opening to the right of this contains the infra-red receiver for the remote control, guarded by metal-mesh as if it were the air-intake for a miniature carburettor.

Next to this is a button marked 'Audio', which switches the player's upsampling between 96kHz and 192kHz, and another to switch between coaxial and optical digital inputs. Then comes a row of four that provide all the usual transport functions: forward and reverse Skip, Stop

**RIGHT:** An in-house design, the 102's PCB and daughter boards are beautifully laid out. DAC, upsampling and other key ICs are blackened to prevent identification...

and Play/Pause. Furthest right is a Power button that's really a standby/operate selector, as there is a mains power switch on the rear panel. The LED above glows amber in standby and, unusually, red when ready for operation.

Functional as it is, the display is rather basic, just a single line of green dot-matrix characters. It will tell you 'No Disc' until you load one, and it will flash 'RCA' or 'TORX' (Toslink) if you touch the digital input selector button, which cycles through these options and CD. It won't show sample rate information when playing from the digital inputs, though. When there's a disc to read, it displays the number of tracks and total time. During play, it shows track number and either elapsed or remaining time, a choice that can only be made on the remote.

This is Burmester's slim, metal-bodied 067 system controller [see p37], which will also operate volume and source selection

on the 101 amplifier. Other handset-only CD functions include direct track selection and programmed play using the numeric keypad, track or whole-disc repeat, and display dimming (three light levels or off), and fast-forward or reverse search. Select one of these and the player will keep running at the same speed, with reduced

volume level, until you press the button again.

Turning to the back panel, you will see a USB port adjacent to the RS232 – the latter provided for the BurLink connection to enable remote control via PC,

Crestron or AMX systems. But don't be fooled, the USB is *also* for BurLink, and it does not provide a digital signal input. There is a Toslink optical input, but the only electrical digital input is a coaxial (phono) connector, so to use the 102 with computer sources you will need a suitable USB-to-S/PDIF adapter. I used the affordable M2Tech HiFace Two, which costs around £150 from Russ Andrews. Owners of 069,

*'Those chromed fascias reflect with absolutely no visible distortion'*







089 and 061 players can add the plug-in Burmester MMI module, which will do this job and give you Bluetooth too, but there's apparently no provision for this on the 102.

For analogue output, there are Burmester's usual balanced connectors as well as unbalanced (RCA) phonos, plus a second pair of these as a record output.

### BURMESTER'S PREMIERE

Like the matching player, the £5088 101 integrated amp is slim and compact. This is Burmester's first Class D stereo amplifier and it is very powerful. Once again, the fascia is immaculate, the controls clean-looking and straightforward, with all legends engraved rather than silk-screened.

It's no simple matter to produce these plated fascias, so perfectly flat that they reflect with absolutely no visible distortion. Almost as impressive, on the 101, is the superbly-finished volume knob: a 'proper'

old-fashioned rotary control, rather than an endless rotary encoder.

Far right is the power on/off switch, a three-position toggle for Off, Standby and Operate. This means that you can more conveniently switch off mains power from the front, although with the remote you would leave the unit in Standby mode.

Once again, a neat row of control buttons is punctuated by the remote-control IR receiver window, and alongside this is a headphone jack. Connecting headphones automatically cuts off the power to the speakers, and also reduces the volume level. To the left are five line input selection buttons, labelled TV, Aux 1, Aux 2, Tuner and CD, and one final button labelled 'Smooth': a form of subtle loudness compensation which 'ensures a rounded, detailed sound even at low volumes'.

Rear panel connections are straightforward, although some of them

**ABOVE:** The 102 CD player controls include a button to change oversampling and another to select RCA and Toslink digital inputs. There's a classy motorised volume control for remote use

might look unfamiliar. As with the CD player there is an RS232 BurLink connector, but no USB, along with two mini-jacks for DC remote control triggering, which this time are both outputs. Intended to be used in balanced mode as far as possible, the amplifier has pairs of three-pin sockets for the CD, Tuner and Aux 2 inputs, which are standard balanced connectors, although they aren't the usual recessed type. Only the TV and Aux 1 inputs are unbalanced.

Then there is a pair of balanced sockets for Pre Out, allowing the connection of an additional power amp under control of the 101's preamplifier section. If rather than adding a second power amplifier to a system, you just want to use the 101

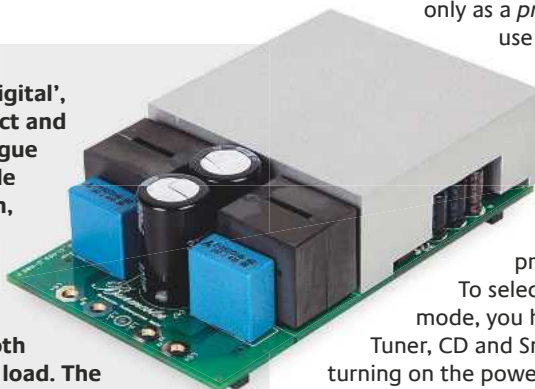
only as a preamplifier, you can use a special operating mode in which the 101's power amplifier section is switched off, which saves energy and is said to give better preamp performance.

To select this 'Pre-out only' mode, you hold down the Tuner, CD and Smooth buttons while turning on the power switch.

All the amplifier functions except mains power-off are available on the 067 remote, which comes packed with the 101, as it did with the 102 player, but again it pays to first read the manual. Sources can be

### CLASS D MODULES

It's always worth repeating that Class D does not mean 'digital', though it is possible to have a digital Class D amp – the Tact and Devialet designs being the most famous exponents. Analogue Class D amplifiers all benefit from very high efficiency while the newer single-ended types (the Hypex used by Meridian, B&W and others and UFPD, used by Primare) enjoy a response and distortion that's broadly unaffected by speaker loading. Burmester's proprietary Class D module is closer in performance to the widely-used B&O ICEpower Class D engines whose architecture results in both response and distortion that is dependent on the speaker load. The 101's response peaks at +2.3dB/50kHz (8ohm) but falls to -1.3dB/50kHz (4ohm) and -5.0dB/50kHz (2ohm), all coinciding with the peak in (inductive) output impedance of 7.3ohm/50kHz. Distortion also increases swiftly at HF, from a low 0.004% through the midrange to 0.08% (20kHz) and 0.3% (40kHz). PM





**WHAT HI-FI?**  
SOUND AND VISION  
**WHATHIFI.COM**  
**AWARDS 2013**  
STEREO SPEAKERS  
BEST STANDMOUNTER £1500+  
**PMC TWENTY 22**

**WHAT HI-FI?**  
SOUND AND VISION  
**AWARDS 2012**  
STEREO SPEAKERS  
BEST STANDMOUNTER £1500+  
**PMC TWENTY-22**



*"...simply astonishing – they're truly fabulous speakers"*  
- Jan '12

**twenty<sup>®</sup>22**



**WHAT HI-FI?**  
SOUND AND VISION  
**WHATHIFI.COM**  
**AWARDS 2013**  
STEREO SPEAKERS  
BEST FLOORSTANDER £1500+  
**PMC TWENTY 23**

**WHAT HI-FI?**  
SOUND AND VISION  
**AWARDS 2012**  
STEREO SPEAKERS  
BEST FLOORSTANDER £1500+  
**PMC TWENTY-23**



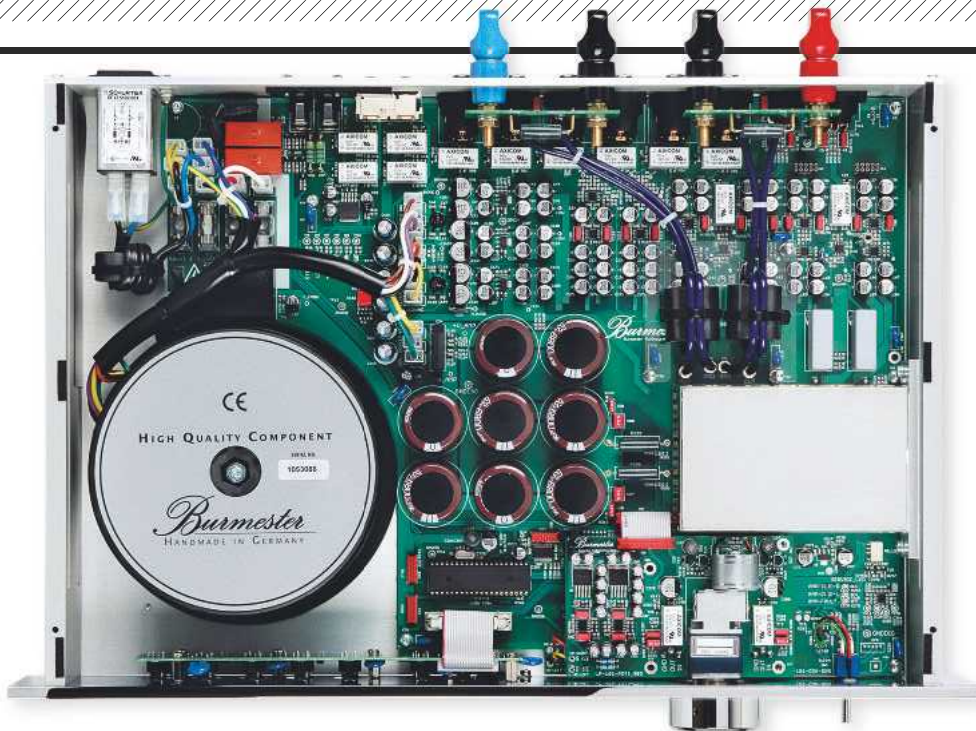
*"If you're looking for a top-class pair of compact floorstanders, look no further"*  
- Aug '12

**twenty<sup>®</sup>23**

Hear why they're the best — two years running



To book a demonstration, see our dealer listing online, or contact us  
T +44 (0) 870 4441044  
sales@pmc-speakers.com



## DIETER BURMESTER

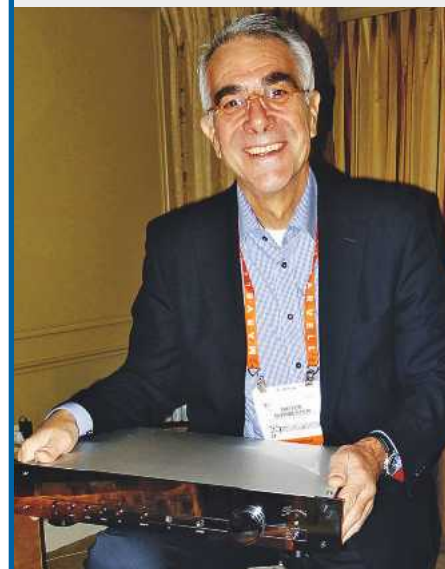
Dieter Burmester served an apprenticeship as a radio and television technician, then studied in Berlin. Burmester's first product when he started his company in 1978 was the 777 preamp.

The 101 is Burmester's first Class D amplifier and, as he explains: 'None of the modules are purchased from other manufacturers; all parts have been developed in-house. We used our experience from the automotive area, where we've been working with digital amplification for quite some time.'

How would he compare the sound quality of Class D here with the linear X-Amp technology used in other Burmester products, like the Rondo 991? 'Both techniques have their advantages – when they are well designed. It took us three years of development work until we were convinced that the 101 sounded warm, with a fine resolution yet full-bodied. Sometimes it even sounds a little bit like a tube amplifier.'

But the 101 has no difficulty in maintaining constant high currents, and is thus able to power even challenging loudspeakers with low impedances and complex loads.'

The 102 has only an S/PDIF digital input. Was there a reason for this? 'The 102 was designed as a high-end source to play audio CDs. As an entry-level product however, it differs from the Reference Line products in terms of features. For customers who desire a USB connection, the 113 DAC is a perfect supplement to the 102.'



**ABOVE:** To the right, the 101's Class D amplifier module is fully screened. No switch-mode power supply here though, Burmester employing a heavy linear PSU and fully discrete preamplification. Note also the motorised volume control and, at the rear, (white) relay-switched input selection

selected by labelled buttons, but on the handset, you use a single Aux button to cycle through TV, Aux 1 and Aux 2. Also, rather obscurely, to activate the Smooth setting, you press the Subt[itle] button. But no guesswork is needed for the motorised volume control, which works very sweetly from the up and down keys.

### SUBTERRANEAN DEPTHS

Once warmed up, the Burmester combination showed its sheer class on every kind of music I tried. Taking a cue from Dieter Burmester's promo video, which opens with him playing bass to a blues track, I plunged into Stevie Ray Vaughan and his Albert King-influenced 'Ain't Gone 'N' Give Up On Love' [from *The Real Deal: Greatest Hits 2*, Epic DD199]. The sound was poised and powerful, with massive bass and punchy drums behind SRV's creamy, purring vocal and stinging guitar.

Although the 102 CD player allows you to switch its upsampling on the fly, it proves to be an extremely subtle difference on CD material. Burmester recommends sticking with 96kHz for best sound. But after repeated trials with 'Kalerka' from Rebecca Pidgeon's *The Raven* [Chesky SACD 329] I felt that the 192kHz setting was giving just a little more luminosity to the vocal, as if the slight but crucially

supportive studio reverb was being reproduced with slightly more clarity. It seemed a little easier to follow the rather buried rhythm guitar pattern, for example.

But before settling down with a pile of CDs, I put the 102 through its paces as a DAC, listening to a variety of files ripped from CD as well as hi-res material. On David Chesky's *The New York Rags* the Burmester really conveyed the drive and dynamics of these virtuosic piano pieces, and the way they conjure up the bustle of the big city.

On some of Tony Faulkner's orchestral recordings, especially a recent Rachmaninov *Symphonic Dances*, I was impressed by the Burmester's ability to provide flawless deep bass, conjuring up

almost subterranean sounds from a truly black and hash-free background.

Making amplifier comparisons with the 102 player as a source, I found that the Classé CAP-2100, which is my regular yardstick, could give a sound that was subjectively a little softer and somehow more all-enveloping. The stereo image could sound almost washy or vague after the Burmester, as the German amplifier's remarkable precision and focus was traded off for a somewhat more relaxed quality. Nor did the Classé deliver the ear-opening power and downward extension that was possible with the Burmester 101. ↻

'The 192kHz setting gave vocals just a little more luminosity'



“Get up and drive your funky soul!”

James Brown

# The heart and soul of music

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



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

## BURMESTER 102/101

Both the 102's XLR outs and 101's XLR ins are wired in anti-phase – worth remembering if used with other components. The top 15dB of the 102 CD/DAC's performance is heavily influenced by its analogue output stage with distortion increasing to 0.0015%, albeit impressively consistent with frequency from 20Hz-20kHz. Below –15dBfs distortion falls to a minimum of 0.0006% before climbing again at lower levels, as we'd expect with reducing digital resolution [see Graph 1, below]. The player's maximum output is a substantial 3.8V and the A-wtd S/N ratio a full 113dB via CD and S/PDIF inputs. The CD response and other parameters are largely unaffected by choice of 96kHz/192kHz upsampling with jitter held to the 16-bit limit of 116psec. Jitter via the S/PDIF input is state-of-the-art at just 10psec and 7psec (re. 24-bit/48kHz and 96kHz). Responses are –0.1dB/20kHz (44.1/48kFs), –1.5dB/45kHz (96kFs) and –7.8dB/90kHz (192kFs).

Burmester's 101 amplifier is hugely under-spec'd and 'reviews' that simply quote the user manual/press release at '2x120W/4ohm' will be quite wrong. In practice it delivers 2x140W/8ohm and 2x245W/4ohm – double its rated spec. Unlike many Class D amps there's a further increase under dynamic conditions to 170W and 330W [8/4ohm, see Graph 2] but like other balanced Class D types its response and distortion does vary with speaker load [see boxout, p33]. The A-wtd S/N is also about 10dB below 'average' at 74dB (re. 0dBW) but this is white noise, not hum. Readers may view comprehensive QC Suite test reports for Burmester's 102 CD player/DAC and 101 amplifier by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



**ABOVE:** Although the 102 player has optical and S/PDIF coaxial digital inputs, the USB connector, top left, is for system control connection only. Balanced outputs match the CD inputs on the 101 amp, one of its three balanced-only line inputs

Listening to the redoubtable Eddy Louiss and 'Blues For Klook' from *Sang Melé* [Nocturne NTCD 101], the conventional amp did a good job in bringing out the human spirit behind the electronic keyboards, but when those really low notes came, the Burmester 101 was breathtakingly powerful and solid.

### HYPNOTIC JUNGLE SOUNDS

I found that the Burmester 102/101 combination could really give convincing weight and scale to a concert grand piano, and I really enjoyed Patrick O'Byrne playing Ravel's *Miroirs* and *Gaspard de la Nuit* [from Stockfisch Records SFR 357 4049-2].

It was easy to get carried away by O'Byrne's rich and rhythmic interpretation of the well-known 'Alborada del Gracioso', while the contrasting final piece, 'La Vallée des Cloches', showed off the bottom-end of the piano to great effect, the lowest notes, the most distant and solemn clock bells perhaps, sounding full of substance.

Moving on to *Gaspard* and 'Ondine', it was lovely to hear the way that at first just a single quiet note looms up from the depths through the glittering, rippling treble waters, presaging the major upheavals that follow.

On a good live recording, the Burmester combination could really give you the space and ease of a concert venue, and a fine illustration of this was *Quercus*, by the group of the same name made up of June Tabor, Iain Bellamy and

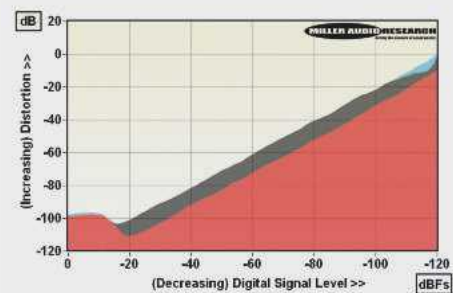
Huw Warren [ECM 372 4555]. This album was recorded live but seemingly without an audience at The Anvil, Basingstoke, and rather artfully mixed. Tabor's voice is heard enveloped by the acoustic of the large hall, but there's a closer view of Huw Warren at the piano and the sonority of its low notes was really well presented here, especially on 'Near But Far Away'.

These products were good at opening out the soundstage on spacey-sounding studio recordings too. With Bebel Gilberto's dreamy 2001 album *Tanto Tempo* [East West 0927-47407-2], it really painted a picture of the luxuriant Brazilian musical landscape, where all kinds of electronic sounds ease their way into the mix. On 'August Day Song' the Burmester combination clearly conveyed the subtlety of distant jungle sounds that move across the soundstage while the singer duets with herself from the left and right channels. With music like this it was hypnotic, even addictive. ⚡

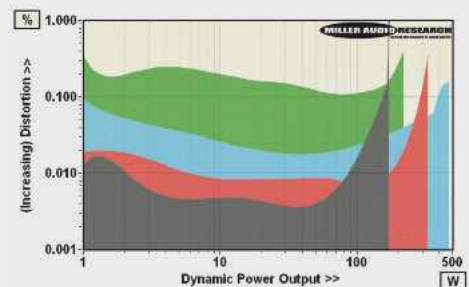
### HI-FI NEWS VERDICT

Burmester is a brand that has spectacularly ploughed its own furrow, but will you go along with the concept of 'art for the ear'? Well, this is a powerful and smooth-sounding combination, strong on precision but not lacking warmth, and subjectively more musical than, perhaps, you might expect. Also, in terms of material content and engineering quality, it offers better value than many a competitor.

Sound Quality: 85%



**ABOVE:** THD vs. decreasing digital level via S/PDIF (24-bit/1kHz, red) and CD (1kHz, black; 20kHz, blue)



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Current limit is 15.5A

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	140W / 245W
Dynamic power (<1% THD, 8/4/2/1ohm)	170W / 330W / 480W / 220W
Output imp. (20Hz-20kHz, CD/Amp)	64ohm / 0.001-0.45ohm
Freq. resp. (20Hz-20kHz, CD/Amp)	+0.0 to -0.13dB/-0.25 to +0.71dB
A-wtd S/N ratio (CD/Amp)	113.1dB (0dBFS) / 74.0dB (0dBW)
Distortion (20Hz-20kHz, CD/Amp)	0.0014-0.015% / 0.0041-0.082%
Digital jitter (CD / S/PDIF)	116psec / 10psec
Power consumption (CD/Amp)	12W/290W (22W idle)
Dimensions (WHD, CD/Amp)	482x95x320mm/482x93x350mm



# LUMIN

INTRODUCING LUMIN. THE WORLD'S FIRST UNIVERSAL  
AUDIOPHILE NETWORK MUSIC PLAYER.

## UNIVERSAL

From mainstream formats FLAC and Apple Lossless (ALAC) through native DSD (SACD files), up to the highest resolution 384kHz, 32bit Studio Masters.

## FLEXIBLE

Supporting Gapless Playback and On-device Playlists for a superior playback experience and UPnP AV for maximum compatibility.

## NO COMPROMISE

The highest-grade matching components, circuit design and spacious layout includes true balanced audio outputs and an external toroidal power supply.

## INTUITIVE

A superbly intuitive, attractive and uniquely designed iPad app makes music browsing and selection a pleasure for everyone.

## BEAUTIFUL

Precision-machined from a solid block of aluminium using the finest materials, LUMIN deserves a place at the top of any audiophile's hi-fi.

## AVAILABLE NOW AT AUDIO EMOTION

"...the most polished network player I've ever used. The sound quality is exquisitely analog much like spinning a vinyl album. Lush and vivid are terms that describe the sound of music streamed through the Lumin player." - [computeraudiophile.com](http://computeraudiophile.com)



LUMIN NETWORK MUSIC PLAYER  
£4995



# audioemotion



www.audioemotion.co.uk



e: info@audioemotion.co.uk

f: facebook.com/audioemotion

t: 01333 425 999

## Gato audio

Conceived to represent the absolute pinnacle of Danish High End audio technology, performance and design, Gato Audio brings together decades of experience in the purest imaginable statement of Scandinavian excellence.

### GATO AUDIO AMP-150 INTEGRATED AMPLIFIER

£5290

- Balanced and unbalanced inputs
- Gold-plated terminals
- Single Mos-Fet output stage
- Ingenious pre-heating circuit - optimal sound quality about 15 minutes after turned on from stone-cold

hi-fi news  
EDITOR'S  
CHOICE



**"The AMP-150 is both physically beautiful and sonically uncompromised... this is pure audiophile heaven."**

- 6moons.com

### GATO AUDIO CDD-1 HIGH END DAC with Drive

£5290

- 24 bit/192 kHz S/PDIF and USB inputs
- Low jitter clock circuit
- CDpro2LF mechanism

hi-fi news  
EDITOR'S  
CHOICE



### GATO AUDIO DIA-250 INTEGRATED AMPLIFIER

£2890

- 2x 250W@8ohm / 2x 500W@4ohm
- Class D output stage
- Built in 24bit/192kHz D/A converter with upsampling
- Coax, optical and asynchronous USB digital input up to 24bit/192kHz



### GATO AUDIO DIA-400 INTEGRATED AMPLIFIER

£3790

- 2x 400W@8ohm / 2x 800W@4ohm
- Class D output stage
- Built in 24bit/192kHz D/A converter with upsampling
- Coax, optical and asynchronous USB digital input up to 24bit/192kHz



# T+A

## *Caruso* Blu

### The Musical Miracle Cube



The new *Caruso* Blu sounds even better than its predecessor, looks even better, and boasts the very latest technology.

The combination of active overall design, with three 50 Watts high-performance output stages, new, specially designed speaker drive units and the digital signal processor, delivers an incredible sound experience.

And if that isn't enough for you, simply connect your television to obtain improved sound and BluRay playback.

Alternatively the *Caruso* Blu can be expanded to form a fully-featured 3.1 home cinema system with the KW 650 sub-woofer and CM Active loudspeakers.



The *Caruso* Blu is capable of reproducing music from all modern sources:

BluRay, CD and DVD, Internet radio, Network music servers, USB storage media, Bluetooth music transfer from mobile devices DAB+ and VHF radio, analogue sources such as turntable with phono pre-amplifier, digital sources such as TV sets and set-top boxes.

Hand built in Germany, the *Caruso* Blu from T+A is available in the UK now.

# AVOKE

Avoke Limited

Tel - +44 (0)7876 246956

Email - [info@avoke.co.uk](mailto:info@avoke.co.uk)

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



# hi-finews GROUP TEST

Serious about sound, but tired of the weedy warblings from your integrated's headphone stage? You need some real canned heat. We test five standalone headphone amplifiers...

## HEADPHONE AMPLIFIERS £170-£350

TESTED THIS MONTH

EDWARDS AUDIO HA1	£280
FIDELITY AUDIO HPA-100	£350
MUSICAL FIDELITY V90-HPA	£170
PROJECT HEAD BOX DS	£250
REGA EAR	£200



Cutting-edge gear, cherry-picked by the *Hi-Fi News* editor



The pinnacle of sound quality within its peer group



Great sound, great value and a cut above its rivals

• CD PLAYERS • TURNTABLES • CARTRIDGES • HEADPHONE AMPS • LOUDSPEAKERS • AMPLIFIERS • DACS •

**H**i-fi is going in two different directions. On the one hand, we're seeing ever more integrated, single-box system solutions packed with DACs, streamers and radio functionality, and on the other, hi-fi separates seem to be splitting up into discrete elements. Phono stages were the first to migrate from the main board of your integrated amp or preamplifier and make their own homes in separate boxes – and now it's happening to headphone amplifiers too. Now there are umpteen little black and silver boxes on sale, purpose-designed to drive your favourite set of cans.

### MORE THAN JUST FASHION

Cynics might suggest the recent appearance of these mini amplifiers has been driven by the mushrooming popularity of headphones in general, which appear to have transitioned from utilitarian music monitoring devices to high net worth fashion statements – spurred along by the amazing success of the blingy Beats range. But there's a real audiophile case to be made for

separate headphone amplifiers if done properly: serious power supplies driving a high-current, low impedance output circuit can transform the sound of even quite mediocre 'phones. Conversely, anyone who's heard decent headphones through the weedy output of an iDevice will know that even the best designs can be spoiled by an underpowered output stage.

This is why the following five products exist – they're purposed to boost the sound of your cans, literally and metaphorically. They claim to put out enough power to drive any headphone to high levels effortlessly, while doing it with more detail and finesse than you'd get via the standard headphone socket on your integrated amp or iDevice. Some even offer extra DAC and preamp functionality, too. But as we all know, the promise and the reality are rarely the same...

### OUR MUSIC CHOICES

Philips Fidelio L2 headphones were used as a reference because they present an unusually difficult load [*HFN* Sep '13]. Basically, if an amp can drive these then it can drive

pretty much any conventional dynamic headphone design. Lighter relief came from a pair of Jays v-Jays, an efficient budget 'phone with a sparkingly open sound. The primary source was Audiolab's 8200CD, which is an excellent mid-priced CD player and DAC, typical of the sort of device these affordable designs will be used with, plus computer audio courtesy of an Audirvana-equipped MacBook Pro.

Music included the *Adagio* from Dvořák's 'New World' Symphony [BPO/Kubelík – DG 477 412-2], to give a sense of tonal purity and soundstaging accuracy. Conversely, Empire Of The Sun's 'Walking On A Dream' [Virgin CDVIR 227] is a highly compressed slice of processed synthesiser pop, but has a strong driving beat. Freeez's 'Sunset' [Strike Force Entertainment SFE 017] is a beautiful, largely acoustic jazz song with shuffling time signatures to keep a product on its toes, and Visioneers' 'Shine' [BBE BBE176ACD] is a powerfully recorded, rich and sumptuous slice of modern soul. ↪

REVIEWS BY NICK TATE  
LAB TESTS BY PAUL MILLER

• CD PLAYERS • TURNTABLES • CARTRIDGES • HEADPHONE AMPS • LOUDSPEAKERS • AMPLIFIERS • DACS •



# Edwards Audio HA1

Essentially a sub-brand of long-established Talk Electronics, this headphone amplifier was the first to appear under the Edwards Audio name. A minimalist design, you wouldn't say it's going for the high perceived value section of the market, lacking as it does any meaningful feature count or sense of style. But it is well made in an industrial sort of way, and sports the usual offboard power supply.

The cheap plastic volume control knob will never be seen on a Krell, but it works smoothly enough. Its one concession to luxury is a rear-mounted switch that toggles inputs between 'line' (RCA phonos) and 'MP3' (3.5mm mini-jack) – shouldn't that now be labelled 'iPod'?

The circuitry is described as fully discrete, bipolar transistor based, with relay-switched inputs, gold-plated printed circuit boards and an active 'power amp' section fed by a fully regulated power supply. The single fascia mounted headphone socket is a sturdy 6.3mm Neutrik type. For £220 extra, owners can upgrade to Edwards Audio's PSU 1 (not tested), which claims to offer substantial sonic improvements.

## AN ENDEARING NATURE

This relatively unknown headphone amp proved great fun to listen to. Its enjoyable, endearing nature made the beautiful Freeez track a joy to hear: it captured the recorded acoustic brilliantly. The HA1 served up a wonderfully open and detailed sound, yet didn't fall into the trap of sounding too forensically detailed and 'hi-fi'. Instead of obsessing about

**RIGHT:** The HA1 aims to demonstrate that less is more with just its single headphone socket and volume control

the slightest piano stool squeak, it went for the big picture and worked on conveying the song's sense of direction and purpose.

It was really good at imparting the dynamic accenting of the instruments, yet was also skilled at reproducing their timbral richness too. The Fidelity Audio and Rega typically prove even more accomplished, but the Edwards Audio is absolutely no slouch.

The processed sound of Empire Of The Sun proved surprisingly addictive; the HA1 obviously knows its way around a four-four beat, and got into the groove as enthusiastically as any other headphone amp here, bubbling with energy and intensity while choosing not to dwell on the general unpleasantness of the recording.

It wasn't quite as powerful in the bass as the Fidelity Audio and Rega, nor did it display quite as much control of the track's complex rhythms. Spatially, the Dvořák track showed it didn't quite have 'out of the head' image projection either.

Nevertheless, it gave rewarding results with the sumptuously recorded Visioneers track, the Edwards again making a very nice noise. It always sounded in control, unflappable and authoritative – it was completely committed and played it like it meant it.

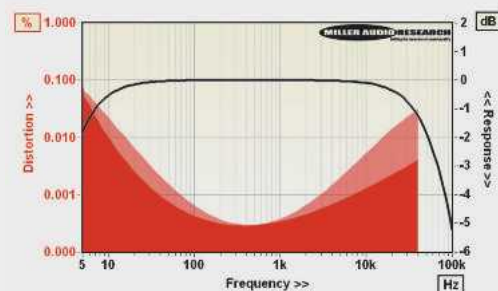
Sound Quality: 80%



## HI-FI NEWS LAB REPORT

Part of the Talk Electronics stable, the Edwards Audio brand has plenty of experience in amplifier design to call upon. This headphone preamp offers a maximum 13.5dB gain and 6.5V output through a 10-11ohm source impedance, representing a drop of about 3.6dB into our dummy 25ohm headphone load. The HA-1 has a rated power output of 500mW but, in practice, the line-driver looks to be electronically protected above 350mW. This will still be more than sufficient to drive any conventional headphone, however. Its subtly tailored response offers a sub-bass roll-off of -0.5dB/10Hz and very mildly 'sweetened' treble of -0.4dB/20kHz to -5.2dB/100kHz with an interchannel balance of 0.2dB (volume/gain adjusted to +6dB).

Distortion holds true to ~0.0004% through the upper bass and midrange into high and low impedance loads [see solid and shaded Graph infills, below] with some slight increase from 0.002% to 0.006% at 20Hz and 0.002% to 0.015% at 20kHz into lower impedances at the frequency extremes. The A-wtd S/N ratio is a generous 92dB – on a par with the Pro-Ject [p47]. PM



ABOVE: Frequency response (black) from 5Hz-100kHz/25ohm and distortion vs. frequency (red, 1V; shaded, 40mW) from 5Hz-40kHz

Maximum output (re. 1% THD into 47kohm)	6.4V
Max. power output (re. 1% THD into 25ohm)	350mW
Output Impedance (20Hz-20kHz)	10.4-10.8ohm
Maximum gain	+13.5dB
A-wtd S/N ratio (re. 0dBV)	92.0dB
Frequency response (20Hz-20kHz/25ohm)	-0.15dB to -0.38dB
Distortion (20Hz-20kHz, re. 40mW)	0.0003-0.015%
Power consumption	6W
Dimensions (WHD)	115x48x160mm

**RIGHT:** With phono input and output pairs and a PSU socket, the rear panel is par for the course, aside from a 3.5mm mini-jack socket and input control switch – not particularly easy to reach



# Fidelity Audio HPA-100



On the face of it, this slightly awkward looking headphone amplifier is nothing special. True, it's housed in a pretty sturdy alloy case with a chunky fascia, but this looks like a bought off-the-shelf item and little attention has been paid to detailing; allen bolts protrude from the four corners of the fascia, and its volume knob looks like it has escaped from a 1960s Roberts radio. The Fidelity Audio's fascia sports a single headphone socket – so no frills here – and proves nice enough to use without feeling anywhere near as special as the Musical Fidelity at half its price.

Round the back, the only thing that stands out is the IEC mains input – unlike most others here, the HPA-100 has a built-in mains transformer. And it's a good quality item – look inside and you'll find a toroidal almost as big as would fit, and good passive components including bespoke smoothing capacitors, with Wimas and Rubycons doing decoupling duties. An Alps Blue volume control is an impressive fitment at this price, and decent wiring and short signal paths complete the picture.

### A NATURAL RENDITION

Compared to most of the others here, the opening bars of 'Walking On A Dream' were a revelation – showing previously unheard details on something as simple as a looped drum machine hi-hat set over a basic keyboard guide melody. Even with these two key elements of the mix, the Fidelity Audio locked on to the rhythm with an alacrity that only

**RIGHT:** The expensive HPA-100 is certainly no oil painting, but you are paying for quality electronics instead

the Rega proved able to match. It gave a profound sense of the musical flow of the song. Its ability to convey the transient attack of the notes, and their relative dynamics, was unsurpassed. It gave this rather compressed recording heightened musical impact.

The more earthy strains of Freeez's 'Sunset' were just as striking. Suddenly the bass guitar gained a life of its own and was bouncing up and down in time with the keyboards, while the lead vocals hung powerfully centre stage, every last inflection clear. The spaces between the notes were amazingly explicit, falling back to an inky-black silence, and piano chords decayed with uncanny accuracy.

Whereas the Musical Fidelity sounded processed and shut in, the Fidelity Audio was breathtakingly natural, open and detailed. But never did this manifest itself in an analytical way, as the HPA-100 strung everything together so effortlessly and organically.

All of which made for a profound rendition of the Dvořák, where this headphone amp was able to show off its lovely texture and resolution. It wasn't quite as warm as the sumptuous Rega, but there was little in it and, if anything, it's the HPA-100 that gave the more natural rendition of orchestral music.

Sound Quality: 84%



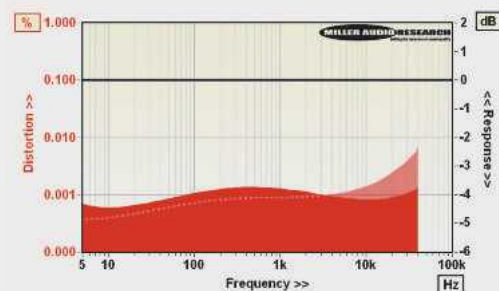
**RIGHT:** This is the only headphone amp of the group to have a built-in mains transformer, hence the switched IEC mains input. The RCA phono input and output pairs are clearly marked



### HI-FI NEWS LAB REPORT

A real wolf in sheep's clothing, the Fidelity Audio HPA-100 may look unassuming but its electronics pack a hefty clout. This preamp really has been designed to drive difficult, real-world headphones. It offers a maximum 9.4V output with a substantial 1.2W capacity into low (25ohm) headphone loads, all sourced through an impressively low sub-1ohm output impedance. Not only does this mean losses into low impedance phones are typically lower than its inherent channel imbalance of 0.25dB (a function of the volume pot) but it also means that variations in system response are almost eliminated.

The overall gain is quite high at 17.8dB, channel separation slightly weak at 50dB/20kHz and the A-wtd S/N ratio about 'average' for this group at 86.5dB. Less typical is the ruler-flat response of the HPA-100 [ $\pm 0.01$ dB from 1Hz to 100kHz, see Graph below] while distortion actually *decreases* from  $\sim 0.0014\%$  to  $\sim 0.0008\%$  through bass and midrange under load, only increasing from 0.0009% to 0.0025% at 20kHz. In any event, these are very low figures indeed. PM



ABOVE: Frequency response (black) from 5Hz-100kHz/25ohm and distortion vs. frequency (red, 1V; shaded, 40mW) from 5Hz-40kHz

Maximum output (re. 1% THD into 47kohm)	9.4V
Max. power output (re. 1% THD into 25ohm)	1190mW
Output Impedance (20Hz-20kHz)	0.55-0.95ohm
Maximum gain	+17.8dB
A-wtd S/N ratio (re. 0dBV)	86.5dB
Frequency response (20Hz-20kHz/25ohm)	-0.01dB to +0.01dB
Distortion (20Hz-20kHz, re. 40mW)	0.0004-0.0025%
Power consumption	3W
Dimensions (WHD)	104x56x245mm

# NAGRA MELODY

## High end solid-state preamplifier



Quietness, stability and precision  
Outstanding value for money

**NAGRA**

Swiss Made  
[www.nagraaudio.com](http://www.nagraaudio.com)

**R.T.Services**  
AUDIO SALES DISTRIBUTION. ESTABLISHED IN 1986

Accuphase  
Leben  
Nagra  
Peak Consult

Tel: +44 (0) 1235 810 455  
E-mail: [info@rtsaudio.co.uk](mailto:info@rtsaudio.co.uk)  
Web: [www.rtsaudio.co.uk](http://www.rtsaudio.co.uk)

# Musical Fidelity V90-HPA

This is the latest in a burgeoning range of V90 products; these promise to be a step up in quality, style and build from the previous V-series, and have been turned by 90° – hence the name. The fine crystal bead shot-blast aluminium finish will win the 'HPA a lot of friends before the unit has even been turned on: it looks and feels like a miniature high-end device, unlike most here...

The volume control works slickly and the fascia is luxuriously appointed with an option of standard or mini-jack sockets, and a choice of line or USB inputs. With its onboard USB DAC, the V90-HPA lets you play out 'hi-res' music files from your computer at up to 24-bit/96kHz resolution via its RCA phono output sockets as well as its 6.35mm and 3.5mm headphone sockets.

As per most others, it sports an offboard power supply, along with the usual RCA ins and outs and the aforementioned USB type B socket – said to provide an asynchronous link to the PC. The unit works with the normal USB driver supplied with Windows XP, Vista, 7 and 8, plus Apple OS X, of course, so is a breeze to get going.

### ALL SPARKLE AND SHINE

As you might expect, the V90-HPA shares a strong 'house sound' with the other components in the range. Best described as 'clean', it isn't the most fulsome and lush here – rather, there's a very light, open sort of sound with everything sparkly and shiny. This works nicely with the heavily produced electropop of Empire Of The Sun. The track punches along with the V90 capturing the attack of the bass



**ABOVE:** One of the prettiest and best finished here, the V90-HPA looks like a full size amp that's shrunk in the wash!

drum well and playing it off against the hi-hats nicely, while the vocal line is decently syncopated, giving a jaunty and propulsive feel.

Still, trouble comes when the Musical Fidelity is asked to play the more organic-sounding acoustic jazz funk of Freeez. 'Sunset' came over as rather scratchy and forward, when in truth this recording is quite the reverse. Also, the MF's bass felt rather curtailed and lacking in body, and it made vocals sound thin, reedy and lacking in timbre. The treble didn't have the open, delicate and sweet quality of the Fidelity Audio or Rega, instead being slightly hazy and devoid of atmosphere.

Still, you couldn't deny that the foot-tapping way the V90-HPA delivered the modern soul strains of Visioneers worked better: it's a rich recording which hid this unit's tendency to thin things out. The built-in DAC will upgrade the poor sound systems in most computers, but don't expect the crown jewels!

Sound Quality: 70%

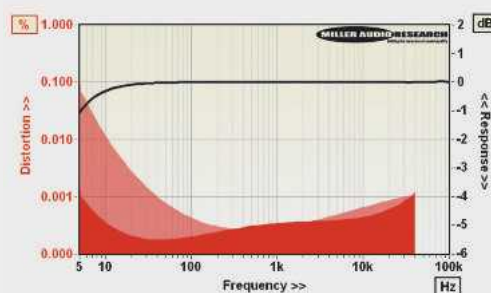


**ABOVE:** The rear panel of the V90-HPA is distinguished by a USB type B socket, alluding to the fact that this is effectively a DAC and line preamplifier

### HI-FI NEWS LAB REPORT

With its USB DAC in tow, Musical Fidelity's V90-HPA is offering a lot of functionality at a bargain price. With this in mind it's perhaps not surprising that the accompanying analogue headphone amp is not as beefy as the others in this test – MF rates it at 0.25W into an unspecified load but I measured a tenth of this, or 22mW/25ohm. The 47ohm output impedance is quite high too, representing a ~9dB loss into our low 25ohm dummy load. So while its inherent response is very flat at -0.1dB/20Hz right out to +0.01dB/100kHz, in practice the system response may well be affected by swings in the impedance trend of the headphone. Note also how distortion also increases through the bass with low impedance 'phones [red infill, Graph below].

High impedance 'phones offering 100dB+ for 1mW will be perfectly suited to the V90-HPA, but I'd avoid low impedance types. The V90-HPA offers a limited 4.7dB gain (x1.7), but this is just fine with modern line-level sources (or the inbuilt USB DAC) and also contributes to the impressive 101dB A-wtd S/N ratio. It also endows the volume pot with a greater 'useable' range. PM



**ABOVE:** Frequency response (black) from 5Hz-100kHz/25ohm and distortion vs. frequency (red, 1V; shaded, 10mW) from 5Hz-40kHz

Maximum output (re. 1% THD into 47kohm)	2.3V
Max. power output (re. 1% THD into 25ohm)	22mW
Output Impedance (20Hz-20kHz)	47ohm
Maximum gain	+4.7dB
A-wtd S/N ratio (re. 0dBV)	101.1dB
Frequency response (20Hz-20kHz/25ohm)	-0.10dB to +0.01dB
Distortion (20Hz-20kHz, re. 10mW)	0.0026-0.0008%
Power consumption	2W
Dimensions (WHD)	170x47x117mm

# Goliath, Meet David.

This legend is more than just a shot in the dark. Crafted with the same high-gloss wood finishes and sensuous curves, combined with state-of-the-art driver technology and cabinet construction, the Imagine mini and Imagine T2 might sound like the classic underdog tale but it isn't. Both are cut from the same stone for an equally seamless 'true-to-nature' performance full of rich musical detail.



PSB Imagine mini

PSB Imagine T2

Available at all Sevenoaks Sound and Vision Stores.

REAL SOUND for REAL PEOPLE

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

# Pro-Ject Head Box DS

**L**ike Musical Fidelity, Pro-Ject obviously feels that features are the way forward, so this dinky headphone amp duly comes fully loaded with everything you could ask for, bar the kitchen sink. Headline news is the fluorescent display, whose purpose isn't completely clear – it tells you the input selected, sampling frequency (yes, it's another unit with a DAC inside) and volume level – all of which can be shown by conventional means. Still, the three digital inputs will be handy for some, as will its ability to run up to 24/192, unlike the V90-HPA. All come out via RCA line outputs, effectively making this a mini, digital-ready preamp.

Fiddly push buttons take care of input selection and volume control. Disappointingly, I noticed a slight click as I toggled up the volume occasionally. In other respects, Pro-Ject's Head Box DS has a utilitarian air, but the casework is very solid and everything feels built to last, including the rear panel socketry. Inside are surface mount devices with short signal paths, and Pro-Ject says low noise semiconductors are specified.

### TAKING A STEP BACK

After the fireworks of the Fidelity Audio, this headphone amp stepped back just a little bit, delivering a less passionate rendition of the Visioneers track. But still it was really rather nice, with a warm, sweet bass-guitar sound that gave a well-upholstered feel. It's a beautifully recorded song, and the naturally smooth and balming nature of the Pro-Ject made for an enjoyable end

**RIGHT:** This neat, solid unit's key distinguishing feature is the display; its plasticky push buttons are fiddly to use

result. Trouble is, it was *over-smooth* – although the Head Box DS didn't offend, it didn't grab the song by the scruff of the neck and eke out every last bit of detail. Some might feel the Fidelity Audio too intense, where the Pro-Ject makes you sit back and relax a touch too much.

This proved fine with the Freeez track, which got a polished rendition with plenty of detail and a pleasing, jaunty rhythmic gait. Drums and snares were snappy and bass noodled up and down in a conspicuously enjoyable way. However, the midband sounded a little opaque compared to the Fidelity Audio and Rega, lacking that last *nth* degree of resolution and insight. Treble wasn't quite the sweetest here, and dynamically it didn't go the extra mile (or should that be dB?) of the best of the rest, preferring to sit on instrumental crescendos rather heavily.

Soundstaging proved enjoyably wide, giving a well separated recorded acoustic in the Dvořák slow movement, with very confident image location.

Like the Musical Fidelity, it runs out of puff at very high levels with the Philips phones, and this manifests itself in the bass, which gets softer than it should. The built-in USB DAC proved passably good with a crisp, punchy sound.

Sound Quality: 76%



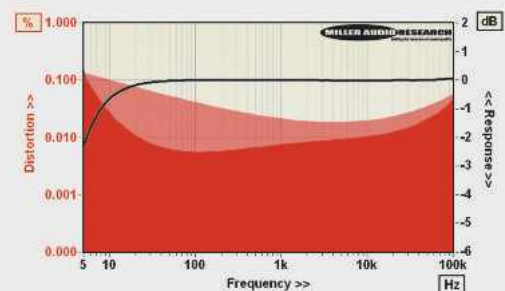
**RIGHT:** The Pro-Ject's 4in wide rear panel is comparatively crowded with RCA line inputs and outputs, plus optical and coaxial S/PDIF and mini USB digital inputs. The Head Box DS (like others in the series) is available in silver or black finishes



### HI-FI NEWS LAB REPORT

In common with other Pro-Ject 'Box' components that include a DAC, it's the Head's associated analogue stage that really determines its overall performance. Distortion, for example, is a little higher than the group average here but at least it's reasonably consistent at 0.006-0.01% (20Hz-20kHz, unloaded). Into our low impedance dummy load, distortion increases to 0.03-0.08% over the same range at 40mW output, figures that are within the compass of most decent headphones. The output impedance is almost identical to that of the Edwards Audio HP1 at 10-11ohm (20Hz-20kHz) so the 3.1dB loss into our 25ohm load is also the same. However, the Head Box has a little more 'grunt' behind it, offering a full 1.4W maximum power output.

The response, loaded or unloaded, is very extended into the high treble (+0.0dB/20kHz and +0.04dB/100kHz) with a sensibly rolled-off low bass from -0.15dB/20Hz to -3dB/4Hz. Channel balance, thanks to the digitally-governed control, is excellent at 0.06dB as is the stereo separation at >80dB from 20Hz-20kHz. The A-wtd S/N ratio is wide, too, at 96dB (re. 1V out). PM



ABOVE: Frequency response (black) from 5Hz-100kHz/25ohm and distortion vs. frequency (red, 1V; shaded, 40mW) from 5Hz-40kHz

Maximum output (re. 1% THD into 47kohm)	9.1V
Max. power output (re. 1% THD into 25ohm)	1370mW
Output Impedance (20Hz-20kHz)	10.9-11.2ohm
Maximum gain	+12.1dB
A-wtd S/N ratio (re. 0dBV)	96.2dB
Frequency response (20Hz-20kHz/25ohm)	-0.17dB to +0.00dB
Distortion (20Hz-20kHz, re. 40mW)	0.075-0.033%
Power consumption	9W
Dimensions (WHD)	103x72x144mm



## Estelon - a revolution in loudspeaker design and performance.



"This is a mighty fine speaker....that just happens to have Sophia Loren's curves."

Estelon XB - Ken Kessler, Hi-fi News October 2013

A continuous pursuit of absolute perfection by mixing science and art. High-End loudspeakers where aesthetics are driven by functionality and innovation, whilst never forgetting the emotion. With proprietary, crushed marble based composite cabinets (having excellent stiffness and damping factors), the E-Ion shape and superlative components, the unique design creates ideal conditions for sound reproduction.

The result is a product line that offers unrivalled musical revelation packaged in designs of unparalleled beauty.

"The Estelon X Diamond simply carves out a different ambient space within the ambience of your listening room and disappears within it...The Estelon X Diamonds get my highest and most enthusiastic recommendation."

Jontahan Valin, The Absolute Sound December 2012



"They (Estelon XC) produce an awesome soundstage in all three dimensions. It almost feels as if my couch is inside a gigantic pair of headphones! Enthusiastically recommended."

Jeff Dorgay, TONEAudio July 2012

"The fanatical attention to detail shows what can be accomplished when a great driver set is combined with cutting-edge materials and design. This (Estelon XA) is a pair of speakers that I could not fault in any way, no matter what music I listened to."

Jeff Dorgay, TONEAudio December 2010

At Kog Audio, we select the most exceptional products in order to give music lovers unmatched enjoyment, and build systems that will exceed expectations and provide pleasure for years. Please visit our website for information, links and reviews for all our products.







# Rega Ear

Unsurprisingly, this latest incarnation of the Ear headphone amp follows Rega's neat and attractive corporate styling. This means a handsome extruded aluminium case, nicely finished in a choice of black or silver, with a gloss plastic fascia inset. Controls are kept to a useful minimum, the only luxury (if you can call it that) being the mute button. A single 6.35mm headphone socket completes the fascia, and around the back it's business as usual with RCA phono inputs, 'Link' outs and a power input.

As well as the styling, the circuit of the Ear is said to have a lot in common with the Brio-R amplifier. It has a similar surface mount PCB layout and fully regulated, low-noise power supply, here with the usual external mains transformer to keep interference to a minimum.

The unit is claimed to work in Class A mode at normal listening levels, and Rega says 'the highest quality components' are used – including Darlington output transistors and polyester film and Nichicon FG capacitors in critical circuit positions. Overall, this feels very well built at the price, and works in a purposeful, fuss-free way.

### POSITIVELY FRAGRANT

From the opening couple of bars of the Visioneers track, it was plain that this was a special performer. It shone on so many levels, from richness of tone to clarity, detail and its sheer composure. Instead of a rather artificial, electronic rendition, I got the sound of a group of musicians playing real instruments in a wonderfully natural and cohesive fashion. Compared to the similarly



**ABOVE:** The cleanly styled Ear has mute and power buttons, plus volume control and a 6.35mm (¼in) headphone socket

priced Musical Fidelity it was like going from supermarket instant to real coffee; the music was positively fragrant and highly authentic, rather than sounding like a chemical clone.

The Rega bristled with information, but not in an overt way. Little bass guitar flourishes on the Freeez track suddenly gained a musical context as part of the song's direction of travel, rather than just a bridge between verses. The players' dynamic accenting was explicitly laid out; piano had a rich tone and shimmered with harmonics; vocals sounded warmer and creamier.

The Rega also showed a very expansive soundstage, being able to push instruments further stage left and right than all the others here bar the Fidelity Audio, rather than cramming them between your ears. The beautifully spacious, natural rendition of the Dvořák only underlined this headphone amplifier's fantastic mixture of power and poise.

Sound Quality: 82%

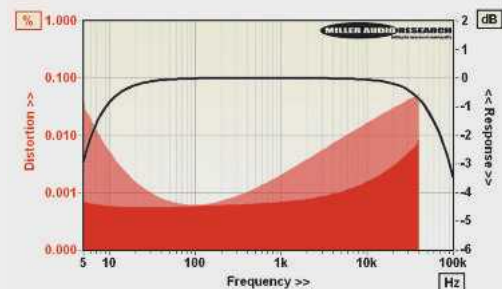


**ABOVE:** Standard RCA line input and output socketry is all you get on the rear panel of the Rega Ear headphone amplifier, plus the obligatory external power supply input

## HI-FI NEWS LAB REPORT

Recently improved, Rega's Ear is, by a small margin, the beefiest amp in our group test. Easily exceeding its 775mW/25ohm spec., it delivers closer to 1.5W/25ohm with a maximum output voltage of 6V. Just as importantly, this is achieved through a very low source impedance of around 1ohm at +6dB gain and close to just 1mohm at full volume. However, as full volume represents an excessive +28dB gain (unnecessarily high if used with modern line-level sources) then the volume control will not typically be exercised over its optimum range – at +6dB, for example, there's a channel imbalance of 0.6dB. Similarly, the high gain makes it more difficult to achieve a super-wide S/N ratio, although the 'average' figure of 86dB here is still perfectly adequate.

Nevertheless, its low source impedance and high power output ensures the Ear maintains a predictable response into most if not all headphones. The native response of the amp has -3dB points at 5Hz-90kHz. Distortion does increase slightly into lower impedance loads, however, from 0.0006% to 0.0015% at 20Hz and 0.003% to 0.03% at 20kHz [see Graph below]. PM



**ABOVE:** Frequency response (black) from 5Hz-100kHz/25ohm and distortion vs. frequency (red, 1V; shaded, 40mW) from 5Hz-40kHz

Maximum output (re. 1% THD into 47kohm)	2.3V
Max. power output (re. 1% THD into 25ohm)	1480mW
Output Impedance (20Hz-20kHz)	0.9-1.25ohm
Maximum gain	+28.1dB
A-wtd S/N ratio (re. 0dBV)	85.8dB
Frequency response (20Hz-20kHz/25ohm)	-0.25dB to -0.2dB
Distortion (20Hz-20kHz, re. 40mW)	0.0006-0.030%
Power consumption	4W
Dimensions (WHD)	178x45x155mm



# High End – Made in Germany



Master Innovation

The Clearaudio catalogue of high quality pressings inc. Deutsche Grammophon re-issues available now



For orders and information contact;  
+44 (0)1276 501 392 [info@soundfoundations.co.uk](mailto:info@soundfoundations.co.uk)

sound foundations  
[www.soundfoundations.co.uk](http://www.soundfoundations.co.uk)

# GROUP TEST VERDICT

• CD PLAYERS • TURNTABLES • CARTRIDGES • HEADPHONE AMPS • LOUDSPEAKERS • AMPLIFIERS • DACS •

Stand-alone headphone amplifiers really can make a difference to the sound of your cans. All the units tested here give a better sonic result than you'd get just plugging them into a headphone socket on your typical integrated amplifier, mini system or iDevice. Indeed, with the latter the differences were profound – you may be surprised how good your portable player can be via decent headphones driven properly.

But there were still very obvious differences in sound between these five, especially considering the relatively small price differentials – not just in tonal balance but also in the way the rhythm and dynamics of the music were conveyed. It's true to say that a good headphone amp can transform a pair of middling 'phones, but not the other way round...

## PUTTING THEM IN ORDER

Musical Fidelity's new V90-HPA is a lovely little package in terms of its styling, features and exterior finish, but failed to deliver the performance of the other units here – some of which cost pretty much the same. It is punchy, propulsive and fun to listen to, but lacks delicacy and detail, and sounds a little two-dimensional and lightweight overall.

Pro-Ject's Head Box DS ranks fourth. The other headphone amp sporting a DAC (and indeed the full gamut of digital inputs), it spreads itself just a little too thinly compared

to the leading three. Which isn't to say it's unpleasant – quite the reverse: it proved warm and smooth across all sources, especially line-in. Only very critical listeners would think it to be poor value considering its all-round appeal.

The Edwards Audio really begins to move the game forward though. Here is one of the best headphone amplifiers at its price, only a whisker behind the remaining two, thanks to a crisp and dynamic sound with oodles of detail. It also succeeds thanks to its musically expressive nature – and always seems to get to the heart of the music. If there's any criticism to be made, tonally it's not quite as sumptuous as some. There is little in the way of richness or romance, so it'll suit warmer sounding 'phones.

The Rega Ear is lovely, in so many ways. It is beautifully made, stylish and has all the facilities you really need, plus a delightful sound that stirs the soul regardless of whatever music you put through it. Wonderfully expansive and big hearted, it makes listening a pleasure. Tonally it's slightly on the warm side, so suits poor quality

sources down to the ground – even an iPad sounds good via the Rega!

## SUPERLATIVES ARE DUE

Yet this month's winner, by a hair's breadth, is the Fidelity Audio HPA-100. A superlative performer in pretty much every respect, it is the

most expensive here by some way – and you soon discover why this is the case, as no matter what programme material you play, every moment is mesmerising and

utterly immersive. Music floods forth from this headphone amplifier with all its original emotions intact.

It is highly capable in the conventional hi-fi sense (dynamics, detail, etc), yet what matters more is that it strings the musical notes together so convincingly. So much so that the lucky listener soon forgets that he or she is wearing headphones altogether. The HPA-100 opens a wonderful window onto a world of musical magic! ☺

*'Music floods forth, with all its emotional detail intact'*

**RIGHT:** Rega's £200 Ear wins for style and value, and its sound is excellent too; but the more basic looking Fidelity Audio HPA-100 is the biggest sonic hitter here and more than justifies its £150 price premium



• CD PLAYERS • TURNTABLES • CARTRIDGES • HEADPHONE AMPS • LOUDSPEAKERS • AMPLIFIERS • DACS •

# NAD Viso HP50

NAD adds its name to the list of hi-fi brands entering the headphone market  
 Review & Lab: **Keith Howard**

**I**t never rains but it pours. We've waited with baited breath to hear headphones boasting the new target frequency responses that are beginning to appear, then two arrive at once. Last month we reviewed the first model with Room Feel, PSB's M4U 2; this month it's the turn of NAD's similarly priced Viso HP50. PSB and NAD both belong to the Lenbrook Group stable so it's no great surprise to see them sharing this feature, which arises from research conducted at Canada's National Research Council. How much further it will spread remains to be seen.

## ALL IN THE HEAD

The issue at stake here is the ideal frequency response, at the eardrum, for a headphone reproducing sound that's intended for replay over stereo loudspeakers. Since the 1980s it has been widely accepted that the diffuse-field response – recreating the frequency response at the eardrum in a soundfield where sound impinges on the head with equal intensity from all directions – is optimum, but recent research has suggested that a response mimicking a pair of loudspeakers operating in an acoustically well behaved room is more appropriate. Hence the Room Feel sobriquet given to the target response embodied in the HP50.

There is no electronic processing involved here, no attempt to recreate the sense of actually being in a room.

The stereo image from Room Feel headphones remains within the head, but the tonal balance of the sound is supposed to more closely resemble that from a good pair of loudspeakers.

In its essentials the HP50 is like the M4U 1, the passive version of the M4U 2. It is closed-back, has quite small circumaural earpads that will squash larger ears a bit, and is equipped with input sockets on both sides so that you can choose which side is more convenient to hook up the thin, flat connecting cable. Unlike the PSB, the capsules do not fold into the headband but do rotate flat for storage in the supplied soft neoprene carrying case. A ¼in adaptor, aircraft adapter, second cable with remote control and a carabiner carrying clip for the case are also provided.

One feature I wish the NAD and PSB didn't share is an obvious headband resonance. As described in the PSB review, when we measure impedance versus



ears a mini-jack capsules which

to hook up the thin, flat connecting cable. Unlike the PSB, the capsules do not fold into the headband but do rotate flat for storage in the supplied soft neoprene carrying case.

A ¼in adaptor, aircraft adapter, second cable with remote control and a carabiner carrying clip for the case are also provided.

frequency for the Lab Report, using a pink noise signal driving the left capsule only, I always wear the headphone rather than placing it on the artificial ear. This has the

advantage that if there are any significant structural resonances, within the headband in particular, I will hear them. Clearly it's a test that more manufacturers should do (not to mention reviewers...) because resonance problems sometimes go uncorrected by the former and unremarked by the latter – as with both the PSB and NAD. Although the NAD's headband design is ostensibly quite different from the PSB's, both colour the sound and – by conveying vibration across to the other capsule – blur the position of the virtual sound source. NAD should fix this, and soon.

## THE HEADBAND PROBLEM

Headphones are just like loudspeakers in that they can support mechanical resonances which colour and muddy the sound. Headphone capsules have the advantage of being much smaller than loudspeakers and easily curved, which helps push structural resonances higher in frequency – but that may drop them into a part of the audible spectrum where they become more noticeable. What speakers don't have but over-head headphones do is a physical link between left and right enclosures – the headband – which is not only susceptible to resonance but also conveys vibration from one channel to the other. Having encountered a number of headphones that evince this effect only too clearly, I suspect that it may be an issue (albeit at lower level) with headphones in general. In which case it may be time we saw innovations that obviate the problem, such as low-frequency compliant decoupling of the drive units.

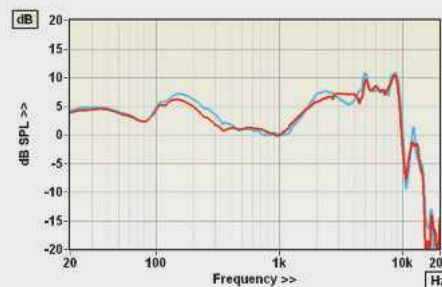
## A QUESTION OF EXCESS

Anyone who reads our headphone reviews on a frequent basis will know that I am not enamoured of headphones that have excessive lower-midrange and bass output. As demonstrated, for instance, by the Beyerdynamic T1 [*HFN* Aug '13], a little extra here – to the tune of +3.4dB at 100Hz in the T1's case, diffuse-field corrected – is fine, but anything more than that I find thickens the sound unacceptably and makes it stodgy on rock and pop in particular. All the more so if, in addition to the rise in output below 1kHz, there is a less energy than there should be above

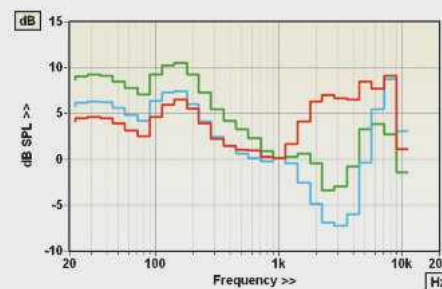
## NAD VISO HP50

Unusually, NAD appears to offer no specification of the HP50's sensitivity. In fact there are no specifications at all provided online or in the supplied quick start guide, just a few listed on the retail packaging. Our measurements recorded 116.5dB SPL for 1V input at 1kHz, which is about average for modern headphones with medium impedance but, interestingly, the better part of 4dB lower than we obtained from stablemate PSB's M4U 2 [HFN Dec '13] in passive mode – so it seems that they don't share the same drive unit. Despite this the NAD model has slightly the lower impedance of the two, ranging from 33.5ohm at 20Hz to 37.9ohm at 20kHz – a little higher than the 32ohm nominal figure. Driven from a 10ohm source impedance this variation introduces just 0.23dB frequency response change and from a 30ohm source only 0.48dB, both of which are unlikely to be noticed.

Comparing the HP50's uncorrected [Graph 1, below] and corrected [Graph 2] frequency responses with those of the M4U 2 reveals common features that presumably represent those of the Room Feel target response. Both headphones have a rising output below 1kHz but the NAD's climb begins sooner and finishes higher, the diffuse-field corrected trace showing a 10.5dB peak at about 160Hz. As in the PSB, there is then a shelving down of output as frequency decreases further. Above 1kHz the NAD's output is initially a little below that required of diffuse-field correction but dips only to -3.4dB at 2.5kHz whereas the PSB drops to -7.0dB at the same frequency. Despite the uneven bass, extension is excellent at 8Hz (-6dB re. 200Hz) and the capsule matching unusually good at ±2.3dB, suggesting that the HP50 is more tolerant than most headphones of the somewhat different shapes of the left and right pinnae of the artificial ear used for testing. KH



ABOVE: The NAD Viso HP50 has a similar response shape to last month's PSB M4U 2 but with slightly greater bass emphasis and a stronger 'presence'



ABOVE: 3rd-octave freq. resp. (red = uncorrected; cyan = FF corrected; green = DF corrected). Note change in Y (amplitude) scaling

## HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL at 1kHz for 1Vrms input)	116.5dB
Impedance modulus min/max (20Hz-20kHz)	33.5ohm @ 20Hz 37.9ohm @ 20kHz
Capsule matching (40Hz-10kHz)	±2.3dB
LF extension (-6dB ref. 200Hz)	8Hz
Distortion 100Hz/1kHz (for 90dB SPL)	<0.1% / <0.1%
Weight (inc cable and 0.25in connector)	274g



**LEFT:** Available in red, black or white, the capsules rotate for storage and provide for cable connection on either side. Each drive unit is 40mm in diameter

1kHz in the presence band. Given that the HP50 evinces even more of a rise below 1kHz than the PSB M4U 2, if less shortfall immediately above, it was odds-on that I would find its sound to be lacking in clarity and vitality.

### SOFT CENTRE

It made sense in the circumstances to use the same tracks for listening as in the M4U 2 review. On 'You Look Good To Me', a 24/88.2 rip from the Verve/Analogue Productions SACD of *We Get Requests*, Ray Brown's double-bass – whether bowed or plucked – was too prominent, too weighty, imposing a somewhat leaden feel to the proceedings, and the beautifully light touch of Oscar Peterson's piano playing was less in evidence than via my favourite headphone in this price band, which has a much lighter, airier tonal balance.

On the famous Vox Turnabout, Johanos/Dallas recording of Rachmaninov's *Symphonic Dances*, a 24/96 rip from Classic Records DAD 1004, there was no question that the HP50 delivered in respect of weight on the fortissimos but some of the familiar rough edge of the Vox sound was smoothed away, and with it went some of the character of this much-loved old recording. It really shouldn't sound too refined, too polite – words that apply with even greater force to the movement 'Rasch' from Anton Webern's *Five Pieces For Violin And Piano*, which should prick up even the most tired of ears. This 24/96 download from 2L can easily sound a bit too lean, a bit too harsh but I'd take that any day in preference to the fuller, softened delivery of the HP50 that fattened the violin and piano timbres and dulled the pizzicato.

The string plucking is of a very different nature in Eric Clapton's *Double Trouble* [Polydor 531 872-2]

but this track too has a rough edge to it – as you'd expect of the live performance at which it was recorded. Again the HP50 applied the smoothing-iron here, diluting the sense of atmosphere and with it the music's impact. 'Come Together', one of my favourite late Beatles tracks, was totally overwhelmed by the NAD's excessive bass, robbing it of rhythmical drive and providing little insight into just how skilfully this track is both played and mixed.

This is, of course, a personal take on the tonal balance imparted by Room Feel – one with which you may not agree, particularly if you prefer sound quality that steps back from the assertive. But individual taste aside, I question the claim that

Room Feel makes headphones sound more like a good pair of loudspeakers. As I almost but didn't quite say in the PSB review, if my speakers sounded like this then I'd be inclined to change them. ☹

*'They certainly delivered in respect of weight on fortissimos'*

### HI-FI NEWS VERDICT

Here we are again: the great headphone tonal balance debate. If you prefer a warm, thickened sound – as many users apparently do – and you don't mind its headband resonance, the HP50 deserves your consideration. Whereas if you prize clarity and fleetness of foot, you should disregard the hype about Room Feel and look for a headphone balanced closer to the established diffuse-field target response.

Sound Quality: 73%



# Auralic Vega

Behind the minimalist exterior of Auralic's Vega 'digital processor' lies a sophisticated DAC that can handle all the hi-res digital formats the 21st century has to offer

Review: **John Bamford** Lab: **Paul Miller**

**Y**ou can count on your fingers and toes the number of DACs currently available worldwide that feature USB inputs capable of handling 'ultra HD' data beyond 24-bit/192kHz together with the playback of DSD audio files using the recently ratified DoP protocol. The svelte-looking Auralic Vega ticks *all* the boxes for audiophiles who want to explore the highest resolution audio that today's digital technology can offer.

Although founded five years ago, Auralic will be a new name to many readers. Only recently have the company's products become available in the UK. Headed up by electronics and recording engineer Xuanqian Wang and his business partner Yuan Wang, Auralic has its headquarters and manufacturing base in Beijing.

## A DIGITAL PROCESSOR

In addition to the fully-featured Vega the company's product portfolio includes the Taurus PRE line stage preamp (£1790) and partnering Merak 400W monoblock power amps (£2090 each), Taurus MkII headphone amp (£1490) and two new headphone 'docks' – Gemini 1000 and 2000 (UK prices to be announced) – that will surely be on headphone enthusiasts' wish-lists this year. Auralic has licensed from Klutz Design the form factor of the Swedish design firm's stylish CanCan headphone stand and integrated into the stand's base a USB DAC (based on the Vega) and a headphone amplifier, together with an SD Extended Capacity card reader that allows it to store up to 2TB of data on board. Talk about cool!

Auralic calls its Vega a 'digital processor'. You might call it a digital preamplifier, since it's a DAC with a (digital) volume control and a Class A preamplifier built in – not merely a high-current DAC output – so you can certainly connect it directly to a power

amp or active loudspeakers if you live in an all-digital home. There are no analogue inputs. Neither are there any fixed-level line outputs, so to use it simply as a DAC, as I did, you'll connect its balanced (XLR) or single-ended (RCA) outputs to your amplifier and leave the volume control set to maximum output.

At the rear are five digital inputs. The AES/EBU (XLR) and three S/PDIF inputs (two electrical via RCA, one optical via Toslink) will handle LPCM up to 24-bit/192kHz, while its asynchronous USB input will accept incoming data all the way up to 32-bit/384kHz. Moreover, as well as being compatible with 1-bit/2.8224MHz DSD (DSD64) the USB input will also handle double-rate DSD with a 5.6448MHz sampling frequency (DSD128). Such a spec. represents the current state of the art in consumer audio gear, providing the ability to play all currently available hi-res file formats – no matter how rarefied – available from audiophile record labels such as 2L, Channel Classics, Reference Recordings, Blue Coast Records, etc.

As with all the company's components, the Vega's chic-looking casework is made from an alloy of iron, nickel, silicon and rare-earth metals dubbed AFN402, coated internally with a damping material called Aire. Auralic claims this makes for a chassis that's excellent at protecting the internal electronics from vibration and electromagnetic interference. The minimalist alloy fascia, devoid of any controls other than a rotary knob on the right, is dominated by a large active-matrix organic LED display that's really gorgeous once the unit is powered up.

With yellowy-orange legends against a black background it's exceptionally easy to read from a distance, with a choice of three brightness levels that can be determined via the unit's setup menu. Pushing in and releasing the volume knob brings the DAC out of standby, while pressing it again enters its configuration menu where you select inputs and access the Vega's deeper settings – of which there are many. It can be fully operated via the supplied IR remote handset too.



**RIGHT:** A linear PSU feeds a proprietary LPCM/DXD/DSD-compatible 'Sanctuary Audio Processor' with a claimed '32-bit/1.5MHz' upsampling while an equally bespoke 'Orfeo' Class A analogue stage drives the output



Under its bonnet the Vega has a 1000MIPS ARM-based digital signal processor called Sanctuary, developed in partnership with ASIC and software company Archwave of Switzerland, along with an ESS Sabre ES9018 DAC chipset. The Sanctuary DSP upsamples all incoming data to 32-bit/1.5MHz and also controls the Auralic's X MOS-based USB interface, buffering data to minimise jitter in a process that Auralic describes as 'Active USB Technology'. The DSP also provides myriad digital filter options.

#### 'FEMTO' CLOCK

At the heart of the Vega is a very high precision crystal oscillator that Auralic calls its Femto

Master Clock (a femtosecond is equal to 1/1000th of a picosecond). When booted up from cold, the Vega operates in 'Auto' mode whereby it utilises the best internal clock precision it can, when locking on to incoming data. Via the menu this can be changed to 'Coarse' (higher input lock bandwidth) which allows the Vega to lock on to excessively jittery digital sources.

After it's been powered up for around one hour, after which the temperature controlled clock has stabilised, two further

settings appear in the configuration menu: 'Fine' and 'Exact'. The user manual warns that these modes will only work with low jitter sources and that when pushing data into the Vega's USB input one might experience drop-outs (especially with high data rate audio) unless the computer has been 'optimised for music playback'.

Further menu settings include: a sleep function (whereby when putting the Vega into standby it only shuts down some of

its circuits and keeps the clock active so that its Fine and Exact modes are available immediately it's powered up); balance and absolute phase; and choice of digital filters. For PCM sources there are four filter 'modes'.

Mode 1 is a traditional digital filter offering a flat frequency response and good stopband attenuation, but with pre- and post ringing and poor group delay. Modes 2-4 are in fact *groups* of filters that provide varying passband, stopband and group delay characteristics optimised for different sampling rates [see Lab Report, p57].

Auralic calls this its Flexible Filter Mode technology, saying: 'We developed our filters using subjective auditory and objective data models, designing them

'You would swear the Vega had valves in its output stage'

**ABOVE:** AMOLED display shows selected input, volume setting and sampling frequency of incoming data. Rotary multi-function control knob is used to access the Vega's setup menu

to optimise the listening experience for different types of music and hi-resolution formats.' Two further filters (Modes 5 and 6) are 18dB/octave IIR low pass filters designed to suppress the ultrasonic noise inherent in DSD, with respective -3dB cut-off frequencies at 70kHz and 50kHz.

#### WARMTH AND OPULENCE

Living with the Vega for more than a few weeks, I found its sound quality enchanting and immersive. Rather than aim for a 'get a load of this' detail and 'grab these visceral dynamics' type of presentation, its designers appear to have erred towards a slightly 'warm' and opulent sound character that allows for extended listening without fatigue. Certainly the Vega delivers detail a-plenty, but rarely does it throw it in your face seemingly to grab attention.

I was gratified to find that my rig worked seamlessly with the Vega's clock setting in Exact mode, experiencing only very occasional drop-outs when switching between tracks that had different sampling rates. On the rare occasion this occurred it was easily remedied by simply stopping the track and starting it again. Set to Auto mode the DAC worked seamlessly throughout the extended review period.

I could fill a book describing the subtle variations in presentation offered by the Vega's digital filter options, since my preferences varied depending on source recording and its sampling frequency. Listening through my system I generally found the DAC's Mode 2 setting preferable when playing CD quality files, especially with well-balanced recordings – perhaps because its group of filters offers the flattest frequency response. With harder-edged recordings the Mode 4 setting tended to be my favourite.

As ever, it's easy to tie yourself in knots as so much depends on the character of the recording you're playing – and, of ↪

## DSD CONTROVERSY

Many audiophiles claim that DSD recordings, played either via SACD media or via computer playback with appropriate software players and DSD-capable DACs, sound 'more analogue' and closer to the original source (the music) than PCM recordings. But not everyone thinks DSD is the most accurate encoding system. Cookie Marengo, proprietor of Blue Coast Records, and Andreas Koch of Playback Designs are both DSD evangelists – Koch having headed up the development of the Sonoma DSD recording system for Sony. But other engineers maintain that DSD colours the sound. Says Morten Lindberg of Norway's 2L label: 'We find DSD somewhat different in colour to PCM. In some mysterious way DSD is softer and more beautiful but slightly less detailed. I personally prefer extremely high resolution PCM over DSD and would claim that DSD is not transparent. Similarly Reference Recordings' president Marcia Martin has been quoted as preferring 24-bit/176.4kHz PCM. When discussing the great SACD vs DVD-Audio debate in 2008 she said: 'As for SACD, our mastering engineer Paul Stubblebine felt the conversion to DSD changed the sound of our masters in a way we didn't like.'

40 YEARS OF DESIGN INNOVATION DEDICATED TO YOU

# FILL THE AIR NOT THE SPACE

Whatever the size of your room,  
seductive New Silver delivers glorious  
wideband audio to every corner without  
ever filling the floor.



**SILVER SERIES**  
monitoraudio.com

**MONITOR AUDIO**



## OUTBOARD USB DAC



**ABOVE:** The Vega has five digital inputs: USB, AES/EBU (XLR) and three S/PDIF (two RCA, one Toslink). It has single-ended (RCA) and balanced (XLR) analogue outputs

course, the sound of your system and personal preferences.

Listening to the album *Hidden Colours* by the David Rees-Williams Trio, recorded for the BBC's short-lived Late Junction label and reissued by DePaeen Records in 2010 [DPNCD 006], revealed how smooth and creamy the Vega can sound. The best track on the album, in which pianist Rees-Williams brings a jazz trio approach to a selection of 'popular' classics in the manner of Jacques Loussier, is the sublime 'When I Am Laid In Earth' from Purcell's *Dido and Aeneas*. The acoustic bass sounded rich and full-bodied, with good transient attack to the plucked notes without appeared over-etched. The piano – which can all-too-easily sound quite 'clanky' in this recording – remained bold and powerful throughout.

### PCM PREFERRED

Moving on to some more adventurous jazz I listened to several tracks from the CD version of Carlos Franzetti's *The Jazz Kamerata* [Chesky Records JD283] featuring interpretations of compositions from the likes of Pat Metheny, Bill Evans, Wayne Shorter and Keith Jarrett, among others. This is a beautiful recording, with plenty of space around the jazz ensemble that allowed the Vega to paint wonderful images of the musicians working in harmony. Again, the sound was richly textured and the tone colours vibrant, the strings and woodwinds accompanying the piano, saxophone, bass and drums depicted exquisitely across the wide and deep soundstage.

If you wanted to employ the traditional cliché of describing

solid-state electronics as sounding 'fast', vivid, squeaky-clean but sometimes hard and edgy, where tube electronics sound pleasingly softer and lyrical, less forceful and more fleshed-out with sweeter high frequencies, then you'd swear the Vega had valves in its output stage! It doesn't paint razor-sharp images, rather they're *slightly* soft-focused. Only with 'brutal' recordings does its sound ever become incisive and hard. And it *does* sound tonally neutral, exceptionally 'tidy' and relaxed, its robust bass in particular always tuneful and controlled.

With the Vega I've spent countless hours listening to hi-res downloads from 2L and Channel Classics, including DXD (24-bit/352.8kHz PCM) master files and native DSD recordings. However, I have to say I was largely underwhelmed by the sound of DSD files delivered via DoP. Sure, there's a pleasing warmth and 'ease' to the sound, but to my ears high sampling-rate PCM appears simply more lifelike. Nevertheless, Auratic is to be applauded for enabling its Vega to handle *all* formats, ensuring it to be a future-proof investment for audiophile music lovers. ☺

### HI-FI NEWS VERDICT

The Vega sounds glorious: there's a natural ease to its music making with an effortless quality that makes listening pure pleasure. Yet it's not too smooth-sounding to rob the music of vitality, preserving dynamic swings and leading-edge transients with aplomb. Its feature set is also pretty much state of the art, making it an outstanding proposition for anyone looking for a top quality DAC.

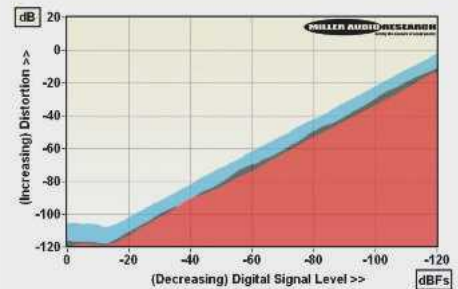
Sound Quality: 87%



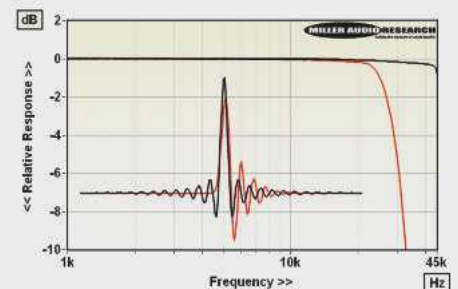
## AURALIC VEGA

Tested via its balanced XLR output, capable of 4.1V through an astonishingly low 0.25ohm source impedance (this DAC will drive any length of cable), the Vega puts in a state-of-the-art performance. Thanks to its 'Sanctuary Audio Processor', ESS Sabre DAC and 'Orfeo' analogue output module, distortion is vanishingly low at 0.00004-0.0004% from 20Hz-20kHz over the top 30dB of its dynamic range [see Graph 1, below] while the A-wtd S/N ratio is a full 115.8dB. If JB's listening results are any guide, it shows that super low-THD solid-state stages can still sound silky smooth! The '32-bit' DAC performance is impressive, with low-level resolution good to  $\pm 0.1$ dB over a 100dB range and  $\pm 0.5$ dB over a 110dB range while jitter is so low it wasn't worth publishing the graphs here – just 8psec via S/PDIF at all (44.1kHz-192kHz) sample rates and 14psec via USB.

The Vega's core feature, however, is its 'Flexible Filter Mode'. Mode 1 is akin to a traditional FIR brickwall filter with familiar pre/post-event ripples in the time domain but excellent amplitude flatness [-0.3dB/40kHz; black traces, Graph 1 below]. Mode 2 is similar but with reduced group delay, better stopband attenuation (110dB versus 83dB re. 20kHz) but an earlier response roll-off (-15dB/40kHz with 96kHz media). Mode 3 offers minimal pre/post-echoes while Mode 4, a minimum phase filter, trades zero pre-echo for slightly higher post-echoes and an early high-treble roll-off [see red traces, Graph 2]. Modes 3 and 4 are best used with sample rates above 48kHz. Readers can view comprehensive QC Suite test reports for the Auratic Vega's S/PDIF and USB inputs and all its filter modes by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



**ABOVE:** Distortion vs. 24-bit/48kHz digital signal level over a 120dB dynamic range. S/PDIF input (1kHz, red) and USB input (1kHz, black; 20kHz, blue)



**ABOVE:** Frequency (zoomed) and impulse responses at 24-bit/96kHz (Filter 1, black; Filter 4, red)

### HI-FI NEWS SPECIFICATIONS

Maximum output level (Balanced)	4.10Vrms at 0.25ohm
A-wtd S/N ratio (S/PDIF / USB)	115.8dB / 115.3dB
Distortion (1kHz, 0dBFS/-30dBFS)	0.00004% / 0.00016%
Dist. & Noise (20kHz, 0dBFS/-30dBFS)	0.00035% / 0.00040%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	+0.0dB to -0.1dB/-0.7dB/-2.1dB
Digital jitter (48kHz/96kHz/USB)	8psec / 8psec / 14psec
Resolution @ -100dB (S/PDIF / USB)	$\pm 0.1$ dB / $\pm 0.1$ dB
Power consumption	10W
Dimensions (WHD)	330x65x230mm

# Sonus faber Venere 3.0

With its keenly-priced Venere range, Italy's most famous high-end speaker maker expects to reach a wider market  
 Review: **Steve Harris** Lab: **Keith Howard**

A loudspeaker is *not* a musical instrument. We all know that a loudspeaker is meant to reproduce sounds, not to produce sounds of its own. But there is one Italian company that can still gracefully refer to its speakers as 'musical instruments' and get away with it, in a tradition that reflects the artistry and passion of its founder and long-time chief designer, the late Franco Serblin. And we would gladly forgive his wonderful designs if they did, in fact, add a little something of their own to the music.

Anyway, Sonus faber has always tried hard to link its speakers to Italy's great tradition of musical instrument making. In the 1990s, Sonus faber's lute-shaped cabinets set a trend that's been followed by many other makers – although few could match Sonus faber's beautiful craftsmanship in solid wood.

Today Sonus faber maintains this heritage with evolved versions of now-classic designs, along with many newer models. At entry level, there is the rather basic Toy series, but a step up from this, and (as the name implies) giving you that lute-shaped cabinet style, is the Liuto range. But now, with Venere, we see a new series with visual design, features and finish all closely akin to the higher ranges.

It simply has much more pizzazz than Liuto, while again catering for multichannel as well as two-channel use and is aimed at younger buyers. Above all, thanks to a partnership with a Chinese contract manufacturer, the Venere line-up promises better value for money. At the top of this range is the Venere 3.0, priced at £3198 per pair in the wood finish seen here, or £2898 in Lacquered White or Lacquered Black finishes.

Of course, the drive unit and system design is still entirely the work of the Sonus faber engineering team led by Paolo Tezzon, with Joseph Szall as a consultant on the driver development. The striking

design, by Livio Cucuzza, echoes the 'lyre-shaped' theme of the high-end Aida.

However, rather than the subtle reverse bend of the Aida, or the continuous 'lute' curve of the Guarneri and Amati, the Venere profile goes from a frontal curve to a straight section at each of its sides before reaching the final narrow rear face. There is a sloping top plate of tempered glass, and this is complemented by a tempered glass base with adjustable aluminium feet.

## TIME-ALIGNED

As with all the models in this range, the three-way Venere 3.0 is fronted by a sculpted, curved baffle. This is machined from MDF and painted black but it is so beautifully made and immaculately finished – no visible fixings for the drivers – that it belies the material used.

It is designed to give time-alignment, with a slight tilt, and shaped so that each drive unit nestles in a niche that forms a vestigial waveguide, said to give an even more vivid and engaging sound. In this line-up there are twin 180mm bass units, a 150mm midrange and a 29mm silk-dome tweeter. Both the bass and midrange cones use Sonus faber's proprietary Curv material. Curv is made of polypropylene fibres woven together, with the thickness and section shape of the fibres chosen to determine the sonic properties. This textile is then placed in a moulding tool, which is heated to a specific temperature to form it into the desired cone shape.

Another special feature of these drivers is Sonus faber's 'free compression design' basket, which means that there are special openings between the spider seat and the top magnet pole plate, to avoid any air compression below the spider.

**RIGHT:** Twin 180mm bass units, 150mm midrange and 29mm silk dome tweeter are all mounted on a sleek curved baffle with no visible fixings. Sloping top is of tempered glass



## FINE SOUNDS, FROM CHINA

Italy's expanding Fine Sounds group recently added McIntosh to a stable of high-class electronics that already included Audio Research and Wadia, along with Sumiko. But the foundations for this powerful group were laid when its parent investment company, Quadrivio, acquired Sonus faber back in 2007. Since then, Sonus faber has expanded strongly, and with the Venere range has introduced what it calls 'an absolutely original approach to production in China'. As well as bringing Chinese personnel to Italy for training, Sonus faber has created a permanent technical office at the Chinese plant, employing Italian technicians and carpenters as well as personnel from the Hong Kong-based Sonus faber Asia Ltd, 'to ensure that the production model in Arcugnano is transferred to our Chinese partners'. Collaboration between the headquarters in Arcugnano and its Asian partner, says Sonus faber, results in 'a two-way exchange of knowledge and technological know-how that allows Sonus faber to take advantage of its long established local tradition of craftsmanship and lacquered finishes.'

In the Venere 3.0, the twin bass units are connected in parallel and loaded by a conventional reflex-port system, tuned to around 40Hz, with the port or vent near the foot of the front baffle. A front port was chosen to avoid the possibility of unwanted effects from the rear wall, and to make the speaker easier to place in any environment. Crossover to the midrange unit takes place at 250Hz, with a third-order (18dB/octave) low-pass filter. The band-pass filter for the mid and the high-pass network for the tweeter are all pure first-order, 6dB/octave.

Silk dome diaphragms for the Venere tweeters are made by the German specialist company DKM (Dr Kurt Müller), and these parts are shipped to China for assembly. The tweeter does not use ferro-fluid damping.

Grilles are held in place magnetically – these speakers sound at their best with the grilles off, when the stereo image opens out a little, with a feeling of better inner detail and perhaps greater intimacy.

### NOT SO EASILY FAZED

My immediate impression was of a smooth and cultured sound, and although it did not appear to be tremendously detailed or revealing, it was soon clear that this was a speaker that wasn't going to be easily fazed by 'difficult' recordings.

For example, when I plunged into RCA's classic Heifetz recording of the Mendelssohn Violin Concerto [JVC's XRCD JMCXR-0010], the Venere 3.0 seemed to give body to the violin rather than bring out its keening or piercing quality.

Switching to Mitsuko Uchida's 1990 Snape Maltings recording of Debussy's *12 Études* [Philips 464 698-2], I felt the speaker did fairly well too, keeping the piano sound very listenable in the brilliant fast passages, even if it seemed to not quite manage to resolve those treble echoes, while it avoided the unpleasant clashing effect that they often produce.

As to stereo imaging, I felt that the Venere 3.0 produced an attractive and well-centred sound picture between and behind the speakers – but in my system and

room at least, it had only a moderate ability to produce images that reached beyond the speaker to give a really open and three-dimensional quality. It gave a good enough sensation of depth in

the centre, but I felt it could have done more to give a layered depth perspective.

Moving on to non-classical studio recordings, I had similar impressions. With Rebecca Pidgeon's *The Raven* [Chesky SACD 329], and the cunning production of the opening number 'Kalerka', the Venere 3.0 gave a lively and enjoyable performance, although the intricacies of the background instruments could perhaps have been brought out a little more clearly. The inner detail was there but you had to listen for it. Yet on this track Pidgeon's voice seemed a little more upfront than I'd expected.

Focusing more on the speaker's bottom end, I felt that the bass sound was generally even, controlled and in proportion. However, with Rebecca Pidgeon and 'Kalerka' I found that there was a slightly washy feeling to the bass and drum tracks, and as far as the bass line was concerned, although you could pick

'That gorgeously electric cry from the keyboard was true to life'



**FURUTECH**  
PURE TRANSMISSION



WWW.FURUTECH.COM

sound foundations  
www.soundfoundations.co.uk

+44(0)1276-501-392  
info@soundfoundations.co.uk



discover  
your  
inner  
sound

new from ADL  
**ADL-H118**  
headphones

The ADL ESPRIT...  
unleash your music  
no matter the source

DAC · preamp · system controller · head-  
phone amplifier



**ADL**  
ALPHA DESIGN LABS

by **FURUTECH**

Tokyo • Japan  
service@adl-av.com

sound foundations  
www.soundfoundations.co.uk

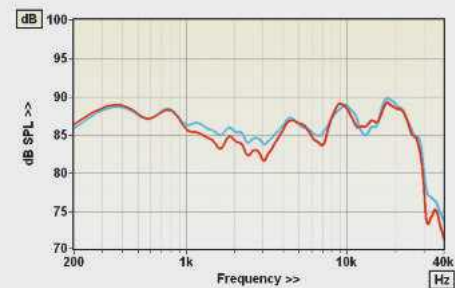
+44(0)1276-501-392  
info@soundfoundations.co.uk

## SONUS FABER VENERE 3.0

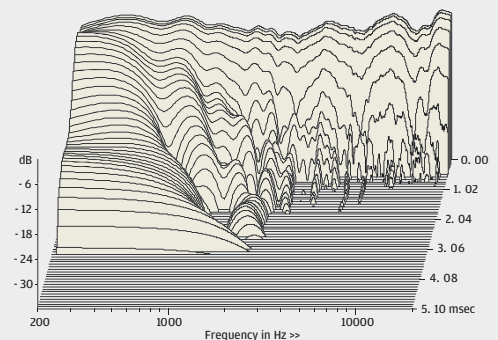
Sonus faber doesn't specify sensitivity for any of the Venere range but our pink noise figure of 86.9dB for the 3.0 indicates that it is slightly below average for a floorstander of this size. In part this reflects the fact that the largest of the Venere models presents a fairly friendly amplifier load. Although the impedance modulus drops to a minimum of 3.4ohm at 94Hz, consistent with a 4ohm nominal rating, phase angles are well enough controlled for the minimum EPDR (equivalent peak dissipation resistance) to be 2.1ohm at 130Hz and the same again at 887Hz – not as challenging as some competitors.

Frequency response [Graph 1, below] was measured on the axis of the midrange driver, as on the tweeter axis there proved to be a wide depression in presence band output. This means that to hear the most neutral tonal balance from the Venere 3.0 may require a lower than usual seating position, although the adjustable base does provide a slight tilt. Even on the axis of the midrange driver the response is clearly concave in trend, so the tonal balance is likely to be on the warm side of neutral and the stereo image a little recessed. But the response errors, over the range 200Hz-20kHz, are modest at  $\pm 3.8$ dB and  $\pm 3.0$ dB respectively. Pair matching error, over the same frequency range, is a little high, though, at  $\pm 1.7$ dB with quite large, sustained disparity in the two octaves from 1kHz to 4kHz.

Bass extension of 58Hz (-6dB re. 200Hz) is typical for this type of speaker but ultrasonic output declines rapidly above 20kHz. The cumulative spectral decay waterfall [Graph 2] shows fast decay across much of the audible spectrum and little sign of ridges indicating cone breakup. KH



ABOVE: The Venere 3.0's concave midrange response is minimised if you listen below the usual HF axis



ABOVE: Fast decay and no obvious resonance modes, indicating excellent cabinet and driver behaviour

## HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	87.2dB/86.9dB/86.1dB
Impedance modulus min/max (20Hz–20kHz)	3.4ohm @ 94Hz 27.2ohm @ 3.1kHz
Impedance phase min/max (20Hz–20kHz)	-23° @ 5.2kHz 56° @ 1.7kHz
Pair matching (200Hz–20kHz)	$\pm 1.7$ dB
LF/HF extension (-6dB ref 200Hz/10kHz)	58Hz / 28.1kHz/28.7kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.5% / 0.3% / 0.4%
Dimensions (HWD)	1157x340x438mm

**LEFT:** Curved cabinet shape, narrowed at the back, helps make the speaker easier to position in any listening room. Double terminals with removable links provide for bi-wiring or bi-amping

On Ry Cooder's *Bop Till You Drop* [Warner 7599-27398-2], the bass sound was quite big and impressive, without being boomy or sluggish, though perhaps a bit overblown.

### HAPPY RESULTS

I got happy results too from the great double-bass playing of Esperanza Spalding on *Chamber Music Society* [Heads Up HUI-31810-02]. On the 'Inútil Passagem' duet with Gretchen Parlato, the vocals sounded intense but the studio ambience was not grippingly conveyed. Spalding's bass was muscular and convincing, even if it didn't seem to have that ultimate free-breathing quality you could hope for. Inevitably, perhaps, with a speaker of this size and type, it seemed possible to detect a definite lower limit to the response here.

On rockier material though, the Venere 3.0 came into its own. With *Boz Scaggs' Greatest Hits Live* [Gray Cat GCD 4001] the sound was suitably big and warm, with Scaggs' uniquely off-hand vocals looming out of the space between the speakers. It was almost a victory of soul over subtlety this time on 'Runnin' Blue', where Scaggs lets his great musicians take turns to stop the show in a string of virtuosic solos.

And the great sound of Scaggs and his band on this well-crafted soundtrack album just kept me listening happily to the last bar. 🎧

### HI-FI NEWS VERDICT

With strong visual design matched by superb fit and finish, this speaker delivers the Sonus faber style and vindicates the move into Chinese manufacturing. Intended to be versatile, fuss-free and enjoyable in a wide range of systems, the Venere 3.0 offers an engaging sound that is warm, homogenous and forgiving. For those who've longed for a Sonus faber speaker they couldn't afford, this will be the answer.

Sound Quality: 82%



out the fact that this was indeed an acoustic double-bass, the character of the instrument wasn't really conveyed very convincingly.

Then I turned to another old favourite bottom-end showpiece, 'Blues For Klook' from *Sang Melé* by the French keyboard wizard Eddy Louiss [Nocturne NTC 101]. That gorgeously electric cry of mourning from the keyboard was true to life, the chords hanging like clouds behind well reproduced too. What made this track a hi-fi show stopper in its day was the sudden entry of the keyboard bass. With the Venere 3.0, the bass was not too heavy or out of control, but I felt it was decidedly plump rather than punchy.

# NAD D 1050

NAD's D 1050 USB DAC is more than just another amazing budget converter – it's a clever alternative for those bored with boxes, and offers proper audiophile details, too  
Review: **Ken Kessler** Lab: **Paul Miller**

It's hard to believe that there was a period not so long ago when standalone DACs seemed like they would disappear. CD players had appeared with an ample number of digital inputs to host most other sources, which meant one less box. Then the assault on CD began, as downloads and streaming (and better software) turned computers into sources as 'valid' as tuners and tape decks of yore, so DACs returned.

Now we're in an era where the two hottest items of all are headphones and ridiculously capable DACs at astonishingly low prices. NAD has taken heed of both, and I don't just mean the arrival of NAD's HP50 headphones [see p52]: the D 1050 DAC also features a terrific headphone amp with a dedicated volume control, independent of the DAC's line outputs. Indeed, inserting headphones into the 3.5mm socket mutes the outputs and activates the rotary level control.

NAD's take on an affordable D/A converter differs from its assorted rivals in other ways, coming in at a level above the HRT Music Streamers, AudioQuest's USB DragonFly and Cambridge's USB DacMagic XS or others in the entry-level/bargain class. NAD departs from their formulae in that this is not at all minimalist, having more in common with the Musical Fidelity M1 DAC or Cambridge's DacMagic 100.

Note, however, that the primary difference between the USB-only types and the larger offerings are mainly features, as some of the £99-£199 models will more than satisfy those who don't need extra facilities on sonic grounds alone. The NAD is firmly in the 'hi-fi separates' class, rather than that of 'road warrior' with Mac Air.

My first shock was discovering XLR outputs alongside 'normal' RCA line outputs, rare in £399 hardware. As if to reassert the unit's seriousness purely on an audiophile level, the back contained five

digital inputs, including two coaxial, two Toslink optical and USB, to ensure that it will handle anything one might want to feed it, in an all-digital setting.

## USB QUIBBLES

Here is my only gripe as far as facilities are concerned: there's no USB 'A' type socket to accommodate flash drives and I could find no iPod-to-USB cable allowing me to feed my iPod directly into the NAD. Naturally, a standard USB 'B' input is included for PC/Mac hook-up.

Even more curious was the lack of a USB input of any type on the front panel, which would have been simply a generous nod toward convenience, and which even my £29 DVD player possesses. However, as I did most of my listening from a Mac wired into the back and using Fidelia or iTunes as 'front ends', it was hardly debilitating, but I wish it was there

nonetheless. Far be it for me to criticise a mature and savvy brand like NAD, but this unit has so much potential as a standalone headphone amplifier as well as a DAC that the inveterate iPod (or other portable) user might appreciate the handiness of a front panel input. Maybe in the Mk II?

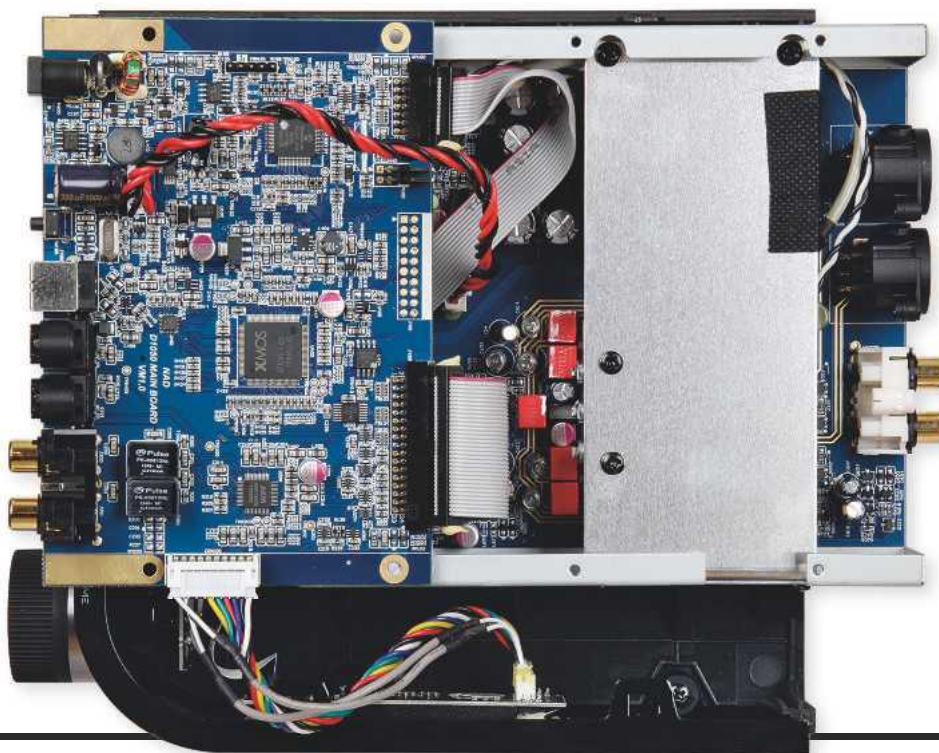
Installation and operation are so

intuitive that I needed no owner's manual (this and a quick set-up guide can be downloaded from NAD's website). There isn't one among you – nor anyone with even basic familiarity with computers – who

would need any guidance.

Perhaps the only surprise this unit presents is that there are no physical buttons *per se*: on/off and source selection are soft-touch, their locations illuminated when you plug it into the mains, standby showing the power icon in orange. Press down for a few seconds and it turns white,

'The NAD avoids head-on competition by offering so much'



**RIGHT:** This partially disassembled view of the D 1050 shows its switchmode power supply, transformer-coupled digital inputs and XMOS-based USB input receiver/processor



while an 'S' illuminates as well on the same panel. The buttons betray no physical presence whatsoever, so you have to treat them like touchscreen commands on a smart phone. They are sensitive – body temperature? static? oil on skin? – so occasionally they took time to respond.

Each time you tap the 'S', it scrolls through the inputs, the names illuminated on the same panel as the volume control and headphone socket. I hesitate to use front/side/top, etc., as the orientation changes depending on whether you use this horizontally or vertically. For me, it was the latter, as it fitted nicely between Mac and Quad amp, feeding Spendor LS3/5As.

With headphones inserted, output muted and volume control activated, the latter handily stands uppermost when the unit is sited vertically. Roughly the size of a hardback novel at 58x186x208mm, it's truly compact, though massive compared to HRT's streamers, a DragonFly, a Musical Fidelity V90-DAC, et al. The HRTs and the DragonFly, though, are designed for portable/transportable use, driven by the

USB port, while the V90-DAC needs power and is minimalist but not transportable.

### WIDE OPEN SOUND

At the risk of trying too hard to place the D 1050 in some sort of historical context, it can be thought of as the modern DAC equivalent of its great-grandfather, the NAD 3020 integrated amplifier. I say that not as a back-handed compliment – some may know that I had issues with NAD's 3020! – rather I make the analogy conceptually, for I love the D 1050 so much that I am buying one. One of the NAD 3020's undeniable virtues was its ability never to sound nasty, even if overdriven. The D 1050 shows this with lesser, compressed digital sources via iPod (and a standalone dock), or iTunes, rather than something serious like Fidelia.

It's an immediate discovery, especially once one learns that the USB is the smoothest, cleanest-sounding input to use. But I'll get to that in a moment. First, here's what I found using it as an adjunct to a CD player. With a number of players and transports from brands as various


**ABOVE:** Horizontally or vertically, the D 1050 places the headphone's volume control and socket at what is the front, while the soft-touch on/off and source are on the side (or top...)

as Marantz, Musical Fidelity and Denon, feeding the coaxial and Toslink options, the D 1050 sounded consistently coherent, open and detailed, offering gains over the DAC sections of older players.

The most vivid demonstrations of this were two of the nicest-sounding CDs I've purchased in recent months, Eric Clapton's *Unplugged Deluxe* [Reprise/MTV 8 122796366] and The Rolling Stones' *Exiles On Main St* [Polydor Japan UICY-40001], the latter being a platinum SHM-CD – review to follow next month.

To add some consistency to the listening, I also imported the CDs to iTunes, so I could compare the same material after processing – irrespective of whatever the Mac does to material that it's fed. Thus I was able to play the exact same music but from different media and sources. Moreover, I even downloaded the 'AutoRip' versions to compare with the better transfers from CD; Amazon's AutoRip downloads are MP3.

Using CD via coaxial inputs, which sounded better to these ears than optical, the reproduction was so wide open – and I mean that in true spatial terms as well as airiness and transparency – that I was able, repeatedly, to hear elements in the platinum SHM-CD version of *Exiles* that were either subdued or lost with the regular CD, the 2010 remastered CD or the conversions to iTunes.

Truly spectacular was the acoustic guitar/harmonica opening of 'Sweet Virginia', followed by the arrivals of mandolin and Dobro, arrayed across the 

## NAD'S D-SERIES

Every so often, a brave brand comes up with an alternative to the ubiquitous 430mm/17in/19in horizontal boxes that have dominated hi-fi styling since the 1960s: you may recall the 'vertical' Sony tuner and integrated amp, Yamaha's and Nakamichi's slope-fronted cassette decks and half-width products from Cyrus, or recent minis from Musical Fidelity and Pro-Ject. NAD's D Series gives the space-restricted the best of both worlds. Looking like early portable digital projectors, the D Series units can stand vertically or horizontally, with appropriate feet and legends to facilitate either position. They're compact, cleverly conceived and free of compromise for 'beginner' audiophiles. I've not tried the D 7050 Direct Digital Network Amplifier nor the D 3020 Hybrid Digital Integrated Amplifier, but if they're as good value for the money as the D 1050, especially the 'Great Grandson of the NAD 3020' D 3020 integrated, then this could be the harbinger of NAD's return to entry-level pre-eminence.



---

# BRODMANN

---

ACOUSTICS

---



*Rediscover the pleasure*

For your nearest dealer call 0203 5442338 (charged at local rate)  
Another fantastic product from NuNu Distribution Limited  
[www.nunudistribution.co.uk](http://www.nunudistribution.co.uk)

NuNu Distribution Ltd

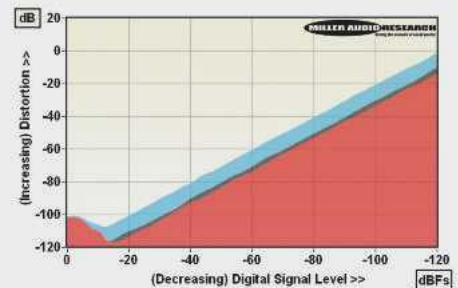




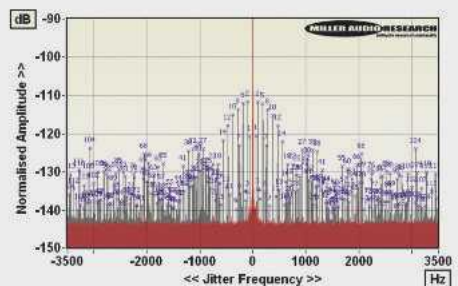
## NAD D 1050

This may be part of a very new and fresh product range and enjoy the benefits of the popular XMOS-based USB audio input but, at its heart, the D 1050 is actually based on a decade-old DAC – the stalwart CS4398 from Cirrus Logic. This chip includes DSD processing and both fast and slow interpolation filters, the latter employed by NAD to minimise pre-echo in the time domain at the expense of a more protracted post-echo and a slightly reduced stopband attenuation of 78dB (subjectively, this is often preferred). The frequency responses remain very extended, out to within  $\pm 0.1\text{dB}/20\text{Hz}-20\text{kHz}$  (44.1/48kHz files),  $-0.9\text{dB}/45\text{kHz}$  (96kHz files) and  $-6.6\text{dB}/90\text{kHz}$  (192kHz media) through both USB and S/PDIF inputs.

With two exceptions, there's little practical difference between its USB and S/PDIF performance. The latter has a minute edge in low-level linearity ( $\pm 0.1\text{dB}$  versus  $\pm 0.2\text{dB}$  over a 100dB range) but the USB input offers a significantly 'cleaner' jitter spectrum down from  $\sim 300\text{psec}$  to just 12psec here [see Graph 2, below]. Its balanced XLR outputs offer a full 4.6V and wide 115dB S/N ratio from a moderate 90ohm source impedance which all suggest the D1050 will drive high-end preamps in style. Distortion is a low 0.0001-0.0006% over the top 30dB of its dynamic range at all frequencies [see Graph 1, below] and channel separation is a massive 130dB through the midrange. Readers are invited to download full QC Suite test reports for the S/PDIF and USB performance of NAD's D 1050 outboard DAC by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



ABOVE: Distortion vs digital signal level over a 120dB range; 24-bit/48kHz S/PDIF (1kHz, red) versus USB (1kHz, black and 20kHz, blue)



ABOVE: High resolution jitter plot using 24-bit/48kHz data via S/PDIF (black, 110+ patterns marked) versus USB (red, 2 patterns unmarked)

## HI-FI NEWS SPECIFICATIONS

Maximum output level (Balanced)	4.58Vrms at 91ohm
A-wtd S/N ratio (S/PDIF / USB)	114.8dB / 114.3dB
Distortion (1kHz, 0dBFS/-30dBFS)	0.00052% / 0.00011%
Dist. & Noise (20kHz, 0dBFS/-30dBFS)	0.00052% / 0.00029%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	+0.0dB to -0.12dB/-0.9dB/-6.6dB
Digital jitter (48kHz/96kHz/USB)	295psec / 309psec / 12psec
Resolution @ -100dB (S/PDIF / USB)	$\pm 0.1\text{dB}$ / $\pm 0.2\text{dB}$
Power consumption	8W
Dimensions (WHD)	186x58x208mm



ABOVE: With five inputs, and – incredibly at this price – both balanced and single-ended line outputs, this is a no-brainer for an affordable all-digital system

soundstage. Then Charlie Watts' drums kick in, subtle yet forceful, never swamping the music. Jagger? Left of centre (physically if not politically), saxes behind and to the left. The vocals emerge as wonderfully sloppy and drunken as they've always sounded, but with a more visceral sound than I expected. And that was the CD feed.

### A 3D PERSPECTIVE

How surprised was I that the Fidelia-via-USB sounded as good, but in differing ways? A tad less punch, but also a shade less aggression – that's the only way I can describe it. But close listening revealed that the retrieval of detail was marginally better via the computer into USB, while CD playback had a richness in the bass which was only hinted at by iTunes or Fidelia.

On a more 'electric' track, 'Rip This Joint', the sheer intensity and speed tend to render the song a wash of sound, too busy to decipher element by element. Via the D 1050, one could zoom in on each and every instrument, however deeply buried in the mix. But when a soloist came to the fore, especially the sax, the palpable presence reminded my of – dare I say? – vinyl.

Put away your Kessler effigies, save the drawing pins for something more egregious. The NAD is one silky performer, and the feeling was repeated with the magnificent acoustic version of 'Layla' on *Unplugged*. I am unable to listen to 'Tears In Heaven' because of the emotional element, as I do not like crying onto my keyboard.

'Layla' is bad enough for intensity, as you can sense Clapton's loss of his friend Duane Allman every time he plays it. Crisp drums and cymbals,

every shade of Clapton's voice, rich and rolling piano, a sense of the room where the quasi-acoustic set was recorded – the D 1050 respects every nuance, presenting it in a genuinely 3D perspective that many find to be a quality that eludes the purely digital. No, I don't have this on vinyl to compare them, but the CD played directly was breathtaking, the playback at 192kHz via Fidelia only marginally less so.

At this point, I must stress that I spent as much time listening through headphones – Musical Fidelity MF100s and B&W P7s – as I did through speakers. Aside from enjoying the added isolation (not that my environment is noisy), it proved repeatedly that the D 1050 is a superb headphone amp, with plenty of drive, great dynamics and exceptional retrieval of detail. Most important of all, if you are looking for a headphone amp, it's so free of fatigue-inducing nasties that the only thing which might cause you to curtail a long listening session will be headphone comfort. ☺

## HI-FI NEWS VERDICT

If one considers that in the D 1050, NAD provides a sublime DAC with five inputs, a proper balanced output (yay!) and an exceptional headphone amplifier, then the £399 price further qualifies it as a bargain beyond question. That it mated so well with my desktop system is reason enough for me to have decided to buy one. I can't give higher praise than that. But it sounds so-o-o good, I'd have bought it anyway.

Sound Quality: 85%





The true definition of 'high-end audio'.  
 Revolutionary product  
 design and technology, with superlative  
 performance

WORLD REFERENCE AUDIO



**MBL 1511F DAC**  
 £7920



**MBL C31 CD PLAYER**  
 £6200



**MBL C51  
 INTEGRATED**  
 £7500



Trigon's timeless elegance pleases the  
 eye and prepares the ear and mind for  
 a transcendent sonic experience

EXCELLENCE IS THE KEY



**TRIGON TRE 50M  
 MONO POWER AMPLIFIER**

£1750  
 per amp



**TRIGON TRV-100 PREAMPLIFIER**  
 £2690

**TRIGON CHRONOLOG  
 REFERENCE MUSIC SERVER** £4850



# audioemotion



www.audioemotion.co.uk



e: [info@audioemotion.co.uk](mailto:info@audioemotion.co.uk)

f: [facebook.com/audioemotion](https://www.facebook.com/audioemotion)

t: 01333 425 999

## LINDEMANN.

"Lindemann's new integrated amplifier simply plays sensationally well. It sounds extremely detailed, emotional, sub-stantial and involved. Definitely one of the best in its class!" - *"LP" magazine*

### LINDEMANN 885 INTEGRATED AMPLIFIER

£8950



- Symmetrical signal processing
- 250 W / 4 ohm (per channel)
- Fully balanced stereo integrated amplifier, dual mono supplies
- Intelligent quiescent current adjustment
- "Single Ended Push Pull"- design principle

- Fully balanced CD Player
- USB HD-Audio 24/192 Asynchronous mode
- State-of-the-art digital signal processing and D/A conversion
- Sophisticated analog output stage
- Intelligent signal conditioning and input data standardization



### LINDEMANN 825 HIGH DEFINITION DISC PLAYER

£6950

"Lindemann's 825 is one of those rare components which rouses an immediate sensation of assurance - the assurance of having done things right.... In short, its acoustic performance cannot be considered anything other than the ultimate statement in matters of precision." - *image-hifi.com*



### XINDAK A600E MKII Integrated Amplifier

£2500

160W Class A Output - 240000uF filtering capacitance specially designed toroidal transformer



### XINDAK 20th Anniversary Red Label DAC

£1590

This DAC represents the premium implementation of the 32 bit AK4397 Delta-Sigma D/A IC from AKM - full stop.



### XINDAK 20th Anniversary Red Label CDT Compact Disc Transport

£1590

20th Anniversary Red Label Edition high end cd transport featuring the legendary Philips CD Pro2 mechanism



Music is our Passion

# Vinyl Frontier

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

It's not all reissues that **Chris Heard**'s been listening to: there's the Californian Haim sisters' debut LP. But he's managed to get through sides 5/6 of The Clash as well!

There's a legend among record collectors that sides five and six of The Clash's sprawling 3LP *Sandinista!* always turn up in stone-mint condition, because no listener, however ardent a Clash fan, could quite make it through to the end of the record.

While it's true that *Sandinista!* would have worked as a perfectly decent double album and a sensational single LP, the passing of 30-odd years and The Clash's undimmed reputation as progenitors of credible alternative rock has allowed it to be seen in a more sympathetic light among a newer generation.

As the follow-up to the perfectly realised (double album) *London Calling*, *Sandinista!* was the sound of a group entirely liberated from the chains of the two-chord punk diktat: a bondage that was never going to contain such intrepid musical adventurers as mainman Joe Strummer and his songwriting lieutenant, Mick Jones.

So it was that the wide-eyed bravura of *London Calling*'s excursions into rockabilly, jazz, AOR, reggae and dub was augmented on 1980's *Sandinista!* with a deeper delve into the black grooves of Strummer's beloved r'n'b influences – Nina Simone, Bo Diddley and New Orleans-style soul among them. Crucially, The Clash were also the first non-rap artists to properly assimilate hip-hop – listen to the life-affirming zest of album-opener 'The Magnificent Seven' – and there was a ravenous appetite by all concerned to find new musical directions, the group embracing everything from cod-Motown ('Hitsville UK') and Louisiana

## CHRIS HEARD

Chris Heard is a music journalist and a vinyl fanatic. He runs an online record store, Classic LPs, specialising in vinyl reissues and new releases, and a physical shop, Carnival Records, purveying 10,000-plus records amid the splendour of the Malvern Hills. Visit [www.classiclps.co.uk](http://www.classiclps.co.uk) and [www.carnivalrecords.co.uk](http://www.carnivalrecords.co.uk).



with a sure-footedness in approach and production – not to mention a commercial savvy – that could only have emerged from the post-iTunes world of 2013.

Listening to radio-friendly fare such as 'Forever' and 'Falling', there's no getting away from the idea that *Rumours* and *Hotel California* must have figured prominently in mom and pop's record collection, but the spirit of Haim owes as much to the bubblegum pop of Hanson or the Archies as it does to Stevie Nicks and the swirls of record company cocaine dust that characterised so much MOR back in the day.

## SONGS OF LOVE AND LOSS

*Tapestry* by Carole King [Mobile Fidelity] is such a well-known and overplayed record that you sometimes forget just how great it is, and where it came from. Born of the heady late-'60s Laurel Canyon hippy milieu centred on David Crosby, Jackson Browne, Neil Young, Joni Mitchell and James Taylor, *Tapestry* marked the turn-of-the-decade moment when all those *passé* light shows and Kaftans finally gave up the ghost in favour of denim waistcoats, California grass and cats in windowsills. The age of introspection had begun, and what's more, in that bold confessional US style that seemed in stark contrast to the relatively meek Nick Drakes and Elton Johns on this side of the water.

*Tapestry* is simply a great collection of songs, sequenced to perfection, recorded modestly without studio trickery or fanfare, so that King's poignant songs of love and loss are all that count. Her warm, slightly cracked vocal, the bright piano and simple arrangements speak for themselves, while the tunes – 'It's Too Late', 'Way Over Yonder', 'I Feel The Earth Move' – are among the most honest and affecting reflections on heartache ever put on tape. In our Facebook lives, it's easy to forget that there was a time when saying something about yourself to other people in public was unusual, possibly even frowned upon: essentially



➔ A *Tapestry* of songs of introspection by Carole King (a Mo-Fi reissue)

swamp-funk ('Junco Partner') to gospel and calypso on a record whose diverse textures anticipated the patchwork-quilt nature of world music.

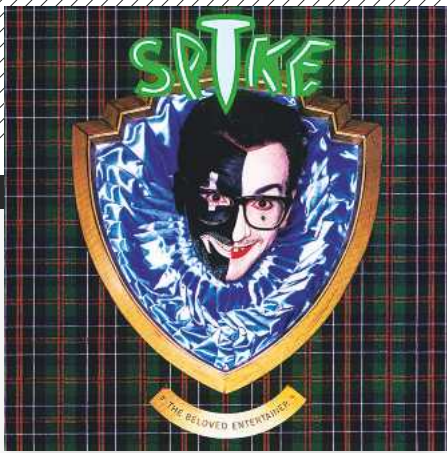
The major criticism of *Sandinista!* is its unfocused 'middle' – the feeling that somewhere around ten minutes into Side 3 you can fall down a hole and never find your way out again. I prefer to think that the subtle folky nuances and vague minimalist tones of, say, 'Something About England' or 'Washington Bullets' helped to shape the post-rock landscape as we know it. If *London Calling* was the punk generation's *Exile On Main Street*, then *Sandinista!* finds itself somewhere between *The Last Waltz*, *Graceland* and the first Public Enemy album. It's out now as part of Columbia's Clash reissue series.

## THREE SISTERS

California's Haim are blessed with the kind of credentials that promise much to those of us who harbour a secretly guilty love of West Coast-style 1970s soft rock. Based around three sisters from the San Fernando valley – namely, mesdames Este, Danielle and Alana Haim – they rock out like a more stoned Pat Benatar, tempered by a soulful undertow born of the girls' love of '90s-style contemporary R'n'B of the En Vogue/TLC school. The result, as evidenced on their debut album *Days Are Gone* [Polydor], is a modern AOR album that harks back to the cheesecloth-and-flares heyday of The Eagles and Fleetwood Mac, albeit



➔ The Clash's 3LP *Sandinista!* (1980) is newly remastered by Columbia



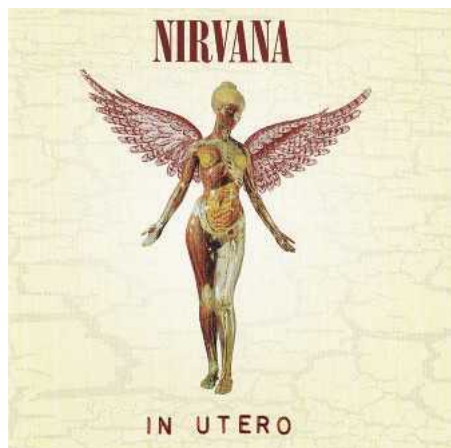
➔ Elvis Costello's first Warner album, *Spike*, is reissued by Music On Vinyl

it was the preserve of great artists who could communicate their emotions with precision and poise, reserve and aplomb. Just like Carole King and *Tapestry*.

### COSTELLO IN FULL FLOWER

*Spike*, Elvis Costello's 12th studio album and his first for Warner Bros, represented the full flowering of a reinvented, grown-up songwriter who had discarded the snarling persona of earlier years in exchange for that of a post-punk elder statesman, immersed in thoughtful dad-rock. It was a process that had begun three years earlier on the semi-acoustic *King Of America*, an album of deft yet simply-accomplished Americana, in contrast to *Spike's* multi-layered conceits: brass bands, Uilleann pipes, songs about hanging ('Let Him Dangle') and the death of Margaret Thatcher ('Tramp The Dirt Down'). Oh, and Paul McCartney, co-writer of the album's hit single, 'Veronica'.

The tone of *Spike* is by turns playful ('Stalin Malone', 'Pads, Paws And Claws'), abrasive ('Miss Macbeth') and doleful ('Baby Plays Around'), while the brooding sense that the party's over reaches its apex on the masterful 'Deep Dark Truthful Mirror', a powerful study of self-examination and regret. *Spike*, reissued on Music On Vinyl, is probably the last great Elvis Costello album, the moment he began addressing



➔ Nirvana's *In Utero* (1993) is a 'singularly loud and brutal rock LP'



maturer themes with exceptional versatility of style and mood.

### FAVOURERED NIRVANA LP

It's been 20 years since Nirvana released their third and final album, *In Utero* [see p70], a deliberately less polished affair than the multi-million selling *Nevermind*, the LP that catapulted them from under-the-radar kids with guitars to international rock superstars. And that was the point of *In Utero* – singer Kurt Cobain, uncomfortable with the trappings of fame, sought refuse in a more aggressive style of writing and playing which eschewed *Nevermind's* slick FM radio appeal and Beatle-esque melodies in favour of harder, grittier sounds and more discordant songs. Producer Steve Albini signed up to help fulfil Cobain's vision, and *In Utero* quickly became the 'true' Nirvana fan's favourite record, with devotees proclaiming it as the uncompromising sound of a once-in-a-generation band.

For understandable reasons few hard-rock or metal albums make their way into these pages, but if your hi-fi needs a rest from Diana Krall *et al* and you want to test its dynamics to the limit, you could do worse than turn to this singularly loud, sharp, clear, brutal rock LP. In any event, despite his producer's best efforts, Cobain's instinctive ear for an irresistible tune still made its way to the studio on cuts such as 'Heart-Shaped Box', 'Rape Me' and 'All

➔ The Haim sisters' sure-footed debut album *Days Are Gone* [Polydor] reflects a 'post-iTunes commercial savvy'

Apologies': finely-crafted hymns of despair for outsider types which have prevailed to become the sound of daytime BBC Radio 2 (well, perhaps not 'Rape Me'...).

### A BLUESY AFFAIR

Captain Beefheart's 1967 debut album, *Safe As Milk* [Sundazed, mono], featuring a young Ry Cooder on guitar, is a gutsy, bluesy affair, more direct and less surreal in nature than some of The Magic Band's later classic works, but with hints of the offbeat writing and difficult time-signatures that were to follow. On its release *Safe As Milk* was overlooked in the US but it was better received in Europe and in particular by a handful of hipsters and scenesters who were tuned in to singer Don Van Vliet's avant-garde sensibilities.

In essence, it is a freakbeat album heavily rooted in the delta blues, from the opening 'Sure 'Nuff 'N Yes I Do' through tracks such as 'Grown So Ugly', 'Abba Zaba', and the mighty 'Zig Zag Wanderer'. Perhaps the best compliment ever paid to it came in the movie *High Fidelity*, where record shop employee Jack Black refuses to sell a copy to a customer, deeming him unworthy of it. Ah, the halcyon days of independent record stores! ☺

'The last great Elvis Costello album is probably *Spike*'

# Vinyl Release

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

## Nirvana *In Utero*

For the singer it was an attempt to claw back credibility as an alternative artist. **Steve Sutherland** takes a fresh look at *In Utero* as the LP is reissued on 180g vinyl...

I've never met Dave Grohl but I've always reckoned him to be a perfectly decent chap. Top drummer. Really great teeth. Pretty good band, The Foo Fighters, when they put their minds and muscle to it. Level-headed sort of bloke considering all that he's been through.

But just recently, to mark the 20th anniversary of the original release of the LP we're here to talk about – an album he played on, lest we forget – Mr Grohl has come out with a statement that's caused me to question whether he has, in fact, started to talk out of his bottom.

Speaking to *Rolling Stone* magazine, Mr Grohl would like us all to know that, in order to properly appreciate *In Utero*, Nirvana's third and final studio album, we should listen to it – and I quote – 'without thinking of Kurt dying'.

### A KIND OF DRAMA

Now I never met Kurt Cobain either. But I did get to converse with his missus now and then and I can tell you that every one of my encounters with Ms Love ended up in some kind of drama. Like the time when,

interviewing her for the *NME*, she cost me (well, the company actually) a few grand because she accused a certain tabloid writer of accusing her in print of giving birth to a crack-addicted baby. I failed to fact check her assertion and it turned out it was another journo altogether who'd made the accusation.

The lawyers said we'd have quite a day in court and would have to call Mr & Mrs Cobain to the stand, which I was quite looking forward to in an 'all publicity is good publicity' kinda way. But I went away on holiday and the lawyers lost their nerve (as lawyers so very often do in my experience) and quietly settled out of court without bothering to tell me.

Hey ho.

Then there was another time when she was on stage with her band Hole at, I think, Brixton Academy and she told the whole crowd that I was an asshole who wanted to have sex with her, then rang up

### STEVE SUTHERLAND

Steve edited *NME* from 1992-2000, the Britpop years, launching *NME.com* and reviving the *NME Awards*. Previously he was Assistant Editor on *Melody Maker*. Among his many adventures he has been physically threatened by Axl Rose, hung out awhile with Jerry Garcia and had a drink or two with Keith Richards...



to apologise the next day because she'd gotten me confused with someone else. Hey and again ho. And again, another time when... well, you get the picture.

I'm telling you about the notable havoc Ms Love managed to cause in my every small interaction with her because I'm trying to get you to imagine what living with her *all the time* must have been like

for Kurt Cobain. Then add the heroin. Then add the firearms. Then add the monstrous penchant for self-pity. And that, ladies and gentlemen, is the fog through which we come to *In Utero*. And,

'The details of his personal breakdown bleed from every groove'

begging Mr Grohl's pardon, that's precisely and absolutely *all* the album is about!

Which is why, if Kurt Cobain had had his way and hadn't chickened out under record company pressure, *In Utero* would have been called 'I Hate Myself And I Want To Die' – the title of a song he left off the record but bunged out as a B-side later. Any clues there d'you think Dave?

### A HOWL FOR RELEASE

As I've already said, I never met Kurt Cobain but, thanks to *In Utero*, I don't think I missed much. Because here he is, bleeding the details of his personal breakdown from every groove and howling for release.

Kurt Cobain was avidly, addictively, monstrously narcissistic in a self-hating sort of way. He was a bloke who moaned about everything and was really quite a world champion at it. Moaning was his modus operandi. His career depended on all things being crap. So woe was he when his previous album, *Nevermind*, made him rich and famous beyond most mortals' wildest dreams. Plus he got a rock star wife (granted a bit of a pain in the butt, but...), plus he got a new baby daughter. We'd all be going woo-hoo and lighting our cigars with \$100 notes. But oh no, not Kurt.

He just couldn't handle it. Which, I repeat, is precisely what *In Utero* is all



➔ Kurt Cobain launches himself backwards onto the drums in this early shot of the band. At the time the group were signed to US indie label Sub Pop, moving to Geffen in 1990



➔ Priced £32.99, the 180g re-release of Nirvana's *In Utero* on the Geffen label is available from [www.amazon.co.uk](http://www.amazon.co.uk)

about. The plan was to make an album so punk rock and unlistenable that all the jocks who beat him up at school but bought *Nevermind* would knob off and leave him with his credibility as an alternative artist intact.

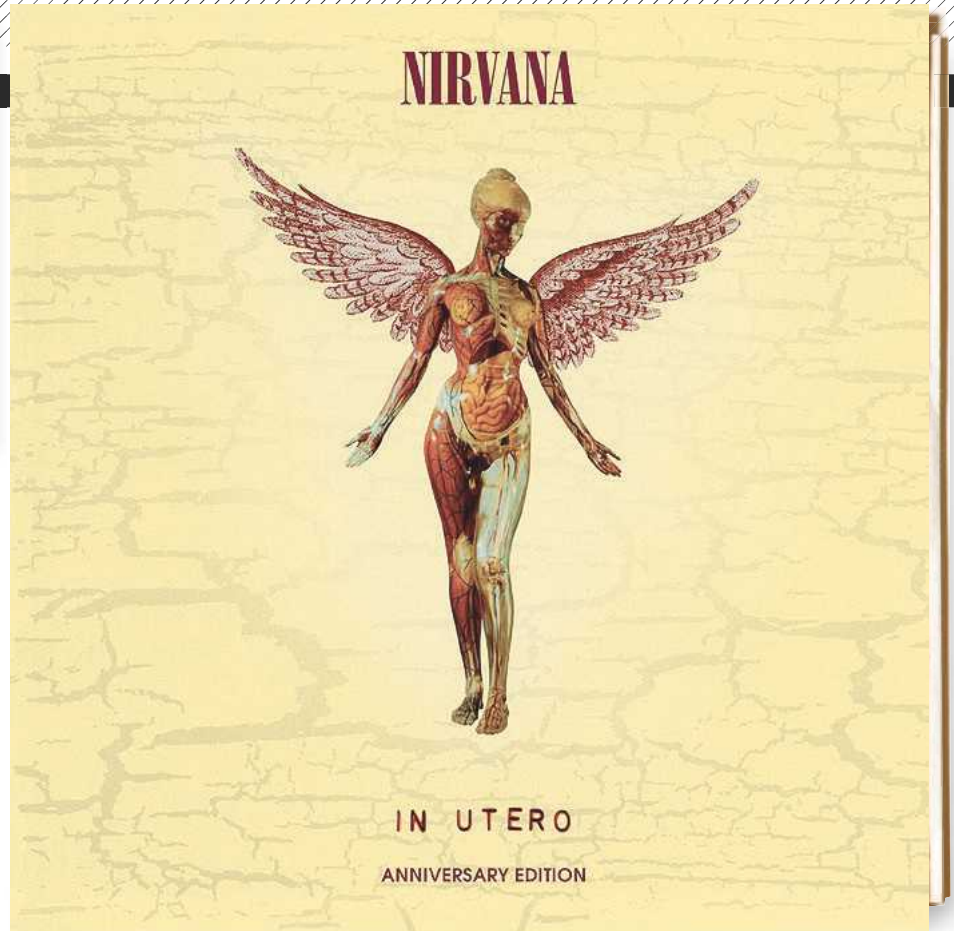
So he hired the world's most indie producer, Steve Albini of American punk band Big Black, booked into a tiny studio in the middle of nowhere (Pachyderm in Cannon Falls, Minnesota) under an assumed name (The Simon Ritchie Bluegrass Ensemble) and knocked out the record in mostly first takes over a couple of weeks.

### COLD FEET

The album Nirvana returned with began like this – 'Teenage angst has paid off well/ Now I'm bored and old'. The song was 'Serve The Servants' and it was terrific. As was 'And Frances Farmer Will Have Her Revenge On Seattle' (about a star who was punished for wanting control over her own career). And 'All Apologies'. And 'Dumb'



➔ Bassist Krist Novoselic and singer Kurt Cobain in a Geffen promo shot



(about how only really stupid people can be really happy). And the self-lacerating 'Radio Friendly Unit Shifter'. Then there were a couple of petulant throwaways – 'Milk It', 'Tourettes'. All, in Grohl's words, 'boom and rumble' delivered by producer Albini's ambient mic-ing of the tiny recording studio.

And that would have been that except... well, Kurt was a bit of a have-his-cake-and-eat-it sort of guy and he got cold feet when his record company told him they didn't think it would sell many copies.

So he got the vocals mixed up a bit. Then the bass. Then he got Scott Litt, who was getting REM into the charts at the time, to remix some of it so it would sound a bit easier on the radio. And then, when Walmart said they wouldn't stock it in the cover he'd sanctioned (a see-through angel – Kurt, of course – with all its guts on display) he had the cover redone.

### FATAL CONCLUSION

For which, of course, he hated himself even more! And so the soap opera unravelled until seven months later when it reached the inevitably fatal conclusion it seems everyone could see except those who were closest to him – that is, dependent on his ability to make them doosh.

Eight years after he blew his head off, Kurt Cobain's diaries were published but they didn't really tell us very much that

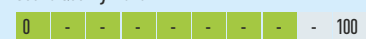
we didn't already know thanks largely to *In Utero*. Quite apart from proving once again how self-obsessed Kurt was (what grown man keeps a diary, I ask you!), the pages simply echoed all the loathing and sadness we'd already suffered through on the record.

So, taking all this into account, I think we're on fairly safe ground in concluding that Kurt Cobain wasn't actually that great a human being. But crap human beings often make extremely fine records and *In Utero* is one of the very best pieces of autobiography ever committed to vinyl. 📌

### RE-RELEASE VERDICT

Airbrushed pop perfection it ain't. But this 3LP 180g 20th anniversary edition from Geffen sees the original album remastered at Abbey Road and spread over two discs with a third disc boasting remastered B-sides, previously unreleased Steve Albini mixes and bonus tracks. With so much material on offer – all packaged in a sturdy gatefold sleeve – the price tag of just over £30 makes this box set something of a steal. Especially as our copy sounded remarkably quiet across all three discs and was free of warping and weaving. HFN

Sound Quality: 75%





# Dusty Springfield *In Memphis*

Deleted soon after its release on account of it being a financial flop, *Dusty In Memphis* is now regarded by fans and critics alike as the crowning achievement of the British singer's extraordinary career. And it still crops up regularly in polls of the best albums ever made

Words: **Johnny Black**



In 1967, despite international success and her status as the UK's undisputed queen of blue-eyed soul, Dusty Springfield found herself stifled by the career path she had settled into.

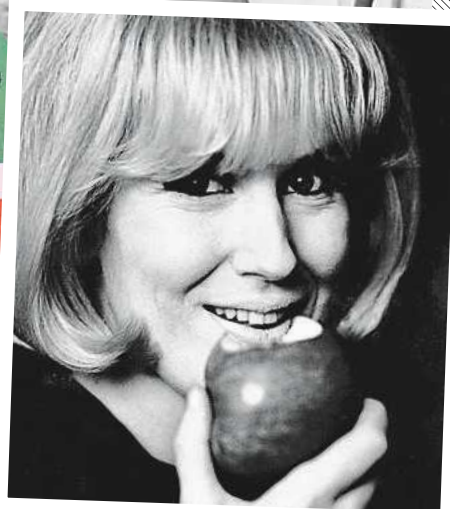
Instinctive and idiosyncratic at heart, she found British studios clinical, and longed for what she perceived as the more creative approach of the American music establishment which had nurtured her heroes, women like Aretha Franklin, Martha Reeves and Dionne Warwick. 'America,' Dusty once declared, 'was the place I'd always dreamed of as a girl. It was where the music came from.'

The albums she was recording with Philips in the UK were unsatisfactory and increasingly cabaret-oriented. A chance meeting at her Bayswater apartment block with Ahmet Ertegun, the founder of Atlantic Records, provided the springboard she needed.

'I played him "Some Of Your Lovin'" and he said, "If you ever get free of your obligations elsewhere, come to Atlantic."

### NEW DEAL

Although hardly a major star in the USA, Dusty had enjoyed success there with 'I Only Want To Be With You', 'You Don't Have To Say You Love Me' and 'Wishin' And Hopin'', so she wasted no time in negotiating a new dual-company deal, whereby the New York-based Atlantic would oversee her recordings for the USA while allowing Philips to



↑ Dusty tops the bill above Herman's Hermits in 1964

↗ The hit single 'Son Of A Preacher Man' from the LP (right) was originally offered to Aretha Franklin

↗ Philips promo shot of the singer from the mid '60s

↗ From bouffant to bob in this later publicity photograph

← The singer on stage in 1966

retain management, recording and distribution rights elsewhere. She also made sure the contract stipulated that Atlantic's Vice President, the legendary Jerry Wexler, would be her producer.

When Wexler invited her to record with the ultimate r'n'b session team at Chips Moman's and Don Crews' American Recording Studio in Memphis, it sounded like a marriage made in heaven.

However, warning bells sounded from the outset. At a pre-planning meeting in Wexler's Long Island home, she rejected every one of the 100 songs he had chosen for her to consider. There was, however, a binding contract, so Dusty and Wexler whittled the list down to 20 possibles, and set a date to start the recording.

In September 1968, Dusty arrived at 827 Thomas Street in Memphis, and found a disappointingly dilapidated and battered building in an impoverished part of town.

The dream team assembled by Atlantic included Wexler himself, engineer Tom Dowd, arranger Arif

Mardin and a superlative session crew including drummer Gene Chrisman, organist Bobby Wood, pianist Bobby Emmons, guitarist Reggie Young, bassist Tommy Cogbill and The Sweet Inspirations on backing vocals.

### ABSOLUTE MAYHEM

But when sessions began on September the 26th, Dusty found their way of operating quite disturbing. She was used to huge London studios, complete with orchestra and meticulously planned

'Every one of the 100 songs chosen for her to consider she rejected'

musical arrangements. In Memphis, however, 'It was like a house band and they would just sort of make it up, basically.' She later recalled recording 'Windmills Of Your Mind', a track with which the band was unfamiliar and which she didn't even want to sing, saying, 'It caused absolute mayhem in the studio' ➔

## VINYL ICONS

### PRODUCTION NOTES

In an era during which ever more complex production sounds were being pursued, American Sound Studio in Memphis was distinctive for its signature minimalist sound.

'I hated it at first,' admitted Dusty. 'I had come from thundering drums and Phil Spector, and I didn't understand sparseness. I wanted to fill every space. I didn't understand that the sparseness gave it an atmosphere.'

Jerry Wexler, however, was in hot pursuit of precisely that quality. 'There had been a tendency with star singers to record the tracks first, and then the singer would come in and lay their tile in the picture,' he explained. 'I abhorred that, as the artist would have no part of the creative process. I wanted the interplay of singer with rhythm section, with the musicians taking cues from the vocalist.'

Ironically, Dusty's anxieties about working in American Sound meant that Wexler was obliged to do exactly the opposite, crafting the tracks in Memphis, then moving to Atlantic Studios in New York to overdub her final vocals.

Wexler has revealed that, when he tried to get Dusty to sing over the tracks which were being played to her through headphones, 'she insisted we crank up the track so loud it was physically painful. There was no way she could hear herself – it was like she was singing into a void, projecting an interior monologue. Like she was totally deaf and asked to sing from aural memory. The thing was – and this shows what a gifted, idiosyncratic artist she was – she sang perfectly in tune. Her pitch was miraculous.'



trying to get the chords right. Originally it was very much faster and I slowed it down so it would be more organised.'

Jerry Wexler, however, was adamant that she should record it, and so they soldiered on. It became one of many tracks where the instrumental parts were completed in Memphis, but Dusty's final vocal performances had to be overdubbed in New York.

### NOT GOOD ENOUGH

Dusty's discomfort in Memphis was exacerbated by a feeling that she couldn't match up to the standards of her heroes. 'I remember going into the studio and Jerry would say, "That's where Aretha Franklin stood, right there," and consequently I stayed frozen the entire time I was in Memphis.'

She also quickly realised that she didn't have the control she was used to wielding in London. 'All the hit records I had in England,' she told *Rolling Stone* magazine in 1973, 'were found, produced, almost promoted by me. I never took any credit. It wasn't fashionable for women to have credit. Now it's very fashionable. But I did the whole bloody lot myself!'

In Memphis, however, Wexler was in charge, and veterans like Tom Dowd and Arif Mardin knew what they were trying to achieve. Dusty's role was to deliver performances, but that proved difficult.

Terry Manning of the *NME* visited Dusty in the American Recording Studio once the sessions were underway, and found her, 'in the control room munching from a box of Vick's menthol cough drops'. It was only years later that Dusty revealed, 'I was so crippled with laryngitis they could only record me two or three words at a time.'

Tom Dowd later revealed that the team was as disoriented by Dusty as she was by them. 'She had her hairdresser, John Adams, with her, and she'd have her hair blown, dried and cut every day.' Her appearance, said Dowd, was so Southern States that, 'people were flabbergasted when she opened her mouth and it wasn't a

Southern drawl they heard.' Nevertheless, the Memphis team displayed determination and patience above and beyond the call of duty, making the sessions as comfortable as possible for Dusty, who responded by delivering some remarkable performances. 'I think the highest and most sure I've ever sung is on the fades [of] some of the Memphis songs... they're stratospheric! I've never hit them again. I don't know how I did it.'

Those songs included the Barry Mann/Cynthia Weill gem 'Just A Little Lovin'', the Carole King ballad 'So

'The studio team was as disoriented by Dusty as she was by them'

↑ UK (blue label), US and (below) German releases of 'Son Of A Preacher Man'

← Picture from the 2002 CD booklet

← Arif Mardin, who arranged the songs on the LP, in LA in 1990

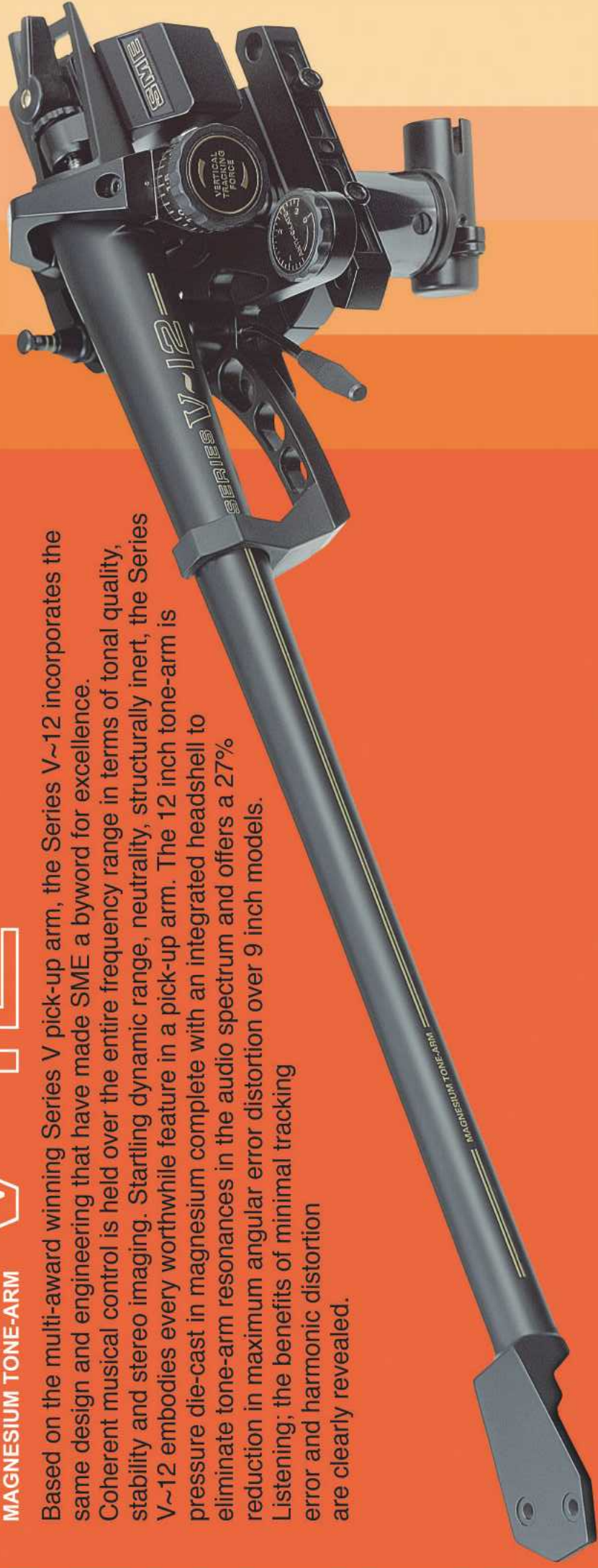
↓ Dusty was born in April 1939. Her real name was Mary O'Brien



# SERIES V~12

MAGNESIUM TONE-ARM

Based on the multi-award winning Series V pick-up arm, the Series V~12 incorporates the same design and engineering that have made SME a byword for excellence. Coherent musical control is held over the entire frequency range in terms of tonal quality, stability and stereo imaging. Startling dynamic range, neutrality, structurally inert, the Series V~12 embodies every worthwhile feature in a pick-up arm. The 12 inch tone-arm is pressure die-cast in magnesium complete with an integrated headshell to eliminate tone-arm resonances in the audio spectrum and offers a 27% reduction in maximum angular error distortion over 9 inch models. Listening; the benefits of minimal tracking error and harmonic distortion are clearly revealed.



# SME

*“The best pick-up arm in the world”*



# OXYGENE



*Brand New Intuitive Touch Control*

*Phenomenal Design and Construction*

*Every now and then something comes along that completely changes the way we perceive our needs.*

*The brand new Oxygene series from Roksan Audio is just such a concept. It offers unrivalled sound performance, boasts arguably the most striking body on the market, and interacts with its proud owner in a wholly unique way.*

*Oxygene represents the future of high-fidelity audio equipment.*

# ROKSAN

Distributed by Henley Designs Ltd.

T: 01235 511 166 | E: [sales@henleydesigns.co.uk](mailto:sales@henleydesigns.co.uk) | W: [www.henleydesigns.co.uk](http://www.henleydesigns.co.uk)

# Alternate Format Discography



➔ Dusty poses for a promo shot in New York's Central Park

Much Love' and Randy Newman's 'I Don't Want To Hear It Anymore'. But the album's high point, and most successful single, was 'Son Of A Preacher Man' – a track that had been offered to – and turned down by – Aretha. Bobby Emmons, who played Wurlitzer piano on the track, recalled, 'The fact that Dusty was a white British girl gave it the extra little spice. The sound of the song, with low chords that rang, made it dark and mysterious.'

## PAINFUL PERFECTIONISM

Although they worked long and hard in Memphis, Dusty later admitted that the bulk of her vocals were not completed there. 'We cut the tracks in Memphis but most of it was done in New York,' she confessed.

'After we did the tracks,' confirmed Arif Mardin, 'we added the Memphis Horns down south and, up in New York, I arranged strings and woodwinds. Somehow, the combination worked.'

Jerry Wexler described those final vocal overdub sessions at Atlantic's New York studios, as 'excruciating' because of Dusty's perfectionism, which he rightly recognised as a symptom of her insecurity.

*Dusty In Memphis* was released in the USA on January the 17th, 1969, and in the UK on April the 18th, but did not immediately find favour with the buying public. The single, 'Son Of A Preacher Man' did well, but the album itself was a financial flop.

'Everybody loved it except the damn public,' recalls Wexler. 'It sold 100,000 copies in America before Ahmet Ertegun deleted it. Maybe he did us a favour... giving the record a rare status. ☺



As with any much-loved classic, there's a mind-boggling profusion of different editions out there. I've heard of exotica including a 'four-track cassette' version and seen photographs of an 8-track cartridge, but hard information about either of them is elusive.

As ever, the versions detailed here represent the most significant releases of an album that has been available in different formats for some four decades – despite it being out of print for many years following its initial release.

## ORIGINAL VINYL (1969)

The first vinyl editions appeared on Atlantic [SD8214] in the USA and Philips [SBL 7889] in the UK. The track listing was identical for both releases, but the cover art chosen was dramatically different.

Atlantic opted for a mid-shot of a childlike 'Gosh! Wow!' Dusty in frilly top, hands pressed against her cheeks, while Philips framed a somewhat prosaic portrait against a dreary green background [see both above]. Philips used the same artwork for releases in the Netherlands, France and New Zealand, but astutely opted for the American cover in Canada.

The Philips version was considered a good pressing, but the original blue/green Atlantic editions tend to be favoured for their warmth and tone. On the downside, some critics did feel that Dusty's voice suffered some mid/treble hardness on the latter.

## VINYL REISSUE (1980)

Entitled *Dusty In Memphis Plus*, this was a Mercury Records product [6381 023] which essentially added four extra tracks, 'I Want To Be A Free Girl', 'I Believe In You', 'What Do You Do When Love Dies' and 'Haunted', which were all A-sides of US singles never before released in the UK.

## FIRST CD VERSION (1990)

A straightforward reissue of the original album from Philips/Phonogram [846 252-2] in the Netherlands and Australasia, considered good for its time, but quickly superseded by Rhino's subsequent CD version.

## FIRST RE-MASTERED CD (1992)

Re-mastered by Bill Inglot and Dan Hersh for Rhino Records [R2 71035] this was noticeably better than the previous CD, and also features three extra tracks in the form of 'Willie And Laura Mae Jones', 'That Old Sweet Roll' and 'What Do You Do When Love Dies?'



## DELUXE EDITION CD (1999)

Rhino's second attempt at *Dusty In Memphis* [R2 75580] featured a mammoth 25 tracks by adding previously unreleased Memphis recordings plus rare singles and other out-takes. Great value for money, it also came with liner notes by its producer, Jim Pierson, but attracted some criticism for thin and trebly sonics.

## 2ND DELUXE EDITION (2002)

This version came from Mercury [063 297-2] in the UK, and differed considerably from the American 1999 Rhino effort. The bonus tracks are reduced in number from 14 to 8 and, rather than being sourced from several places, they're all mono versions of tracks from the original album. Arguably, this makes it more coherently an *In Memphis* product, but significantly

decreases its value for money.

Re-mastered by Gary Moore, it has been criticised for having too much noise reduction applied.

On the upside, there's a desirable booklet which includes the original album notes, essays by Elvis Costello, Jerry Wexler, Arif Mardin, Tom Dowd and Gary Moore.

## 180g VINYL REISSUE (2002)

California-based audiophile vinyl specialists Four Men With Beards cranked this one out [4M 112]. A no-frills reissue of the 1969 album, though some said it suffered from noticeable sibilance.

## 180g 45RPM VINYL (2011)

Remastered by the renowned Kevin Gray, this two-disc 45rpm pressing from Analogue Productions [APP 8214-45] of Kansas, was produced from the original master tape at Gray's own Los Angeles facility, CoHearent Audio. Widely hailed as a benchmark for high-def digital, this is the one to drool over, although that might not enhance the audio.

## HD DOWNLOAD (2012)

For those not intrinsically repulsed by downloads, at the time of writing HDtracks offers the original 11 tracks in 192kHz/24-bit format (see [www.hdtracks.com](http://www.hdtracks.com)). There are no liner notes, but the download does include high-res album cover art, and those who can't splash out for 45rpm vinyl might be surprised by how good these cuts sound.

Further reading: Anyone terminally smitten by this gorgeous album might like to consider buying the 2003 paperback *Dusty In Memphis* [Bloomsbury Publishing's 33 1/3 series] by Warren Zanes.



# Fairfield Halls, Croydon

Built on the site of a 19th century fun fair, Croydon's spacious arts centre has played host to acts as diverse as Marc Bolan and Yehudi Menuhin. **Steve Sutherland** continues his celebration of the world's iconic live music venues with the tale of Fairfield Halls

In 13 years, 10 months and 22 days, the drummer on stage before us now will walk out of his condominium in the Van Nuys district of Los Angeles, climb into his white Datsun 200SX and drive to a small apartment in North Hollywood. He will knock on the door and his mother will open it. The drummer will then produce a hammer and a butcher knife, which he has been hiding behind his back, and kill her. He will then drive away.

The drummer will quickly be arrested and will say the voices in his head – especially his mother's – told him to do it. Although he will be diagnosed as acutely schizophrenic, he will be found guilty of second degree murder and incarcerated in the California Men's Colony in San Luis Obispo, where he still resides today, medicated up to his eyeballs.

## RIGHT ON THE MONEY

But the drummer we see before us tonight is in his absolute element and, if not exactly clear-headed, is pretty much right on the money providing the backbeat for a band packed with legends.

Fronted by a volatile married couple called Delaney and Bonnie Bramlett, we've got Bobby Keys on sax and Jim Price on trumpet – the brass section which will go



↑ The venue today. It contains a concert hall, a theatre, a civic hall and an art gallery. It was opened in 1962

← On the first night's bill was Yehudi Menuhin, a regular performer at the venue as the 1964 poster (above right) shows

on to grace many an infamous Rolling Stones recording. We've got Dave Mason, in and out of Steve Winwood's Traffic, on guitar. We've got Leon Russell on keyboards; Leon will go on to form Mad Dogs And Englishmen with Joe Cocker and put together an extremely wild tour which the drummer will soon join.

We've got the wonderful Rita Coolidge on backing vocals. The drummer is having a thing with her, on and off, lucky chap. We've got Bobby Whitlock on more keyboards and Carl Radle on bass, both of whom will go on to join with the drummer in forming Derek & The Dominos with Eric Clapton, who just happens to be playing lead guitar tonight. The drummer will co-write one of rock's most famous love songs with Eric Clapton, providing the haunting piano coda to 'Layla'.

And there's another lead guitarist on stage tonight; a man who bills himself L'Angelo Misterioso but who turns out to be George Harrison. When George needs a drummer to play on his debut post-Beatles solo album, *All Things Must Pass*, he will go to our guy. But although he has already done brilliant work on The

Beach Boys' *Pet Sounds* and The Byrds' *The Notorious Byrd Brothers*,

here, tonight, on the 12th of July 1969, on stage at the Fairfield Halls in Croydon, Jim Gordon will play as well, if not better, than he ever has or ever will again.

## ALL PRETTY ACE

The gig is so great, in fact, that of all the shows recorded by demon producer Jimmy Miller on the band's short UK tour, this is the one chosen to be released on an album. It's called *Delaney & Bonnie & Friends On Tour With Eric Clapton*. It's on the Atco label and the highlights are a medley in tribute to king bluesman Robert Johnson called 'Poor Elijah', Dave Mason's 'Only You Know And I Know' and another medley of Little Richard screamers. But in truth, it's all pretty ace as it goes.

The Halls, now we come to mention them, have become a bit of a favourite when it comes to live recordings since it was opened





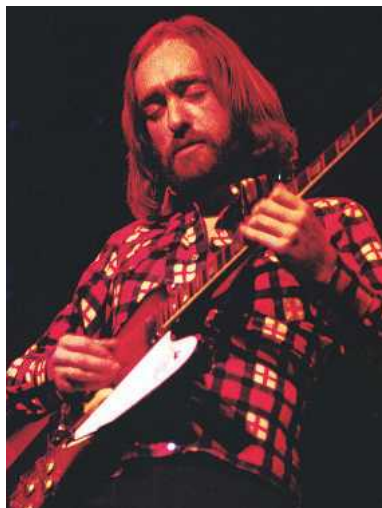
by the Queen mum, bravely showing up despite a fractured foot, on the 2nd of November 1962. The show that night was by the BBC Symphony Orchestra conducted by Sir Malcolm Sargent and featuring the popular soloist Yehudi Menuhin.

The venue is sited on land that, not surprisingly, was used for decades to host a fair but that was shut down in 1866 due to rowdy behaviour. The Brighton Railway Company used it as sidings for a time, then it became a bomb shelter during the Second World War, a shot-down Messerschmitt being displayed there in 1940 to raise funds to build a Spitfire bearing the Croydon civic badge.

### MINI MANHATTAN

Eventually the town rejuvenated, planned to be a 'mini Manhattan' in the words of future Sex Pistols manager Malcolm McLaren who attended art college there. And the Fairfield Halls were duly built along the architectural lines of the South Bank development, to the most ultra-modern, early '60s design.

The venue comprised three spaces – the Ashcroft Theatre for dramatic works, the Arnhem Gallery



↑ **Delaney & Bonnie & Friends...** was recorded at the Halls and released in 1970. The feet dangling from the car window on the LP sleeve belong to Bob Dylan

➔ **Singing duo**  
Delaney and Bonnie Bramlett

➔ **Derek & The Dominoes** (l-r): Eric Clapton, Bobby Whitlock, Jim Gordon and Carl Radle

➔ **Original Beatles concert programme** from the band's appearance at the venue on the 7th of September 1963

← **Dave Mason**, co-founder of Traffic, pictured on stage in 1974



to act as a space to show art which quickly converted to a banqueting hall, and the Concert Hall which is the space that concerns us here. Designed to be acoustically awesome, it seats an audience of 1794 and from the off proved an attraction to both the BBC, who recorded a lot of shows there, and touring pop groups.

Most famous of the early performers at the Halls were The Beatles who played there as part of the Mersey Beat Showcase on the 25th of April 1963. They'd been booked before they'd hit the charts so weren't advertised as bill-toppers. That pleasure went to a handsome actor-turned-singer by the name of John Leyton who, in the clutches of mad genius producer Joe Meek had fronted two moody smash hits – 'Johnny Remember Me' and 'Wild Wind' – in 1961.

As fate would have it, Johnny called in sick on the day and there

was much cheering from the crowd assembled outside the venue when his no-show was announced. So the Fabs headlined the 5.30 and 8pm shows after all, admirably

supported by Gerry & The Pacemakers, Billy J Kramer & The Dakotas and The Big Three.

The Beatles must have enjoyed it

because they returned one last time on the 7th of September. Their fee? A princely £250!

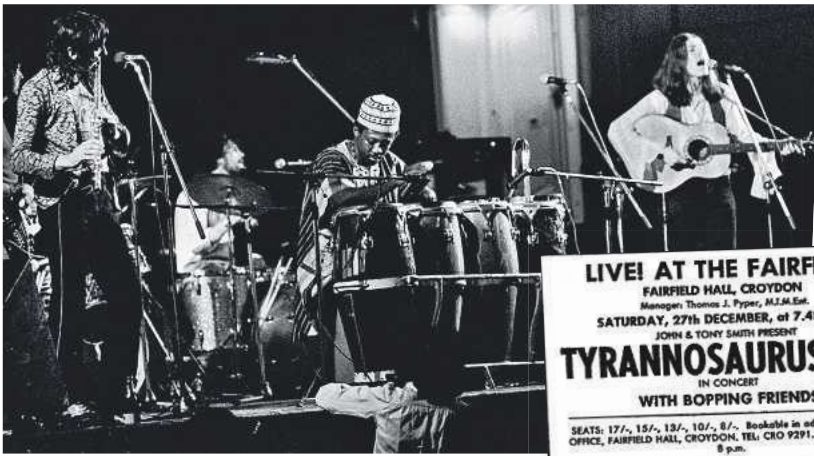
### SPIFFING JAM

Loads of other great bands swung by through the '60s and another great live album was recorded at the Halls in September 1971 (or partially anyway, a couple of tracks being taken from a benefit gig for Oz magazine, which took place a couple of months earlier).

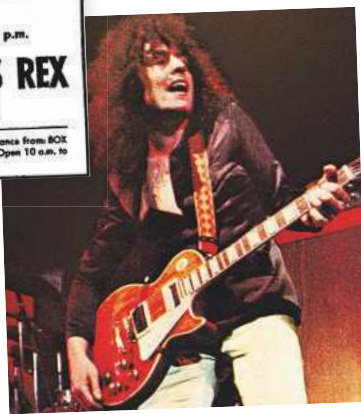
*Welcome To The Canteen* is the fifth long-playing offering by Traffic. The aforementioned Dave Mason ➔

'The fee for The Fab Four's appearance? A princely £250!'

## CLASSIC VENUES



**LIVE! AT THE FAIRFIELD**  
 FAIRFIELD HALL, CROYDON  
 Manager: Thomas J. Pyper, M.J.M. Est.  
 SATURDAY, 27th DECEMBER, at 7.45 p.m.  
 JOHN & TONY SMITH PRESENT  
**TYRANNOSAURUS REX**  
 IN CONCERT  
 WITH BOPPING FRIENDS  
 SEATS: 17/-, 15/-, 12/-, 10/-, 8/- Bookable in advance from BOX OFFICE, FAIRFIELD HALL, CROYDON. TEL: CRO 9291. Open 10 a.m. to 8 p.m.



had recently re-joined Winwood and the band for a brief sojourn and with our old pal Jim Gordon complemented on drums by Rebop Kwaku Baah, it's a spiffing jam session featuring an hypnotic 'Forty Thousand Headmen', a stonking ten-plus minute long 'Dear Mr Fantasy' and a beefy extended bash through the old Spencer Davis stomper 'Gimme Some Lovin'".

The album, released by Island, didn't actually do well at the time but that may have been due to the band deciding not to put their name on the cover. Hippies, eh?

A couple of years earlier, in October 1969, Keith Emerson, soon to be the chief

shareholder in ELP (Emerson, Lake & Palmer) brought his quasi-classical, quasi-prog outfit The Nice to the Halls to perform and record 'Five

Bridges', a sort of modern jazz piece in (appropriately enough) five movements commissioned by an arts festival in Newcastle to celebrate the five bridges which spanned the River Tyne at the time.

### FULL ORCHESTRA

It was premiered with a full orchestra on the 10th of October in Newcastle, but recorded seven days later at the far more acoustically accommodating Halls. The Suite itself is weird enough but the other stuff they played that night kinda outweirded it. Sibelius' *Karelia Suite* (Intermezzo) and Tchaikovsky's *Pathétique* Symphony (third movement) were played pretty

straight by the orchestra while the band did fiddly jazz things in between. They also spliced Bob Dylan's 'Country Pie' into Johann Sebastian Bach's *Brandenburg Concerto No 6*, which must have seemed a good idea at the time... and for some time afterwards it seems as if it was a trick Emerson revisited in spirit on ELP's attempt at Mussorgsky's *Pictures At An Exhibition* two years later.

### NIGHT OF THE DAMNED

And while we're on the subject of great British freaks, Family – the band much beloved of John Peel, the one with the singer called

Roger Chapman who contrived to sound like a sheep undergoing root canal surgery – recorded Side One of their fourth album,

*Anyway*, at the Halls in July 1970.

Marc Bolan – who also had a bit of a bleat in his voice – didn't follow suit but he did put in his time onstage at the Halls. He appeared twice there with his hippie duo Tyrannosaurus Rex in 1969 before testing out his rockier version, T Rex, twice in 1971, returning in much pomp and triumph for a third and final time on the 24th of October of that Glammy year on his all-conquering 'Electric Warrior Tour'.

Recordings may never have been released but history was made that night nonetheless as one Chris Millar was working at the venue as a toilet cleaner, as was young master Raymond Burns. Bumping into each

other at the gig and much taken by the adoration Marc was getting from the audience, the pair determined to get themselves a slice of the action. Chris Millar became Rat Scabies, Ray Burns became Captain Sensible, they threw together a band called The Damned with a couple of other like-minded reprobates, released the first ever UK punk single, 'New Rose', and wound up supporting Mr Bolan on T Rex's final UK tour in 1977.

The scene at the Halls is a lot quieter nowadays. Gigs tend to either be stadium-sized like the big O2, or tiny, like, er, the local O2s. But should the great British music-loving public ever learn to see sense again, Fairfield Halls awaits. ☺

↑ In 1969  
 Keith Emerson came to the Halls to record a piece paid for by an arts festival in Newcastle

← Marc Bolan appeared at the venue in 1969 before returning in 1971 with T Rex

← Traffic on stage in 1973 with Steve Winwood singing

← Ray Burns (far left) and Chris Millar (third from left) of The Damned





# P R I M A R E

## AWARD-WINNING DESIGN NOW WITH HIGH-RES STREAMING

The MM30 multimedia upgrade adapts the award-winning I32 integrated amplifier and PRE32 stereo preamplifier for audiophile streaming, internet radio and gapless audio playback. It's a genuine 24/192 DAC board including coax, TOSLINK, USB-A, asynchronous USB-B inputs, and a high resolution coax output.



UK Distribution  
**karma**  
audio - visual  
karma-av.co.uk

FOR MORE INFORMATION ABOUT OUR PRODUCTS

PRIMARE.NET

# hi-finews SUBSCRIPTION ORDER FORM

## DIRECT DEBIT SUBSCRIPTIONS UK ONLY

Yes, I would like to subscribe to **Hi-Fi News**

Print + Digital: £11.87 every 3 months

(SAVE 25% on shop price + SAVE 75% on Digital Download + FREE GIFT)

Print: £9.79 every 3 months (SAVE 25% on shop price + FREE GIFT)

## YOUR DETAILS MUST BE COMPLETED

Mr/Mrs/Miss/Ms..... Initial..... Surname.....

Address .....

Postcode ..... Country .....

Tel ..... Mobile.....

Email ..... D.O.B.....

## I WOULD LIKE TO SEND A GIFT TO:

Mr/Mrs/Miss/Ms..... Initial..... Surname.....

Address .....

Postcode ..... Country .....

## INSTRUCTIONS TO YOUR BANK/BUILDING SOCIETY

Originator's reference 422562



Name of bank.....

Address of bank.....

Postcode .....

Account holder.....

Signature..... Date .....

Sort code Account number

**Instructions to your bank or building society:** Please pay MyTimeMedia Ltd. Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with MyTimeMedia Ltd and if so, details will be passed electronically to my bank/building society.

Reference Number (official use only)

Please note that banks and building societies may not accept Direct Debit instructions from some types of account.

## CARD PAYMENTS & OVERSEAS

Yes, I would like to subscribe to **Hi-Fi News**, for 1 year (13 issues) with a one-off payment

### UK ONLY:

Print + Digital: £49.79 (SAVE 21% on shop price + SAVE 75% on Digital download + FREE GIFT)

Print: £41.49 (SAVE 21% on shop price + FREE GIFT)

### EUROPE & ROW:

EU Print + Digital: £69.56

EU Print: £61.26

ROW Print + Digital: £73.30

ROW Print: £65.00

## PAYMENT DETAILS

Postal Order/Cheque  Visa/MasterCard  Maestro

Please make cheques payable to MyTimeMedia Ltd and write code X215 on the back

Cardholder's name.....

Card no: (Maestro)

Valid from..... Expiry date..... Maestro issue no.....

Signature..... Date.....

Offer ends 3rd January 2014. MyTimeMedia Ltd & Hi-Fi News may contact you with information about our other products and services. If you DO NOT wish to be contacted by MyTimeMedia Ltd & Hi-Fi News please tick here:  Email  Post  Phone. If you DO NOT wish to be contacted by carefully chosen 3rd parties, please tick here:  Post  Phone. If you wish to be contacted by email by carefully chosen 3rd parties, please tick here:  Email

POST THIS FORM TO: **HI-FI NEWS SUBSCRIPTIONS, TOWER HOUSE, SOVEREIGN PARK, MARKET HARBOURGH, LEICS LE16 9EF.**

Please visit [www.hifinews.co.uk/terms](http://www.hifinews.co.uk/terms) for full terms & conditions

CODE X215

**HURRY  
OFFER  
CLOSES  
3RD JANUARY  
2014**



## PRINT + DIGITAL SUBSCRIPTION

Free 3m Ethernet cable – Chord C-stream\*

13 Issues delivered to your door

Save up to 25% off the shop price

Download each new issue to your device

A 75% discount on your Digital subscription

Access your subscription on multiple devices

Access to the Online Archive dating back to January 2008

Exclusive discount on all orders at [myhobbystore.co.uk](http://myhobbystore.co.uk)



## PRINT SUBSCRIPTION

Free 3m Ethernet cable – Chord C-stream\*

13 Issues delivered to your door

Save up to 25% off the shop price

Exclusive discount on all orders at [myhobbystore.co.uk](http://myhobbystore.co.uk)

# SUBSCRIBE TODAY

DIGITAL  
SUBSCRIPTIONS  
AVAILABLE ONLINE!

# Receive a free **Chord Ethernet cable** when you subscribe today\*

**WORTH £55!**

*“Chord’s C-stream  
– a perfect upgrade for  
the computer audiophile”*




Chord Cable’s C-stream has been designed to bring noticeable sonic benefits to Ethernet-enabled streaming audio components. Chord C-stream is a high-specification cable, with OFC conductors and low-density polyethylene insulation. Each of C-stream’s twin conductors are precisely twisted, the pair featuring an overlapping foil shield, and the four pairs are then additionally wrapped

with a further foil shield. C-stream features gold-plated signal contacts with a moulded plug surround which is marked with a black dot at the source end. Chord’s C-stream Ethernet cable is a perfect upgrade for the progressive, computer audiophile!

TERMS & CONDITIONS: Offer ends 3rd January 2014. \*Gift for UK subscribers only, while stocks last. \*\*When you subscribe by Direct Debit. Please see [www.hifinews.co.uk/terms](http://www.hifinews.co.uk/terms) for full terms & conditions.

**SUBSCRIBE SECURELY ONLINE**  
 [www.hifinews.co.uk/subscribe](http://www.hifinews.co.uk/subscribe)

**CALL OUR ORDER LINE** **Quote ref: X215**  
 **0844 543 8200**  
Lines open weekdays 8am – 9.30pm & Saturday 8am – 4pm

BT landline calls to 0844 numbers will cost no more than 5p per minute. Calls from mobiles usually cost more.

# Xpression Carbon

Xpress your sound,  
Xpress your look...



## A Classic Made New...

The Xpression Carbon is the latest version of Pro-Ject Audio Systems' original turntable, the Pro-Ject 1. This new model employs a brand new carbon fibre tonearm with an Evolution-inspired support structure. The superior motor, with isolation blobs designed by Ortofon, drives a high-gloss platter that can be fitted with either a Cork or Felt mat. The plinth is available in three stunning finishes\*, and the arm is rounded off with an Ortofon 2M Silver cartridge to create a comprehensive package that would suit any system.

Available in the UK through Henley Designs Ltd.

T: 01235 511 166

E: [sales@henleydesigns.co.uk](mailto:sales@henleydesigns.co.uk)

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

 /HenleyDesignsLtd

 /HenleyDesigns1



\* Bordeaux finish shown



COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY

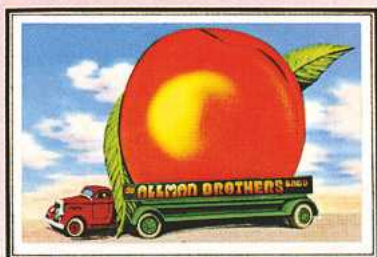


VINYL



DOWNLOAD

ORIGINAL MASTER RECORDING™



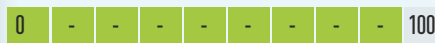
### THE ALLMAN BROTHERS BAND

#### Eat A Peach

Mobile Fidelity MFSL 2-398 (two discs)

As one who loved The Allman Brothers Band from their first LP (1969), I was among those who couldn't face this, what was effectively a tribute to Duane, killed in a motorcycle accident in October 1971. While two sides of this 2LP set contain a seemingly interminable jam, and much of the rest comes from the live Fillmore East sessions, it somehow manages to possess the virtues of a new studio release as well as serving as a testament to one of the greatest guitarists who ever lived. (Just Google the assorted '100 Best Guitarists' polls.) Forty years on, the pain has nearly subsided and it's easy to hear why it ranks with the best the band ever did, Southern blues-rock at its finest. *KK*

Sound Quality: 89%



### INXS

X

Mobile Fidelity MOFI 1-042

If you're of a certain age, INXS may qualify as a supergroup to you. My condolences: 23 years on and with Hutchence's memory slipping deeper into the footnotes of history, it sounds like a rather forced period piece that doesn't know if it wants to rock, or charm androids on the dance floor. Their seventh album, it works around Hutchence's front-man persona to reasonable effect, and anyone between the ages of 35-45 might even remember the singles 'Suicide Blonde' and 'Disappear', the former having a rather creepy connotation given what would follow. Kind as I'd like to be to this, it merely reinforces my loathing of the electronic drivel of the era. *KK*

Sound Quality: 80%



### LYNYRD SKYNYRD

#### Nuthin' Fancy

Analogue Productions APP2137

As the aptly-named third LP from the Southern boogie band closest to The Allman Brothers in quality and prominence, Lynyrd Skynyrd's 1975 release reaffirmed that position with the kind of material that could satisfy a wide audience. Although 'rebel rock' to the core, it embraces elements of the blues, while the vibe is as heavy metal as anything I can recall of similar vintage. Indeed, some moments sound like Bad Company, which is a Good Thing. This is a cocky, confident release despite its humble title, and it bears comparison to the band's LPs now reissued on Mobile Fidelity. Which tells you something: this isn't just good boogie. It's good-sounding boogie. *KK*

Sound Quality: 88%



### JOHNNY SHINES

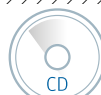
#### Standing At The Crossroads

Pure Pleasure/Testament T-2221

A legend whose career was resuscitated by the blues revival of the 1960s, Shines was truly 'old school' and unashamedly rural in his approach. Word has it that he learned his chops from Robert Johnson, which will tell you that this acoustic set from 1970 is raw yet sophisticated: the kind of country blues that dips so often into the conventions of its urbane cousin that you might be tempted in the post-MTV era to call it, simply, 'unplugged'. Much of the material will be familiar – not least the oft-covered title track – but Shines' interpretations are so fresh and melodic that you will sit back in awe at his virtuosity. Man-oh-man, is this a joy to behold. *KK*

Sound Quality: 89%





COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



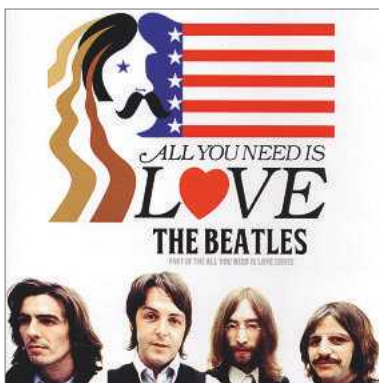
### THE ROLLING STONES

Crossfire Hurricane

Eagle Rock ERBRD5177 (Blu-ray)

Even if you caught this documentary on TV, that was a truncated version of the 134-minute version of The Rolling Stones saga – still the World's Greatest Rock'n'Roll Band. If you're a fan, you'll want the bonus material, including previously unreleased live performances of 'Satisfaction' and 'I'm Alright' from Germany in 1965, an interview with the director, the theatrical trailer and a short on the sound and music of the production. This may be as close as we'll get to a definitive – ie, approved – telling of the tale, but gaps can be filled by any of a few dozen other DVDs, from whole concerts to documentaries. Then again, the story is still being written... KK

Sound Quality: 88%



### VARIOUS

All You Need Is Love: The Beatles

Boulevard Entertainment BVED0098 (DVD)

Call it cheating, or the 'CliffsNotes' version of Tony Palmer's TV history of rock, with just The Beatles' element. This DVD, running to 53 minutes, contains only Episode 14 from the 17 in the series, ostensibly because it was about The Beatles. However, that is misleading because it also includes much non-Fab Four material such as The Monterey Pop Festival, the Hell's Angels, Bill Graham and Haight Ashbury, The Animals and 'The House of the Rising Sun' and other moments you may not care about. The other chapters received separate releases, typically a fiver a pop, but as the complete series only costs £29.99, only a schmuick would buy the lot one at a time. KK

Sound Quality: 78%



### VARIOUS ARTISTS

Groove Into Bits Vol 2

STS Digital STS611132

In August 2012, I gave this CD's predecessor 'Disc of the Month', and this sequel deserves the same, but it happens to arrive for the same issue as MoFi's set, which just nudges it out. The recipe is the same as before, this time with tunes from Taj Mahal, Bob Dylan, Calexico, Willie Dixon, Billie Holiday, Count Basie, John Lee Hooker and others. The CD again contains 'STS Remastered Analog LP Recordings', and if it accomplishes anything this late in CD's lifespan, it's to show that, with the right source material and engineering: wow! This is (like the MoFi) an ideal disc to carry around from demo to demo. Go to [www.sts-digital.nl](http://www.sts-digital.nl) again and beg for a copy. KK

Sound Quality: 93%



### VARIOUS

MoFi Collection 1

Mobile Fidelity UDCD 51 (gold CD)

Not sure if MoFi has issued samplers before, but this makes up for any lack. Rhino's logo lurks in the corner, which may explain the nine-track selection, but by any measure, it's both a dandy introduction to the catalogue of the most dependable of 'audiophile' labels, as well as an ideal CD to keep in one's pocket for demos at shows or in shops. MoFi did not scrimp: the songs by The Cars, Natalie Merchant, Linda Ronstadt, Curtis Mayfield, Chicago and others of that calibre are hits, not fillers. 'Walking In Memphis' by Marc Cohn? 'Roundabout' from Yes? Faith No More and Little Feat complete the roster, so it's likely you'd find this an exciting and eclectic listing even if the sound quality was 'normal'. Which it ain't. KK

Sound Quality: 94%



COLLECTION 1



WILSON<sup>®</sup>  
AUDIO

audio research  
HIGH DEFINITION<sup>®</sup>

*Sonus faber.*



Signature Brands from Guildford Audio

Please visit our web site to browse our full product portfolio

*Trevor Martin*  
trevor martin | guildford audio

Guildford  
Audio

t.  
01483 537 577

m.  
07979 515 577

w.  
www.guildfordaudio.co.uk



COMPACT DISC



SUPERAUDIO



DVD



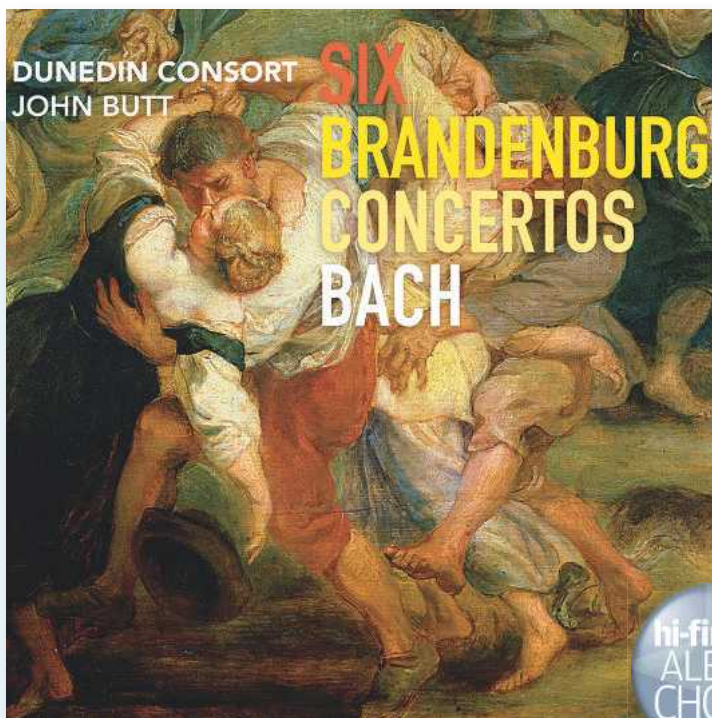
BLU-RAY



VINYL



DOWNLOAD



### JS BACH

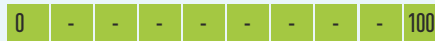
Brandenburg Concertos 1-6; Dunedin Consort/John Butt (192kHz/24-bit; FLAC/ALAC)

[www.linnrecords.com](http://www.linnrecords.com); Linn Records CKD 430

The two hunting horns played by Anneke Scott and Joseph Walters make a glorious noise at the start of Concerto 1, and their duo in 1(v), 6m 25s-7m 27s, is as clean as a whisker. Similarly, 4(iii) seemingly holds no terrors for trumpeter David Blackadder. (John Butt says in his comprehensive booklet note that their A' 392Hz pitch helps.) With one player per part this is one of the most stimulating sets of the *Brandenburgs* we have had; 3(iii)

– introduced by an improvisatory violin passage – is lightning fast and the famous harpsichord cadenza in 5(i) is truly exciting (the more so as engineer Philip Hobbs maintains the continuo perspective balance). But the transverse flute's wailing wide trill, Concerto 5(i), 2m 47s-53s, did jar! And headphone listeners might detect faint hum from the Perth Concert Hall as the music tracks start and stop. *CB*

Sound Quality: 93%



### GISLE TORVIK

Tranquil Fjord (44.1kHz/24-bit; FLAC)

[www.hiresaudio.com](http://www.hiresaudio.com); Ozella Music

Authentically Norwegian as Torvik and trio may be, *Tranquil Fjord* commences just as you might fear, the opening title track plinking a New Age path into a gentle guitar-led arrangement, meandering slowly through shallows rather regimented in their quantisation, and underlain by an intrusively full-width soundstage granted to the percussion of Hermund Nygård – close-miked snare brushes lent distracting prominence. These two qualities, forward percussion and 'swinglessness', continue even on speedier pieces such as 'Kryssande' and 'Land Veg Helm', bass and guitar each lacking a fully resolved space in either soundstage or equalisation, all three performers instead firing from the same place. When Torvik gives his guitar synth a few directionless refrains at the close of 'Endelaus Veg', it encapsulates the general meaningfulness of it all. *JF*

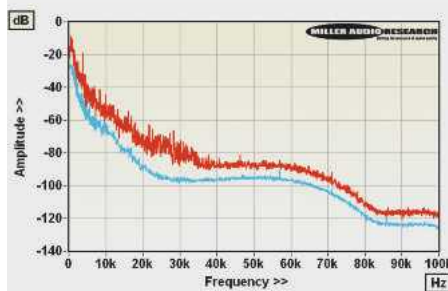
Sound Quality: 70%



### OUR PROMISE

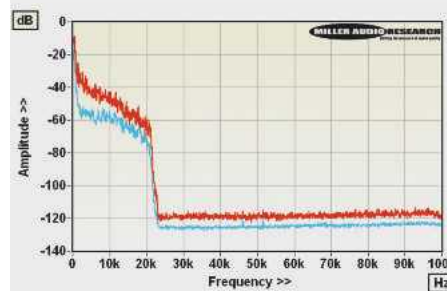
Following our Investigation feature [HFN, Jun '11] where we examined the claimed quality of high-resolution downloads, *Hi-Fi News & Record Review* is now measuring the true sample rate and bit-depth of the HD music downloads reviewed on these pages. These unique reviews will be a regular source of information for those seeking new and re-mastered recordings offered at high sample rates and with the promise of delivering the very best sound quality. (Note: asterisk in headings denotes technical reservation explained below.) *PM*

### LAB REPORT



Available as a hybrid multichannel SACD and as downloads in resolutions from MP3 to 'Studio Master 192kHz', as tested here, this fabulous recording carries content consistent with an original rate of 96kHz with noise beyond ~45kHz. *PM*

### LAB REPORT



Unlike the '96kHz' Mike Oldfield download (adjacent) the limited ~20kHz bandwidth of this 24-bit recording is perfectly in keeping with its claimed 44.1kHz sample rate. Peak recorded levels are quite high here though. *PM*





COMPACT DISC



SUPRAAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



## MIKE OLDFIELD

Five Miles Out (Deluxe Edition, 96kHz/24-bit; FLAC)\*

[www.highresaudio.com](http://www.highresaudio.com); Universal Music/Mercury

A new reissue of Oldfield's fifth album from 1982, which saw him less prog, more folk and pop, along with Vocoder and Fairlight CMI moments aplenty, the marvels of their day. Newcomers may be surprised to encounter Hall & Oates hit 'Family Man', but it's Oldfield's song and this is where it first appeared – ably sung by Maggie Reilly, though less so on the bonus live set from Cologne. These 1982 live tracks (8-15) hardly merit the 24/96 treatment, though include a fine 'Tubular Bells Pt 1', and show how the multiple personalities of the 24-minute 'Taurus II' combined less incongruously in its live arrangement than in the studio, where it spasms between splices of jazz-rock, fusion and ye olde Robin Hood music. Note that the physical 2CD version comes with a DVD of surround mixes and 12-minutes of video. What to choose – quantity or quality? *JF*

Sound Quality: 75%



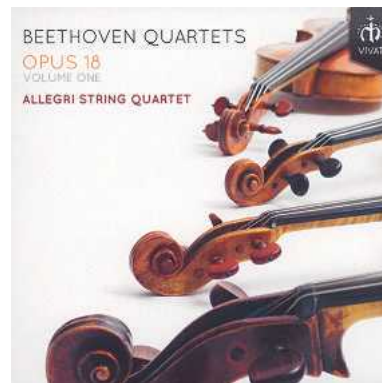
## HOLLY COLE TRIO

Girl Talk (88.2kHz/24-bit FLAC; DSD64)\*

[www.highresaudio.com](http://www.highresaudio.com); 2xHD

The trio's first full-length album from 1990 is delightfully presented despite the sampling issues (below), whether Cole's preparatory throat-clearing on opener 'My Foolish Heart' or the fine 'live to two-track' mix which leaves Ms Cole's vocal thrillingly tactile, warmed by only the lightest of reverb. Her team is terrific – it takes confidence to barrel-bang the keys as Aaron Davis does on 'Girl Talk' and to vamp so sympathetically as on 'I'm So Lonesome I Could Cry' (this immediacy is well worth the occasional fluff and vocal pop). And on the slower numbers his softly recorded piano augmentations slide into synchronicity with David Piltch on bass, whose own spotlight comes when slam-dunking the dem-room delight of 'My Baby Just Cares For Me' and giving good wood for Smokey Robinson's 'Cruisin'', with a sax solo from John Johnson. A tight trio tackled with integrity. *JF*

Sound Quality: 80%



## BEETHOVEN

String Quartets Op.18 Nos 3-5  
Allegri String Quartet (192kHz/24-bit; FLAC/ALAC)

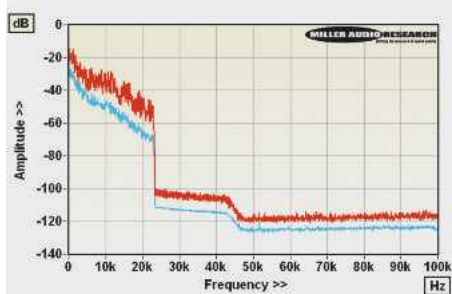
[www.vivatmusic.com](http://www.vivatmusic.com); VIVAT 103

Reviewing the CD from Tony Faulkner's recordings for the new label, Vivat, produced at Stoke d'Abernon's Menuhin Hall in April 2012 [*HFN* Sept '13], I didn't find space to mention occasional knocking noises, as one or other player caught the body of the instrument. These take on a more realistic, recognisable quality with the high-res download, and the extra £2.00 is more than justified, given the greater spatial focus (in width *and* depth) and accuracy of string tones. This is the first instalment of a planned complete Beethoven quartet cycle; apt to this early opus, the Allegri keeps expression within the bounds of a Haydn-referenced ambience. Now comprising two women and two men, the Allegri is a later formation than you will find on the Naim Label, eg, their Op.131/Britten coupling. *CB*

Sound Quality: 75%

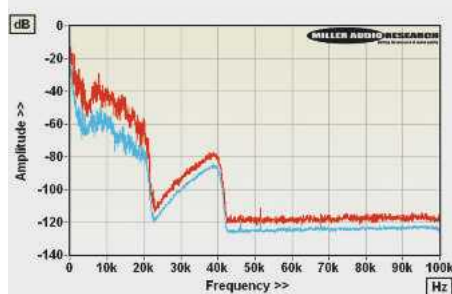


### LAB REPORT



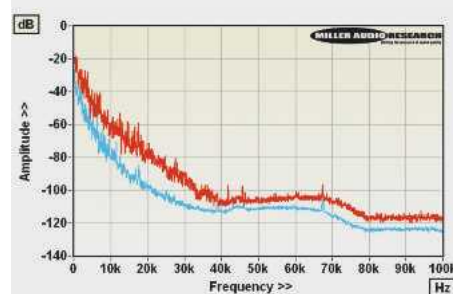
Tracks 7-15 including 'Five Miles Out' [above] look to be upsampled from CD to 96kHz while tracks 1-6 with 'content' up to ~40kHz give me pause as this album was created with a Fairlight CMI (30kHz mono sample rate in 1982). PM

### LAB REPORT



While the sample 'packets' are certainly at 88.2kHz the spectrum indicates that this recording was downsampled from SACD (or a DSD file) that was, in turn, produced by upsampling a 44.1kHz CD file to DSD. Stick with the CD! PM

### LAB REPORT



Available in resolutions from CD through to 192kHz this download measures and *looks* [see Graph above] like a genuine 192kHz rendering. Do note however, that there's little real content beyond what would be captured at 96kHz. PM



COMPACT DISC



SUPERAUDIO



DVD



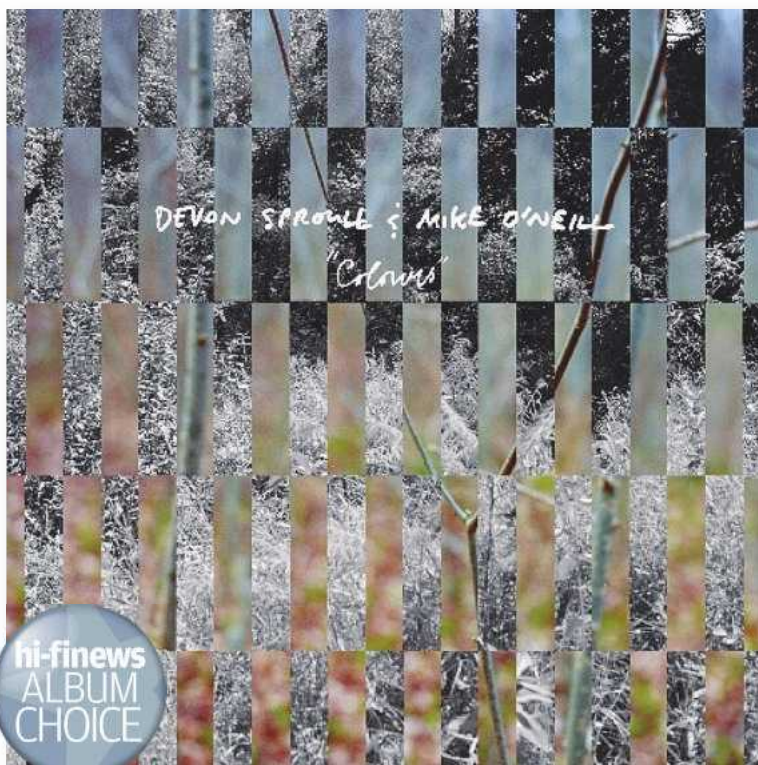
BLU-RAY



VINYL



DOWNLOAD



### DEVON SPROULE AND MIKE O'NEILL

Colours

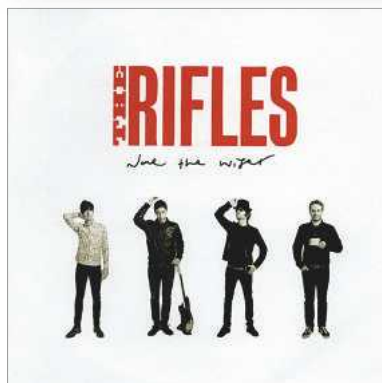
Tin Angel Records TAR038

I've been banging on about Devon Sproule for so long that I'm starting to wonder if she's destined to remain an acquired taste. If that's the case, it's not too late to acquire it, because her latest offering (this is her fourth Tin Angel album), a collaboration with Canadian songwriter Mike O'Neill, features some of her most gorgeous music to date. The way their voices intertwine on 'Magic In The Panic' is breathtaking, and set against one of the most lovely electronic/orchestral backings I've heard in ages. O'Neill seems to have encouraged Sproule to take a more straightforward rhythmic approach to recording, which enhances her melodies and vocal timbre enormously. Don't wait: buy this today. *JBk*

Sound Quality: 93%



hi-finews  
ALBUM  
CHOICE



### THE RIFLES

None The Wiser

Cooking Vinyl Records COOKCD595W

These guys are so passé... Well, to be more precise, if writing ridiculously catchy indie-pop with great hooks and memorable choruses is passé, then The Rifles are the epitome of that sort of old-fangled thinking. Lest you know them not, The Rifles are a London-based quartet and this is their fourth stunning album. They were once described in *The Times* as 'life-affirming indie-pop' and that's pretty near the mark. Somehow no major label has snapped them up yet. Admirers of the likes of Squeeze, The Jam or even Del Amitri will delight in every track and with cuts like 'Catch Her In The Rye' and 'You Win Some', it's just a matter of time before they go mega. *JBk*

Sound Quality: 90%



### ROSCO LEEVE AND THE SOUTHERN SLIDE

Get It While You Can

Red Train 041828

Blues rock is just about the hardest genre in which to attempt to try something novel and hope to get away with it. That's not to say that Rosco and his chums are breaking musical barriers here, but they certainly don't sound like the run of the mill tosh doled out by most blues combos. Rosco (real name Ross Wilson) is a discerning, concise guitarist, and he makes intelligent use of a corking horn section, twin guitar lines, and a storming rhythm section to combine, blues, soul and pop in ways most of the competition can't match. And you'd swear he was from Louisiana – though the only Deep South he comes from is Kent. *JBk*

Sound Quality: 87%



### JEN CHAPIN

Reckoning

Purple Chair PCM42465

Despite much evidence to the contrary (I'll name no names) it may be that songwriting talent can occasionally be transmitted down the generations. Jen Chapin is the daughter of acclaimed '70s tunesmith Harry Chapin but, thankfully, her style – jazzy and folksy with hints of gentle funk – is a million miles removed from his politically-oriented country-rock oeuvre. However, they both know exactly how to construct a song so that its impact grows with every play. Jen deals with much more introspective, almost confessional lyrics which have drawn comparisons with Laura Nyro and Alanis Morissette. Anyone seeking sophisticated pop elegance should check her out. *JBk*

Sound Quality: 90%





# Hi Fi - Home Cinema - Custom Install

TELEPHONE  
**01865 790 879**

E-MAIL  
[info@oxfordaudio.co.uk](mailto:info@oxfordaudio.co.uk)

WEB SITE  
[www.oxfordaudio.co.uk](http://www.oxfordaudio.co.uk)

ADDRESS  
Cantay House  
Park End Street  
Oxford  
OX1 1JD

Follow us on:



BUSINESS HOURS  
10am to 6pm Mon-Fri  
10am to 5pm Sat  
Closed Sunday & Bank Holidays

FINANCE  
Ask about our Buy Now  
Pay Later 0% Finance  
with No Deposit

## Our 'Buy Now Pay Later' Plan\* offers you complete control...

Pay what you like, when you like - just clear the total within a year.

**No interest, 0% APR; No fees.**



Devialet 170



Magico S5



Wilson Audio Sasha W/P



Audio Research REF 75

Call Jon Harker on **01865 790 879** to find out more.

\*Visit [www.oxfordaudio.co.uk](http://www.oxfordaudio.co.uk) for full terms & conditions.



COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



### STEFANO BOLLANI/HAMILTON DE HOLANDA O Que Será

ECM 374 0459

An unlikely duo, you might think, as the celebrated Italian pianist joins the Brazilian master of the mandolin – or more correctly, bandolim, the 10-string version that Hamilton de Holanda plays – in a live concert recording from 2012. Chasing each other into ever more fantastic flights, they please the crowd with virtuosity and humour, and then offer tenderness with Jobim's 'Luiza', for example. Holanda weaves Flamenco into 'Caprichos de Espanha' while Rossini's barber becomes a bum in Bollani's spiky, punningly-titled 'Il Barbone di Siviglia'. You hear the audience clapping along and you will be too. *SH*

Sound Quality: 85%



### DAVE BRUBECK QUARTET NDR 60 Years Jazz Edition

Moosicus 2CD N1302-2 (two discs); N1301-1 (three discs, 180g vinyl)

Justifying the *60 Years* tag, the first release in this series offers archetypal performances from Dizzy Gillespie's 1953 quintet, which was the first visiting American jazz group to be recorded at the Hamburg radio station's studios. But in 1958, when Brubeck arrived on his State Department-sponsored Jazz Ambassadors tour, the station sent its outside broadcast team to record him at the Neidersachsenhalle, Hannover. Even in mono it's fascinating to hear the quartet as it was the year before *Time Out*. Gene Wright and Joe Morello are well captured and, even though he's annoyingly under-recorded at times, Paul Desmond's happy, fluid solos are a joy. *SH*

Sound Quality: 80%



### STACEY KENT The Changing Lights

Parlophone France 5099944406226

Here the much-travelled but never world-weary singer looks to Brazil, with the music of husband Jim Tomlinson sandwiched by that of Jobim, Nelson Motta, *et al.* Kasuo Ishiguro, whose collaboration started with *Breakfast On The Morning Tram*, wrote the lyrics for three songs here, and two are based on poems by Antonio Ladeira, who taught Stacey and Jim when they started learning Portuguese. There's immaculate musicianship as always, Tomlinson's saxes and flute meshing with Graham Harvey's piano and the guitar of John Parricelli. As a finale, Kent sings Bernie Beupere's French lyrics in 'Chanson Légère' with a touch that's as light and graceful as ever. *SH*

Sound Quality: 80%



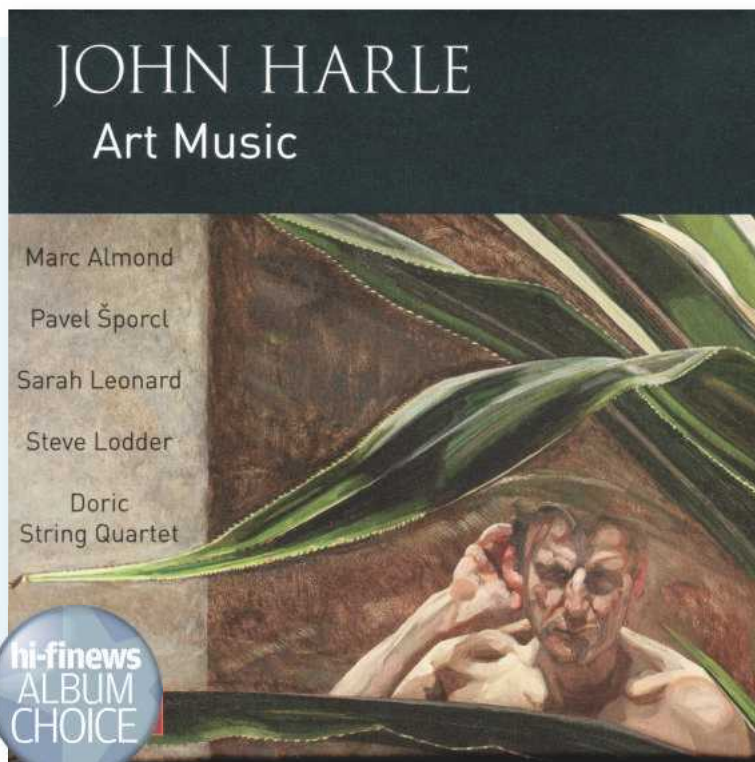
### JOHN HARLE

Art Music

Sospira SOSIH100213

It was composer and saxophonist John Harle's work on the BBC's *Lucian Freud – Painted Life* that led to this fully-realised concept album. Starting with Freud, he responds in music to the work of several British artists, helped by Marc Almond, Sarah Leonard and the Doric Quartet. Francis Bacon's *Study after Velasquez's Portrait of Pope Innocent X* becomes a sound collage that swirls frighteningly down to eternal darkness, and more cheerfully, minimalist-ish rhythms wake up the woods in response to David Hockney's *The Arrival Of Spring*. Finally, inspired by a John Craxton painting, *Arcadia* draws on Cretan folk music and is brilliantly performed by Harle, Steve Lodder and Pavel Sporcl. *SH*

Sound Quality: 90%





## Tune Audio

*"a sound less ordinary"*

Tune Audio horn loudspeakers bring the true sound of musical perfection into the domestic environment. The range includes the Prime, Marvel and Anima models, and an active full-horn sub. Engineered and constructed to superb standards, the range is available in an almost infinite variety of finishes built to order.

The horn speakers are the result of many years of experimentation and development, and offer high efficiency, low distortion and immense dynamic range. The designs bring listeners as close to the original recording as is possible.

Sensibly priced and of an acceptable size for 'real world' use, Tune Audio speakers are genuinely exceptional.

## ModWright Instruments

*"for the most discerning listener"*

Anyone can hear music, and many systems will play music. But to truly hear the music on a level that transports a listener to a different time and place requires absolute reproduction of sound.

Equipment from ModWright Instruments will bring a listener this experience: true sound from a true enthusiast's company.

The range includes pre-amplifiers, power amplifiers and a truly superb integrated amplifier - all built to extreme standards using the highest quality components.

A perfect listening experience should feel amazing, and that is what ModWright Instruments equipment achieves.



# BD Audio Ltd

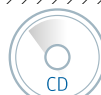
retail, import, distribution

Tune Audio, ModWright Instruments, Acoustic Solid, Signal Projects, Aktyna, Audio Note UK, Ortofon, van den Hul, DSPeaker, RJC Audio, Puresound, Transcriptors, Pro-Ject, Moth, Cartridge Man, London Decca..... and much more

01684 560853

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

[info@bd-audio.co.uk](mailto:info@bd-audio.co.uk)



COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



### ELGAR/DVORAK/TCHAIKOVSKY

Cello Concerto/Rondo; Silent Woods/Rococo Variations  
Jean-Guihen Queyras, BBC SO/Jiri Belohlavek

Harmonia Mundi HMC 902148

We've had memorable recordings of the Elgar by French cellists, Paul Tortelier and André Navarra. Now here's a third: Queyras plays with complete empathy and consummate technique. Possibly, however, for some his playing will seem too self-contained. The BBC SO gives excellent support – a shame Belohlavek has not done more Elgar with them – and the orchestra is especially fine in the balletic Tchaikovsky variations after the cadenza. But it's a shame that cellists (Isserlis a lonely exception) still play the Fitzhagen version, not the original. Dvorak's homely pieces are sandwiched between these major works. Excellent sound from the BBC's Maida Vale Studios. **CB**

Sound Quality: 95%



### BRUCKNER

Symphony 1 (Vienna version)  
Lucerne Festival Orchestra/Claudio Abbado

Accentus ACC 30274

Duplicated in DG's celebratory 41CD Abbado *Symphony Edition* (the only non-reissue item) this 2012 Lucerne live recording shows a departure from the Linz version, which Claudio Abbado has recorded twice with the VPO (Decca 1969/DG 1996). While the symphony may not be a priority for Bruckner collectors it is a fascinating work, with hints of Wagner and motifs that would resurface later – the first of his symphonies he felt warranted performance. The one here is characteristically lucid and steady: a contrast with Jochum's excitable Dresden/EMI account of the Linz revision. **CB**

Sound Quality: 80%



### DEBUSSY/MAHLER

L'après-midi d'un faune/Symphony 4  
RAM Soloists Ensemble/Trevor Pinnock

Linn CKD 438 (SACD hybrid; downloads up to 192kHz/24-bit)

These are chamber music reductions prepared by Schoenberg pupils for a private music performance society in Vienna. The Mahler (arranged by Erwin Stein) has 14 players, with piano and harmonium prominent. I don't feel that the music itself is really illuminated by these transcriptions: the performances (recorded at St George's, Brandon Hill, Bristol) are just enjoyable in their own right. Highlights are the flute playing of Mi Re Seo in the Debussy and soprano Sónia Grané in the Mahler finale. And of course it is interesting to hear Trevor Pinnock, whom we associate with much earlier composers, directing Mahler. **CB**

Sound Quality: 90%



### VERDI

Missa da Requiem  
Anja Harteros, Elina Garanca, Jonas Kaufmann, René Pape, La Scala Orch & Ch/Daniel Barenboim

Decca 478 5245 (two discs)

This Unital live production from La Scala has a more devotional character than Barenboim's Chicago version for Warner – rather more exciting later in the work. 'A dream cast' other reviewers have suggested, but the women (Harteros outstanding) are better matched than the men: Kaufmann too 'operatic' in his delivery for my taste, and Pape stressing syllables and somehow standing apart. I'd say buy this for the sensitive orchestral detail and stirring choruses. Timings are not far removed from the Karajan/La Scala *Requiem* on DVD [DG 0440 073 4055 4]. **CB**

Sound Quality: 75%



Great savings in-store and online. For the latest prices and offers visit [www.ssav.com](http://www.ssav.com) or contact your local store

# SALE

NEW **ESSAV**  
.COM



**MARANTZ • CD6005 / PM6005 • CD / AMPLIFIER**

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

**£1249**  
OR LESS **SAVE**  
**£250**



**CYRUS • 8 DAC • AMPLIFIER / DAC**

A powerful integrated amplifier with its 2 x 70 w power output. Includes six analogue inputs, five digital inputs, a headphone amplifier and pre-amplifier output.

**£299**  
OR LESS **SAVE**  
**£50**



**NAD • C 326BEE • AMPLIFIER**

The latest in NAD's range of affordably priced, yet very high performance amplifiers. Features 7 line inputs, including tape in/out and delivers 2 x 50W continuous power into both 4 ohms and 8 ohms.

**£179**  
OR LESS **SAVE**  
**£80**



**YAMAHA • CRX-550 • CD / DAB SYSTEM**

Yamaha's CRX-550 offers excellent audio quality from a CD / DAB System. Includes iPod digital connection for superior audio performance, USB input and subwoofer out.

**£199**  
OR LESS **SAVE**  
**£300**



**NAD • VISO 1 • WIRELESS MUSIC SYSTEM WITH DOCK**

Ideal for wirelessly playing music from your iPod, iPhone, iPad or any Bluetooth device enabled smartphone, tablet or laptop with renowned NAD performance, simplicity and value.

**£249**  
OR LESS **SAVE**  
**£150**



**PIONEER • XC-HM81 • CD / NETWORK SYSTEM**

Play audio from your Apple device, smartphone or external storage device via a USB connection or stream directly via AirPlay® and DLNA when connected to your home network.

**SAVE £400**  
WHEN YOU TRADE-IN ANY  
ARCAM DISC PLAYER

**£999**  
OR LESS



**ARCAM • FMJ BDP300 • 3D BLU-RAY PLAYER**

Arcam's BDP300 Blu-ray player delivers outstanding sound quality with audio CDs along with excellent movie performance from either 2D or 3D films.

**£699**  
OR LESS **SAVE**  
**£100**

**MONITOR AUDIO  
MASS  
SPEAKER PACKAGE**

Enjoy jaw-dropping audio dynamics and décor-friendly styling. MASS makes the introduction of high quality home cinema sound into any living space a simpler and more satisfying experience.



NEW **ESSAV**  
.COM



**YAMAHA • RX-V675 • AV RECEIVER**

New highly capable and versatile 7.2-channel Network AV receiver with multi-zone compatibility. Also Available: YAMAHA RX-V375 & RX-V475

**REL • T-7  
SUBWOOFER**

Delivers the exceptional low-bass performance, rugged build quality and unique design of larger REL models at a more affordable price. T7 can be used to wonderful benefit to underpin both two-channel and multi-channel systems.



**£579**  
OR LESS **SAVE**  
**£70**

**ESSAV**  
.COM



**PIONEER • N-50 • MUSIC STREAMER**

Award-winning audiophile Network player supporting AirPlay® and DLNA wireless technologies, allowing you to stream music wirelessly from your iTunes libraries or iOS devices. When connected to your home network, you can also enjoy a wide variety of online music services remotely.

**£499**  
OR LESS **SAVE**  
**£100**



**FREE**  
PSB PFS-27  
SPEAKER STANDS  
WORTH £199

**PSB  
IMAGINE MINI  
SPEAKERS**  
Compact speakers with startlingly big and commanding sound.

**WALNUT FINISH**

Also Available: PSB IMAGINE B £699 SAVE £200

PLEASE NOTE: SOME BRANDS/PRODUCTS ARE NOT AVAILABLE AT ALL STORES. SPECIAL/ADDED VALUE OFFERS ARE NOT IN CONJUNCTION WITH ANY OTHER OFFER (NICWAOO). ADVERT VALID UNTIL 10/01/2014. E&OE



Denon's D-M39DAB, CD/DAB system boasts serious hi-fi quality sound in a compact body and is complemented with the award-winning 2020i bookshelf speakers.

\*Standard Finishes

**£299**  
SAVE £129

**DENON & Q ACOUSTICS**  
D-M39DAB • CD/DAB SYSTEM  
2020i • SPEAKERS\*



**£379**  
SAVE £59

**SENNHEISER & HRT**  
MOMENTUM • HEADPHONES  
MICROSTREAMER  
USB DAC / HEADPHONE AMP



A truly remarkable package combining the NAD D 3020 with the Concept 20 speakers. Delivers a level of performance previously only available to audiophiles investing in high-end models.

**£629**  
SAVE £119

**NAD & Q ACOUSTICS**  
D 3020 • AMPLIFIER / DAC  
CONCEPT 20 • SPEAKERS



**£549**  
SAVE £99

**NAD**  
VISO HP50 • HEADPHONES  
D 1050 • DAC/HEADPHONE AMP



Enjoy great sounding music from diverse sources, including CD, Internet radio, music-streaming services, mobile devices, TV and other digital audio sources.

**£579**  
SAVE £169

**MARANTZ & MONITOR AUDIO**  
M-CR610 • CD/NETWORK SYSTEM  
BRONZE BX2 • SPEAKERS



**£279**  
SAVE £69

**GRADO & MERIDIAN**  
SR80i • HEADPHONES  
EXPLORER  
DAC/HEADPHONE AMP



The stylish and compact D 7050 combines NAD's most advanced digital platform, Direct Digital technology with Apple Air-Play creating the ultimate plug 'n play solution for wireless music.

**£1399**  
SAVE £199

**NAD & KEF**  
D 7050 • NETWORK AMPLIFIER / DAC  
LS50 • SPEAKERS

**DACS**



**£539**  
OR LESS

**ARCAM • irDAC • DAC**

Designed to be the heart of a digital system. Includes asynchronous USB and a direct iPod input to optimise sound quality. All inputs can be controlled through an IR remote that will also control iPods, iPhones, PC and Mac computers.



**£1899**  
SAVE £250

**NAIM AUDIO & TANNOY**  
UNIQUE 2  
STREAMING SYSTEM  
DC6T SE  
SPEAKERS


Combines high-resolution 32bit/192kHz streaming capability and a DAB/DAB+ tuner.



**£899**  
SAVE £209

**ARCAM & Q ACOUSTICS**  
FMJ A19  
AMPLIFIER  
2050i  
SPEAKERS\*

Award-winning amplifier and floorstanding speakers.  
\*Standard Finishes



**£539**  
OR LESS

**AUDIOLAB • M-DAC • DAC / PREAMP**

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



**£449**  
OR LESS

**MERIDIAN • DIRECTOR • DAC**

Featuring a range of connectivity, Director can be used with a wide selection of traditional components as well as high-resolution USB based sources. Director features technology drawn from Meridian's award-winning Reference 800 Series, offering up to 24-bit resolution and 192kHz sampling.

**FREE**  
CHORD USB  
SILVERPLUS (1.5m)  
WORTH £55



Great savings in-store  
and online.

For the latest prices  
and offers visit  
[www.ssav.com](http://www.ssav.com) or  
contact your local store

# SALE



**BOWERS & WILKINS • CM10**  
Introducing the CM10, a new  
flagship for the CM series that  
combines technologies from the  
Reference ranges with innovative  
new construction techniques.  
The result is simply spectacular.

NEW **ESSAV**  
.COM



**KEF • R500**

The smallest floorstanders in  
the R Series. Uses the latest  
generation Uni-Q driver array  
and two 5.25-inch aluminium  
bass drivers. Its slim proportions  
make it perfectly suited for  
any interior.

**ESSAV**  
.COM



**PMC • TWENTY-23**  
An open, engaging and  
communicative loudspeaker that  
defies its size both the depth of  
bass and scale of presentation by  
taking any music or film material  
in its stride. The sound is vivid  
and dynamic and delivered with  
authoritative bass.

**ESSAV**  
.COM



**PMC • TWENTY-22**

An astonishingly natural  
balance and high dynamic  
capability are the hallmarks  
of this speaker. It creates a  
precise sound stage and  
profound bass performance  
from its compact cabinet.

**ESSAV**  
.COM



**MONITOR AUDIO • BRONZE BX2**  
Award-winning stand/bookshelf  
speakers featuring a 25mm  
C-CAM tweeter and 165mm  
bass/mid driver. Compact in size,  
but equipped to reproduce sound  
of immense stature and detail.

£225  
OR LESS **SAVE**  
£24

**MONITOR AUDIO  
SILVER 6**

2.5 way speaker system  
combining excellent dynamics  
with a naturally rhythmic  
sonic character and tight,  
controlled bass. The Silver 6 is  
an outstanding communicator  
of music and film audio.

NEW **ESSAV**  
.COM



**SONOS  
THE WIRELESS HI-FI SYSTEM**

**FREE BRIDGE**  
FOR EASY WIRELESS SETUP  
WITH PURCHASE OF PLAY:1, PLAY:3,  
PLAY:5 OR PLAYBAR  
Promo ends Dec 31, 2013. While stocks last.



**ESSAV**  
.COM

**FREE  
PSB PFS-27  
SPEAKER STANDS  
WORTH £199**

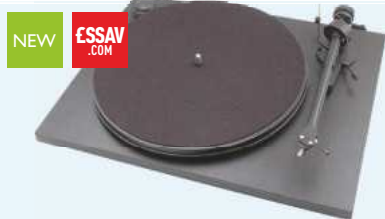
**SONOS & PSB  
PACKAGE**

- CONNECT: AMP
  - IMAGINE MINI  
SPEAKERS
- WALNUT FINISH ONLY



£799  
OR LESS

**SAVE**  
£199



NEW **ESSAV**  
.COM

**PRO-JECT • ESSENTIAL II • TURNTABLE**

Entry-level "plug n' play" two speed turntable with single piece  
aluminium tonearm and pre-fitted Ortofon OM5e cartridge.



£269  
OR LESS **SAVE**  
£30

**NAD • C 556 • TURNTABLE**

Time to enjoy vinyl collections with extraordinary quality!  
With a minimalist design, the C 556 turntable offers accurate  
reproduction by using performance-focused parts and  
components that put music first.



NEW **ESSAV**  
.COM

**PRO-JECT • 1 XPRESSION CARBON • TURNTABLE**

With its Carbon armtube and supplied Ortofon 2m Silver cartridge,  
the 1 Xpression Carbon sets new standards in its price range.

FOR THE LATEST PRICES AND OFFERS VISIT [WWW.SSAV.COM](http://WWW.SSAV.COM) OR CONTACT YOUR LOCAL STORE

**Stores Nationwide**

We have a national network of stores and a hard-won  
reputation for outstanding customer service.

**Website**

Visit our new website for a streamlined on-line experience  
with a better defined product section, more product choices  
and an improved search engine.

\*THESE STORES ARE FRANCHISED AND OPERATE UNDER A LICENCE AGREEMENT TO  
SEVENOAKS SOUND & VISION

Aberdeen • 01224 252797  
Bishop's Stortford • 01279 506576  
Bristol • 0117 974 3727  
Bromley 020 8290 1988  
Cambridge • 01223 304770  
Chelsea • 020 7352 9466  
Cheltenham • 01242 241171  
Chorleywood • 0845 5046364  
Epsom • 01372 720720

Exeter • 01392 218895  
Guildford 01483 536666  
Holborn • 020 7837 7540  
Kingston • 020 8547 0717  
Leeds (Wetherby) 01937 586886  
Loughton • 020 8532 0770  
Maidstone 01622 686366  
Norwich • 01603 767605  
Oxford 01865 241773

Reading • 0118 959 7768  
Sevenoaks 01732 459555  
Sheffield • 0114 255 5861  
Southampton • 023 8033 7770  
Tunbridge Wells 01892 531543  
Weybridge 01932 840859  
Witham (Essex) 01376 501733  
Yeovil • 01935 700078

Please Note: Some brands/products are not available at all  
stores. Special/added value offers are not in conjunction with  
any other offer (NICWAOO).

**SEVENOAKS**  
SOUND & VISION

ADVERT VALID UNTIL 10/01/2014, E&OE



**Paul Miller**  
Editor

Technician and writer on all things audio for some 30 years, Paul Miller took over the editor's chair in 2006. He invented the QC Suite, used across the audio industry

# Which to choose – 96 or 192?

Many audiophiles report hearing subtle benefits from the highest res. 192kHz music downloads even if 96kHz renderings are notionally identical. Don't dismiss the idea, says **Paul Miller**

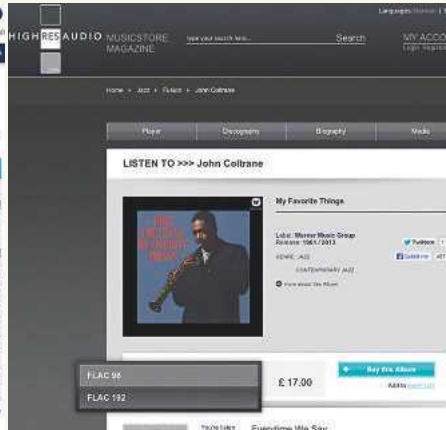
Our shared interest in high quality music reproduction is never free of the 'numbers game'. The parameters may change but bigger is usually touted as better, and never more so than with hi-res music downloads where 24-bit/192kHz renderings typically attract the highest premium. The point is, many audiophiles claim to hear a very real benefit from these 192kHz FLAC or WAV files even if 24-bit/96kHz versions offering no less a practical bandwidth or resolution are available at slightly lower cost. So what is going on?

## KNOW YOUR DOWNLOADS

It would be easy to dismiss these observations as mere wishful thinking but I believe there's a good reason for suggesting 192kHz renderings may indeed have the capacity to offer better sound quality. What I don't believe, however, is the explanation normally trotted out that 192kHz recordings have twice the bandwidth of 96kHz files (96kHz versus 48kHz, although necessarily slightly less in practice), offering more 'musical information', less aggressive filtering and reduced phase distortion at the upper limits of the audioband.

This might be the case if the music download was a bang-up-to-date album recorded, mixed and mastered at 192kHz and the 96kHz version was a direct downsample. But that scenario is pretty rare. Most 'hi-res' downloads of legacy recordings are sampled from analogue tape and the premium 192kHz offerings are typically upsampled versions of the 48kHz or 96kHz digital copy. So they cannot offer any more 'audio information' than the lower sample rate files or obliterate the phase

'It would be easy to dismiss these observations as wishful thinking'



ABOVE: Many high-res music downloads are available from both [www.hdtracks.com](http://www.hdtracks.com) (left) and [www.highresaudio.com](http://www.highresaudio.com) (right) at 24-bit/96kHz or 24-bit/192kHz for a small premium

distortions already 'built-in' by the original anti-aliasing filter.

## BACKWARDS PROGRESS

The reasons for 192kHz files having the potential to sound better has more to do with the silicon employed in today's outboard USB DACs. Regular readers will be

familiar with my views on modern CD players versus those from the pre-DVD era and the theme is much the same here.

Frankly, the multi-purpose CD/DVD/BD ROM drives employed in today's universal

players cannot hold a candle to the last generation of Philips' single-beam, swing-arm mechanism and SAA7310 decoder when it comes to dedicated CD replay. That latter day mech/decoder combo could track through a 3mm hole in a disc! The DACs meanwhile were truly 44.1kHz-centric with clocks and oversampling based on this original core sample rate.

Modern DACs are 192kHz-centric because they are primarily intended for use with DVD/BD media. And here lies the clue

to the sonic differences between 192kHz music downloads and their lower-rate brethren. Most of today's USB DACs will upsample all incoming data rates to 192kHz. So if the file you're playing is already a native 192kHz rendering then there'll be at least one stage of processing avoided in the DAC's silicon.

## WHERE TO UPSAMPLE?

What we're left with is an evaluation of the differences – technical and subjective – between the upsampling algorithms applied in software by the record companies in producing their 24-bit/192kHz files for download and the upsampling applied in real time by your DAC. There's every chance the professional upsampling tools are going to deliver a different, potentially better sounding result than the DAC's on-the-fly upsampling of 96kHz media. So 192kHz files may well sound different from 96kHz 'equivalents' via the same DAC even if the audio content is identical.

Of course, the very latest DACs operate at 352.8/384kHz to replay DXD media files. So will the DXD-mastered music content from the likes of 2L sound better here too? Probably... ☺



## Barry Fox Technology journalist

Barry Fox trained in electronics with the RAF and worked as a patent agent, but he gave that up to enter journalism. He is one of the world's top technology writers

# A digital divide

Both the music industry and the BBC are engaged in promoting new ways of listening to music, in hi-res disc form and via online streaming. So, asks **Barry Fox**, what's in it for audiophiles?

**T**he music industry is now in schizo push-pull mode: pushing for 'hi-res' sales at higher prices, yet pulling down quality by making low-res material ever easier to access online. At the high-end, MESA, the Media and Entertainment Services Alliance, is trying to herd cats and coordinate the launch of High Fidelity Pure Audio – audio-only 96/24 or better Blu-ray discs which (sometimes) come with the free option to download a FLAC copy of the content.

Universal has led the Pure Audio push with a good selection of titles [see p109] and the 'no compression, no compromise' tag-line. Warner is on-board in France and Australia, and Sony Music announced 'a new high-resolution audio initiative' which sees 15 hi-res tracks (from Warner, Universal and Sony) pre-loaded on some Sony players.

But, evoking unhappy memories of the way the music companies screwed up the launch of DVD-Audio and SACD, Sony launched its hi-res initiative with a party at an open-plan nightclub totally unsuited to hi-res demonstrations.

Thanks to invites with wrong times – or no invites at all – I and others with an interest in hi-res missed a round table discussion on hi-res with the likes of David Chesky who had been flown

in from the US for the event. Instead we got a rock band and DJ set.

Trying to shout talk over the boombox din, David Chesky joked that the only journalist who had shown any interest in him was from a UK red-top tabloid, 'desperately looking for some way to tie hi-res into sex-soaked scandal, like they were wearing headphones and listening to 96/24 audio at the time...' When I left there was no information

**RIGHT: Find out more about the BBC's Playlister digital music server at [www.bbc.co.uk/music/playlister](http://www.bbc.co.uk/music/playlister). According to the broadcaster, in the months to come there are plans to link Playlister to TV programmes also**



on paper or flash stick to explain what the costly event had been intended to promote. It makes you weep. As happened with DVD-Audio and SACD, Divided They Will Fall. Meanwhile the low-res pull gathers strength with machine-like efficiency.

### PLAYLISTER NOW LIVE

The BBC has now gone live with Playlister, which lets anyone, anywhere in the world who is listening to any BBC radio station online – either live or through a BBC iPlayer catch-up service – click on a song they hear and like. The title is then added to a personal 'playlist' of favourites, which is stored indefinitely. Copyright limits playback of tracks to 30-second snippets,

but Playlister is designed to export a user's playlist to third-party online music sites, currently Spotify, Deezer or YouTube. The site then searches for the tracks, and offers the chance to listen again at any time.

Once I had created the necessary online identity accounts (which is free and made as easy as possible) the Playlister service worked remarkably well. YouTube identified five randomly varied jazz and classical tracks correctly, offering me the chance

either to watch videos or audio-only versions of the same songs.

I asked Ben McOwen Wilson, YouTube's European Content Director, about copyright, because people are uploading bootleg videos and rips from 78s and LPs, with 'borrowed' photos of the musicians.

'We use a tool called Content ID,' he told me. 'Any rights owner can upload their music material to create a digital audio fingerprint. All new material posted is then automatically scanned for matches. The rights holder then has a choice. They can block the posting, and replace it with a warning message. Or they can track who is watching or listening, for demographic research. Or they can monetise, by charging for legitimate copies or adding adverts.'

'Over the last three years YouTube has become the modern equivalent of the water-cooler, where people share recommendations. But unlike the water-cooler, YouTube is measurable.'

The downside, of course, is that the audio quality of this musical water-cooler is a lot less than hi-fi.

If only the Pure Audio campaigners could find a way of harnessing the power of tools like Playlister and YouTube, we might then see serious audio become a talking point. ☺

'The downside is the audio quality of this musical water-cooler is a lot less than hi-fi'



## Barry Willis

Journalist for top American audio-video publications

While his main interest is high-end audio, Barry Willis also writes about the culinary industry, visual art and theatre for a huge variety of US newspapers and magazines

# Our own worst enemy

Can the high-end hi-fi industry sell more components by associating itself with high culture? **Barry Willis** thinks not, and offers lessons drawn from his own experiences by way of proof

In the 1980s and early '90s, I lived in Atlanta, Georgia, whose bustling economy is built not on agriculture or industry but on its convenience as a distribution centre. It's a deal-making, marketing-and-promotions kind of town, a place that nurtures an avaricious business mentality lurking beneath a veneer of Southern civility.

Atlanta boasts a disproportionate percentage of recently wealthy people, all of them keenly aware of the social symbolism inherent in everything from desirable addresses and automobiles to designer handbags and wristwatches.

### STINTS IN STORE

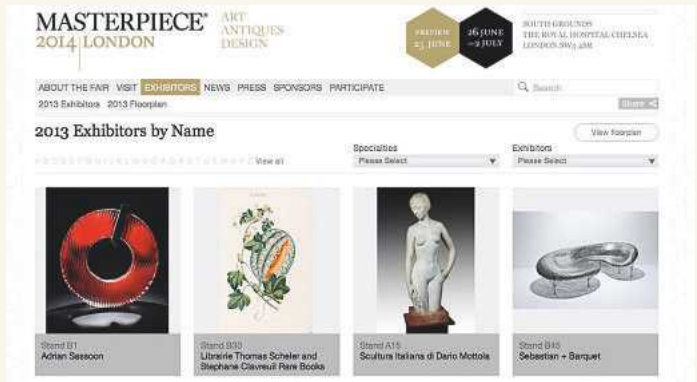
I spent the majority of my working life there involved in one way or another with the audio industry, including stints at four high-end shops in the city's northwest quadrant, home to most of its disposable income.

At the last two, I was an annoying and unheeded advocate of marketing a lifestyle rather than selling high-performance equipment.

I suggested repeatedly that rather than emphasising the differences among the brands we sold, we instead ought to be offering hi-fi with everything that it should accompany: original artworks, fine carpets, beautiful furniture, and cutting-edge interior design services. (See Steve Harris's 'Surprise in store', October *HFN*.)

One of my employers had the insight to agree with this but not the financial resources to make it a reality. There was sufficient surplus, however, to pay for recurring full-page advertisements in the programme of the Atlanta Symphony, an ensemble immortalised in many Telarc recordings. The effort yielded no increase in our revenue. One would think – we

**RIGHT: Modern ceramics, fine sculpture, contemporary furniture... like last year, Masterpiece London so far has no audio products listed for its 2014 event (see [www.masterpiecefair.com](http://www.masterpiecefair.com) for more)**



did – that associating ourselves with high culture would attract at least a few paying customers. It didn't.

Marketing experts say that for any product or product category to acquire high status, it must be associated with other high-status products. Artworks and

fancy furnishings reinforce each other's value by proximity – hence, the panoply of desirable goods bid upon at the 'Masterpiece London' event mentioned by Ken Kessler towards

the end of his October 'Off the Leash!'

So why has great hi-fi never achieved the cult status of sought-after cars and paintings? It's a matter of neglect that the audio industry has yet to produce an affordable, reliable, easy to set up and easy to operate high-quality music system for everyman, but one of sheer promotional incompetence that we have no equivalent of Lamborghini or Francis Bacon.

In a world where nearly everyone loves music, it's incomprehensible that some of the names featured in full-page spreads in journals such as this are not household names. In the States, at least, the only such name is 'Bose', which is the one least likely to be mentioned in any audiophile journal.

There are many explanations, each with its grain of truth. One is that high-performance audio has never proven its worth to ordinary music lovers. The small differences that audiophiles obsess about are of no importance to most people (for example, the difference between SACD and CD). Likewise, most advancements in performance (advancements in convenience have not, of course.)

Meanwhile, advertising for audio products is almost always embarrassingly geeky, and almost never hooks people emotionally. If music isn't about emotion, what is it? Probably the most damning fact is that hi-fi is a self-referential cult without any meaningful connection to the larger world. For that we have no-one to blame but ourselves.

### JUST A WISH...

For the past two decades I have resided in Marin County, California, a community far wealthier than Atlanta and one not nearly so taken with superficialities. I've hosted many dinner parties and dazzled many guests with wildly eclectic music from a huge variety of great gear.

All have been truly thankful for the transcendent experience; many have expressed the wish to recreate it in their own homes. To date, not one has followed up on that wish. ☹

'Hi-fi is a cult without any meaningful connection to the larger world'



## Jim Lesurf Science Journalist

Jim Lesurf has spent a lifetime in audio, both as an engineer at UK hi-fi company Armstrong and reader in Physics and Electronics at St Andrew's University

# If you can't beat 'em...

Annoyance at being unable to source some much needed analogue parts for a DIY project turns to delight as **Jim Lesurf** realises he can experiment in the digital domain to his heart's content

It's now well over a decade since manufacturers like Wadia and dCS introduced radical new approaches to the design of upsampling digital-to-analogue converters. These were combined with the idea that 'causal' filter designs behaved more like real-world physical processes, so should sound more 'natural'.

While people still debate whether this is actually the case or not, it has become common for commercial DACs to offer a set of reconstruction filters, allowing the user to choose one they prefer.

I began thinking about this again a few months ago when I was having difficulty finding a supplier of old-fashioned analogue filters, which I needed for a 'DIY' headphone DAC.

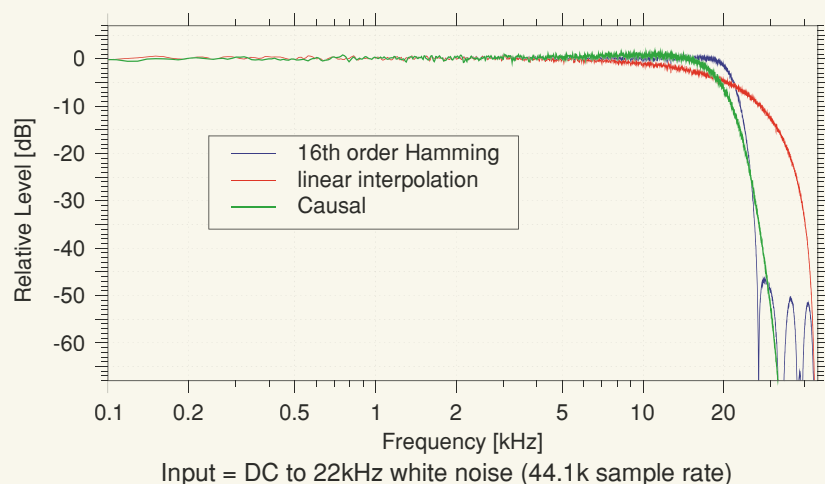
### DIGITAL DIY

Analogue filters began to disappear from the market when digital filters appeared. Ten years ago, good digital filters for a DAC demanded dedicated hardware. But it occurred to me that modern home computers are vastly more powerful than they once were. This gave me an idea. If you can't beat 'em, join 'em!

So I set about writing some demo/test programs that would run on a computer and 'upsample' input audio sample streams in ways

that the user could choose or design for themselves. Let's call it DIY upsampling. Don't like the filters on offer with your DAC? No problem. Change them.

Given a computer and a decent DAC the user can try out a variety of reconstruction filters. Time-symmetric, causal... provided the computer is fast enough, you just need a decent DAC that can accept the higher sample rates. For my first tests I decided to keep things



ABOVE: Frequency response 'shapes' of Jim's DIY digital upsampling filters with 44.1kHz media

simple and focus on standard rate source material – 44.1kHz and 48kHz – and use x2 upsampling for test purposes. The results I obtained certainly won't see dCS going out of business, but they were quite encouraging nonetheless.

For my initial experiments I used an ARM CPU-powered computer with its own internal DAC. And to start with I developed four filters. Two were 'classic' time symmetric examples of the kind used in most

CD players, starting from the days of the first Philips chipsets. The third was a 'linear interpolation' filter similar to the 'Legato Link', which Pioneer championed. The fourth filter I chose was a 'causal' design that mimicked a series of analogue low-pass stages and had a time-response with no pre-ringing.

I also wrote two programs. One processes 44.1kHz/48kHz WAV files to create new 'upsampled' 88.2kHz/96kHz

files with the chosen filter applied. These could then be played or analysed just like other high rate files. The other program is an upsampling player which enables you to immediately hear the results. You can find both the programs and the source code on the software section of my [audiomisc.co.uk](http://audiomisc.co.uk) website.

### NO RISK

When I began designing and building audio equipment everything was analogue and you had to know which end of a soldering iron not to hold. Today you often can't even get the analogue electronics components you need!

Yet the good news is that 'digital' means you can now DIY in software, with no risk of your dropping molten solder onto the carpet and burning a hole in it. Whereas a few months ago I was cursing the lack of analogue components, now I am experimenting without being handicapped by my poor eyesight or fumbling fingers. And I was able to tweak the programs and then sit down and listen to the results. Oh, and no carpets were harmed in the process. ☺

'Don't like the filters offered with your DAC? Change them. It's DIY upsampling'

DOUG BRADY HIFI

— SINCE 1960 —



# SIX OF THE BEST

OUR PERSONAL PICK OF THE VERY BEST MID-PRICED INTEGRATED AMPLIFIERS REALLY TAKES SOME BEATING



REGA ELICIT R



EXPOSURE 3010S2



ARCAM FMJ A38



SONNETEER ALABASTER



UNISON RESEARCH SIMPLY ITALY



NAIM NAIT XS

## HANDPICKED HIFI

With some of the finest demo rooms in the North, and arguably one of the best selections of integrated amplifiers currently available, Doug Brady offers you the opportunity to audition these outstanding sub-£1600 models in real comfort. Relax, and make an informed choice.

ARCAM | B&W | BELLES | CHORD | DENON | EPOS | EXPOSURE | FUNK FIRM | HARBETH | KUDOS | LFD  
MAGNEPLANAR | MICHELL ENGINEERING | MONITOR AUDIO | MUSICAL FIDELITY | NAIM | NEAT | ORTOFON | PMC | PRIMARE  
PROAC | PROJECT | REGA | RENAISSANCE | ROTHWELL | RUARK | SME | SONNETEER | UNISON RESEARCH | WILSON BENESCH



## Steve Harris Contributing Editor

Steve Harris edited *Hi-Fi News* between 1986 and 2005. He loves jazz, blues music, vinyl and vintage hi-fi and anything that makes good music come to life

# Black and blu

As Universal Music begins offering material from its back catalogue in hi-res on Blu-ray disc, **Steve Harris** notes that the other physical format the music industry is promoting is vinyl...

**N**ot long ago I met an old friend, yet another who, as he told me, had bitten the bullet and put all his music on a computer hard drive.

All his CD music, that is. Paul had been a keen audiophile in his younger days, when his soul's delight was a Thorens TD124 with 12in SME arm, in a custom marble plinth. But around 13 years ago, when he and his better half upped sticks and moved to a Greek island, that marble plinth was just too much. The turntable stayed in the UK.

Paul had to content himself with a CD system, while dreaming of the glory that was ancient vinyl. Eventually, though, he did manage to get the Thorens shipped over, and started revisiting his old LPs.

### IMPRESSIVE BANNER

It was just as I caught up with Paul again in Greece that Universal Music Group announced its launch of Blu-ray music discs, under the impressive banner of High Fidelity Pure Audio [HFN Dec '13].

Blu-ray music ought to succeed where DVD-Audio failed, because at least people have the means of playing it. Sony wiped out the rival HD-DVD system and got Blu-ray established by the expedient of putting it in every Playstation, and it's since become standard in home theatre systems.

But even if the record industry majors would like to promote Blu-ray music as the cutting-edge new format of the 21st century, they've long since realised that the only physical medium that's growing is the vinyl LP. They've all moved from repressing vinyl to re-pressing it.

At the same time, they've also realised that even people who love vinyl might want something to play

**RIGHT: Late greats like Marvin Gaye and Lou Reed can now be heard on Blu-ray. Discs typically cost £16.99 at <http://store.universal-music.co.uk/restofworld/artists/pure-audio/icat/pureaudio>**



on their computer or portable device as well. In 2011, Universal Music Distribution Group launched an online store called Groovetown Vinyl ([www.groovetownvinyl.com](http://www.groovetownvinyl.com)), offering lossless CD-quality FLAC files bundled with vinyl.

'Music fans have fallen in love all over again with the vinyl experience, from the packaging to the distinctive sound to the collectability,' gushed UMDG's Mitch Rotter in the press announcement, 'And the FLAC file provides the ease of digital listening without the sacrifice that accompanies digitally compressed audio files.'

But apparently there were few takers for a relatively expensive FLAC/vinyl combination. Groovetown Vinyl seems to have sunk without trace, as the

domain name now leads you to a dating site school in Osaka, whose stated aim is to brighten the bad image of the dating industry in Japan.

More in line with market realities is the 'Back To Black' offering from Universal's UK-based online record sales arm Uvinyl, where you can buy a vinyl album and get a free MP3 download.

If you've dipped into the 'Back To Black' listing, you'll notice that the first wave of

Blu-ray High Fidelity Pure Audio releases does little more than round up material from the usual suspects, including Nirvana, The Stones, Marvin Gaye and Bob Marley. Also carried over are Nick Drake's *Five Leaves Left* and *The Velvet Underground & Nico*, a title now made sadly topical by the demise of Lou Reed.

### SAME OLD SONG

Meanwhile, up on the main Universal website, <http://store.universal-music.co.uk>, you can buy *Back To Black*, the Amy Winehouse album which has outsold all those offerings on Uvinyl, in any format you like. Nothing comes free here, with prices ranging from £7.99 for the MP3 album to £13.99 for the vinyl to £16.99 should you be tempted by the Deluxe Edition FLAC download.

It all reminds me of the story about the 1960s Motown vocal group, The Four Tops. In the studio, trying to create a follow-up to 'I Can't Help Myself,' they just kept falling back on the infectious riff they'd used before.

Finding that they couldn't help playing 'The Same Old Song,' they went with the flow and made that the title.

And it appears that today's music industry still wants to keep all those old hits selling. It's the same old song, it's just a different medium since you've been gone. ☺

'The major music labels have moved from repressing vinyl to re-pressing it'

Award-winning range of cartridges  
and cables

All Van den Hul cartridges are personally  
hand built and tuned by Dutch Master  
cartridge designer A.J. van den Hul

0% Finance available  
on most products\* \*\*

Handmade in The Netherlands

*van den Hul*



Van Den Hul Crimson cartridge

IsoTek Genesis & Super Titan power conditioner



**IsoTek**<sup>®</sup>

Designed to get the very best  
performance from your system

Award-winning range to suit  
every budget

0% Finance available on most  
products\* \*\*

Handmade in England



*World Class Audio Systems*

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



Range of award-winning  
Electronics

Engineered to perfection  
for superior sound

0% Finance available  
on most products\* \*\*

**marantz**<sup>®</sup>



NEW 14 Series - Marantz SA-14S1 cd/sacd player / PM-14S1 integrated amplifier



EAR/Yoshino V12 integrated amplifier



Award-winning range of beautiful  
valve amplifiers

Designed by Tim de Paravicini

0% Finance available on most  
products\* \*\*

Handmade in England

**bourne mouth showroom**

**t. 01202 911 886**

9:00-5:00 Tue - Fri / 9.30-3.00 Sat

e-mail: [bourne mouth@jordanacoustics.co.uk](mailto:bourne mouth@jordanacoustics.co.uk)

**glenrothes showroom**

**t. 01592 744 779**

9:00-5:00 Mon - Fri / Closed Saturday

e-mail: [glenrothes@jordanacoustics.co.uk](mailto:glenrothes@jordanacoustics.co.uk)

**0% Finance up to 36 months\* \*\***

Available on most brands.

**Classic Finance on our used products\* \*\***

All of our used equipment is available  
on classic finance (13.9% APR).

**Trade-in/ Part-exchange\*\***

We offer great trade-in/  
part-exchange deals.

**Please call or e-mail**

for further details and a quotation.

\*subject to status \*\*subject to conditions

Follow Jordan Acoustics:



issuu



facebook



twitter

## YOUR VIEWS

# Sound Off!

Correspondents express their own opinions, not those of *Hi-Fi News*. We reserve the right to edit letters for publication. Correspondents using e-mail are asked to give their full postal address (which won't be published). Letters seeking advice will be answered in print on our Sound Off pages, but due to time constraints we regret we're unable to answer questions on buying items of hi-fi or any other hi-fi queries by telephone, post or via e-mail.

## VIBRATION AND VOLUME CAN ISOLATING KIT INCREASE LOUDNESS?

Recently I decided to place my hi-fi equipment on upgraded racks and bases, later installing a number of Stillpoints supports under some of the components. This led to an overall improvement in clarity, dynamic range and separation. My equipment appears 'to breathe' more easily. I assume these to be the usual effects of overall improved vibration control.

The strange phenomenon that has also occurred is that for a similar perceived loudness the volume setting on my preamp is now lower than it was before. The amp has a digital readout and is now around four to five notches lower on a scale of 100. With a conventional potentiometer volume control this would not have been so easily observed.

Generally, it has always been my belief that if a component has high distortion, the perceived loudness for a given power output will be greater. One only has to consider the comparative loudness of a low-fi system having a modest power output when heard alongside a high-end set-up. Can the perceived increase in output due to a change in system supports be measured and is the actual range of dynamic output

power from my set-up greater than before, as my subjective perception suggests? The equipment used has not been changed in any other way.

*Mark Smith, via email*

Paul Miller replies: Unintentionally, Mark, you've just illustrated why precise level-matching is critical in any comparative A/B listening test! Quite often changes in a hi-fi system's tonal balance, detail resolution or perceived noise are identified by listeners as changes in *level* even though there has been absolutely no change in the peak volume level at all.

In the past you were winding up the volume ever-so-slightly in an effort to have the finest musical details punch their way through what must now seem a slightly 'cluttered' sounding presentation. The extra ease and subtlety now achieved by your system parallels my own experiences with 'mass loading' various separates, a saga I reported on in *Hi-Fi Answers* magazine back in the mid-1980s. It is possible to measure microphony in active components and is especially easy with some valve amplifiers. I've measured examples that realised a significant output (20dB+ above the noise floor) simply by drumming my fingers across the casework.



ABOVE: For more on the Stillpoints range of supports see [www.stillpoints.us](http://www.stillpoints.us)

Send in your views to:  
Sound Off, Hi-Fi News, AVTech Media Ltd,  
PO Box 718, Orpington, BR6 1AP or  
email your views to: [letters@hifinews.com](mailto:letters@hifinews.com) -  
please use 'Sound Off' in your subject field

## My dependable direct-drive deck

WHY ONLY VINTAGE TECHNICS WILL DO FOR THIS READER

I am enjoying your new 'Buying Vintage' series, particularly the comments made on direct-drive turntables in the October issue. I bartered a digital SLR for a Technics SL-110 some years ago and have been very happy with it.

By way of example, my friend also has a vintage turntable, this time a belt-drive design from a British manufacturer. 'Doesn't it sound lovely?' he said. 'It's playing too fast!' I replied. I was horrified by the primitive approach to resolving the problem, which entailed opening up the power supply and adjusting a variable resistor with a screwdriver while comparing the speed of the turntable to the same track on CD.



ABOVE: Technics' direct-drive SL-110 - Japanese engineering and attention to detail at its best

More recently I tried to use his turntable and found that the belt had stretched so much the platter wouldn't turn. I would never be able to live with such an unreliable piece of equipment.

I had my Technics SL-110 with SME 3009 and Shure V15 sent to my home in California. I was shocked to find on arrival that the turntable had been shipped on its side! I expected it to be damaged beyond repair, but after a trip to Katli Audio in Chino Hills a minor adjustment and a tune-up were all that it needed. Every time I press the start button it performs as it should. I can't imagine using any other turntable now.

*Steve Ayres, via email*

Tim Jarman replies: An easy way to adjust turntable speed is to use a stroboscopic disc. Under mains lighting you simply vary the speed until the dot pattern appears to stand still. (You can download a stroboscopic disc for print out from [http://extremephono.com/free\\_turntable\\_strobe\\_disk.htm](http://extremephono.com/free_turntable_strobe_disk.htm).) This method is surprisingly accurate. If you are intolerant of unreliable equipment (as everyone should be!) then you can't do much better than an SL-110.

## Coaxial versus coplanar

SMALL ROOM SPEAKER SOLUTION FINDS READER QUESTIONING THE PROS AND CONS

After moving into a tiny apartment, I was looking at coaxial speakers due to the fact that I am forced to listen at very close range. It's my understanding that coaxials have better horizontal and vertical dispersion, so I finally settled on a pair of Teac S-300 NEOs, which I imported directly from Japan.

As you can see from the photo [below], it is coaxial but not coplanar in design. It does sound rather good and images superbly. My question is: what are the advantages of the coaxial Teac as opposed to coaxial and coplanar speakers like those made by KEF and Tannoy? I think the Teac will have issues with diffraction versus Doppler distortion while the KEF and Tannoy solutions will give a more ragged HF response.

*Kit Fonseca, via email*

Keith Howard replies: I'm not aware of KEF or Tannoy ever having referred to



ABOVE: One of Kit's Teac S-300 NEO speakers with its concentric driver array

their Uni-Q or Dual Concentric drivers as coplanar. Not only are they not coplanar, the term might easily be applied to conventional loudspeakers with separate bass/midrange and treble drivers. Neither driver will usually have a flat diaphragm but they are typically mounted on the same plane, *i.e.*, the speaker front baffle.

What the Teac, KEF and Tannoy drivers all are is coaxial: the two integrated drive units share a common axis. But they represent three significantly different ways of achieving this. In the Teac the dome tweeter is mounted in front of the cone diaphragm; in the KEF design the dome tweeter is incorporated where the dust cap of the cone would otherwise be; and in the Tannoy the tweeter is a compression driver mounted behind the cone with a short horn to convey its output to the cone's apex.

All three arrangements obviate the effects on vertical off-axis response of conventional spaced drivers but each has its own pros and cons. Of the three the only one that readily allows the acoustic centres of the two drivers to be aligned is Uni-Q, which is why KEF refers to it as a coincident or 'point source' array. But by using the flare of the cone as an acoustic horn to load the tweeter, the KEF and Tannoy solutions can both run into horn problems, particularly reflection from the mouth (the surround area of the cone) back towards the throat (the cone apex).

KEF has made significant advances in controlling this in recent years, as a result of which the treble response of its latest Uni-Q drivers is much better controlled than in previous generations, and much smoother than the switchback treble output typical of Tannoy dual concentrics.

By not using the cone as a horn to load the tweeter, the Teac arrangement (also used by others) avoids this problem but does entail the body of the tweeter obscuring some of the cone and thereby acting as a large 'phase plug', the effects of which may not all be positive.

There is no reason to suppose that any of the three approaches is inherently better or worse in respect of Doppler distortion as all incorporate two drivers to carry different parts of the frequency range. Doppler distortion is worst in full-range moving-coil drivers that use a single diaphragm to reproduce the entire frequency range from bass to treble.



RJ/E Forest



RJ/E Cinnamon



RJ/E Vodka



RJ/E Diamond



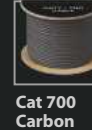
Cat 600 Pearl



Cat 700 Pearl



Cat 700 Forest



Cat 700 Carbon

## Lanes On Your Entertainment Superhighway

Since its origins in the early 1980's, Ethernet, and the Local Area Network (LAN) systems it enables, has become the copper plumbing of the digital age. Originally deployed only over coaxial cable, the Ethernet protocols (IEEE 802.3) now also apply to fibre-optic and "Category" (Cat 5, 5e, 6, 6e, 7) cables. These 8-conductor (4 twisted pairs) Cat cables are the 8 lanes which stream or transport your digital entertainment to equipment a foot away or several rooms away.

AudioQuest refers to its pre-terminated leading-edge Cat 7 cables as the RJ/E Series ... RJ for the RJ45 connector standard to the application, and E for Ethernet. For AudioQuest, the highest Cat 7 standard (with all 4 pairs using correctly differentiated twist rates and individually shielded) is only the solid foundation to which AQ then adds better materials and unique-to-AQ additional technologies.

The particulars of the RJ45 connectors have also received extreme attention. The plugs used on the Vodka and Diamond models (and available for use with bulk Cat 700 models), feature a unique patented transition-compensating system which reduces reflections caused by the impedance mismatch where 4 twisted pairs meet a straight line of 8 plug contacts.

**What does this all mean? Simple ... better sound!**

**audioquest**

# EQUIPMENT URGENTLY!!! REQUIRED!! NOW!! PHONE 07860-511111

HEATHCOTE AUDIO: TEL: 07860 511111 - [www.heathcoteaudio.co.uk](http://www.heathcoteaudio.co.uk)

ALMOST ALL LISTED ITEMS ARE 1 OWNER/EX DEM

## SOLID STATE

KRELL 402 STEREO POWER AMP LITTLE USE.....	MINT/BOXED.....	£6450
PATHOS INPOWER CLASS A HYBRID MONO'S (SUPERB £9K?).....	EXCLT.....	£4250
DENSEN B200 PRE/GIZMO & B300XS POWER AMP.....	MINT/BOXED.....	£1850
BEL CANTO PRE-3 & S300 AMPLIFIERS.....	AS NEW/BOXED.....	£1695
McCORMACK DNA-125 AMP (£2250).....	AS NEW/BOXED.....	£1195
TALK ELECTRONICS TORNADO 4 MONOBLOCKS.....	EXCLT/BOXED.....	£895
TALK ELECTRONICS TORNADO 5 MONOBLOCKS.....	EXCLT/BOXED.....	£895
BELCANTO EVO 200.2 POWER AMP.....	EXCLT/BOXED.....	£995
DENSEN B300XS POWER AMP.....	EXCLT/BOXED.....	£895
TRIO LOS-M MONOBLOCKS (VERY RARE).....	DEM.....	£795
MARANTZ MA-700 200 WATT MONOBLOCKS.....	DEM/BOXED.....	£595
QUAD 99 MONOBLOCKS.....	AS NEW/BOXED.....	£675
H-CAT P-12A PRE AMP (£2500?).....	DEM.....	£995
H-CAT P-12B PRE AMP (£2500?).....	DEM.....	£1495
PASS LABS ALEPH PRE AMP (REAL HI-END).....	EXCLT.....	£1195
TRIO LO7-C PRE AMP WITH MIMC/STAGE(RARE).....	EXCLT.....	£695
MERIDIAN 501 PRE AMP.....	MINT/BOXED.....	£395
LYNGDORF SDAI 2175 INTEGRATED.....	EX.DEM/BOXED.....	£1295
MARANTZ PM11 S2 INTEGRATED (£3300).....	EXCLT.....	£1695
DENON PMA-QS10II 30 KILO INTEGRATED.....	EXCLT/BOXED.....	£995
JOHN SHEARNE PHASE 2 INTEGRATED & PHASE 2 POWER AMPS.....	EXCLT.....	£875
JOHN SHEARNE 2.5 INTEGRATED AMP.....	EXCLT.....	£450
JOHN SHEARNE 3.5 POWER AMP.....	EXCLT.....	£450
ADVANTAGE I200 INTEGRATED AMP (£1800?).....	EXCLT/BOXED.....	£895
MUSICAL FIDELTY X-CANS V-3.....	AS NEW/BOXED.....	£275

## VALVE AMPS

ROGUE AUDIO 150 MONOBLOCKS (new old stock).....	BOXED.....	£2995
AUDIO RESEARCH VS-110 POWER AMP.....	AS NEW/BOXED.....	£2450
PAPWORTH M-100 MONOBLOCKS ONE OWNER FEW MONTHS USE MINT/BOXED.....	EXCLT.....	£2750
PATHOS INPOWER CLASS A HYBRID MONOBLOCKS (SUPERB £9K?).....	EXCLT.....	£4250
MATTISSE REFERENCE 2 BOX PRE AMP ONE OWNER.....	EXCLT.....	£3450
AUDIBLE ILLUSION MODULUS 3a 2 BOX PRE LITTLE USE.....	MINT/BOXED.....	£2295
ROGUE AUDIO 66 MAGNUM REMOTE CONTROL PRE.....	EX.DEM.....	£795
ART AUDIO INTEGRAL EL-34 VALVE INTEGRATED.....	EXCLT.....	£1150
ANTIQUE SOUNDLABS LH-01 PRE-AMP HI PHONE AMP.....	EX.DEM.....	£375

ANTIQUE SOUNDLABS MINI PHONO 2 BOX.....	VGC.....	£295
---	----------	------

## TRANSPORTS/CD/DACS

BOW ZZ EIGHT CD PLAYER (SERVICED).....	MINT/BOXED.....	£2750
AUDIONOTE CD2.1 MKII VALVE CD PLAYER (3K?).....	MINT/BOXED.....	£1350
LYNGDORF CD-1 CD PLAYER/TRANSPORT.....	EXCLT.....	£849
VACUUM STATE JLTI MODIFIED MARANTZ SA7001 (1 £1300).....	BRAND NEW.....	£795
VACUUM STATE JLTI MODIFIED MARANTZ SA7001 (1 £1300).....	DEM.....	£650
STELLO CDA-320 ONE BOX CD/DAC.....	EXCLT/BOXED.....	£795
SONY 557ES HEAVYWEIGHT CD (ROSEWOOD SIDE CHEEKS.....	TIMEWARP!.....	£375
INCA TECH KATANA.....	VGC.....	£395
TRICHORD/ACOUSTIC PRECISION DIGITAL TURNTABLE.....	EXCLT.....	£395
MERIDIAN 500 TRANSPORT.....	MINT/BOXED.....	£450
SONY XA-1200ES MULTI CHANNEL SACD PLAYER.....	VGC.....	£299
SONY CDP-X33ES CD PLAYER.....	MINT/BOXED.....	£249
CAMBRIDGE AUDIO AZUR 740C CD PLAYER.....	MINT/BOXED.....	£275
MICROMEGA STAGE 3 CD PLAYER.....	MINT.....	£249

## LOUDSPEAKERS

KLIPSCH K-HORNS FABULOUS BIRDS EYE MAPLE.....	MINT.....	£3995
PODIUM 1s FEW WEEKS USE ONLY (£6000? NEW).....	MINT.....	£295
ENSEMBLE FIGURA (SOLID ALUMINIUM £5800?) ONE OWNER.....	SALE!.....	£2995
HALES TRANSCENDENCE 5 HUGE FLOORSTANDERS		
2 OWNERS.....	EXCLT/BOXED.....	£1895
ART AUDIO PRECISION MONITOR (FLOORSTANDERS		
PIANO BLACK 6K+.....	EXCLT/BOXED.....	£2795
B&W 802 MATRIX SERIES 2 IN WALNUT 1 OWNER.....	EXCLT.....	£1395
B&W 801 MATRIX SERIES-2 IN WALNUT 1 OWNER.....	EXCLT.....	£1995
MARTEN MILES CHERRY (8K+ ONE OWNER FROM NEW).....	SALE!.....	£2995
AURUM CANTUS VOLLA (LAST PAIR).....	DIS.BOXED.....	£1695
SNELL C MKIV AMERICAN WALNUT (SUPERB).....	EXCLT.....	£1250
PROAC STUDIO 150 (PREMIUM YEW FINISH).....	VGC.....	£695
ACOUSTIC REFLEX (CONCRETE Baffle HORN LOADED		
FLOORSTANDERS).....	EXCLT.....	£495
AURUM CANTUS MUSIC GODDESS (£2500).....	DEM.....	£1695
AURUM CANTUS LEISURE 3 SE BRAND NEW BOXED		
(LAST PAIR £1350).....	NEW/BOXED.....	£895

AURUM CANTUS BLACK ORCHID BRAND NEW BOXED		
(LAST PAIR £1300).....	NEW/BOXED.....	£895
AMPHION NEON 1 (1 OWNER).....	EXCLT.....	£895
SPENDOR LS35A MATCHED PAIR.....	EXCLT.....	£995
THEIL CS 1.5 (ONE OWNER FROM NEW).....	MINT BOXED.....	£995

## VINYL

PINK LPT/RB250PSU/CART REBUILT AS EXPORT.....	SUPERB!.....	£695
AUDIO INNOVATIONS 1000 MC STEP UP.....	MINT.....	£495
CARTRIDGE MAN MUSIC MAKER II FEW HOURS.....	MINT.....	£450
WILSON BENESCH CIRCLE/ACT 2 TONEARM.....	MINT/BOXED.....	£1795
VOYD VALDI (1 OWNER FROM NEW).....	SALE BOXED.....	£695
JMW-9 TONEARM (BRAND NEW).....	NEW.....	£595
TOM EVANS MICRO GROOVE.....	EXCLT.....	£375
DENON DP-1200 SPECIAL EDITION (INC.ARM/CART).....	RARE.....	£595
ANTIQUE SOUNDLABS MINI PHONO 2 BOX.....	VGC.....	£295
MICHELL ISO/HERA PHONO STAGE.....	EXCLT.....	£395

## INTERCONNECT CABLE

ACOUSTIC ZEN SILVER REF 2 METRE XLR.....	VGC.....	£595
AUDIENCE Au24 REFERENCE INTERCONNECTS.....	EXCLT.....	£375
XLO REFERENCE 1 METRE BALANCED PAIR.....	EXCLT.....	£175
ACOUSTIC ZEN MATRIX REFERENCE II 1 METRE RCA.....	VGC.....	£349
ACOUSTIC ZEN MATRIX REFERENCE II 1 METRE RCA.....	VGC.....	£349
HARMONIX HARMONIC-STRINGS HS-101 1METRE XLR.....	DEM/BOXED.....	£375
CHORD CO.SIGNATURE 1 METRE BNC.....	AS NEW.....	£299
ANALYSIS PLUS SOLO CRYSTAL OVAL 0.5 METRE.....	EXCLT.....	£199

## LOUDSPEAKER CABLE

TRUE COLOURS IND.KING COBRA 5 METRE PAIR.....	MINT/BOXED.....	£375
TARA LABS RSC 5 METRE SHOTGUNNED BI-WIRE PAIR.....	EXCLT.....	£395
BLACK RHODIUM POLAR NINJA DCT 2.9 METRE PAIR.....	DEM.....	£650
XLO 5.2 SIGNATURE-1.4FT PAIR.....	DEM.....	£495
SONORAM PLATEAU 4 METRE VERY HEAVY HI END PAIR.....	EXCLT.....	£475
COGAN HALL INTERMEZZO 5FT PAIR.....	EXCLT.....	£275
XLO REF.2.5 METRE PAIR.....	EXCLT.....	£375

MOST MAJOR CREDIT/DEBIT CARDS ACCEPTED

THE OCTAVE IS FAST, EXCEPTIONALLY TRANSPARENT AND THOROUGHLY ENGAGING. JOHN DARKO

HIFI CHOICE: THE HEX TRACKS THE PACE OF THE MUSIC LIKE A BLOODHOUND, KEEPING EVERYTHING RHYTHMICALLY ENGAGING AND ALIVE. RICHARD STEVENSON

HIFI+:NEXT TO SOME WELL REGARDED ALTERNATIVES AT PRETTY EXALTED PRICES IT IMPROVES BOTH FOCUS AND COHERENCE. J KENNEDY

Why does METRUM ACOUSTICS eschew the standard (obligatory) DAC (digital to analogue convertor) Chip-sets (AKM, BURR BROWN, TI, CRYSTAL or WOLFSON) and Up-Sampling?

Because its analogue music (from digital) CANNOT COMPARE to native analogue music. It should sound like FRESH vinyl played for the first time via a FRESH cartridge (every time). [Digital music files don't degrade]

Does Metrum Acoustic's DACs achieve this?

The Critics think so, but it's your call! Try the Octave2 (from £799) at your leisure in your own system for 30 days, If you don't like it return it for a full refund.

What do I use a DAC for?

(GREATLY) improve the sound quality of (up to) 3 digital devices, cd player, DAB radio, digital tv, computer via usb, etc. including playback of Hi-Res music up to 24/192 Khz.

 **istereos.co.uk**  
transforms computers into stereos

TEL: 01255 676 222 [sales@istereos.co.uk](mailto:sales@istereos.co.uk)

Metrum Acoustic's products are made in a modern high tech factory in Holland (not China) using multiple exclusive & expensive NOS Ultra high speed DAC chipsets, 6 layer PC boards and toroidal transformers

6 MOONS: HEX: THE DAC WHICH THUS FAR CAME CLOSEST TO THE FULL IMMERSION I FEEL WHEN LISTENING TO VINYL AND ACTUALLY MANY TIMES EXCEEDED IT. FREDERIC BEUDOT

HIFI CRITIC A VERY TRUTHFUL AND ARTICULATE SOUND, WHICH IS PARTICULARLY EVIDENT ON PIANO. MARTIN COLLUMS.

HIFI CHOICE:IF IT WERE 10 TIMES ITS PRICE, IT'LL STILL BE GOOD VALUE. JASON

THE OCTAVE HAS SUPERB RHYTHM AND PACE. TNT MAGAZINE

## Testing tricky amps

ARE AMPLIFIERS THAT DON'T DOUBLE THEIR POWER NECESSARILY LESS LINEAR?

Great magazine! Even after 40 years of hi-fi addiction I still get *Hi-Fi News* airfreighted to Australia as waiting any longer than I have to for each issue is *not* an option.

Anyway, to business: consider power amplifier outputs when tested into 8ohm then into 4ohm. In the idealised case the power will double with every halving of impedance. But what happens when the output does not double, and the output at 4ohm is less than doubled – say it goes from 100W to 150W? An amplifier like this will probably be current limited, either by its power supply, or electronic limiting will have kicked in because the safe operating area of the output stage, as decided by the manufacturer, has been breached.

Consider the output voltage versus input drive voltage as the load is varied in impedance over the range of any loudspeaker (using the amp exemplified above) and it will be obvious that the input/output ratio is not linear. Then comes the EPDR (equivalent peak dissipation resistance) as tested. Yet another can of worms opens.

My question is whether or not the ratio is going to be linear across frequency and impedance ranges. In the same vein, is the output voltage linearly following the input voltage, except where the current limit is reached? How could this be tested, particularly in a dynamic situation? Could this be related to the feedback loop(s) of the amplifier, which makes 'no feedback' amps better?

My own 5.1 system has VAF Signature i93 loudspeakers with Behringer X-Overs and a Paradigm Sub 25 subwoofer. Amps are a



ABOVE: Krell's massive FPB 700cx power amplifiers are especially load-tolerant

Parasound pre, Krell FPB 700cx, Bel Canto Ref1000 and Harman Kardon Signature. Sources include a Musical Fidelity CliC streamer and an Oppo BDP-95 universal player.

*BM, South Australia*

Paul Miller replies: It's important to remember that when we measure and specify power output, whether continuous or dynamic, this represents the amplifier's performance at the point of clipping. Provided an amplifier has sufficient current in reserve to maintain a constant voltage across different load impedances, for example, then during normal use there'll be no variations in input/output gain. It's only when we look at the *maximum* power output that we require substantially more current to hold that voltage and thus double the power into each halving of load impedance, but there are precious few amplifiers capable of that feat, although big Krell's typically come close!

Any gain variation that did occur would be manifest as an impedance-dependent change in frequency response. We do measure this already, of course, but it's more usually related to the output impedance of the amplifier and is independent of its power output or ability, within reason, to drive difficult loads. Valve amplifiers usually have the highest source impedance and, as a result, the overall 'system response' will often depend very heavily on the swings in impedance of the attached loudspeaker.

Many balanced Class D amplifiers also demonstrate a sensitivity to load impedance [the Burmester 101 is a very recent example, see p32] and will usually be 'tuned' to offer the flattest response into about 6ohm. Of course, very few loudspeakers offer such a reliably uniform impedance trend and so the Class D amp/speaker system response will change from set-up to set-up. Once again this has nothing to do with the amplifier's 'power doubling' credentials.

Then there's the difference between an amplifier's continuous and dynamic power output to consider. Amplifiers that can (nearly) double their power under continuous conditions usually have very stiffly regulated power supplies that limit their headroom under dynamic conditions, and vice-versa of course.

## WIRELESS FRONTIER?



Not only are wires still very much the lowest-distortion highest-performance way to send both analog and digital audio information, but when it comes to sending power, "wireless" is just a nifty science project, not part of a home entertainment rig.

The challenge of not adding distortion as AC power goes from the wall to the electronics, and the challenge of not adding distortion as audio power is sent to a loudspeaker, are almost the same. The amount of energy transferred through these cables, and the size of the associated magnetic fields, puts them in a different class from all other audio and video cables.

Speaker cables need to maintain perfect integrity across the audio band and then some, while AC cables only have to try to be perfect in a narrower band. AC cable design is therefore a subset of speaker cable design because AC cables are subject to almost all the same distortion mechanisms, and benefit from almost all the same damage minimizing techniques.

For the most sophisticated power-transfer cables, for the best sound and video, please visit [audioquest.com](http://audioquest.com) for more details.

**audioquest**

audioquest.com

## Recording radio an easier way

READER EXPLAINS HOW HE CAPTURES RADIO STREAMS USING AUDACITY AND A MAC

I have read the many contributions on the subject of recording radio with interest, but I wonder if there is not an easier method than those described by Barry Fox in his August column and readers who have shared their thoughts in recent Sound Off pages?

The first thing to say is that I live in Scotland where, some two years ago, our government removed the main English language radio stations from Freeview in order to create more bandwidth for BBC Alba and Gaelic TV (which nobody in southern Scotland watches). Radio 3 and Radio 4 are therefore available on Freeview only until 5pm each day. Barry Fox was one of the few journalists at the time to comment on this folly, which restricts one's ability to capture radio broadcasts using video recording devices.

We have FM, DAB and (only recently) reasonably fast broadband. I believe there are also radio channels on Sky and Freesat. I can feed any of these sources into my Apple Mac computer via the

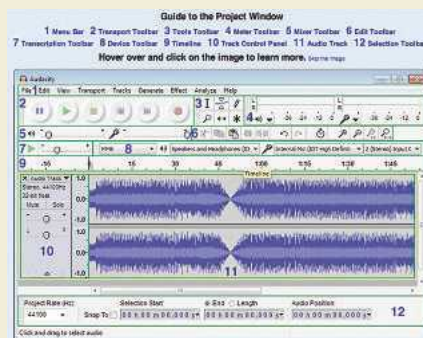
optical audio-in port, where I capture the stream via Audacity. This can export to iTunes in many formats, including AIFF and AAC. The results seem to me to be pretty good, especially when the source is Radio 3 via the internet at 320kb/s.

I have another piece of software on my Mac called AudioRecorder. This is capable of capturing any audio stream, which can then be saved in AAC and exported to iTunes. Audacity offers more flexibility as well as the ability to edit the files created, but AudioRecorder is convenient and simple.

I used to record broadcasts using a Sony DAT deck, but I hear no quality difference between recordings made on the Sony and those made using Audacity.

*Paul Scott, via email*

Barry Fox replies: There are several software programs that will capture an audio stream from inside a computer. Roxio Creator will do it as an inbuilt option on PCs although I bought the dedicated program Total Recorder which, for a bit extra on the price,



**ABOVE: Audacity is free and available for both OS X and Windows – [audacity.sourceforge.net](http://audacity.sourceforge.net)**

will also capture video. All this is what makes the music and movie industries' faith in digital copy-protection look so naive. If someone really wants to copy audio or video they will do so. Presenting a challenge may encourage some to rise to the challenge.

I think my original point still stands. Recording radio for personal storage, or mobile listening, especially in a car, is still far more difficult than it could and should be.

## Beatles: we need more than Love

AGE AND EARS WON'T WAIT FOR BEATLES ORIGINALS TO BE REMASTERED TO MODERN DAY STANDARDS

I wish to enlist the help of Mr Ken Kessler. Your journal is, I know, widely read and this debate needs air and breadth of opinion. I am a contemporary of The Beatles, as I think Ken is. The first album I owned was *With The Beatles*, bought as a Christmas present for me by my parents when I was 13 or 14 years



**ABOVE: The Beatles' Love album from 2006, produced by George Martin and his son Giles**

old. I proudly displayed it in my window so that others could see how lucky I was.

I did not get into hi-fi for years after this. As a consequence I owned several original copies of The Beatles' albums and, like most of my contemporaries, trashed them all. In the intervening years I have owned all the original issues and American Capitol sets.

Recently I purchased the new box set on vinyl. I already have the mono and stereo CD box sets and very fine they are too, but on playing the *Love* album – remixed and remastered to bring the sound up to date – I was struck by the fear that I will die before The Beatles' original albums are remastered to modern day standards. I want the clout of the *Love* album, the separation of the voices, the clear and strident bass, and the soundstaging, which only a modern producer can get from the tapes.

The originals are great. But we have them now. While I am sure they will follow in 24-bit/192kHz form sometime

in the future, my age and ears won't wait. By the way, I played 'Let It Be' from the album of the same name and from *Past Masters*, both from the remastered issues. They are not the same. Neither are the vinyl issues of the same tracks from the same albums. Any thoughts?

*Andy Andrews, via email*

Ken Kessler replies: Unfortunately, you are dealing with an opened can of worms which has already created so much web chatter that I suspect somewhere a Beatleologist is already preparing a full-length book on the subject. As one who bought the 24-bit USB stick and heard how much better even that was than the CDs, I was angered that EMI and The Beatles did not take the opportunity to release true high-res versions, on Blu-ray perhaps, when everyone knows they remastered to 192kHz/24-bit. I fear that we are victims of cynics who will, every ten years or so, release a slightly higher-res version, for us to buy again. Sadly, many of those who would want to buy them will have passed on.

# Careful with that Dustbug!

COULD MARKS ON RECORDS BE CAUSED BY THE USE OF A DUSTBUG AND BRUSH?

In the October 2013 edition of *HFN*, Jim Lesurf reconsidered the use of the Cecil Watts Dustbug. Now I am of the generation that always used the thing – as the paint damage to numerous Garrard 301s and 401s attests!

I note that Mr Lesurf uses his without the brush. Very wise, says I! A number of my LPs have marks on the run out grooves, which may result from my use of a Dustbug [see below]. All the LPs I played in this way during the 1970s and '80s show the same fine scoring. I wonder if any damage was done within the grooves of the playing area?

*Chris Wiltshire, via email*

Being, erm, of a certain age, I read with great delight the recent interest being shown by *HFN* in the classic SME 3009/Shure V15 combination. I have a V15 Type IV cartridge which I have always loved, but until recently have taken to using the original Shure stylus very sparingly because the copies I have bought as replacement have been awful.

I suspect that it's for this very reason that hundreds of precious V15 cartridges have been abandoned for other MM models, which may not necessarily be any better.

Other readers might like to know that I eventually bought a replacement stylus online from Ed Saunders ([www.edsaunders.com/shurestylus.htm](http://www.edsaunders.com/shurestylus.htm)) and was really pleased with the sound quality.

I will also venture that the SME 3009 is a true design icon and that the only cartridge that looks 'right' in

this arm is a V15. My only regret now is that when the V15 Type V was a current model in the Shure catalogue I was unable to justify the £350 quid or so that was needed to buy one!

Finally, can I point out that I have no connection whatsoever with Ed Saunders. I'm just a happy customer.

*Adrian Clarke, via email*

Jim Lesurf replies: Chris Wiltshire's photo is intriguing. I've wondered if this might happen. However, I've not experienced it with my LPs. I looked again at some to compare them with Chris' example, and found no sign of the problem. For example, I have a copy of VICS 1160 Bartók *Music for Strings...* bought new, but with no sign of the faint scoring on its scroll-out flats. I guess this depends on the environment where you live and how an LP has been cleaned. So I'd welcome feedback from other readers about their experiences.

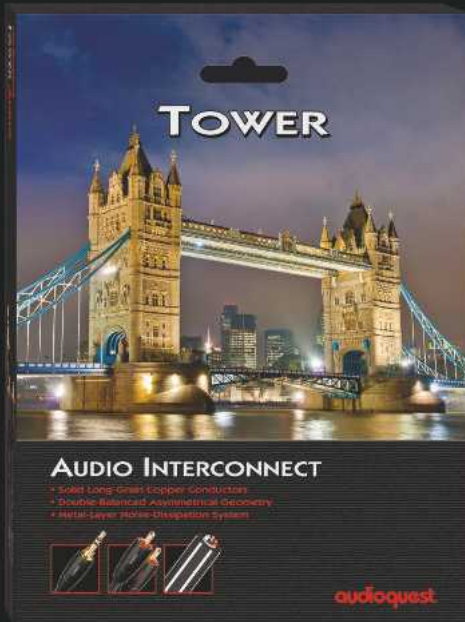
I tend to pre-clean my LPs with something like a Parastat before playing them. And wherever I've lived the main enemy has been a mix of fluff from the air and tiny specs of paper from LP sleeves. The paper being more of a pest. But what have others experienced?

With regard to 'alternative' V15 styli, I've shared Adrian Clarke's wariness and have so far avoided trying any third-party replacements. I'm hoping that by making high resolution digital copies of my LPs to play will help me ward off the day when I may have to do something about this.

I hadn't heard of Ed Saunders. But perhaps it's time to investigate some of the alternative styli on the market and compare them with 'the real thing'.



ABOVE: One of Chris Wiltshire's LPs showing white marks on the run-out groove

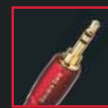


## We've Got Your Back ...

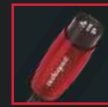
Your Front and Your Sides!



RCA plugs for the back



3.5mm plugs for portables and more



DIN plugs for the back



iPod plugs for underneath



3.5mm socket for extension cables

From solid conductors, superior metals (conductors and plugs) and low-interaction insulation to AQ's Noise-Dissipation System and AQ's Dielectric-Bias System, all of AudioQuest's proven distortion-minimizing ingredients are used to ensure that all eight models of Bridges & Falls cables bring you beautiful music, clear dialogue and thunderous sound-effects.

audioquest

**“With deep resolve and  
HUGE soundstage size, the  
AURALiC Vega presents  
music in a way that’s  
impossible to ignore –  
it’s utterly engaging.”**

*digitalaudioreview.net*





audioemotion



www.audioemotion.co.uk



e: info@audioemotion.co.uk

f: facebook.com/audioemotion

t: 01333 425 999

# AURALiC VEGA

DIGITAL AUDIO PROCESSOR



ORFEO CLASS-A OUTPUT STAGE ■

ACTIVEUSB ADVANCED BUFFER ■

FLEXIBLE FILTER MODE ■

MEGAHERTZ UPSAMPLING ■

NATIVE DSD HANDLING & FEMTO MASTER CLOCK ■

only £ 2890

# AURALiC MERAiK

400W POWER AMPLIFIER MONOBLOCK



HYBRID ANALOG AMPLIFIER TECHNOLOGY ■

PURER-POWER LINEAR POWER SOLUTION ■

ADVANCED POWER MANAGEMENT ■

ORFEO CLASS-A OUTPUT STAGE ■

only £2090

65

AURALiC

MERAiK

# Vintage cassette decks

Which are the best vintage cassette decks for everyday use and which offer the best value in terms of sound and ease of maintenance? Let **Tim Jarman** be your guide...

**O**f all 'vintage' sources, the cassette deck is arguably the most useful and the most resistant to obsolescence. After all, you don't need pre-recorded media to use one and can listen to recordings you have made yourself in the context of an authentic, fully vintage set-up. What's more, cassette decks are not limited by immovable constraints like resolution or bit-rate while the quality of sound that can be achieved is limited only by the design of the machine, the accuracy with which it is set up, the characteristics of the cassette tape used and the skill of the operator.

## TAPES AND SETTING UP

To give of its best, any cassette recorder must be matched to the tapes it is used with. In the early days there was little in the way of standardisation so it was common to nominate a type of cassette and ask the dealer selling the deck to align the recording circuits to suit.

The International Electrotechnical Commission (IEC) set about rectifying this situation and by the early 1980s standardised tapes were introduced. Decks with user-accessible calibration controls and automatic setup routines had become widely available by this time too, so making high quality recordings became less the black art that it had once been.

It is also important that a deck's playback circuits, head azimuth and

**RIGHT:** It took Compact Cassette inventor Philips 15 years to come up with a cassette deck worthy of the company's name, but it was worth the wait. The N2521 shown here is an outstanding recorder. It was released in 1977



**BELOW:** The Philips EL3300 'Pocket Recorder' from 1963 certainly wasn't 'hi-fi', but it introduced a format which would dominate the audio scene for the next three decades

tape speed are setup accurately. These do not vary with the type of tape used, but they drift as a machine wears and ages.

The Compact Cassette itself was invented by Philips in the early 1960s and first marketed with the mono EL3300 'Pocket Recorder' in late 1963 [see *HFN* Feb '13]. The company dominated the portable market, but initially struggled when it came to hi-fi decks. Its N2520 of 1974 was a brave effort, but the deck's performance was limited by a crude transport mechanism.

The N2521 of 1977 solved this problem and is certainly a deck to consider. Purpose designed from the ground up, it represented a radical departure, not only from previous Philips designs but from anything the Japanese manufacturers were doing at the time.

A long-life Sendust head was fitted, along with a completely new transport that used magnetic couplings instead of the usual felt clutches and rubber wheels. Meanwhile, the electronics offered compatibility with all current tape types along with the choice of either Dolby B or Philips' own DNL noise reduction systems.

The mechanism of the N2521 is simple to overhaul; its worst failings are intermittent contacts in the various mode-sensing switches and the tendency of the damping fluid used for the cassette door to leak and gum up the works if the machine has been used vertically.

## JAPANESE DOMINANCE

Though the Compact Cassette was a European invention, it was the Japanese who dominated the market for both decks and tapes. Aiwa, in





particular, made the cassette deck its speciality, producing models which, while seldom glamorous, always ranked well in contemporary magazine group tests. At every price point, Aiwa machines offered top performance and excellent value.

The company's first really serious offering was the AD-1800 of 1975, a top-loading model whose design majored on mechanical stability. Add to this a very durable ferrite head, Dolby B noise reduction and the facility for users to fine-tune the recording bias of ferric cassette tape and you have the makings of an excellent machine.

The only real drawback of the AD-1800 is that the tape speed is locked to the frequency of the mains supply, limiting the precision to which it can be set. Still, Aiwa quoted a tolerance of  $\pm 1\%$ , which is adequate for most purposes.

#### MORE AIWA HIGHLIGHTS

Other Aiwa high points are the AD-F770 and AD-F990, released in 1984. Both are feature-rich, three-head decks boasting a computer-controlled tape optimisation system and dual-capstan drive, the '990 offering a slightly better head and an electronic recording level control. The performance of these machines is outstanding, yet mechanically neither is excessively complex.

In the case of these models, the dual-capstan drive – so often a cause of problems with cassette decks – is largely trouble-free, so long as the pinch rollers and drive belts are in good condition. One problem area is the power supply, which works very hard to feed the rest of the circuit. Poor soldering and failed transistors are also reasonably common.

Aiwa designs were not usually extravagant, but one exception is the AD-6900 of 1979. Two motors, three heads, user calibration facilities and VU meters that could show peak and average readings

**ABOVE:** Aiwa's mid-'80s masterpiece. All Aiwa decks rate highly as vintage buys but the AD-F770 shown here is among the best. Not that glamorous style-wise, but a highly effective recording tool

**BELOW:** All the Nakamichi you'll ever need! The BX-300, released in 1985, gives a full measure of Nakamichi performance without the cost, bulk and complexity of some of the company's larger models

simultaneously were just some of the technical highlights. Yet the densely packed electronics and mechanicals inside make even basic repair work extremely difficult. This one's strictly for cassette connoisseurs with engineering degrees and time on their hands...

#### ART OF NAKAMICHI

The other big Japanese name in cassette decks is, of course, Nakamichi. Nakamichi decks enjoyed a high status position among audiophiles but many of its models were little different from those offered by other Japanese brands, aside from the care that was taken to set them up in the factory.

Note that time, wear and the evolving characteristics of available cassettes may now have eroded this advantage, so it is still necessary to have the machine's settings checked if maximum performance is your ultimate goal.

At the other end of the scale, decks such as the 1000 series, ZX-9 and CR-7 were very highly regarded, but their performance came at a considerable cost. Today, these decks are still expensive and are also difficult to overhaul, meaning that they are not really ideal for beginners. Some weaknesses are now starting to emerge, such as head failure in the 1000 models,

#### BEFORE YOU BUY...

If you are buying a vintage cassette deck for serious use, budget for a mechanical check-up and basic alignment of things like head azimuth, tape speed and Dolby level. This is particularly important if you plan to build a library of recordings for use with a number of machines.

Inspect the head for wear by running your fingernail across it. If you can feel a groove or a step where the tape runs across it then wear is present.

Worn drive belts are a very common cassette deck problem. Check the availability of replacement kits before settling on a particular model.

which leads to the loss of one channel. Needless to say, the head is a special part and replacements are very difficult to find.

The art of buying a Nakamichi is to choose one near the middle of the range which includes most of

the important Nakamichi technologies and components without being too expensive or complicated.

The BX-300 of 1985 is just

such a machine. This discrete black box is capable of remarkable results yet is reasonably straightforward to operate and to look after. It offered three heads and, while lacking the comprehensive tape matching facilities of some of its rivals of the period, comes with a bias tuning control, which for most purposes proved sufficient to get decent results from IEC standardised tapes. ➔

*'For everyday use it's hard to beat Sony's TC-K611S cassette deck'*



## BUYING VINTAGE

For those who fancy something older, the 500 Dual Tracer from 1976 is another easy-to-use recorder which works remarkably well, thanks in part to its special focused field 'Crystalloy' head. It is important to check this type of head carefully since the material used is not as hard as some and so not especially resistant to wear. The same applies to other Nakamichi decks that employ this head, such as the 600 console and the 550 portable. The circuits used in these three Nakamichi models are very similar and so all offer much the same level of performance. Only their presentations differ greatly.

### HARD HEADED

Sony's Ferrite & Ferrite (F&F) head is one of the most durable ever to be used in a cassette recorder – a useful life 200 times longer than that of ordinary types was claimed. This head was used across Sony's range from the mid 1970s onwards, from basic offerings like the TC-134SD and the TC-153SD portable to the TC-177SD – the first three-head cassette deck to reach the market.

Two of the last few models to feature the F&F head were the TC-229SD and the TC-K8, similar machines though the latter sports LCD VU meters. Both were big and chunky and have something of the look and feel of the failed Elcaset decks of the period.

In general these decks present few issues, aside from the usual problems of mechanical overhaul. As with all F&F Sony recorders the quality of the head is almost a given,

*'In some respects the Revox B710 is arguably the best deck available'*

making any deck equipped with one potentially a good buy.

Some of Sony's 1980s models, such as the TC-K45 and the TC-D5 Pro II professional portable, came with a newly designed ferrite head. However, the difficulty of recording on IEC IV Metal tapes with decks having ferrite heads limited their usefulness (although Akai did persist in attempting to do so). Sony also sold a special metal-compatible

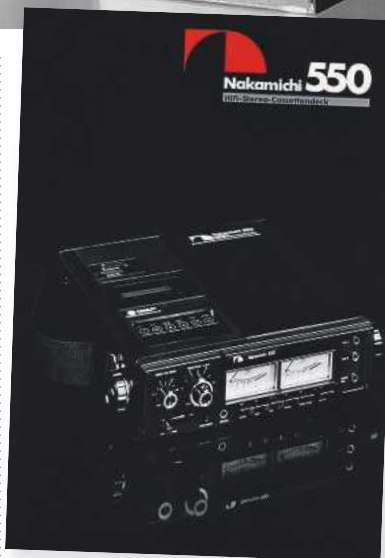
version of the TC-D5 – the TC-D5M – which came fitted with a Sendust head to get around this problem.

Sony continued to produce quality cassette decks even when the format began to be eclipsed by newer developments. The TC-K611S of 1993 was well reviewed and offers an almost ideal combination of features: a simple single-capstan

**ABOVE:** While the Revox B710 may not be a match for Japanese decks when it comes to reliability, when properly setup the recordings it can produce are among the very best

**RIGHT:** Not quite portable! The Nakamichi 550 looks handy but notice how small the cassette door is compared to the rest of the machine. Only the strong-shouldered need apply

**LEFT:** Ferrite head finale – the Sony TC-229SD was one of the company's last decks to use the virtually wear-proof F&F combination record/replay head



transport fitted with three heads, Dolby B, C and S noise reduction and a straightforward manual record calibration system. As a working recorder for everyday use the TC-K611S is hard to beat.

### CASSETTE DECK KING

Europe's greatest contribution to the world of cassette decks was probably the Revox B710. This large and expensive recorder was aimed as much at professional users as it was at audiophiles and is capable of outstanding mechanical and electronic performance.

In some respects the B710 is arguably the best cassette deck available. With the right equipment and skills it can be setup with such accuracy that it will bring out the best from practically any tape. Bear in mind, though, that this is a very involved process. ☺

# A truly engaging USB DAC!

The Bitzie USB DAC will play all your CD and DAT quality music and accepts up to 24 bits...

...but what's really amazing about the Bitzie USB DAC is its engaging musicality – the fatigue-free analogue sound Graham Slee does so well!

- ✓ Plug & Play (not plug and pray) - no messy downloads!
- ✓ Outputs: Line, Headphone, Coaxial S/PDIF, Optical S/PDIF
- ✓ Included stereo jack to phono adapter
- ✓ Cute palm size design
- ✓ OTG: Samsung Galaxy S3/Android Jellybean compatible
- ✓ USB powered USB compliant 0.5W consumption
- ✓ Designed and manufactured in Great Britain!



Read more about the Bitzie plus our Lautus USB cable at...

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

Phone: +44 (0) 1909 568739



Audio  
Cinema  
Multi-Room  
Network  
Installation

Bryston  
Chord Co.  
Dynavector  
Guru Audio  
Heed  
HiFi Racks  
Isoblu  
Lehmann  
Linn  
Naim  
Neat  
Okki Nokki  
PMC  
Rega  
REL  
Sennheiser  
Wilson Benesch  
Wireworld

Calveley Court, Reymerston, Norfolk. NR9 4QD

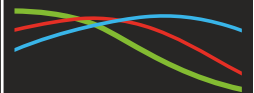
01362 820800

enquiries@basicallysound.co.uk  
www.basicallysound.co.uk



Respecting The Past, Embracing The Future

BASICALLY  
SOUND



Hi-Q  
RECORDS

Supercuts

xrcd<sup>24</sup>  
24 bit super analog

MASTERED FROM THE ORIGINAL ANALOGUE MASTER TAPES -- FEATURING THE ORIGINAL SLEEVE ARTWORK

## NEW RELEASES ON HI-Q RECORDS

The name in audiophile quality LPs & XRCDS



HIQLP034

**The Academy In Concert**  
Albinoni, Pachelbel, Bach  
Sir Neville Marriner



HIQLP035

**Mahler: Symphony No. 1**  
Chicago Symphony Orchestra  
Carlo Maria Giulini



HIQLP036

**Brahms: Symphony No. 3**  
Vienna Philharmonic Orchestra  
Sir John Barbirolli



HIQLP037

**Tchaikovsky: Piano Concerto No. 1**  
Philharmonia Orchestra  
Ogdon/Barbirolli

### ALSO AVAILABLE

HIQLP002/HIQXRC2  
**Grieg: Music From Peer Gynt**  
HIQLP003/HIQXRC3  
**Holst: The Planets**  
HIQLP004  
**Mendelssohn/Bruch:  
Violin Concertos**  
HIQLP005  
**English String Music:  
Elgar & Vaughan Williams**  
HIQLP006/HIQXRC6  
**Beethoven: Triple Concerto**  
HIQLP007/HIQXRC7  
**Tchaikovsky: 1812 Overture**  
HIQLP008/HIQXRC8  
**Carl Orff: Carmina Burana**

HIQLP009/HIQXRC9  
**Bach:  
Violin Concertos in A Minor**  
HIQLP010  
**Sibelius: Symphony No.5**  
HIQLP011  
**André Previn's Music Night**  
HIQLP012  
**Rodrigo: Concerto de Aranjuez**  
HIQLP013  
**Mussorgsky:  
Pictures From An Exhibition**  
HIQLP014/HIQXRC14  
**Berlioz:  
Symphonie Fantastique**

HIQLP015  
**Paganini:  
Violin Concerto No.1**  
HIQLP016  
**Dvořák:  
Symphony No. 9 in E major**  
HIQLP017  
**Fauré: Requiem**  
HIQLP018  
**Brahms: Piano Concerto No.2**  
HIQLP019  
**Handel: Music for the Royal  
Fireworks**  
HIQLP020  
**Strauss: Ein Heldenleben**

HIQLP021  
**Beethoven:  
Symphony No.7 in A**  
HIQLP022  
**Ravel: Boléro**  
HIQLP023  
**Mozart: Symphony No.40**  
HIQLP024  
**Smetana: The Bartered Bride**  
HIQLP025/HIQXRC25  
**Vivaldi: Four Seasons**  
HIQLP026  
**Sibelius: Symphony No.2  
in D major**  
HIQLP027  
**Bizet: L'arlésienne & Carmen**

HIQLP028  
**Berlioz: Harold In Italy**  
HIQLP029  
**Rossini: Overtures**  
HIQLP030  
**Sibelius: Symphony No. 4  
Rakastava • Romance in C**  
HIQLP031  
**Rimsky-Korsakov:  
Scheherazade**  
HIQLP032  
**Nights In Vienna**  
HIQLP033  
**Brahms: Violin Concerto**

Order online now from [www.hiqrecords.com](http://www.hiqrecords.com)

## BUYING VINTAGE

Despite having no belts, rubber wheels or mechanical brakes to give problems, always be on the lookout for minor faults if inspecting a B710 with a view to buying one. Also remember to look for signs of wear from hard professional use.

More suited to the domestic environment, B&O's drawer-loading Beocord 5000 of 1984 is about as sleek and modern looking a cassette deck as you are likely to find. This highly accomplished machine is surprisingly easy to work on and sets up beautifully with IEC standard tapes. Along with Sony's TC-K611S it is highly recommended as an everyday machine.

Despite sporting a DIN connector, the Beocord's input levels match modern line-level standards, meaning a simple adapter is all that is needed to use the deck with non-B&O gear. Later models from the company like the 5500 and 7000 added extra automated features, but never quite matched the 5000's excellent audio performance.

### BRITISH DECKS

Lacking the large-scale precision manufacturing abilities of the Europeans and Japanese, the British hi-fi industry was not able to produce cassette decks in any quantity. The few that did emerge tended to use locally made electronics with imported mechanisms, making production a simpler proposition.

The Arcam Delta 100 is one celebrated example of this type of machine. It used a Denon transport partnered with Arcam electronics and was equipped with Dolby S

'Good quality examples of the Arcam Delta 100 are highly prized'

and manual recording calibration controls. The Delta 100 offered similar facilities and sound quality to the Sony TCK-611S but cost two and a half times as much – £850 rather than £330 to be exact. Unsurprisingly it was a slow seller, but good quality examples are highly prized today.

### AND FINALLY... NEAL

UK company NEAL had more success in the mid 1970s with its 102 and 103 machines, both of which used a rather basic transport sourced from 3M (the producer of Scotch cassettes) in the USA. Of these, the 103 is the choice, being an early example of a tape recorder where the user could

tune the recording parameters of level, bias and equalisation without having to dismantle the machine. This was not an easy process since only two heads were fitted, but for those who really understood tape recording, these facilities were certainly a boon.

The NEAL was built to semi-professional standards and has proved to be a durable product. However, as with anything aimed at the more technically minded user it is a good idea to check the unit for irreversible home-made modifications before buying. ⚡

**ABOVE:** Timeless styling and refined sound quality are combined in the B&O Beocord 5000. The controls and deck slide out on a motor-powered drawer, keeping the lines of the casing clean



## ALSO CONSIDER

**Yamaha TC-800GL:** Striking styling from Mario Bellini and a reasonable recorder too. Head wear can be a problem though.

**Toshiba/Aurex PC-X60AD:** Uses the non-standard ADRES NR system (although it has Dolby B as well) which limits compatibility but the deck produces excellent recordings when properly setup.

**Goodmans SCD-100:** Behind the blue-collar badge lies a Nakamichi 500 Dual Tracer. Same parts, same performance. In short, a bargain!

**Optonica RT-3838:** Sold as a high-tech marvel but really just an ordinary Japanese cassette deck with a fascia resembling a pocket calculator. Mechanical keys limited the possibilities for useful automation.



**Sony WM-D6C:** The 'Walkman Professional' [pictured above] is pocket-sized (just!) but performs like a top quality full-sized deck and lacks little when it comes to features. A great choice if rack space is limited.

**Uher CG360:** Open-reel maestro Uher's most ambitious cassette deck. Mega-money when new and today a challenge to repair and maintain, but still a strangely alluring machine.

**Pioneer CT-A9:** The best of the big Pioneers, ruler-flat playback response when set up correctly with mechanical performance to match. Not common, but worth seeking out.

**Aiwa XD-009:** The deck's built-in 16-bit DAC may no longer be a draw but this is still a great machine. Another statement piece from Aiwa.

**Technics RS-9900:** Big two-box layout looks impressive but the performance is little different to that of a good conventional machine of the period.

**BELOW:** The Arcam Delta 100 is arguably the top British cassette deck, although the transport it uses is Japanese. Rare and expensive but worth keeping an eye out for



# Sometimes you just can't see the wood for the trees when you're buying hi-fi.

## Clarity is here to help.

Buying a hi-fi system is all about you and the emotional connections you make with the music. What you buy depends upon what you need and what you want from your music.

And you can only find the answer at your local expert retailer. You can't audition hi-fi or make comparisons online or by mail order.

Members of **The Clarity Alliance** are the only independent retailers who are trained to industry agreed standards to give you unparalleled levels of product advice and service. Take your time and relax in dedicated listening rooms, try a variety of equipment and music, audition and study each item, get to know it and see how it makes you feel. [www.clarityalliance.co.uk](http://www.clarityalliance.co.uk)

- ✓ **Free geek time** impartial and honest advice
- ✓ **Transferrable warranty** the freedom to move
- ✓ **Listen** great demo facilities
- ✓ **Knowledgeable staff** a refreshing change
- ✓ **Awful coffee** but we'll always make a cuppa

Let our expert retailers guide you through the myriad of choices and show you some clarity

### EAST

**Basically Sound**  
Norwich  
[www.basicallysound.co.uk](http://www.basicallysound.co.uk)  
01362 820800

**Martins Hi-Fi**  
Norwich  
[www.martinshifi.co.uk](http://www.martinshifi.co.uk)  
01603 627010

### LONDON

**Adair Acoustic Design**  
Clerkenwell  
[www.adairacousticdesign.co.uk](http://www.adairacousticdesign.co.uk)  
0207 253 2326

**Bartletts Hi Fi**  
Holloway  
[www.bartlettshifi.com](http://www.bartlettshifi.com)  
020 7607 2148

**Billy Vee Sound Systems**  
Lewisham  
[www.billyvee.co.uk](http://www.billyvee.co.uk)  
020 8318 5755

**Grahams Hi-Fi**  
Islington  
[www.grahams.co.uk](http://www.grahams.co.uk)  
020 7226 5500

**Oranges & Lemons**  
Clapham  
[www.oandlhifi.co.uk](http://www.oandlhifi.co.uk)  
020 7924 2040

**Unilet Sound & Vision**  
New Malden  
[www.unilet.net](http://www.unilet.net)  
020 8942 9567

**MIDLANDS**  
**Nottingham Hi Fi Centre**  
Nottingham  
[www.nottinghamhificentre.co.uk](http://www.nottinghamhificentre.co.uk)  
0115 9786919

**NORTH EAST**  
**Sound Organisation**  
York  
[www.soundorg.co.uk](http://www.soundorg.co.uk)  
01904 627108

### NORTH WEST

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

**Chris Brooks Audio**  
Warrington  
[www.chrisbrooksaudio.com](http://www.chrisbrooksaudio.com)  
01925 261212

**SOUTH EAST**  
**Home Media**  
Maidstone  
[www.thehomeofhifi.com](http://www.thehomeofhifi.com)  
01622 676703

**Infidelity**  
Kingston-on-Thames  
[www.infidelity.co.uk](http://www.infidelity.co.uk)  
020 8943 3530

**P J Hi-Fi**  
Guildford  
[www.pjhifi.co.uk](http://www.pjhifi.co.uk)  
01483 504801

**Soundcraft Hi-Fi**  
Ashford  
[www.soundcraftshifi.com](http://www.soundcraftshifi.com)  
01233 624441

**SCOTLAND**  
**Glasgow Audio**  
Glasgow  
[www.glasgowaudio.com](http://www.glasgowaudio.com)  
0141 332 4707

**Holburn Hi-Fi**  
Aberdeen  
[www.holburnhifi.co.uk](http://www.holburnhifi.co.uk)  
01224 585713

**SOUTH CENTRAL**  
**blu-horizon**  
Reading  
[www.blu-horizon.co.uk](http://www.blu-horizon.co.uk)  
0118 909 9613

**Overture**  
Banbury  
[www.overture.co.uk](http://www.overture.co.uk)  
01295 272158

**Oxford Audio Consultants**  
Oxford  
[www.oxfordaudio.co.uk](http://www.oxfordaudio.co.uk)  
01865 790879

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

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

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

### With support from:

Anthem AV • Arcam • Bowers & Wilkins • Bryston • Dolby • JVC  
KEF • Heed • Henley Designs • Hi-Fi+ • Pioneer • Plinius • PMC  
REL • Rotel • Sennheiser • SIM2 • The Chord Company  
The Multi-Room Company • What Hi-Fi? Sound & Vision

 /ClarityAlliance

 @clarityalliance

**clarity**  
clear advice

# Naim NAC 12/SNAPS/NAP 250

The NAP 250 power amp is perhaps the Salisbury company's best known component. Launched in 1975, it was a match for the NAC 12 preamp. How do they sound today? Review: **Keith Howard & Tim Jarman** Lab: **Paul Miller**

While history best remembers the Naim 32/250 – NAC 32 preamp and NAP 250 power amp as the classic Naim amplifier combination of the late 1970s, and the one most often associated with the subjectivist revolution in audio, this wasn't the first of the NAP 250's partnerships. When the 250 was introduced in 1975, the preamp awaiting it was the earlier NAC 12, introduced a year before and destined to survive just six years until it was discontinued in 1980.

For readers too young to have experienced the febrile atmosphere of the hi-fi industry in the latter half of the 1970s and early 1980s, or who are old enough but weren't audiophiles at the time, it is difficult to convey just what an exciting and unsettling period it was.

All of audio's established tenets came under scrutiny and, to cries of outrage from the audio establishment, many were overthrown. Suddenly it was naïve to judge a turntable by its wow and flutter spec or an amplifier by its power output and total harmonic distortion figures, and foolish to suppose that the cable hooking them all up had no influence on sound quality.

In the process a cabal of new manufacturers came into being whose products were held to epitomise the new order, of whom Naim Audio (manufacturer of amplifiers) and Linn



**ABOVE:** Naim founder Julian Vereker (right) pictured in the company's warehouse along with current Naim managing director, Paul Stephenson. Naim Audio Ltd was Vereker's second company

Products (manufacturer of turntables and loudspeakers) became the most important in the UK for as long as their symbiotic relationship flourished.

## FIRST AMP

Naim Audio Ltd, founded in 1973, was Julian Vereker's second company. It was while manufacturing products such as lighting controllers at his first, Naim Audio Visual Ltd, that – dissatisfied with the sound quality he heard from existing hi-fi products – he began experimenting with audio amplifiers. Having left school at 16 to become a racing driver, he didn't have the necessary skills and experience to design electronic circuits himself so he called in Allen Mornington-West, who had recently graduated from Durham University and who he knew as a result of his father Charles Vereker being professor of political theory

**LEFT:** 'The purpose of an audio amplifier is to drive loudspeakers without loss of musical information.' Naim states its design criteria in these original NAP 250 leaflets

there, and his mother Patricia vice-principal of Trevelyan college.

Naim Audio's first product, the NAP 160 power amplifier, was introduced in 1971. It was followed in 1973 by the original NAP 200, which in 1975 was replaced by the NAP 250. Naim's top power amplifier of the time, and for many years to come, the 250 was technically unusual in that it used a regulated power supply, whereas the vast majority of power amplifiers, then as now, make do with an unregulated supply. In effect, then, the NAP 250 was four power amplifier modules in one box, but two of them were adapted to deliver a stable DC supply voltage to the others.

Even by 1975 transistor power amplifiers were relatively new, and Naim was still a small company with limited technical resources. So Allen Mornington-West adapted a circuit design described in an application note by one of the large semiconductor manufacturers, in this case RCA. The three-stage circuit – comprising a long-tailed pair input stage, common emitter voltage amplifier and push-pull output stage – is still popular today, although what would now normally be a





**RIGHT:** Stripped down and ready to rock – the NAC 12 (left) offers just three inputs (phono, tape and tuner) and no tape loop while the SNAPS does not have a mains switch

complementary NPN/PNP output stage was in RCA's design a quasi-complementary stage using two NPN devices, because PNP complements were at that time rare and costly. Plus Naim had doubts about how complementary they really were...

### IDEAL PARTNER

Once Mornington-West had determined that the popular 2N3055 output device was too 'slow' (its current gain dropped to 1 at a low 0.8MHz), he chose instead the radio frequency output transistors produced by Solitron. The NAP 160 used BDY55s, the NAP 200 BDY56s and the NAP 250 BDY58s, all with a specified ft of 10MHz but different voltage, current and power ratings in line with their respective power outputs and Naim's desire that they should be capable of driving unusually low impedance loads. This was to make the 250 an ideal partner for the Linn Isobarik. But Naim's eschewal of an output inductor – there was just a 0.22ohm series resistor in the output to provide some insensitivity to capacitive loads – meant that the speaker cable had to provide sufficient inductance if the amplifiers were to remain stable. Use of low inductance, high capacitance braided speaker cables was deprecated, and ignoring Naim's warning could result in smoke heralding an output stage failure.

Arguably, the NAC 12 preamp was even more unusual than the NAP 250. In ultimate form it required a standalone external power supply – the SNAPS – at a time when such an arrangement was virtually unheard of; it favoured DIN



connectors over the more popular phonos and it soon became modular internally.

The very earliest NAC 12 had all its circuitry on a single printed circuit board but this was quickly superseded by a mother board and six (later seven) daughter boards, initially mated via edge connectors but later by the pin connectors also adopted in the NAC 32. This arrangement provided flexibility, allowing moving-magnet and moving-coil disc input stages to be quickly swapped, and facilitated servicing. If a board failed

it could be replaced at a Naim dealer and returned to the factory at leisure for repair.

Naim eventually relented and provided phono sockets for the disc input (labelled 'Gram' on the input

selector of early NAC 12s!) because pick-up arm leads were conventionally terminated in phono plugs, but nevertheless the NAC 12 remained manifestly idiosyncratic.

The same was true of its circuit design. At a time when Japanese manufacturers in particular were beginning to trumpet the merits of complementary circuitry and DC coupling throughout, Naim's preamp circuits used a single voltage rail and capacitor coupling and were inherently quite simple, although extensive use was made of two-transistor constant current loads to improve linearity.

As the NAC 12 and NAP 250 matured, so did the method of constructing them. In

its initial form – as tested here and known affectionately as the 'bolt-on' design – the NAP 250 was constructed using a custom aluminium extrusion, cut and bolted together to form the four sides of the case, to which aluminium top and bottom plates were bolted to complete the enclosure. The output transistors were attached to the rear panel via mica insulating washers and smartened up a little with black plastic insulating covers – needed because the metal cases were connected to the transistor's collector terminal.

### BUMPER VERSION

In 1980 the case was redesigned to use a rectangular extrusion that formed the top, bottom and sides, creating the 'chrome bumper' version. Now the output transistors were bolted to an internal, mid-mounted heatsink which allowed each amplifier board and its regulated power supply board to be mounted, much more neatly, end to end. The NAC 12's construction changed too, from an initial design with bolt-on sides to one in which the top panel bolted down onto sides that were aluminium extrusions.

While not everyone was a fan of Naim's distinctive approach to amplifier design, or of the whole subjectivist movement, the one became a symbol of the other. This became even more the case when Naim's

**BELOW:** None of the power meters or speaker selectors found on Japanese amps of the period to be found here. Rather, Naim spent its money on the NAP 250 where it counted – inside

'Mark Knopfler's famous guitar sound enjoyed tremendous grip'



## VINTAGE HI-FI

**RIGHT:** A peek under the lid of the NAP 250. Of the four modules, two are voltage regulators and two are power amplifiers, with the large power supply components on the right

tongue-in-cheek advertising campaign also broke with convention.

### TIM LISTENS

Partnering equipment for the listening part of the test was a Cyrus CD8 SE2 CD player connected to the tuner input of the NAC 12 preamp using custom-made interconnect cables with Monitor Audio PL100 loudspeakers hooked up to the NAP 250 with Chord Odyssey 2 cables. The NAC 12 proved to be a bit too sensitive when it came to a CD player with a standard 2V output so the action of the volume control action was rather abrupt.

The Naim components aren't that easy to set up. The high level sources are connected to the NAC 12 unit via DIN connectors – latching sockets are used but ordinary plugs will fit if necessary. The connection for a turntable is made via BNC connectors, again non-standard, but simple in-line adapters that suit the more familiar RCA-type plugs are easily obtained. The NAC 12 is then connected to the SNAPS unit via a special cable using DIN connectors of a type rarely seen in audio. If this cable is missing or broken it is likely that a replacement would have to be made specially.

The NAC 12 is powered by the SNAPS, which also has a signal loop-through to the NAP 250. This involves another special cable with a DIN connector on one end and a single XLR on the other.

As an admirer of the original Naim Nait, my hopes were that this larger, more expensive combination would retain the Nait's strengths of transparency and nimbleness but at the same time address

its most significant drawback: a severe lack of power. The former requirement was met with aplomb, the regulated supplies of the NAP 250 helping to give a really solid and confident presentation at all listening levels. In fact it was impressive to hear how increasing the volume level did little to alter the character of the sound and instead simply made the presentation louder. This is how all amplifiers should be, of course, but in practice few manage this feat quite so convincingly.

Meanwhile, the Nait's matter of fact, dry and analytical sound was carried over intact as rich and luxuriously recorded discs such as Mark Knopfler's album *Golden Heart* [Vertigo 514 732-2] demonstrated. On the Knopfler set, that famous and familiar guitar sound enjoyed tremendous grip – helped in no little part by the NAP 250's power reserves – though both vocals and guitar would have benefited from more warmth. The result was that some of the tracks sounded somewhat two-dimensional, 'No Can Do', in particular, failing to connect in its usual, emotional manner.

On the other hand, female vocals reaped the rewards of the Naim's sheer presence. Katie Melua's 'Halfway Up The Hindu Kush' from her album *Piece By Piece* [Dramatico DRAMCD0007] was delivered with superb midrange lucidity, each word projected from the speakers with a fine sense of precision. True, dryness was noted around the backing instruments but in terms of vocal clarity the Naim system made a very good case for itself.

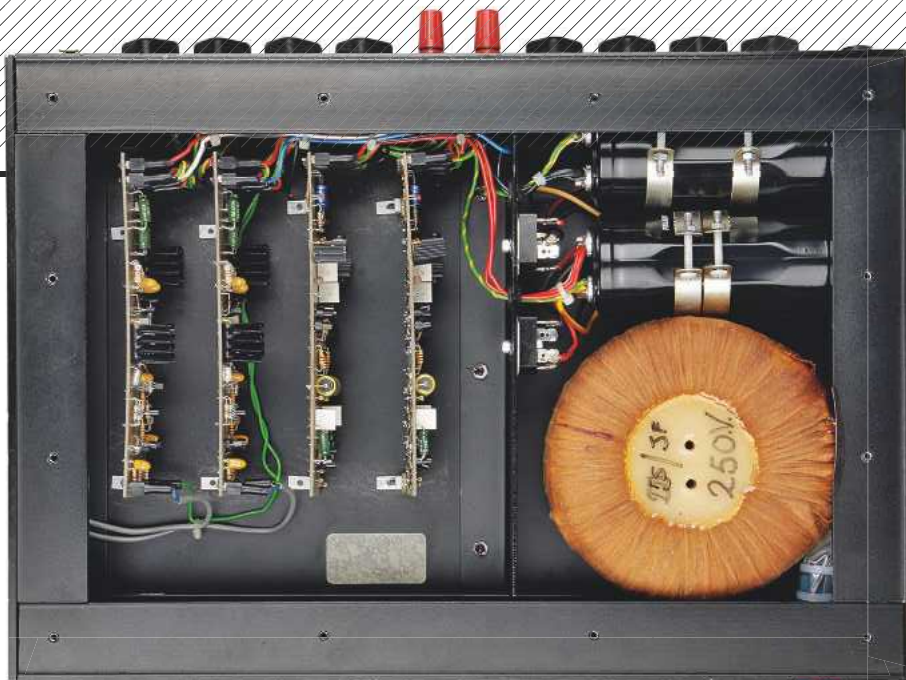
### PHONO STAGE

The quality of Naim's phono stages of this period is well known and, having a tidy Sony PS-X70 deck fitted with an Audio-Technica AT-OC9III MC cartridge on hand, I couldn't resist giving it a go. The results compared favourably with those one might obtain from a decent modern external phono stage, even if the sound was clipped at both the upper and lower frequency extremes. *Fickle Heart* by Sniff 'N' The Tears [Chiswick WIK 9] remained a satisfying listen way beyond 'Driver's Seat' (the point at which I often lift the needle...) with only subjectively heightened surface noise between tracks when compared to best-in-class performance to detract.

The system gave the impression of being more at ease with LPs as a source than it did with the CD player. This is not surprising since its original role would have been that of a centrepiece of a top-end record playing system.

One can't expect Japanese levels of build integrity from a low volume production models like the Naims, so be on the lookout for faults and problems when buying. Also be aware of Naim's policy regarding service data and circuits. ↻

**LEFT:** Inside our sample of the NAC 12, the seven edge-connected daughter boards reveal it to be a 2nd generation version of the preamp. It is powered via the external SNAPS PSU



'Katie Melua's vocal was delivered with superb lucidity'



# LOIT

## PASSERI

### The Epitome Of True Sound



The carbon fiber and stainless steel Passeri features the Philips CD- PRO2 LF drive attached to an oversized aluminium frame. This is supported on four silicon gel bushes that eliminate micro vibrations interfering with the drive. The 0.9kg motorised cover further dampens the micro vibrations.

The 20kg Passeri has three supporting towers housing a ceramic ball isolation system, which eliminate over-damping and excess resonances.

LOIT's patented current to voltage converter uses two valves as a zero feedback transimpedance amplifier, regulated by a hybrid MOSFET/valve circuit, reducing distortion and noise in the multibit DAC.

Dual mono choke regulated power supplies are utilized for ultimate channel separation and both the analogue and digital circuits are individually regulated for improved sound quality.

All this adds up to the LOIT Passeri being the ultimate statement in CD reproduction and *is* The Epitome Of True Sound.

Distributed by  
[www.alternativeaudio.co.uk](http://www.alternativeaudio.co.uk)  
+44 (0)1984 624242

[www.loit.com.sg](http://www.loit.com.sg)  
+(65) 91003239

## VINTAGE HI-FI

## LAB REPORT

### NAIM NAC 12/SNAPS/NAP 250 (Vintage)

The seven daughter boards inside our NAC 12 suggest it's a 'Version 3' preamp but I doubt anyone really appreciated just how technically impressive it was at the time. Distortion, for example, is managed to a remarkably consistent 0.0205-0.0210% from 20Hz-40kHz [see blue trace, Graph 2] while the output impedance is impressively low at 6-2ohm at 200Hz-20kHz. It increases at lower frequencies to 126ohm/20Hz, the point at which the low filter bites, rolling the response away to -3dB/4Hz. Interestingly, and not coincidentally, the responses of both the NAC 12 and NAP 250 power amp are almost identical in shape at -0.5dB/20kHz out to -7dB/100kHz.

The output impedance of the NAP 250 is also 'engineered' with a series resistor to between 0.23-0.26ohm from 20Hz-100kHz. Similarly, while the preamp offers a huge 95dB A-wtd S/N ratio (re. 0dBV), the NAP 250 clocks-up a spectacularly wide 102dB (re. 0dBW). Only some stray capacitive-coupling on the daughter boards gives the NAC 12 pause as its stereo separation falls with increasing frequency from 106dB/20Hz to just 47dB/20kHz. The NAP 250 follows the same trend with a 51dB separation at 20kHz but distortion is rather *lower* than through the NAC 12 at 0.0024-0.012% from 1W-70W through the midrange. This increases with frequency to 0.025%/20kHz [see black trace, Graph 2]. Naim's 70W/125W 8/4ohm power specification is met at 80W/140W but the very stiff regulation of its power supply means there's little dynamic headroom [see Graph 1] - 140W and 8.4A is the limit. Readers may view a full QC Suite test report for Naim's NAC 12/SNAPS preamplifier and NAP 250 power amplifier by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'Download' button. PM



**ABOVE:** NAP 250 shows XLR signal input (far right) and externally mounted power transistors. Note DIN sockets on NAC 12/SNAPS

In short, neither is available. This means that the factory repair service is your only option if there are serious issues with the equipment.

Another Naim quirk is that the output and regulator transistors, the most vulnerable part of any solid-state amplifier, are rebranded with Naim part numbers, making replacement problematic since specifications or equivalents were never published.

Of the smaller parts, the red moulded plastic electrolytic capacitors used on some of the modules in the NAC 12 should be replaced if the unit is going to be put into regular use. They have a habit of becoming electrically leaky or suddenly short-circuiting now they are long in the tooth.

Missing interconnecting cables need not be a problem since the materials to make replacements are still easily available and the functions of each pin are marked on the back of the equipment. The

only possible pitfall is that the term 've' is sometimes used when 'OV' or 'GND' would have been more appropriate. This causes confusion if you are not familiar with how the system is arranged.

### CARTRIDGE MODULES

Finally, if you are going to use the system with a turntable it is a good idea to try and determine which RIAA modules are fitted and which cartridges they are optimised for. Unlike with some equipment there is no facility to make adjustments so you are stuck if the cartridge that you want to use doesn't suit.

So did the NAP 12, SNAPS and NAP 250 live up to my hopes of being a Nait with greater power? Up to a point. It was beyond question that the extra grunt was there. But this more complex set-up lacked the Nait's delightful transparency. To use an old cliché, it sounded a bit too much like 'hi-fi' at times rather than a system making music. ☹

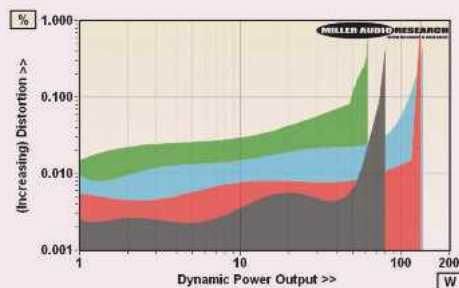


**ABOVE:** One of Naim's unconventional advertisements from a 1980s campaign

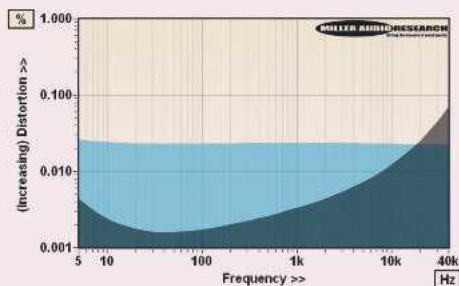
### HI-FI NEWS VERDICT

While not as polished as the best contemporary components from Europe or Japan, the Naim system nevertheless proved to be an arresting listen, whether with CD or vinyl. Indeed, its phono stage has much to recommend it, despite perceived limitations at the frequency extremes. Devotees fully in tune with 'the Naim sound' of the period, are sure to love it - sparse facilities, complicated setup, rough edges and all.

Sound Quality: 82%



**ABOVE:** Dynamic power output vs. distortion (8ohm tap) into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads



**ABOVE:** Distortion vs. extended frequency; preamp 0dBV (blue) and power amp 10W/8ohm (black)

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	80W / 140W
Dynamic power (<1% THD, 8/4/2/1ohm)	80W / 135W / 140W / 62W
Output imp. (20Hz-20kHz, pre/power)	2-125ohm / 0.23-0.26ohm
Freq. resp. (20Hz-100kHz, pre/power)	-0.2 to -7.9dB / +0.0 to -7.0dB
Input sensitivity (for 0dBV/0dBW)	91mV / 183mV
A-wtd S/N ratio (re. 0dBV/0dBW)	95.0dB / 101.5dB
Distortion (20Hz-20kHz, pre/power)	0.0205-0.021% / 0.0016-0.025%
Power consumption (Idle/rated output)	15W/307W (6W preamp)
Dimensions (WHD, Pre/Power)	144x76x300/430x76x300mm

The most amazing sound  
you've ever heard

To find out more, and to book your home  
demonstration, visit us online

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

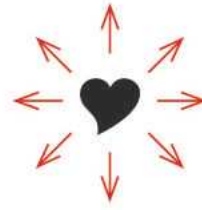
Introducing...

- JansZen Electrostatic Speakers

- exaSound DSD DAC's

*Sound as pure as the air itself*

[info@soundsetup.co.uk](mailto:info@soundsetup.co.uk)  
07941 330 654



HI-FI WORLD



5 GLOBES

"Outstanding - simply the best"

Platinum M 50



**Love is all around...**

First it was German efficiency.  
Then came German automotive reliability.  
Now it's German HiFi / Home Cinema excellence.

**Embrace the love we have for audio - from our  
speakers to electronics, since 1981.**

Tel 01785 748 446

E-Mail: [info@quadralgb-ie.co.uk](mailto:info@quadralgb-ie.co.uk)

[www.quadralgb-ie.co.uk](http://www.quadralgb-ie.co.uk)

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

**THE EQUALISER**  
IF YOU REALLY WANT TO HEAR YOUR RECORDS  
CALL 01822 612449 TO ARRANGE AN AUDITION  
[WWW.PURESOUND.INFO](http://WWW.PURESOUND.INFO)

THE GRAHAM COLLIER SEPTET  
JAZZ SOUL  
WITH LITTLE STEVIE  
HOWLIN' WOLF  
john lee hooker  
etha  
et  
VIN GATE  
SHADES OF BLUE  
DON BENVENUE  
IAN CARR

VIDA  
Aurora

Phono Equalizer  
Dart Equalizer  
Stereophonic  
Mono  
Stereophonic  
Stereo  
FM  
MM  
Low  
Impedance  
AutoSound

**quadral**   
HiFi / Surround Speakers

“the P10 will have an effect ranging from positive to positively startling”. **Hi-Fi News**



PS AUDIO

Pioneering world class audio products

# 40 years in the making, PS Audio's range of mains regenerators give you complete control of your mains for the sound you aspire to.

If your high end system is powered directly from the mains or through poor quality conditioning, the true sound of the recording will be compromised. Without PS Audio mains regeneration you will be experiencing:

- Low/high supplied mains (from 220V to 260V)
- Fluctuating mains with variations of up to 20 Volts
- Harmonic distortion (THD) ranging from 1%-3.5% (increased by appliances sharing power in your house)
- Radio Frequency Interference (RFI)
- System dynamics are reduced or suppressed across the range
- Reduced soundstage
- The musical performance of your system is unpredictable at different times of the day

PS Audio has developed a range of mains regenerators that solves these issues and gives you total control of your mains. All you need to do is choose the product that suits your system & budget.

---

For a no obligation demonstration please contact one of the following approved PS Audio dealers:

**North West** - Brian & Trevors 0161 766 4837. **East** - Analogue Seduction 01733 350878.

**Midlands** - Oxford Audio Consultants 01865 790879 / Midland Hifi Studio 01902 380083 / Art Audio Salon - 07878 566814.

### P3

- 850W of continuous regenerated power (1kw on peak)
- 3 regenerated outlets (for front end or low output amps) and 1 high level conditioned outlet (for high output amp)
- Fan cooled (run silent)
- **Price £1,950.00**



### P5

- 1kw of continuous regenerated power (1.2kw on peak)
- 4 regenerated outlets including 1 high current (amp)
- Fan cooled (run silent)
- Touchscreen display
- **Price £2,999.00**



### P10

- 1.25kw of continuous regenerated power (1.5kw on peak)
- 9 regenerated outlets
- 3 high current outlets (high power amps/mono-blocks/projector/TV)
- Heat sink cooling (no fans)
- Touchscreen display
- **Price £4,400.00**



All products in the range provide stable mains to your system, reduce incoming harmonic distortion to virtually nil, and have the ability to step up/down the incoming voltage to provide regenerated mains at the level you require. The result will be obvious to you: improved dynamics, far better base and a much bigger soundstage - always.

**South East** - Guildford Audio 07979 515577 / Audio Venue W5 0208 567 8703 / Audio Venue Maidenhead 01628 633995 / Stereo Now 07870 192618.

**Distributed by: Signature Audio Systems 07738 007776 ● [www.psaudio.com](http://www.psaudio.com)**

# WELCOME TO THE NORTH EAST

ANATEK RESEARCH  
 APOLLO  
 ATACAMA  
 AV INTERNATIONAL  
 CHORD COMPANY  
 CHORD ELECTRONICS  
 CLEARAUDIO  
 DYNAVECTOR  
 EAR YOSHINO  
 GOLDRING  
 GRAHAM ENGINEERING  
 GRAHAM SLEE  
 G F HADCOCK  
 ISOTEK  
 KOETSU  
 KUDOS AUDIO  
 MARTIN LOGAN  
 LYRA  
 MAGNEPLANAR  
 MELODY  
 MICHELL ENGINEERING  
 MONITOR AUDIO



NAD  
 NAIM AUDIO  
 NORDOST  
 NOTTINGHAM ANALOGUE  
 OPERA  
 ORTOFON  
 PATHOS ACOUSTICS  
 PROJECT  
 PS AUDIO  
 PURESOUND  
 REGA  
 REVOLVER  
 ROKSAN  
 SME  
 STAX  
 SUGDEN AUDIO  
 TEAC ESOTERIC  
 TRANSMISSION  
 TRICHORD RESEARCH  
 UNISON RESEARCH  
 USHER AUDIO  
 VAN DEN HUL

**HIFISOUND, Castlegate mill, Quayside, Stockton on Tees. 01642 267012**

# 2NDHANDHIFI.CO.UK

Guaranteed used and ex-demo audio equipment from HiFiSound - the UK's premier source

**Call: 0845 6019390 Email: [news@2ndhandhifi.co.uk](mailto:news@2ndhandhifi.co.uk)**

## MASSIVE EX DEMO SALE NOW ON

Roksan Radius 5, ex demo..... 849	Roksan Kandy K2 & Caspian M2 Integratds, ex demo... Call	AMR CD777 ex demo..... 2499	Focal Electra range, ex demo..... Call
Clearaudio Matrix RCM, ex demo, nr mint..... Call	Esoteric C03/A03 Pre Power, ex demo..... 7999	Roksan Kandy K2 & Caspian M2 CD Players, ex demo... Call	Monitor Audio GX, RX and Platinum ranges ex demo... Call
Croft RIAA Phono Stage, ex demo..... 399	NAIM XS Amps ex demo..... Call	NAIM CD5XS, CDX2, NDX, ex demo..... Call	Martin Logan Summit X, ex demo..... Call
Project Essential and Debut ex demo..... Call	Unison Research Simply Italy..... Call	TEAC Distinction CD1000 & CD3000 ex demo... Call	Magneplanar MG3.6, ex demo..... 2999
Rega RP1, ex demo..... 179	TEAC Distinction A1000 and A3000 Integratds, ex demo Call	Audiolab MDAC, 8200CD ex demo..... Call	Focal Spirit One Headphones, ex demo..... Call
Puresound P10 Phono stage ex demo..... 449	Audiolab 8200 Integrated, Pre and Power, ex demo... Call	Chord Quite HD and QBD76HD ex demo..... Call	Stax Headphones, ex demo..... Call

### Analogue

Cambridge Audio 640P, excellent..... 99
Clearaudio Innovation Compact, good condition..... 2499
Clearaudio Balance Phono stage, excellent..... Due in
EAR 834P Deluxe ex demo..... 1299
Conrad Johnson TEA 1b Phono stage..... 1999
Garrard 401, Slate Audio plinth SME 3009..... 1099
Hadcock 242 Integra, ex demo as new..... 799
Kuzma Stabi Reference, excellent boxed..... Due in
Kuzma Stagi, excellent..... 449
Linn Ekos, excellent..... Due in
Linn Ittok LVII, excellent..... 499
Linn Ittok LVII, in rare black, excellent..... 799
Linn Sondek LP12, Ittok LVII, great condition..... 799
Linn Sondek LP12, Cirkus, Valhalla, front mount motor..... 599
Linn Sondek LP12, Lingo Mk1, excellent..... 999
Lyra Erodion Step up..... 1499
Mission 774C tonearm, excellent..... 149
Music First Step Up Transformer with custom options..... 899
NAIM Stageline S, excellent..... 179
Origin Live stub modified RB250..... 149
Ortofon TA100, excellent boxed..... 449
Project Tube Box Phono Stage..... Call
Project RPM4, with arm and cover..... 229
Rega Planar 3, vgc..... 199
Rega P3/24 c/w Exact cart, excellent boxed..... 349
SME 3009, excellent boxed..... 249
SME 3009/3, excellent boxed..... 249
Technics 1210, vgc boxed..... 249
Thorens TD124 c/w plinth..... 599
Thorens TD170, Fully Automatic, excellent..... 249
Tom Evans Groove, excellent..... 999
Trichord Dino mk2, boxed..... 249
Trilogy 906 Valve phono stage..... 999
Wilson Benesch Act 1 Tonearm, nr mint superb..... 799
World Audio Design Phono 3S, nr mint 2 box unit..... 599

### Amplifiers

Arcam Alpha 9, excellent..... 179
Arcam Alpha 8 excellent..... 119
Arcam Xeta 290 excellent..... 149
Audiolab 8000A, vgc boxed..... 199
Arcam CD192, excellent boxed..... 299
Audio Research LS8 Preamp, excellent boxed..... 699
Audio Research Ref 610 Monoblocks, vgc boxed..... 16999
Audio Research Ref 210T Monoblocks, as new boxed..... 9749
Ayre Acoustics AX7e Integrated amplifier, ex boxed..... 1299
Ayre Acoustics V5xe Power boxed mint..... 1999
Chord Electronics Mezzo 140, excellent boxed..... 1999
Conrad Johnson, PV10L & MB55 Pre/Power excellent..... 999
Conrad Johnson ACT 2, excellent..... 3999
Copland CSA28, excellent boxed REDUCED..... 549
CR Developments Romulus Integrated, boxed vgc..... 799
CR Developments Kalyso Integrated, boxed vgc+..... 599
Cyrus DACXP, excellent boxed..... 699
Cyrus Straight Line Integrated, excellent boxed..... 199
Cyrus XPA Power, excellent boxed..... 199
Esoteric A03 Power amp, superb boxed..... 3999
Exposure X, vgc..... 199
Exposure 14/9 Pre and PMS PSU combo vgc..... 899
Exposure 4 Dual Regulated Power amp vgc..... 499
Exposure 7 Pre, vgc..... 199
Graaf GM100 Power, boxed..... 2499
Krell S300 Integrated, excellent..... 1499
Krell FPB850M Monoblocks..... 549
Marantz PM6004, nr mint boxed..... 199
Marantz SC7S2, excellent boxed..... 2495
Meridian 551 c/w remote, excellent boxed..... 499
McIntosh MA2275, excellent boxed..... 3599
Micromega IA100, great integrated, ex demo boxed..... 649
Micromega IA180, great integrated, ex demo..... 899
Micromega PW400, powerful and cultured 400wpc..... 1099
Music First Passive Silver preamp..... 1299
Musical Fidelity M3i, near mint boxed..... 899
NAIM NAP145, vgc boxed..... 899
NAIM NAIT XS ex demo..... 999
NAIM NAP150, excellent boxed..... 399
NAIM NAIT 3, excellent boxed..... 299
Nightingale Armonia, excellent boxed..... 1499
Nu Force Reference 9Se v3 Monos boxed mint..... 1799
Quad QC24 Preamp, excellent boxed..... 649
Quad 33/303 pre/power combo..... 249
Quad 34/405 pre/power combo..... 499
Rega Brio R, weeks old in Silver..... 399
Unison Research Aria S2, excellent..... 499

### Digital

Accuphase DP100, excellent boxed..... 3999
Accuphase DP75V c/w option boards, excellent boxed..... 3249
Arcam Alpha 8, excellent..... 149
Arcam CD92, excellent..... 279
Arcam CD192, excellent..... 399
Audiolab 8200CD, nr mint boxed..... 279
Audiolab 8200CD, nr mint boxed..... 549
Audio Analogue Crescendo CD, as new..... 499
Audio Note CD2, vgc..... 399
Chord QBD76HD, excellent boxed..... 2249
Copland CDA266, excellent..... 499
Conrad Johnson, PV10L & MB55 Pre/Power excellent..... 329
Cyrus CD8se, excellent boxed..... 499
Cyrus CDXTSe2, boxed..... 499
Cyrus CDXTSe2, boxed..... 749
Esoteric X05, excellent boxed..... 1999
Goldenote Koala, nr mint boxed..... 1999
Lector 0.6i, excellent boxed, due in..... 699
Leema Stream 3, nr mint boxed..... 649
Mark Levinson 360 DAC, excellent boxed..... 1199
Marantz CD6002, excellent..... 99
Marantz SA7S1, excellent boxed..... 2749
Marantz CD80, battleship player..... 299
Meridian 508, excellent boxed..... 349
Meridian 588, excellent boxed..... 899
Micromega Duo with Duo BS DAC, excellent..... 599
Musical Fidelity A5CD, excellent..... 599
Musical Fidelity Nu Vista CD, excellent boxed..... 999
NAIM CD5i, excellent boxed remote..... 449
NAIM CD5i2, excellent boxed remote..... 549
Project Streambox DS, ex demo..... Call
Quad CDP99/2, excellent boxed..... 499
Rega Planet, excellent boxed..... 229
Rega Saturn, excellent..... 499
Shanling SCDT200C, excellent..... 799
Sony SCD777es, excellent boxed..... 999

### Loudspeakers

B&W 685 c/w matching stands..... 349
B&W 805 Signature, Tiger eye finish..... 1499
B&W 800D, near mint..... 9499
Focal Electra 100Bbe with matching stands as new..... 1999
Focal 806V, excellent boxed..... 2749
Hypertion HPSS38, excellent boxed..... 349
Kudos C1, early pair..... Due in
Kudos C2, ex-demo boxed..... 999
Kudos X2, nr mint, boxed..... 699
Linn Ninka, vgc+..... 499
Linn Sara with matching stands, vgc+..... 349
Martin Logan Aerius i, excellent boxed..... 999
Martin Logan Aeon, vgc..... Call
Martin Logan Source, excellent boxed ex demo..... 899
Martin Logan Purity, excellent boxed ex demo..... 1299
Martin Logan Vista, excellent boxed ex demo..... 1799
Magneplanar M31.6, superb..... 999
Meridian M1 Active speakers, boxed..... 1199
Monitor Audio GR60, vgc boxed..... 799
Monitor Audio PL300, mint crated, ex demo..... 3999
Monitor Audio RXW12, gloss black, ex demo..... 599
Monitor Audio RX8, Gloss black, boxed..... 749
Monitor Audio RX6, Walnut, boxed..... 549
Monitor Audio PMC703, boxed..... 199
Opera Secondo, excellent boxed..... 799
Proac Studio 130, excellent..... 499
Ruark Crusader 2 & Dialogue 1, ..... Due in
Sonus Faber Cremona, boxed in graphille..... 2399
Sonus Faber Cremona Auditor, boxed with stands..... 1399
Sonus Faber Cremona Auditor M, as new with stands..... 2999
Thiel CS7.2, vgc, just refurbished..... 2999
Triangle Comete ES, excellent..... 249
Usher S520 in birch, excellent boxed..... 279
Usher X616 centre speaker, excellent..... 399
Wilson Duette, crated with stands..... 5999

### AV/Accessories/Cables

Apollo Racks, various ex demo..... Call
Chord Cables various ex demo..... Call
Graham Slee Novo..... 159
Isotek Aquarius ex demo..... Call
Onkyo AV Receivers ex demo..... Call
Stax, various..... Call
Townshend Limited DCT300 Interconnects from..... 179
Ultrasonice Isside Edition 10 Hedphones BNIB..... Call

### Special System Deals

Audio Analogue Crescendo Amp & CD, ex demo..... 799
Audiolab 8200 Amp and CD..... Call
Monitor Audio Radius 90HD HCP with Onkyo AV amps..... Call
NAIM Unilitte and Usher Speaker Bundle..... Call
Onkyo end of line AV amps..... Call
Roksan Caspian M2 amp/CD..... Call
TEAC DISTINCTION SERIES - Special deals - ON DEMO..... Call
Yamaha RXV673 & Monitor Audio Radius 90 p5.1 pack..... Call

**Telephone 01642 267012, Tuesday to Saturday 10 'til 5 or email [news@2ndhandhifi.co.uk](mailto:news@2ndhandhifi.co.uk)**

**TURNTABLEWORLD**

**Special offers to celebrate our new website**

[www.turntableworld.co.uk](http://www.turntableworld.co.uk) - the analogue specialists - 01642 267012



# Epiphany Acoustics

Headphone Amplifiers . DACs . Interconnects



EHP-02 Portable Headphone Amplifier



Aug 2012



Best Headphone Amplifier of the Year 2012  
Hi-Fi World



Aug 2012

Discover why Epiphany Acoustics are rapidly becoming the name in affordable hi-fi at:

[www.epiphany-acoustics.co.uk](http://www.epiphany-acoustics.co.uk)

**audiophile<sup>USA</sup>**  
RARE & COLLECTIBLE VINYL RECORDS

Over 40,000 Sealed And Near Mint LPs In Stock  
Over 20 Years Experience Shipping Worldwide



**AUDIOPHILEUSA.COM**

# Emporiumhifi

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

WE NOW HAVE 3 BRANCHES

Head office Norfolk/Suffolk border **01508 518542 / 518468**

Kent and South East **01304 239419**

Wales and West **01554 750262**

## AMPLIFIERS

ACCUPHASE E307 INTEGRATED AMP	£2,200
ALMARRO 5012A VALVE INTEGRATED AMP	£1,500
AUDIO RESEARCH D115 POWER AMP	£1,200
AUDIO RESEARCH CLASSIC 60 VALVE POWER AMP	£1,500
AUDIO SYNTHESIS DESIRE DECADE POWER AMPLIFIER	£1,500
AYON SPARK III	£2,500
BELLES VT-01 VALVE PREAMP- WITH REMOTE CONTROL	£2,200
CONSONANCE CYBER 800 VALVE MONOBLOCKS	£1,400
EASTERN ELECTRIC PREAMP WITH BORDER PATROL PSU	£800
EXEMPLAR XP1 VALVE PREAMPLIFIER (USA) LINE	£1,899
GAMMAAEON REFERENCE- ANNIVERSARY EDITION	£1,950
GAMMA ERA REFERENCE VALVE PREAMP	£850
GAMMA SPACE REFERENCE VALVE AMP 300B	£1,750
HEART BEAT 300B SINGLE ENDED VALVE MONOBLOCKS	£1,000
KRELL KAV-400 XI INTEGRATED VALVE AMP	£1,200
LEAK TL12 POINT ONE VALVE AMPLIFIERS (2) SERVICED	£5,300
LUMLEY REFERENCE 120 SIGNATURE VALVE MONOBLOCKS	£1,600
MUSICAL FIDELITY AI FINAL EDITION INTEGRATED AMP	£750
MUSICAL FIDELITY M6i INTEGRATED AMP - NEW, UNUSED	£1,650
MUSICAL FIDELITY TRI-VISTA 300 AMPLIFIER & PSU	£2,000
NAIM NAP 200 POWER AMP	£1,200
NVO SPA ONE PHONOSTAGE - MM/ MC 13 VALVES	£2,950
ORPHEUS LABS 2 PREAMP AND 3 STEREO POWER AMP	£4,000
RAYSONIC SE20 300B SINGLE ENDED VALVEAMP	£1,350
STEREOKNIGHT M100 MONOBLOCKS BOXED	£2,995
SUGDEN MASTERCLASS POWER AMP	£1,499
TOWNSHEND AUDIO ALLEGRI TVC PRE AMP EX DEMO	£1,500
TRAFOMATIC EXPERIENCE ELEGANCE 6550 VALVE AMP	£2,400
TRAFOMATIC EXPERIENCE LINE ONE VALVE PRE AMP	£1,600
UNISON RESEARCH UNICO PRE AMP	£1,399
UNISON RESEARCH S6 MKII INTEGRATED VALVE AMP	£1,900
VERITAS P400 240 WATT POWER AMP	£700
YAQUIN MS 300B SINGLE ENDED INTEGRATED VALVE AMP	£650

## LOUDSPEAKERS

ACAPELLA FIDELIO	£1,500
ACAPELLA CAMPANILE	£20,000
ANALYSIS OMEGA RIBBON LOUDSPEAKERS	£3,500
ART SKIBO LOUDSPEAKERS	£350
ATC SCM10-2 LOUDSPEAKERS	£900
ATC C4 SUB WOOFER PIANO BLACK	£1,700
AUDIONOTE ANE-LX LOUDSPEAKERS	£2,000
KEF REFERENCE SERIES LS3/5A BBC MONITORS	£1,650
KEF REFERENCE 105/3 SPEAKERS	£995
LIVING VOICE IBX-R2 LOUDSPEAKERS, BOXED	£2,250
LOVINGTON HORN SPEAKERS WITH FOSTEX DRIVERS	£725
MARTIN LOGAN PRODIGY ELECTROSTATIC SPEAKERS	£3,500
NIGHTINGALE CONCENTUS CTR II LOUDSPEAKERS	£5,000
PROAC D1 LOUDSPEAKERS	£900
OMEGA MAX HEMP SPEAKERS WITH SUB	£620
QUAD 22.2 LOUDSPEAKERS	£750
QUAD ESL 2805 ELECTROSTATIC LOUDSPEAKERS	£3,800
QUAD LITE SURROUND SPEAKER SYSTEM WITH SUB	£580
REFERENCE 3A EPISODE SPEAKERS	£4,250
REFERENCE 3A MM DE CAPO LOUDSPEAKERS	£750
ROCKPORT MIRA GRAND SPEAKERS	£8,000
ROGERS LS3/5A 15 OHM	£1,250
STIRLING BROADCAST LS3/6 EBONY GOLD LABEL	£2,000
TOWNSHEND MAXIMUM SUPERTWEETERS	£600
WLM LA SCALA LOUDSPEAKERS	£1,500

## TURNTABLES

ACOUSTIC SOLID MACHINE TURNTABLE WITH ARM	£2,000
FUNK FIRM SAPPHIRE TURNTABLE WITH FXR2 ARM	£2,500
GARRARD 301 IN GOOD WORKING ORDER	£800
INSPIRE HIFI LINN LP12 VIVID UPGRADE	£899
INSPIRE HIFI UPGRADE LINN LP12 & FUNK FXR2 ARM	£2,500
LINN LP12 SONDEK FULL INSPIRE UPGRADE REGA ARM	£1,400
LINN SONDEK LP12 TURNTABLE / ITTOK / TROIKA	£1,300
LUMLEY HELIOSPHERE TURNTABLE	£1,750
ROKSAN TMS 3 WITH REFERENCE PSU	£4,250
ROKSAN XERXES 20 PLUS, XPST & ARTEMIZ 2 ARM	£3,795
VPI SCOUTMASTER WITH JMW MEMORIAL ARM	£1,295

## CD PLAYERS

EAD ULTRADISC 2000 CD PLAYER	£850
EAR ACUTE VALVE CD PLAYER	£2,600
LECTOR CDP6T VALVE CD PLAYER	£850
LECTOR DIGITUBE 24/96 VALVE DAC	£800
LINDEMANN D680 CD PLAYER	£2,750
MICRO SEIKI CD PLAYER	£900
MIMETISM 27.2 CD PLAYER	£2,100
MUSICAL FIDELITY CD PRE 24 (CD PLAYER & PRE AMP)	£800
NEODIO NR22 HD CD PLAYER, NEW, LATEST SPEC	£6,000
STELLO DA220 DAC NEW	£1,000
TEAC VRDS 25X CD PLAYER/ TRANSPORT	£1,200
TEN AUDIO TAD 1 DAC	£2,750

## MISCELLANEOUS

FANFARE FT1 TUNER WITH REMOTE CONTROL	£400
KRELL HTS HOME THEATRE STANDARD	£1,200
MERIDIAN G98 DH DVD PLAYER	£1,000
NAGRA IV-S STEREO REEL TO REEL	£1,400
QSONIX Q100 MUSIC SERVER UPGRADED TO Q110	£1,000

**WE WANT TO BUY YOUR OLD HIFI**  
**WE WANT TO BUY YOUR RECORD COLLECTION**

WE PAY CASH AND PICK UP FROM ANYWHERE IN THE UK  
WE CAN EVEN SEND YOU PACKING MATERIALS

**CALL NOW FOR A QUOTE**

**01508 518542 01508 518468**

# Take Centre Stage



## Xtension 10

The Hi-Fi News 'Highly Commended'\* Xtension 10 turntable from Pro-Ject Audio puts you at the centre of the musical performance. Whether it's recreating a rock concert, an orchestral symphony, or whatever else you have in your record collection, the Xtension 10 turns any vinyl recording into a captivating, 'live' experience.

With a retro-styled mass-loaded chassis, which is decoupled by high-grade magnetic feet, the Xtension 10 boasts a near-perfect base for vinyl playback. Combine this with the top-of-the-line 10CC Evolution Tonearm, high-mass vinyl sandwich platter and built-in Pro-Ject Speed Box DS, and you are left with a truly desirable turntable package. All for only £2,250.

### The Xtension 10 is only available through these premium retailers...

Analogue Seduction (Peterborough) - 01733 350878  
Audio Destination (Tiverton) - 01884 243584  
Cranfield Audio (Bedford) - 01234 853044  
Oxford Audio Consultants - 01865 790879  
Sevenoaks S&V (Bristol) - 01179 743727  
Sevenoaks S&V (Reading) - 01189 597768  
Vickers Hi-Fi (York) - 01904 691600

Audio Affair (Birmingham) - 01212 247350  
Audio Venue (Ealing, London) - 02085 678703  
Hi-Fi Gear (Hereford) - 01432 354921  
Paul Roberts Hi-Fi (Bristol) - 01179 429370  
Sevenoaks S&V (Exeter) - 01392 218895  
Tavistock Audio (Devon) - 01822 618940

Pro-Ject Audio Systems is distributed in the UK by Henley Designs Ltd.  
T: 01235 511 166 | W: [www.henleydesigns.co.uk](http://www.henleydesigns.co.uk) | E: [sales@henleydesigns.co.uk](mailto:sales@henleydesigns.co.uk)

\*August 2012 Issue



## AUDIO DESTINATION

The Finest Audio Products



Owned by husband and wife team: Mike & Caroline - Audio Destination is not your typical Hi-Fi specialist

Audio Destination brings together a range of only the finest audio products and places them in comfortable and relaxed surroundings.

- Tuesday – Friday 9am – 5pm
- Saturday 9am – 4pm
- Demonstration Rooms
- Long-term customer support and care
- Large selection of famous brands

We look forward to seeing you

Call +44 (0)1884 243 584

[www.audiodeestination.co.uk](http://www.audiodeestination.co.uk)  
email: [info@audiodeestination.co.uk](mailto:info@audiodeestination.co.uk)  
Audio Destination, Suite 7a Market Walk,  
Tiverton, Devon EX16 6BL

## All You Need In One Place

- ▶ Premium Loudspeaker Drivers
- ▶ Highest Quality Crossover Parts
- ▶ Crossover Design and Assembly
- ▶ DIY Speaker Kits
- ▶ Wire and Terminals
- ▶ Expert Advice

### Some of our Brands:

- ▶ Accuton
- ▶ Audax
- ▶ Aurasound
- ▶ Eton
- ▶ Fostex
- ▶ HiVi Research
- ▶ Peerless
- ▶ SB Acoustics
- ▶ Scan-Speak
- ▶ Seas
- ▶ Raal



# madisound

Your Worldwide Provider of High End Loudspeaker Parts

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

## Heatherdale audio limited

Worthing, West Sussex  
Quality pre-owned equipment available  
Main Dealer for: Tannoy Prestige, Thiel,  
Esoteric, Audio Note, Ayre, Mark Levinson,  
Revel and much more.  
Distributor for Wavac Audio Lab products  
Part exchange welcome. Demonstrations in  
a dedicated listening room by appointment.

### SPEAKERS

Hansen Elixir, Mint, Black with crates, (£15250)  
ex value ..... £6250  
YG Acoustics ANAT REFERENCE 11 speakers MINT  
WITH CRATES (new £43,000) superb value.....£19,995

### PRE-AMPS

Vitus Master pre-amp MP-L201 Superb condition.....£22,500  
Audio Note M-Zero R (remote controlled) pre amp ..... £350  
Wavac PR-T1 pre amp, MINT/BOXED, Ex demo,  
like new ..... £11995  
Wavac PR-Z1, brand new ..... POA

### AMPLIFIERS

Moon W-7 Power amp, MINT/BOXED, ..... £4495  
Almarro A50125A int amp. (£5730) ..... £1995  
Lindley Tyson KT88 Valve monoblocks (Quad 11's) ... £2495  
Boulder 1060 power amp, MINT/BOXED ..... £8995  
Rowland 201 monoblocks ex value at ..... £2500  
Wavac EC-300B power amplifier MINT/BOXED,  
Ex demo, like new ..... £9995

### CD PLAYERS & TRANSPORTS

Accuphase DP-75V CD player MINT/BOXED,  
cost new 10k only ..... £3495  
TRI CD player, BRAND NEW (£1895) only ..... £1450  
Accustic Arts CD-1 Mk 111, MINT/BOXED ..... £2495  
Mark Levinson ML 390S CD player,  
ex' cond./boxed ..... £2995

### MISCELLANEOUS

4 Acrolink Carbon/aluminium rca plugs (£400) ..... £195  
Townshend S/Sink 3 tier stand ..... £395  
Okutsu Denko 1.5 mtr. Mains cable (US plugs)  
£1950 only ..... £1195  
Audio Note Zero Tuner ..... £299  
Yamaha TX-761 FM/DAB Tuner, mint/boxed ..... £195  
Madrigal CZ-Gel 1 metre balanced interconnect .... £295

### TURNABLES, CARTRIDGES & TONEARMS

TRIPLANAR Mk7 tonearm, new /unused. (£5k) only .. £3750  
2 Tier Turn table wall mount stand ..... £195  
Miyajima Kansui Cartridge BRAND NEW (£3500) only  
..... £1800

Selection of brand new discounted cartridges

All major credit cards accepted.

Telephone:

01903 261213

Mobile: 07860 660001

Web Site:

[www.hifi-stereo.com](http://www.hifi-stereo.com)

Email:

[heatherdale@hifi-stereo.com](mailto:heatherdale@hifi-stereo.com)



### DRIVERS:

- ▶ ATC
- ▶ AUDAX
- ▶ ETON
- ▶ FOSTEX
- ▶ LPG ▶ MAX FIDELITY
- ▶ MOREL ▶ PEERLESS
- ▶ SCAN-SPEAK ▶ SEAS
- ▶ SILVER FLUTE
- ▶ VIFA ▶ VISATON
- ▶ VOLT



SOLEN CAPACITORS AND  
INDUCTORS - USED BY THE  
MOST DISCRIMINATING  
LOUDSPEAKER  
MANUFACTURERS.

### HARDWARE

### HOW TO BOOKS

Contact us for the  
free Solen CDROM  
Catalog.

**FREE!**



### SOLEN

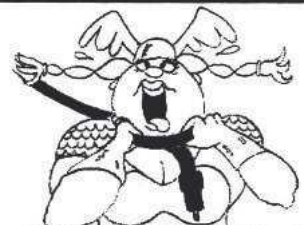
4470 Avenue Thibault  
St-Hubert, QC, J3Y 7T9 Canada

Tel: 450.656.2759

Fax: 450.443.4949

Email: [solen@solen.ca](mailto:solen@solen.ca)

Web: [www.solen.ca](http://www.solen.ca)



## CHOKING

### THE SOPRANO WITH YOUR CABLES?

Careless cable choices can strangle your excellent system. The Cable Company database, based on feedback from thousands of US home cable trials, can tell you what cables will work best in your system.

- FREE SHIPPING on purchases over \$100.
- 60 brands, 238 cable products,
- FREE of all US taxes.



**COMPONENTS  
ACCESSORIES  
TUBES**

Call, write, fax or email for details and free consultation  
(215) 862-4870 • fax (215) 862-4871

Visit our website at:  
<http://www.fatwyre.com>  
email: [fatwyre@fatwyre.com](mailto:fatwyre@fatwyre.com)

**THE  
CABLE  
COMPANY**

125 Union Square, New Hope PA 18938 USA  
ALL MAJOR CREDIT CARDS

*Analogue seduction*  
*where music is our passion*



Analogue Seduction are dedicated towards two channel Hi-Fi, specialising in vinyl replay.

As well as our on-line shop we have dedicated demonstration retail facilities based in Peterborough, Cambridgeshire and we can offer our customers home demonstrations.

We stock the finest in amplification, analogue, digital replay and speakers. We also specialise in a cable termination and cable burn in service.

Please visit our website [www.analogueseduction.net](http://www.analogueseduction.net) to browse or purchase products that are not easily available elsewhere.

**New vinyl records now stocked**

**Tel: +44 (0)1733 344768**

**IAN HARRISON HIFI**

**SALE! UP TO 40% OFF!**

TEL: 01283 702875 [ian.harrison@mercian.myzen.co.uk](mailto:ian.harrison@mercian.myzen.co.uk)

<b>PHONOSTAGES</b> TRICHORD TOM EVANS GRAHAM SLEE LEHMANN WHEST AUDIO ANATEK QUAD CLEARAUDIO ICON AUDIO PURE SOUND PRO-JECT EAR YOSHINO	<b>CARTRIDGES</b> ORTOFON DENON AIR TIGHT TRANSFIGURATION KOETSU GRADO GOLDRING BENZ MICRO ROKSAN ZYX CARTRIDGE MAN	<b>TURNTABLES</b> MICHELL PRO-JECT THORENS SRM TECH EAR AMAZON AUDIO AUDIO TECHNICA DENON INSPIRE	<b>TONEARMS</b> MICHELL REGA SME* GRAHAM MOTH ORTOFON PRO-JECT ROKSAN CARTRIDGE MAN HELIUS REED AMG MOERCH
---	--	--	---

PLEASE PHONE TO CONFIRM PRICE & AVAILABILITY PRIOR TO ORDERING. ALL GOODS ARE BRAND NEW & BOXED WITH FULL U.K. GUARANTEES. NO EX-DEM OR EX-DISPLAY GOODS. NO GREY IMPORTS. GOODS ARE NOT SUPPLIED ON APPROVAL. SORRY NO GENERAL CATALOGUES. PLEASE PHONE OR WRITE FOR SPECIFIC REVIEWS, BROCHURES OR PRICES.

\*CALL FOR DETAILS ESTABLISHED 1986.

MAIL ORDER ONLY FROM: IAN HARRISON, 7 MILL HILL, REPTON, DERBY, DE65 6GQ  
TEL: 01283 702875 9am-9pm INCLUDING SUNDAYS.

Is this your problem? Here's your answer



It's a common problem. The usable range of the volume control is all down at the bottom end and fine control at low listening levels is either difficult or impossible. The noise floor may be audible, too. There is a simple and effective solution - the **Rothwell In-Line Attenuators**. They can be used with pre/power or integrated amps to cure the problem of excess gain and bring sonic benefits with even the most expensive equipment.

£39/pair - post free  
01204 366133

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



"this accessory is heartily recommended" Gramophone

**TRANSMISSION LINE KITS FROM IPL ACOUSTICS**



The **IPL** range now includes five superb bi-wired **Transmission Lines** using top quality drive units and components to achieve sound quality and bass extension equivalent to speakers costing in the range of **£800 to £3000**. The plus kits include all that is required apart from the woodwork, but plain or veneered MDF cabinet kits are available. Please see website or catalogue for full details.

KIT	SPEAKER UNIT	CAB SIZE mm	PLUS KIT	P&P
M3tl	5" IPL Metal, Ribbon Treble	810 x 191 x 261	£251.00	£11.50
M1tl	5" IPL Metal, Ribbon Treble	853 x 191 x 261	£276.00	£11.50
S2tl	6.5" IPL Metal, Ribbon Treble	903 x 230 x 310	£285.00	£12.00
S4tl	8" Kevlar, Ribbon Treble	960 x 275 x 400	£405.00	£13.00
S5tl	10" bass, 5" mid, Ribbon Treble	1080 x 320 x 400	£552.24	£14.00

Send cheque (or postal order) made payable to Mr I P Leslie at IPL Acoustics, Chelsea Villa, Torrs Park, Ilracombe, Devon EX34 8AY, tel 01271 867439. Alternatively visit our website at [www.iplacoustics.co.uk](http://www.iplacoustics.co.uk) for catalogue detailing

Transmission Lines, Hi-Fi and AV kits, including Active Subwoofers, drive units, Silver PTFE cables, and Quality Accessories.

**Loudspeaker Repair and Upgrade Services**



Don't throw away your ageing loudspeakers, why not let us restore, renovate and upgrade them

Improve the aesthetics of your speakers with new tailor-made cloth covered grilles or by recovering your existing ones.



Bespoke cabinets made to order - Available as flat packs or fully built

**WILMSLOW AUDIO**

50 Main Street  
Broughton Astley  
Leicester, LE9 6RD



Open Mon-Fri : 9.00am-6.00pm  
Telephone - 01455 286603  
Fax - 01455 286605  
email-sales@wilmslow-audio.co.uk  
[www.wilmslow-audio.co.uk](http://www.wilmslow-audio.co.uk)

**Nakamichi**  
AUTHORISED SERVICE CENTRE FOR NAKAMICHI CASSETTE DECKS



REPAIRS AND SERVICE ON ALL DECKS WITH THE EXCEPTION OF THE VERY EARLIEST MODELS 600,700 AND 1000.

NAKAMICHI SERVICE IS AT BOWERS & WILKINS LTD  
LITTLEHAMPTON ROAD, WORTHING, WEST SUSSEX, BN13 1QA

TEL: **01903-695695**

Email: [Nakamichi@bowersandwilkins.co.uk](mailto:Nakamichi@bowersandwilkins.co.uk)

**020 7226 5500**  
[www.grahams.co.uk](http://www.grahams.co.uk)



"One of the five best hi-fi shops in the world"

ARENA Magazine

**Grahams Hi-Fi**  
Canonbury Yard  
190a New North Road  
London N1 7BS

To help ensure accuracy, your classified advertisements must be submitted by email or post... Please email your entries to: letters@hifinews.com

THE PLACE TO BUY & SELL AUDIO EQUIPMENT & ACCESSORIES NOW FREE

2. AMPLIFIERS

**NAIM** 52 preamp, SNAXO 3-way, 2 x Supercaps, 6 x 135 amps (Olive). Serviced 2011, certificates. CDS CD Player, working, serviced once since new (new transport, etc). Grey and black Burndies. West Yorkshire. All owned since new, with boxes and manuals. Offers and more information: Email lawzed@gmail.com. Tel: 077175 77576

**LINN** LK100 x 2, one at £250 with original packing (mint), one at £225 (VGC). Also Quad 606 in lovely condition, minimal wear and tear, £330. Collection in person, or courier at £25. All items ovno. Email: mbew@live.co.uk. Tel: 02392 595868

**EASTERN** Electrics Minimax vacuum tube phono preamp, for turntables. Rarely used. Like new condition and hardly run in. Must sell, £695 ono. Email: ksr8267@gmail.com. Tel: 07976 009835

**AYRE** P-5xe phono preamplifier. Utterly transparent phono preamp in satin silver finish, featuring balanced and single-ended inputs/outputs and adjustable cartridge loading. Purchased new in 2008. £1400. Krell KCT line preamp in black, featuring single-ended, balanced and CAST connections. Full remote control. Powerful bass, effortless dynamics, unforgettable imaging. £2900. Email: stephen.rodrigues@sky.com. Tel: 07846 729808.

**EAR** 509 Mk2 mono valve amps, 100W per channel. Late 1980s, very good condition, little used, boxed, can dem. (New £10k+), £2200. Email: abaird2011@btinternet.com Tel: 07527 567829

3. CABLES

**ECOSEE** Baton RCA interconnects, as new, 3 x 1m pairs. £40 per pair, 3 x pair £100 including P&P. Tel: 01531 631337

**VAN** den Hul First Ultimate, 0.8m pair RCA interconnects for £100. Tel: 01721 723 946

4. CD/DVD PLAYERS

**MARANTZ** UD5005 SACD/Blu-ray player, immaculate condition, little used, £225. Tel: 01795 522224

**MUSICAL** Fidelity A308CR CDP £695, unblemished, unmarked (kept covered by dust sheet) as new, with original box, remote and instructions. Resides in an audio rack in a smoke and pet-free home. Email: michael.yates7@ntlworld.com. Tel: 07500 804700

**TECHNICS** SLP 770 vintage CD player, mint, low hours, £125, demo welcome. Tel: 01766 781211

**CREEK** Evolution2 CD player, only one year in use, in mint condition. Selling for £500. Email: carmelodisalvo@doctors.org.uk. Tel: 077330 76855

5. DACS

**WYRED** 4 Sound, DAC-2, Coax, USB, AES & TOS inputs. Built-in preamp, remote, box. Cost £1299, sell for £625. Prefer demo/collection. Email: S4658@btinternet.com. Tel: 07773 366680

7. SPEAKERS

**QUAD** ESL 57s, black, very good condition, boxed, Quad serviced in February 2009 when treble units replaced. £750, prefer buyer collects or shipping extra at cost. Tel: 01761 221166

**WILSON** Benesch Arc loudspeakers, finished in oak, excellent condition, boxed £1850. BiFocal-XL Kimber speaker cables, like new, £1400, sensible offers welcome. Email: mbt7.1@live.co.uk. Tel: 079790 47903

**PROAC** Response 1.5 floorstanding loudspeakers, immaculate condition, light oak, one careful owner, boxed, £750. Tel: 01795 522224

8. TUNERS

**MUSICAL** Fidelity A3.2RDS tuner, £295. Unblemished, unmarked (kept covered by dust sheet), as new, complete with original box, remote and instructions. Resides in an audio rack in a smoke and pet-free home. Email: michael.yates7@ntlworld.com. Tel: 07500 804700

9. TURNTABLES

**REGA** RP 6, red gloss plinth, like new, hardly used, boxed. £625

without cartridge or £900 with Ortofon 2m black. Whest Two phono stage, like new, boxed. £500. Tel: 01942 516092

**REGA** Planar 3. Acos arm needs attention. Spare headshell with Ortofon VMS20E. £50. Tel: 01652 640088

**TOM** Evans Microgroove Plus Phonostage, mint condition, as new, £500, offers invited. Can demonstrate, call for details. Email: stuardarshan67@googlemail.com. Tel: 07870 912 963

**KUZMA** Stabi S/Stogi S/Bastin Power Supply (£3350) £1500. Croft Charisma X preamp, MM input. Separate power supply. Re-valved. VGC. (3750) £1000. Tel: 01453 519700

12. MISCELLANEOUS

**CYRUS** 781 Speakers + Nextel stands £320, Music Tools Entasis h50 speaker stands £410, Vitus SP102 phono stage £12,500 ono – superb performer/unmatched. Audience AU 24e 1.5m RCA interconnect £525, Audience AU24 Powercord 3m £795. Nordost Heimdall RCA 0.6m X 2 £280 each. Isotek Power Cord Premium mains cable 1.5m x 2 £50 each. XLO HTP1 RCA 1m £35, Cyrus Bi-Wire speaker cable 2.5m £30. Signal 7080 RCA interconnect 2 x 1m £30, Signal 7081 RCA interconnect 1x 1m RCA set £25, 1 x 1m RCA single £15, 1 x 2.1m RCA set £35. Email: mark.hanna@virgin.net. Tel: 01825 841104

**POWER** Supply for Class A amplifiers, ideal for John Linsley Hood's 1996/1969 or any other low power Class A amplifier. Fully built, ready to use, in self-contained enclosure, £279. Tel: 0207 4998729

**LEXICON** MC-12HD Balanced EQ running version 2.0 firmware allowing 7.1 LPCM playback via HDMI. Mint condition, unit has been in a rack for last three years untouched. Comes with remote and manual. £3000. Email: benjohnstonmc12@btinternet.com Tel: 07970 602944

**GRAHAM** Slee Solo headphone amplifier (serial no 0111-382) with PSU1 power supply (latest version), £195 (£480). Shure SRH840 headphones, £95 (£200). AKG K550 headphones, £95 (£180) – barely used. All in excellent condition and original packaging. Email: richard.schofield@kcl.ac.uk. Tel: 07772 711432/01494 521359

**LINN** Majik DS, silver, excellent condition, original box. £375, prefer buyer collects or shipping extra at cost. Tel: 01761 221166

13. WANTED

**FAULTY** or non-working Quad 44 preamp, later grey model with phono sockets. Contact Mike 01758 613790 with price.

**QUADRASPIRE** rack, preferably Q4Evo with a minimum of two shelves in oak or cherry with 180mm-high and 32mm-wide black columns. Email: michael.yates7@ntlworld.com. Tel: 07500 804700

**TOP** quality hi-fi separates and complete systems. Naim, Linn, Cyrus, Meridian, Arcam etc, fast, friendly response and willing to travel/pay cash. Tel: 0781 5892458

**LATE** van den Hul Frog Gold cartridge wanted, one requiring repair considered. Tel: 01505 346791

PLACING AN ADVERTISEMENT IN THE HI-FI NEWS CLASSIFIEDS SECTION

Fill in your advertisement copy here...

Please write the product category number that best suits your equipment in the first square. The product categories are: 1 – Accessories; 2 – Amps; 3 – Cables; 4 – CD/DVD players; 5 – DACS; 6 – Software (CDs, records etc.); 7 – Speakers; 8 – Tuners; 9 – Turntables; 11 – Complete Systems; 12 – Miscellaneous; 13 – Wanted

We will insert the telephone number you want to appear in your advertisement(s) as many times as is needed. You only need to fill it in once and it only counts as one word – even if you run multiple adverts.

								Tel (to appear in advert):	

Please post this completed coupon to *Hi-Fi News* magazine, MyTimeMedia Ltd, PO Box 718, Orpington, BR6 1AP, or email your advert to letters@hifinews.com. *Hi-Fi News* accepts no responsibility for description or condition of items advertised.

**studio AV**  
Audio  
Cinema  
Automation

We are one of the UK's premier retailers of high performance hi-fi, offering some of the finest products available on the market today.

We have the finest demonstration rooms in the country, where these systems can be heard at their very best.

studioAV, 44 High Street,  
Eton, Berkshire SL4 6BL  
**01753 631000**  
sales@studioav.co.uk  
www.studioav.co.uk

Avion  
Chord Company  
Clearaudio  
JCS  
Denon  
Dynavector  
Entech  
Fostex  
Grado  
Huter  
Naim  
Nordost  
Quadraspire  
Sennheiser  
Spiral Groove  
Stipos  
Telurium O  
Tatam  
Vais  
VTL  
Wilson Benesch

SEE, HEAR AND FEEL THE DIFFERENCE

**B**

**DOUG BRADY HIFI**  
— SINCE 1960 —

TURNTABLES | HIFI | STREAMING

**www.dougbradyhifi.com**  
01925 828009 (Mon-Sat 9.00-5.30)

**heed**

**obelisk**

Audio Destination	Tiverton	01884 243584
Basically Sound	Norwich	01362 820800
Chris Brooks Audio	Warrington	01925 261212
Faithful Audio	Birmingham	0121 224 7300
Home Cinema Centre	Edinburgh	0131 229 9350
Phase 3	Worthing	01903 245577
Unilet	New Malden	0208 942 9567

**www.heedaudio.co.uk**

**hi-fi lounge**

01767 448 121  
www.hifilounge.co.uk  
Redford Ave., SG18 8BH

**HERE TO LISTEN**

**hi-fi lounge**

GRADO | HIFIMAN | ATLAS | JVC | DENON | SONY | SHURE | BELL | SONY | SHURE | BELL

**Garrard**  
90th Anniversary

**Loricraft Garrard Turntables,  
Record Cleaning Machines & Power Supplies.**

**www.garrard501.com**  
Contact: terry@garrard501.com  
jane@garrard501.com  
Telephone: 01488 72267

**DOOLEYS**  
AUDIO | VISUAL

106 MILL STREET  
MACCLESFIELD  
CHESHIRE  
SK11 6NR  
01625 264666  
sales@dooleys-hifi.co.uk  
www.dooleys-hifi.co.uk

**Front End Problems**  
then contact  
**"The Cartridge Man"**

It doesn't have to cost an arm and a leg to get the best - HiFi News awards 2005. "BEST CARTRIDGE UNDER £1000! Agents for Croft, Moth, Hadcock, E.A.R. and others. 'CARTRIDGE MAN STYLUS GAUGES NOW AVAILABLE

Web Site: [www.thecartridgeman.com](http://www.thecartridgeman.com)  
Email: [thecartridgeman@btinternet.com](mailto:thecartridgeman@btinternet.com)  
**020 8688 6565**

**Alternative  
AUDIO**

01984 624242  
peter@alternativeaudio.co.uk  
www.alternativeaudio.co.uk  
Taunton, Somerset

**Stockists of:**

- Arcam • B&W • Focal
- Linn • Naim • PMC
- Rega • Rotel and MORE

**Infidelity**  
INDECENTLY GOOD HI-FI

9 High Street, Hampton Wick,  
Kingston upon Thames,  
Surrey KT1 4DA

Tel: 020 8943 3530  
Open: Tues - Sat 10am - 6pm  
www.infidelity.co.uk

CEDIA CUSTOM ELECTRONIC DESIGN & INSTALLATION ASSOCIATION

**tavistock audio**

— love your music —

- Wilson Benesch •
- Michell Engineering •
- Grado • Naim •
- The Chord Company •
- Kudos • Quadraspire •
- Audiovector • PMC •
- Audiolab • Quad •
- Project •

18 Market Street Tavistock  
Devon PL19 0DE  
01822 618 940  
info@tavistockaudio.co.uk www.tavistockaudio.co.uk

The Midlands Premier Sound & Vision Academy

**Sound Academy**  
Custom Install & Selected Audio

Excellent product range • Demonstration rooms  
Friendly knowledgeable staff with over 28 years experience  
Visit our **NEW WEBSITE** at  
[www.soundacademy.co.uk](http://www.soundacademy.co.uk)  
for further information • sales@soundacademy.co.uk  
152a High Street Bloxwich Walsall WS3 3JT West Midlands  
**01922 493499**

Panasonic | B&W | ARKHEON | DENON | YAMAHA

atc  
dynavector  
epson  
focal  
huter  
isoblu  
kudos  
lyra  
naim audio  
neat acoustics  
nottingham  
pmc  
rega  
well tempered  
more...

**signals**  
hi-fi for grown-ups

Ipswich (01473) 655171  
email: [enq@signals.uk.com](mailto:enq@signals.uk.com)  
www.signals.uk.com

**Acton Gate Audio**  
4 Ruabon Road, Wrexham, LL13 7PB

**01978 364 500**  
www.acton-gate-audio.co.uk

Stockists of Arcam, Quad, Michell, Roksan, Onkyo, Denon, Yamaha and many more!

**Oranges & Lemons**  
www.orangesandlemons.info

Audio-Visual  
Multi-Room  
Hi-Fi

**020 7924 2040**  
61-63 Webbs Road London SW11

**sound cinergy**  
specialists in home entertainment

Exposure • Heed • Lehmann • Linn • Marantz  
Michell Monitor Audio • Neat • Nordost  
Okki Nokki • Ortofon • Project • Roksan

37 High Street, Aldridge 01922 457926

**IAN HARRISON HIFI**

**PLEASE PHONE FOR THE BEST PRICE:**

Denon DL110 EPOA Denon DL103 EPOA  
Denon DL103R EPOA Goldring 1042 EPOA

**SPECIAL OFFER!!**  
Spend £2,000 or more on any turntable, tonearm or turntable and arm and get a cartridge worth £500 free!!

[ian.harrison@mercian.myzen.co.uk](mailto:ian.harrison@mercian.myzen.co.uk)  
**TEL: 01283 702875**

**HAZLEMERE AUDIO**  
High Wycombe

Specialising in some of the world's finest products for over 20 years.

By appointment only  
**01494 562610**  
info@hazlemereaudio.co.uk

GRAHAM SLEE - ORACLE - ORPHEUS SPECTRAL  
SME - STAX - USHER - NU FORCE HADCOCK  
ACOUSTIC SOLID - NAGRA - BELLES  
PEAK CONSULT - TRILOGY - BRINKMAN  
ART SPEAKERS AND MORE...

**Radlett Audio**  
Sensible hi-fi since 1973

- Rega
- Harbeth
- Croft
- Spendor
- Michell
- Devallet

Saffron Walden www.radlettaudio.co.uk  
01799 599080 Radlettaudio@hotmail.co.uk

**Hi-Fi, Home Cinema & Multi-room AV**

**Ceritech**  
AUDIO

...where music stirs the soul

[www.ceritech-audio.com](http://www.ceritech-audio.com)  
Tel: 0844 7365749  
Email: [info@ceritech.co.uk](mailto:info@ceritech.co.uk)  
Monmouthshire & Gloucestershire

# Missed an Issue?

Have you missed a copy of *Hi-Fi News*? You can now order these online, over the phone or by post!

**JUST  
£4.00\***  
Per copy



YEARBOOK Vol57 N012



DEC 2012 Vol57 N013



JAN 2013 Vol58 N01



FEB 2013 Vol58 N02



MAR 2013 Vol58 N03



APR 2013 Vol58 N04



MAY 2013 Vol58 N05



JUN 2013 Vol58 N06



JUL 2013 Vol58 N07



AUG 2013 Vol58 N08



SEP 2013 Vol58 N09



OCT 2013 Vol58 N010



NOV 2013 Vol58 N011



YEARBOOK Vol58 N012



DEC 2013 Vol58 N013

**Phone: 0844 848 8822**

(Phone lines open: Mon-Fri 10am – 4pm)

From outside UK: +44 (0) 2476 322234

**Order Online:**

[www.myhobbystore.co.uk/HFNBI](http://www.myhobbystore.co.uk/HFNBI)

\*Plus P&P. Yearbook issues are £4.99





# Vinyl is black!



The new and much heavier 31Kg **SME model 20/3 turntable** is a breath of fresh air and music to our ears! This finely engineered precision turntable is built to exacting SME standards.

This massive construction incorporating extensional damping of major surfaces, combined with a lack of vibration from moving parts, ensures exceptional resolution and uncoloured performance.

Driven by a three phase, brushless, eight pole DC motor, with hall effect sensors and closed loop speed control, this turntable gives truly excellent pitch stability.

**Clearaudio Goldfinger - Transfiguration Proteus - Benz LPS - Denon DL103 - Audio Technica AT33/OC9**

**SME Turntables & Tonearms - Oyaide - Furutech - Klipsch - Whest Audio - 78rpm - SL1200 Mods**

All demonstrated in a relaxing setting with river views! Very high part exchanges & World wide mail order.



The **T-01MC moving coil phono stage** has been designed to work with every moving coil cartridge from a DL-103 to a Clearaudio Goldfinger Statement. We know that because we have tried them all and many, many others. The design comes from Dave Cawley who designed and built his first MC phono stage in 1981 and recently manufactured the award winning A.N.T. Kora phono stage.

Building on his experience Dave has now produced a dual-mono phono stage with not a single integrated circuit or transistor in sight! A grand total of 16 FETs are used, including a FET discrete power supply. The input FETs are laboriously hand tested and categorised before being inserted in blocks of 8 into the PCB. In stock now at £995.00

## HOW TO CONTACT US...

# hi-finews

& Record Review



### Editorial Team

**Editor** • Paul Miller  
**Art Editor** • Steve Powell  
**Features Editor** • Patrick Fraser  
**Reviews Editor** • Chris Breunig  
**Retouching Manager** • Brian Vickers  
**Test & Measurement** • Paul Miller

### Photography

Andrew Sydenham

### Management Team

**Group Editor** • Paul Miller  
**Group Art Editor** • John Rook  
**Head of Production** • Julie Miller  
**Group Advertising Manager** • Joanna Holmes  
**Subscriptions Manager** • Kate Scott  
**Chief Executive** • Owen Davies  
**Chairman** • Peter Harkness

### Advertisement Team

**Advertising Sales** • Jack O'Sullivan  
Tel • 01689 869 899  
jack.osullivan@hifinews.com

### Subscriptions

**New, renewals and enquiries...**  
**UK:**  
Tel • 0844 543 8200  
Email: mytimemedia@subscription.co.uk  
**USA/Canada:**  
Tel • (001) 877 363 1310  
Email: expressmag@expressmag.com  
**Rest of World:**  
Tel • +44 (0) 1689 869 896  
Email: mytimemedia@subscription.co.uk

### We Live At...

MyTimeMedia Ltd,  
Hadlow House, 9 High St,  
Green Street Green,  
Orpington, Kent BR6 6BG  
Tel: 0844 412 2262  
Outside UK: +44 (0) 1689 869 840  
www.hifinews.co.uk

Hi-Fi News is a member of the  
Audit Bureau of Circulations (ABC)  
and of EISA ([www.eisa-awards.org](http://www.eisa-awards.org))

Hi-Fi NEWS, ISSN 2042-0374, is published 13 times per year (twice in March) by AVTech Media Ltd a division of MYTIMEDIA LTD, c/o USACAN Media Corp. at 123A Distribution Way Building H-1, Suite 104, Plattsburgh, NY 12901. Periodicals postage paid at Plattsburgh, N.Y. POSTMASTER: send address changes to HI-FI NEWS, c/o Express Mag, P.O. BOX 2769, Plattsburgh, N.Y., U.S.A. 12901-0239. Written consent must be obtained before any part of this publication may be reproduced in any form, including photocopies, and information retrieval systems. All reasonable care is taken in the preparation of the magazine contents, but the publishers cannot be held legally responsible for errors or for any loss however arising from such errors, including loss resulting from negligence of our staff. Reliance placed upon the contents of this magazine is at reader's own risk.



# OFF THE LEASH!

KEN KESSLER TELLS IT LIKE IT IS...

**Ken Kessler** welcomes a vinyl revival but becomes irked to discover that the numbers don't add up



For the life of me, I simply cannot see what has prompted the mainstream media to start acting like the LP is actually 'back' in a big way. In short order, I recently saw an item on Sky News and another in the *Daily Mail*, following those BBC TV specials a few months back – all very sensationalist. You'd think that the LP had supplanted downloads, scotch and sex, for goodness' sake.

## NICHE PRODUCT

There are some vinyl-besotted journos who actually believe that the LP has to be taken seriously beyond the confines of the cults that support it. How do they square that with a completely pro-vinyl spokesperson for the actual record industry who, on the aforementioned TV spot on Sky News, admitted when challenged that vinyl will only ever be a niche product? Her word: 'niche'.

But those vinyl-obsessed scribes? Some teenager buys a used LP and they alert the *New York Times*. I do marvel at how they can ignore hard facts. Well, here's one for you: under the headline 'Vinyl LP Sales Double', which recently appeared in the *Daily Mail*, the small print reads, 'Around 550,000 have been bought so far [in the UK in the current year] and the BPI is predicting that more than 700,000 will be sold by Christmas.'

Now take a deeeeeep breath, all you vinyl lovers who think that such numbers constitute a revolution. If, and it's a big 'if', you added a zero or two to those figures, I might be impressed. But when you consider that such numbers would have been the unit sales for *any* individual chart-topping LP on the day of release in the '60s or '70s, then you realise how truly risible are the numbers.

Of course, there's genuine bored-hack media sensationalism at play here, like they're desperate to write about anything that doesn't involve Syria, fuel prices or the NHS. By using the words 'sales double' in the headline, they caught your attention – but double *bupkes* is still *bupkes*. And if the numbers I have before me are correct, then *global* sales of vinyl in 2012, at circa 4,600,000 according to Nielsen & Billboard, are even more comical: it means that the UK is buying over 10% of the world's vinyl! The dinky, little, impoverished UK!

'There's genuine bored-hack media sensationalism at play here'

## THREE GROUPS

Then there's the demographic. As far as I can tell, only three groups buy vinyl: old audiophiles (myself included) buy 50% of them, DJs buy around 15% to destroy with scratching, and kids who think LPs are groovy buy the remaining third. As for the latter group, sound quality doesn't seem to be a

criterion. They like the sleeve art. Certainly, the 'kids' aren't buying audiophile LPs at £29 a pop, although new releases from current bands like The Arctic Monkeys are typically half that.

A friend of mine, who runs a charity shop that carries a lot of vinyl, has a resident LP expert to price up any collectibles that appear. He confirms that most of the used vinyl goes to younger customers. Maybe those headline-seeking hacks are including used records when proclaiming their imagined vinyl resurrection?

What may also confuse audiophiles who see the world as a series of black 12in discs is the sheer profusion of turntables on the market today. I haven't bothered to count them, but I wouldn't argue with anyone who posits that there are as many, if not more, models available now as there were in 1980. This gives the impression that turntable sales are massive. But if you knew how many units were sold of a certain 'superdeck' (one of which I saw on eBay...), you'd choke on your cornflakes.

## MODELS NOT SALES

A proliferation of models may be the case, but unit sales are nothing like they were during the period when Garrard alone could boast 2m units per annum. And that's not counting what Dual, Thorens, BSR, Connoisseur, Linn, Rega, Goldring, Empire, SOTA, VPI, Roksan, Linn, Pink Triangle, AR, B&O, all of the Japanese companies and a few hundred others were selling.

I know the world's largest independent manufacturer of turntables and I can tell you that his sales probably exceeds all others combined, but it's still only six figures – not millions. It's making a nice living for him, but he is the one exception. (He actually makes turntables for others, to sell as their own.)

Equally, I must admit I have no idea how many of those vile, all-plastic USB decks for as little as £29.99 are sold by Amazon. I'd probably cry if I knew.

Maybe that's it. Maybe there's a silent majority of millions of LP users, buying utter crap in vast quantities. In which case, I owe the LP evangelists among us an apology. A flip-over stylus'd, crystal pick-up'd, idler-driven apology. But I doubt it... ☹

Feb Issue  
on sale 4<sup>th</sup> JAN

### ON TEST:

- Group Test: Interconnect/speaker cable looms
- Exclusive: Audio Research SP20 preamp
- Exclusive: Loit Passeri CD player
- Exclusive: McIntosh MT5 turntable
- Exclusive: Meridian Prime headphone amp

### PLUS:

- Investigation: Buying vintage, Swedish style
- Show Blog: Tokyo International Audio Show
- Vinyl Frontier: Latest LP releases
- Buying Vintage: Early solid-state amplifiers
- Vinyl Icons: Kate Bush's *Hounds Of Love*



solution

nature of sound

Highend Audio Equipment  
made in Switzerland

Distributed by  
Select Audio  
Tel 01900 601954  
[www.selectaudio.co.uk](http://www.selectaudio.co.uk)

"IT'S A SIREN OF AN AMPLIFIER, SEDUCING ALL WHO LISTEN TO IT, WHETHER THEY ARE TUBE TYPES OR SOLID STATE SPECIALISTS...QUITE SIMPLY THIS IS VALVE MASTERY!"

HI F PLUS / ALAN SIRCOM / REF75

# come together

"NO PUSSYFOOTING: REF 10 IS THE BEST SOUNDING VALVE PREAMP I HAVE EVER HEARD"

HI F NEWS / KEN KESSLER / REF10

"WITH A LIQUID AND SPACIAL SOUND FULL OF RHYTHM AND ACCURATE TIMBRAL QUALITY NOTHING LESS THAN OUTSTANDING"

AUDIO / JORGE CONCALVES / REF CD9



For over four decades, motivated by the uncompromising pursuit of the ultimate musical experience, Audio Research has continued to create products that have gained iconic status blending innovation and craftsmanship with longevity. The components featured above - Ref 10, CD9 and Ref75 - the latest additions to the world-famous Reference line, have already received the rapturous reception one expects of this prestigious marque.

Like all true musical legends, Audio Research creates timeless classics.....that "come together...right now".

For details of the full range including streamers, cd players, pre-amplifiers and power amplifiers and to find your nearest dealer, contact Absolute Sounds.

 **absolute sounds ltd.**

International Distributors & Consultants of Specialised Hi-End Audio & Video Systems

58 Durham Road, London, SW20 0TW T: +44 (0)20 89 71 39 09

W: [www.absolutesounds.com](http://www.absolutesounds.com) E: [info@absolutesounds.com](mailto:info@absolutesounds.com)

**audio research**  
HIGH DEFINITION®