

# hi-fi news

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& Record Review

Exclusive

148 pages

# RETRO ROCKER

Audio Research's glorious Galileo tube amps



VINYL ICON



**TAD CE1**  
Flagship standmount

**Quad Vena**  
Little amp with a big heart

**Marantz NA8005**  
Network music player

**Auralic Taurus II**  
High-end headphone amp

**INVESTIGATION**

**Going Live**  
'Concert sound gets the hi-fi treatment' p28

**Ayre QB-9 DSD**  
'Super Audio' USB DAC



• PLUS 19 pages of music reviews & features • **VINYL RE-RELEASE** Elvis Costello's *My Aim Is True*  
• **OPINION** 12 pages of letters and comment • **VINTAGE REVIEW** Hitachi's HMA-6500 power amp  
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**ABOVE:** The Hi-Fi Show *Live* – the grandest high-end event in the UK p18

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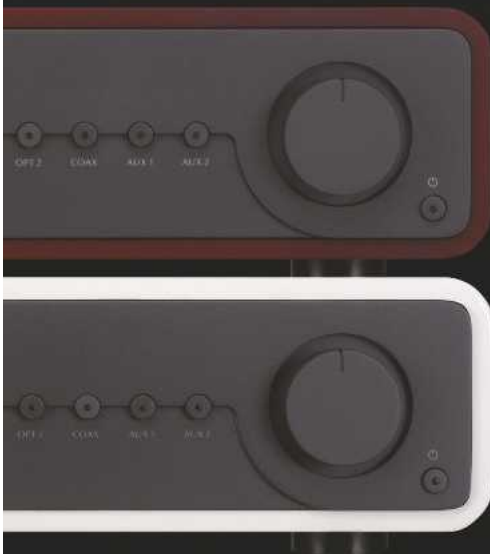
# Vena

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"Powerful, detailed hi-fi sound via all inputs makes the Quad Vena a worthy winner"  
Group Test Winner, Hi-Fi Choice (November 2014)

Quad celebrates 77 years of audio innovation with the launch of Vena, a compact integrated amplifier sporting a wide range of digital and analogue inputs, plus superior-quality wireless streaming over Bluetooth with aptX support. D/A conversion is handled by the same high-performance 24-bit/192kHz chipset used in the company's acclaimed Platinum CD players and, as one expects of Quad, the Class AB power amp section is of the highest quality. Vena is an exceptionally neat solution for superb sound from any source - from smartphones, tablets, PCs and Macs to traditional hi-fi separates. Vena is beautifully finished in Lancaster grey combined with a variety of high-gloss and wood veneer enclosures to complement your loudspeakers and living space.

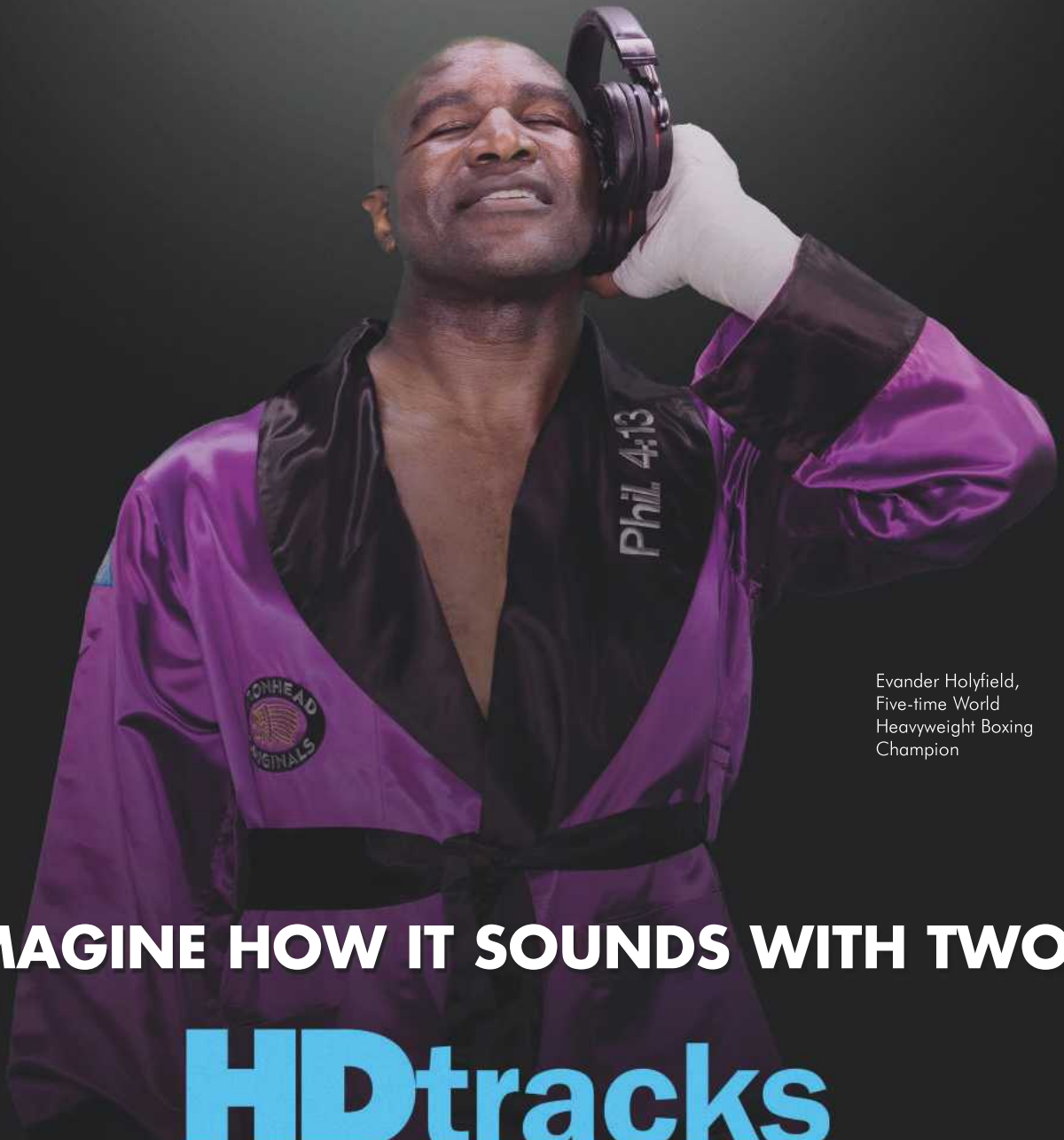


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★★★★★

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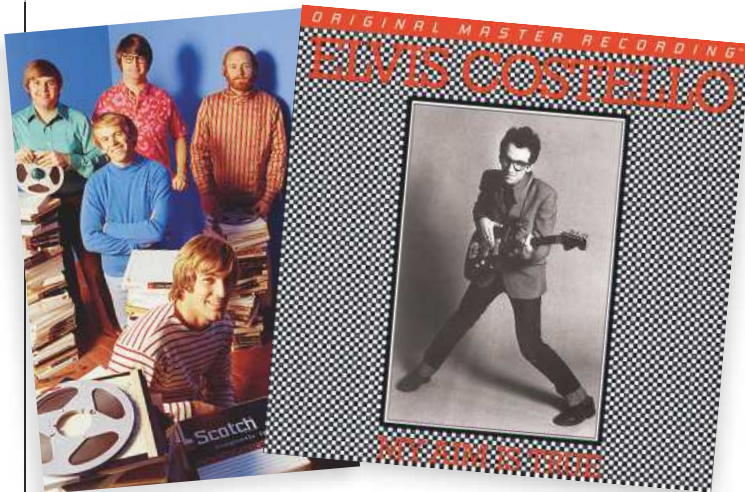
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**RIGHT:** A two-way headphone with a twist – read our review of the oBravo HAMT-1 on p66



**ABOVE:** Completing Marantz's 8005-series of separates, this new media player accommodates DSD files over USB and network connections, p54



**VINYL:** Surf's up as The Beach Boys' *Pet Sounds* is celebrated as this month's Vinyl Icon (p80), while Steve Sutherland ponders faux threats as Elvis Costello's *My Aim Is True* is released on 180g LP (p78)

**RIGHT:** *Hi-Fi News & RR* is the exclusive UK representative of EISA's Hi-Fi Expert Group and editor Paul Miller is EISA's Hi-Fi Expert Group Manager

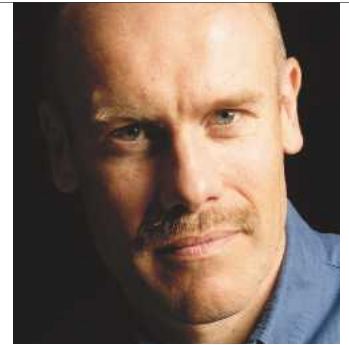


It was a great pleasure to meet so many *Hi-Fi News* readers at our recent high-end audio show in Windsor. No amount of seasonal weather could dampen the spirits of those hardy audiophiles determined to hear the finest equipment that money can buy. Until the next *Hi-Fi Show Live* on Oct 24-25th 2015, this was the only chance to experience so many fabulous brands under one roof.

Those who missed out can live the experience vicariously by leafing through our eight-page Show Blog starting on p18. Visitors were treated to many UK exclusive product launches which will be followed up by in-depth reviews in *Hi-Fi News* over the coming months – so no-one need miss out!

First sight of Audio Research's Galileo Series tube amplifiers was not the least of these premieres, heard in fine fettle together with Wilson Audio's Sasha Series 2 floorstanders. Very hot off the demo floor, ARC's flagship Galileo GSPre preamp and GS150 power amp feature on the cover of this very issue.

Our guest contributor is none other than José Victor Henriques, newspaper journalist, radio presenter and co-founder of two hi-fi magazines in his native Portugal. José's effervescent writing can be enjoyed at [hificlube.net](http://hificlube.net) but he shares his



30 years' experience in high-end audio with us exclusively in our review of what is surely Audio Research's most prestigious and iconic amplifier range in over a decade [see p34].

With apologies to overseas enthusiasts, our UK readers will have discovered a special Awards supplement bundled with their Jan '15 issue. The *AVTech Awards 2014-2015* reflect

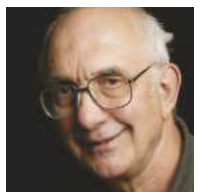
## 'The Galileos are ARC's most iconic amps in a decade'

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**PAUL MILLER** EDITOR

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**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 a long-serving contributor, luxury goods writer and champion 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

# Levinson's leviathan

NEW INTEGRATED FLAGSHIP FROM HARMAN'S LUXURY AUDIO GROUP

Even a stalwart supporter of high-end separates like Mark Levinson is not immune to the growing market pressure for ever more integrated digital/analyse components. The £10,500 No585 amplifier is its response, and at 33kg with a nominal 200W/8ohm and 350W/4ohm power specification, it's a typically massive response!

Built into a heavy-gauge chassis and utilising a card-cage architecture to isolate critical low-level analogue and digital circuitry, the No585 integrated amplifier offers four analogue



and six digital inputs including asynchronous USB 2.0, S/PDIF on optical and coax (one pair each), plus AES/EBU on XLR. The USB input supports PCM files up to 192kHz/32-bit resolution together with DSD64 and 128.

Furthermore, and perhaps as the No585 is the first Levinson

product to emerge from the Harman Group's new Connecticut facility, it also incorporates Harman's Clari-Fi DSP designed to 'reconstruct information and bandwidth that is lost in compressed (MP3) file formats'. The choice

of onboard DAC is almost a given – a 32-bit ESS Sabre Reference converter with proprietary jitter elimination and fully balanced, discrete I/V circuitry to follow. ML's volume control also uses a discrete 15-bit resistor ladder network with low-noise analogue input/output switching.

The No585's industrial design retains ML's distinctive aesthetic with its two-tone black/silver textured finish and hallmark red panel display and LED indicators.

**Harman International Ind.,**  
**01423 358846;**  
**www.marklevinson.com,**  
**www.karma-av.co.uk**

## Extra High Voltage

T+A LAUNCHES NEW HV 3000 SERIES PLAYER



Germany's T+A has lacked a CD/SACD disc player to partner its superb 3000 HV series of amplifiers [HFN Sep '14] – until now! The PDP 3000 HV is built into a matching solid alloy chassis and features a custom SACD transport, separate digital/analogue PSUs plus a fully balanced DAC stage based on that employed in the MP 3000 HV [HFN Jun '13]. The PDP 3000 HV can also be used as an outboard DAC and boasts a true 1-bit DAC stage for DSD inputs, supporting resolutions up to DSD512.

**T+A elektroakustik GmbH & Co. KG,**  
**01353 721089; www.taelektroakustik.de**

## HI-FI NEWS' NUGGETS

### TECHNICS' TUNES

To accompany its re-introduction of the Technics brand name and high-end stereo separates, the company has announced the launch of a hi-res music download store in January 2015. Accessible from the UK and Germany, the new store will carry a comprehensive selection of 24-bit FLAC audio tracks including tens of thousands at 192kHz. Music purchased on the platform will be stored in a cloud locker ready for download to multiple devices. The service has been custom-built by 7digital, a leading open digital music platform operator.  
[www.technics.com/tracks](http://www.technics.com/tracks)

### CRITERION AUDIO

A new hi-fi dealership, Criterion Audio, has opened in Cambridge stocking over 40 brands displayed in three comfortable and well-equipped demonstration rooms, one of which is dedicated to headphones. It even has a slot on the local radio!  
[www.criterionaudio.com](http://www.criterionaudio.com)

## King Arthur's TT

MUSICAL FIDELITY SPINS ITS ROUND TABLE

Over ten years since Musical Fidelity launched its substantial M1 turntable, the brand is re-entering the market with a novel and far higher value design. Dubbed the Round Table, this £599 belt-drive turntable is manufactured by Pro-Ject to MF's specifications and includes a high density MDF plinth and platter. The 'low resonance' 9in tonearm has steel-tipped bearings housed in zirconium with rubber damping, and is pre-fitted with a good quality Audio-Technica 95E MM cartridge.

Key to the design of the Round Table is the fact that its centre of gravity is contrived to coincide with the plane of the platter bearing, helping to keep the entire structure 'in balance'. Gloss black and red colourways are offered.

**Musical Fidelity Ltd, 0208 900 2866;**  
**www.musicalfidelity.com**





## Quad's tubular DAC

THE PA-ONE DAC AND HEADPHONE AMP PACKS TRIODES

Headphone amps are arriving thick and fast, but few are valve-based. Quad's £1200 PA-One looks set to start another trend with its combination of 2x6SL7 and 2x6SN7 tubes driving a pair of 6.35mm headphone sockets – for high and low impedance 'phones. The PA-One also houses a 192kHz/24-bit compatible DAC and offers standard coaxial/optical and USB 2.0 digital inputs. **IAG Ltd, 01480 447700; www.quad-hifi.co.uk**



## Clearaudio headshell amp

THE PHONO HEAD AMP IN A HEADSHELL



Clearaudio is tempting its tonearm owners with the chance to have them upgraded with an *in situ* head amp, designed to boost the pick-up's output for use with its outboard £8995 Absolute Phono preamp. A traditional all-in-one phono amp is also being launched. **Clearaudio Electronic GmbH, 0118 9814238; www.soundfoundations.co.uk**

## Marantz gets a head

PREMIUM CLASS HEADPHONE AMP/DAC

Hard on the heels of Denon's successful DA-300USB [*HFN* Oct '14], sister brand Marantz has launched its own, and slightly beefier, combined DAC/preamp/headphone amplifier. The £679 HD-DAC1 leverages off technology developed for its Premium 11-Series, and features a Cirrus CS4398 DAC along with its own

HDAM-SA2 op-amp analogue stages. The USB input supports LPCM up to 192kHz/24-bit plus DSD64 and DSD128. **Marantz, D+M Europe BV; www.marantz.eu**



## Melco makes music

CUSTOM MUSIC-LIBRARY PLAYERS FROM IT PROFESSIONALS



Melco, in conjunction with Buffalo Technology (leading Japanese producer of computer peripherals and NAS devices), has undertaken an audiophile-led project to offer high-end digital music players that do not require the services of a PC or Mac for playback. The result is the £6200 N1Z, complete with 1TB of internal solid-state

(SSD) storage (expandable to 12TB), twin power supplies and a solid H-frame reinforced extruded aluminium enclosure. The £1650 N1A offers a larger 4TB of conventional HDD storage internally. Both feature OLED configuration displays. **Melco Audio, 024 7722 0650; http://melco-audio.com; www.kogaudio.com**

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

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## Upcoming Events

IMPORTANT DATES FOR YOUR HI-FI DIARY

- 06-09 JAN** International CES, Las Vegas, USA; [www.cesweb.org](http://www.cesweb.org)
- 08 FEB** Audio Jumble 2015, The Angel Leisure Centre, Tonbridge, Kent; [www.audiojumble.co.uk](http://www.audiojumble.co.uk)
- 20-22 FEB** Sound & Vision Show, Marriott City Centre Hotel, Bristol; [www.bristolshow.co.uk](http://www.bristolshow.co.uk)
- 14-17 MAY** High End Show, M.O.C, Munich, Germany; [www.highendsociety.de](http://www.highendsociety.de)
- 29-31 MAY** T.H.E. Show, Hilton Hotel, Newport Beach, CA, USA

# The Hi-Fi Show, Windsor

Words: Paul Miller & Lee Dunkley; Pictures: Andrew Sydenham

Now in its second year, the Hi-Fi Show *Live* was expanded for 2014 by two additional sets of demonstration suites at the Beaumont Conference Centre in Old Windsor. UK enthusiasts were offered the unique opportunity to experience the cream of high-end audio. Exclusive UK product launches were unveiled by iconic brands including Krell, Wilson Audio, Ming Da,

Audio Alchemy, T+A, Mark Levinson, Constellation Audio, Trilogy, iFi Audio, Trinnov and many others. The big Windsor, Wessex and Buckingham Suites provided the ideal environment for some fantastic sounding demonstrations while the *Hi-Fi News* workshops typically had standing room left only. If you missed this unique high-end audio extravaganza, then here's just a taster of the event.



Of course Peter MacKay of Krell is smiling – he's got his hand on the company's hot new integrated, the £4500 Vanguard, which was making some very sweet sounds indeed through a pair of Sonus faber Olympica III floorstanders. The Vanguard is rated at 200W/8ohm and has an optional digital module that offers S/PDIF, USB and HDMI inputs. [www.krellonline.com](http://www.krellonline.com)

Kevin Kelly of Atlas Cables ran two informative workshops, with active demos of the Scottish-based brand's S/PDIF optical and coaxial cables including its new Reference Series Mavros multi-stranded glass optical cable, costing £125/1m. In a further workshop visitors enjoyed discussions on cable manufacturing techniques. [www.atlascables.com](http://www.atlascables.com)



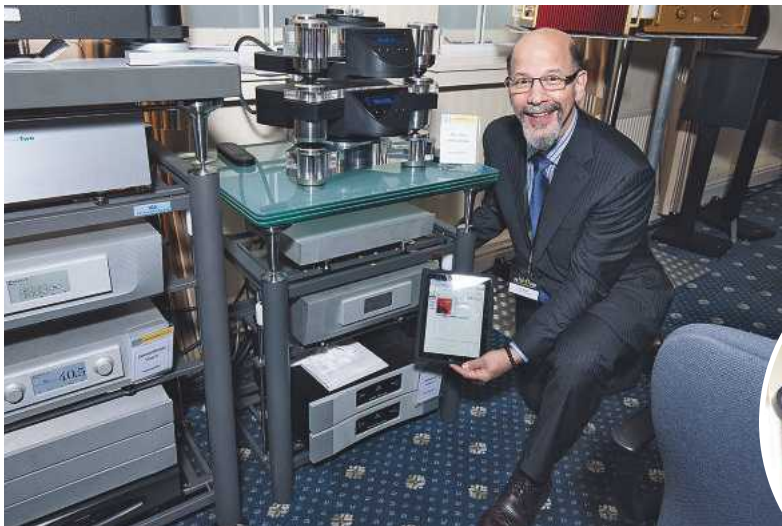
Not a blast from the past but a 21st century 'stereo system reboot' as Vincent Luke from iFi Audio prepares to fire-up the Retro Stereo 50, seen here with Retro LS3/5a standmounts. This all-in-one blends the features of iFi's Nano DSD/DXD-capable DAC and headphone amp with a MM/MC phono stage and all-tube integrated amplifier. [www.ifi-audio.com](http://www.ifi-audio.com)



Chris Green of Sound Foundations showcased Clearaudio's Master Innovation turntable with floating platter, priced at £16,100. It was fitted with the company's £15,500 Statement TT1i parallel tracking tonearm and sat on the matching Olymp stand costing £8000. Heard through GamuT pre/power amplification and loudspeakers, it had visitors glued to their seats. [www.soundfoundations.com](http://www.soundfoundations.com)



WireWorld's Martin Harding and Abbas Hussain not only provided visitors with the chance to see and hear the famous WireWorld 'cable-bypass' demonstration system in action but also featured the full gamut of Micromega's 'My' range of audiophile components. Small in size but big on performance, Micromega's MyDac (USB DAC) and MyGroov (phono stage) were both enjoyed via the company's partnering MyAmp 30W integrated [see p70] and compact two-way, 90dB sensitivity MySpeakers. [www.wireworldcable.co.uk](http://www.wireworldcable.co.uk)



Here's Irv Gross wielding the app that drives Constellation Audio's spectacular £33k Cygnus DAC Server, seen here with Metronome's Kalista Ultimate Signature transport/DAC and outboard PSU combo [HFN Dec '13]. However, Constellation's new 'entry-level' Inspiration Series preamp (£9k) and stereo power amps (£9988) were the real stars, delivering a genuinely jaw-dropping sound via Magico S5s. [www.constellationaudio.com](http://www.constellationaudio.com)

Dave Waters (inset) of Musical Fidelity demonstrated the £8000 Nu-Vista 800 integrated hybrid amplifier [see HFN Nov '14]. Rated at 300W into 8ohm, it sounded sublime fed by electronics from the company's M6 series, driving B&W's iconic 802 Diamond floorstanders. Musical Fidelity also took the opportunity to unveil its affordable Round Table turntable and Merlin system components [see p16]. [www.musicalfidelity.com](http://www.musicalfidelity.com)



Mark Hockey of Harman Consumer UK showed off an eye-catching clutch of cans from AKG, JBL and Harman Kardon, displayed on Omega stands supplied by [electromod.co.uk](http://electromod.co.uk). AKG's top-of-the-range £1100 K812 flagship was a hit [HFN Dec '14] as was its entry-level Y50 at just £80. Demonstrating that wireless connectivity is on the rise, all three brands had Bluetooth-compatible models on show. <http://eu.akg.com>



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Japanese company Melco made its UK debut as Alan Ainslie showed off the revived '70s audiophile name with two digital music storage solutions, backed by Buffalo Technology know-how. The N1Z packs a 1TB SSD drive (expandable) and costs £6200 while the N1A comes with a 4TB traditional HDD and costs £1650. Look out for a *HFN* UK exclusive review of the N1Z soon. <http://melco-audio.com>



One of the must-see (and hear) loudspeakers at the show, courtesy of Jack Durant of BD Audio, these huge Tune Audio Anima horns were partnered by an exquisite combination of the legendary J.C. Verdier La Platine turntable with Modwright Instruments PH150 phono stage, LS36.5DM preamplifier and KWA150 Signature Edition power amp. [www.bd-audio.co.uk](http://www.bd-audio.co.uk)



Oppo's Bjorn Hegelstad and James Soanes flank one of the best-kept secrets to be revealed at the *Hi-Fi Show Live* – beta samples of the brand's forthcoming HA-2 portable headphone amplifier and PM-3 headphones, both designed for use in the home and on the move. The official launch is slated for early 2015. [www.oppodigital.co.uk](http://www.oppodigital.co.uk)

Nigel Crump of Symmetry gave regular demos of the Brinkmann Spyder in its first European showing. Costing £7995, this versatile turntable benefits from the Sinus power supply and motor found on Brinkmann's flagship deck and can accommodate up to four tonearms. Also making its UK debut was the stunning Ayre KX-R Twenty preamp priced £20,995. [www.symmetry-systems.co.uk](http://www.symmetry-systems.co.uk)



Here Primare's Siemen Algra shows off the company's 60 Series pre/power combination [see *HFN* Nov '14]. The PRE60 preamp has an integrated 192kHz/24-bit compatible DAC/media board, while the companion A60 stereo power amplifier is rated at 2x250W. Priced £6500 apiece and partnered here with Revel's £4750 Performa F208 floorstanders, the duo wowed visitors. [www.karma-av.co.uk](http://www.karma-av.co.uk)



## SHOWBLOG Sights and sounds from around the globe



Heard alongside a very fine series of front-end components, including an Oracle Delphi turntable, TAD DA1000 DAC and TAD C600/M2500 pre/power combination, the Brodmann Acoustics JB155 floorstander, seen here with Bernd Gruhn, did a grand job of filling this huge Suite with music. The smaller Festival F1 is adjacent. [www.brodmann.at](http://www.brodmann.at)

Elegance was guaranteed as Crystal Cable's Gabi Rijnveld was on hand to unveil the £10k two-way Arabesque Minissimo standmount loudspeakers. The one-piece cabinet is machined from a metal powder/resin composite while the stands are crafted to accommodate the speaker's reflex-loading, which exits through a port in its base. A revised, bookshelf version of the Minissimo is also on the cards. [www.crystalcable.com](http://www.crystalcable.com)



AnthemAV Solutions had no shortage of visitors to its Geek Out USB DAC/headphone amplifier demonstrations. Fans were able to try the four-strong range of models, priced from £179 to £300, and experience the leap in sound quality for themselves through Oppo's remarkable PM-1 luxury headphones, costing £1100. [www.anthemavs.com](http://www.anthemavs.com)



Making a big impression in the Harman Luxury Audio Group room was JBL's horn-loaded Everest DD67000 driven by a Mark Levinson No52 preamp teamed with No53 monoblocks. Visitors also heard Mark Levinson's £10,500 No585 Class A/B integrated amplifier in what was its first UK outing. [www.karma-av.co.uk](http://www.karma-av.co.uk)



Pure Sound's Guy Sergeant showed ST/ST's Motus II turntable with Vertex 10in tonearm at £7798. Phono stage was the Aurorasound VIDA at £2849 with a matching PRED A line stage at £7999. Pure Sound's £6999 M845 monoblocks fed Simon Mears Audio's £10499 Uccello horns. [www.puresound.info](http://www.puresound.info)



Award for the most outrageous tube amps of the Show must surely go to Ming Da's £35k 212 power triode-equipped Dynasty Cantabile-Grandé monoblocks. Rated at just 50W but partnered with Art Loudspeakers' Alnico-series floorstanders they sounded astonishing. [www.mingda.co.uk](http://www.mingda.co.uk)



Graham Nalty showcased Black Rhodium cables through Ming Da MC368 valve amps and partnering CD player along with Origin Live Astute suspended speakers. Also revealed was the Aria DCT++ pure silver stereo interconnect. [www.blackrhodium.co.uk](http://www.blackrhodium.co.uk)



Leading light of the *Hi-Fi News* Workshops, Matthias Böde of Germany's *Stereo* magazine played to packed rooms during his demos of mains conditioning (with IsoTek), loudspeaker time alignment (with Wilson Audio), digital audio cables (with AudioQuest) and original versus re-released albums (with Brodmann Acoustics).



Ricardo Franassovici of Absolute Sounds stocked three huge suites with the cream of the world's high-end audio. One of numerous UK exclusives, this was the first public showing of the 'streamlined' TechDAS Air Force Two turntable. [www.absolutesounds.com](http://www.absolutesounds.com)

Having decided not to top last year's demo of the outrageous BB5 SE monitors, PMC's three-way Twenty.26 floorstanders took pride of place instead. Tom Barron still served up some huge sounds, ably assisted by a pair of Bryston's £5250, 500W 7B SST<sup>2</sup> monoblocks. [www.pmc-speakers.com](http://www.pmc-speakers.com)



Andrew Tilley of Sound Setup presented an all-digital system with exaSound's £2795 e22 DAC [*HFN* Dec '14], JansZen's £9999 zA2.1 hybrid electrostatics and £5499 zA1.1 standmounts, plus Bryston PowerPAC 120 monoblock amps. [www.soundsetup.co.uk](http://www.soundsetup.co.uk)



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Hosting *Hi-Fi News'* USB cable comparison Workshop, AudioQuest had more than a few network, USB, interconnect and speaker cables on demonstration. AudioQuest showed its visitors how to derive the very best from hi-res downloads, supported by a Primare NP-30, Heed electronics and Kudos Super 20 loudspeakers. [www.audioquest.com](http://www.audioquest.com)

The astonishingly open, transparent and detailed sound achieved by Isobel Whitley and Scott Berry's CAD (Computer Audio Design) demo proved just what can be achieved in a very modest listening space. The equipment included CAD's £6900 1543 DAC, £5300 CAT CD ripper/storage device and Wilson Audio's Duette Series 2 speakers. [www.computeraudiodesign.com](http://www.computeraudiodesign.com)



Bradley Walters, MD of Hi-Fi Racks, displayed a full range of the company's individually hand-made equipment racks and associated furniture (the coffee table crafted from several different coloured woods was especially beautiful). Several exhibitors at the Hi-Fi Show chose Hi-Fi Racks' equipment supports for their demonstrations [see Signature, below]. [www.hifiracks.co.uk](http://www.hifiracks.co.uk)



Kog Audio partnered the mighty Avalon Transcendent loudspeakers with the £12,700 VTL TL-6.5 Signature Series II preamp and £11,500 S-200 Signature stereo power amp. Also on show was the dCS Puccini disc player at £12k with Paganini master clock at £4929. Entreq grounding products and cables were supplied by Studio AV. [www.kogaudio.com](http://www.kogaudio.com); <http://studioav.co.uk>



Kevin Akam of Signature Audio Systems with PS Audio's sprightly 50W Sprout integrated amp (inc. Bluetooth), priced £650 and partnered with Vandersteen Model 1Ci speakers at £1300. A second system featuring PS Audio's £5250 DirectStream DAC, twin Jeff Rowland 525 mono amps (£3999 each) and Vandersteen's Treo speakers ensured the room was packed with visitors. [www.signaturesystems.co.uk](http://www.signaturesystems.co.uk)



## SHOWBLOG Sights and sounds from around the globe

Now distributed into the UK with Danish loudspeaker brand Dynaudio, T+A was able to demonstrate the full impact of its 3000 HV-series pre/power amplifiers and outboard PSU with this pair of statuesque Evidence Platinum floorstanders [*HFN* Dec '14]. Bill Livingston of Dynaudio UK (centre) also unveiled T+A's new PDP 3000 HV SACD player/DAC [see p16] due for launch in the UK in 2015 for around £12k. [www.ta-hifi.com](http://www.ta-hifi.com)



Here are Simon Dart (left) and Nic Poulson (right) of Triloggy with the new 925 hybrid integrated amplifier rated at 135W into 8ohm and priced at £8995. Also new at the show was a power conditioner range that showcased the ISOL-8 SubStation Integra and fed the Triloggy 925 amp, 907 phono stage and Brinkmann Balance turntable. Integra prices start at £1899. [www.isol-8.co.uk](http://www.isol-8.co.uk); [www.symmetry-systems.co.uk](http://www.symmetry-systems.co.uk)



Electromod's Mark Dolbear had plenty to shout about with three new models from US brand Schiit: the Ragnarok headphone amp at £1400, Mani phono stage at £112 and the £75 Fulla USB DAC/headphone amp. Also new to the UK were models from Synergistic Research including its HOT (headphone optimised transducer) at £210. [www.electromod.co.uk](http://www.electromod.co.uk)

In another Hi-Fi Show *Live* exclusive, Jozefina Lichtenegger of EAT fame revealed her latest turntable, the sleek C-Sharp. Fed via an outboard PSU, the motor, belt-drive and alloy sub-platter are all sunk into the turntable's main chassis, itself comprising a mix of HDF, carbon fibre and damping elastomers. You can read the first review in next month's *HFN*. [www.europeanaudioteam.com](http://www.europeanaudioteam.com)



Max Townshend impressed audiences with his Seismic Isolation devices demo'd on a complete Glastonbury system. Connected with F1 Fractal interconnects and speaker cables, the set-up was fed by the battery-powered CD2 universal disc player and Rock 7/Excalibur 2 turntable with Merlin 4 power supply, and partnered by hybrid monoblock amplifiers and Tor loudspeakers. [www.townshendaudio.co.uk](http://www.townshendaudio.co.uk)

## SHOWBLOG Sights and sounds from around the globe



Max & Monica Lowe of the Hi-Fi Network used a MacBook running Audirvarna software to demonstrate Elac's FS 409 floorstanders with a Norma Audio's SC2 preamp and PA150 power amp. Note the omni-directional '4Pi Plus.2' ribbon super-tweeter atop the loudspeakers. [www.hifi-network.com](http://www.hifi-network.com)

Demo'd to fabulous effect via KEF's Blade 2 floorstanders, Chord's Choral Ensemble Audio System comprised the £5970 Blu transport, £4500 Codex 384kHz/DSD-capable streamer, £2670 Symphonic phono stage, £3690 Prima preamp and £2460 Mezzo 50 stereo amp. Chord's 'digital' CPM 2800MkII integrated (£6690) was shown in prototype form alongside the new 'satin black' Hugo. [www.chordelectronics.co.uk](http://www.chordelectronics.co.uk)



David Brooks of Yorkshire-based Mains Cables R Us (MCRU) had special show deals on many of the popular brands the company carries. He also unveiled the Eclipse P interconnect cable from Slic Innovations, priced at £250/1m. Audiophile fuses from Synergistic Research were among the most popular buys. [www.mains-cables-r-us.co.uk](http://www.mains-cables-r-us.co.uk)



Having showcased together for the first time at last year's Hi-Fi Show *Live* 2013, Focal and Naim Audio once again shared the floor, this time with Naim's cost-no-object flagship Statement amplifier hogging the limelight. Seen here with Naim's Dave Spiers for scale, the '746W/8ohm' Statement comprises the NAC S1 preamp and two NAP S1 monoblocks. [www.naimaudio.com](http://www.naimaudio.com)



Fresh from his design duties at Constellation Audio, the irrepressible Peter Madnick was on hand to unveil his re-imagining of Audio Alchemy – the iconic digital audio pioneer of the early '90s. Seen for the first time were the DDP-1 DAC/preamp, MRD-1 media player, DDA-1 integrated amp and DPA-1 power amp. What a scoop! [www.symmetry-systems.co.uk](http://www.symmetry-systems.co.uk)

# Next month

We report from the Portugal Hi-Fi Show

# A question of balance

Barry Fox talks to the audio engineers giving live sound the hi-fi treatment

**RIGHT:** The 2014 WOMAD festival, held in Wiltshire in July, boasted a sound system built by UK hi-fi specialist B&W. The set-up featured four active four-way stacks from 12 separate enclosures, powered by 30kW-worth of Class D stereo amplifiers

**BELOW:** It was the 'mega systems' built in the '70s by Charlie Watkins of WEM that finally enabled huge crowds at outdoor festivals to hear live sound at sufficient volume. However, it was quantity rather than quality that was the aim

An audio-savvy friend came back from this year's WOMAD world music festival, reckoning that the sound inside the 1000-capacity Society of Sound geodesic dome stage was the best he'd heard at a live music event.

That isn't saying much of course. The sound at mega-events, both inside halls and outdoors in fields, can often be poor compared with that of recordings played on a home hi-fi. Foolish groups still assemble over 200kW of amplifier power to try and set a Guinness sound-pressure level record. And as I have many times written in *HFN's* Opinion pages, the natural power of live instruments often outstrips the capacity of the amplifiers being used to 'improve' them, so the electronics just add clipping distortion.

The late Humphrey Lyttelton once talked to me about what he called 'Marconis', sound engineers with no feel for his music who 'ride the faders' and continually adjust controls while the music plays. In his diaries, *Last Chorus*, published after his death by son Stephen, Humph tells of a concert in Beirut organised by the British Council:

'An eager young Lebanese called John is in charge of PA. Initially, he has the sound jacked up so high that our opening must have been heard forty miles away. I don't want to upset him... so with infinite patience I get the volume gradually reduced until we have all we need in the small hall. It's a familiar problem. Ever since the invention of the electric guitar, the electrical engineers who used just to provide



microphones and speakers have acquired delusions of grandeur. They call themselves "sound mixers" with the implication that musicians and bands are simply there to provide the raw materials for their creative talents. They sit behind huge consoles... wearing huge headphones, twiddling with knobs and fiddling with faders so that the soft bits are loud and the loud bits are deafening.'

## NO LONGER DEAFENED

On the whole, live sound reinforcement has been getting progressively better over the last 40 years since the first big music festivals on the Isle of Wight and rock concerts by groups like The Who on football pitches. Front rows are no longer deafened so that the

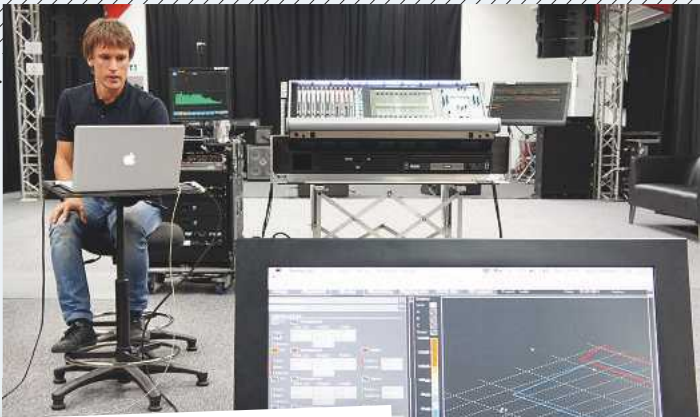
outer reaches can hear. Several stages play simultaneously, with very little spill-over between them.

It's accepted that classical concerts in the open air or acoustically unfriendly halls will need a little help from some watts.

The 'Sound System' in the WOMAD dome was built by hi-fi specialist B&W, originally as a one-off commission for Barcelona's Primavera Sound music festival in May to demonstrate 'top-end hi-fi with the raw power required to deliver sound to thousands of festival-goers'.

Actually, B&W is not the first hi-fi company to foray into live sound. In the '80s Panasonic built a pair of the world's largest speakers for a hi-fi seminar in Europe, and ended up giving them to the Vienna Opera





transients are thrown at them without cracking up.

Britannia Row Director Mike Lowe, started out engineering for rock group Emerson, Lake and Palmer and went on to handle the concert sound for the likes of Floyd, Queen, Frank Sinatra, Sammy Davis, Nelson Riddle, Nina Simone, Ella Fitzgerald – and Robbie Williams having a go at their songs.

He says: 'The way live sound engineering is being taught at the moment doesn't work. University

courses are too music – or studio-oriented. Graduates leave totally untrained for live sound engineering.

'They expect to get their hands

on half a million pounds worth of equipment and murder peoples' ears. It takes years for engineers to gain musicians' trust. But people leave college after three years' study and expect to mix a Coldplay concert the next week.

'They have to start again at the bottom. But most of them think they are too good for that. That's why we started to offer training courses in live sound. The Universities hate us for what we are offering. We

**ABOVE LEFT:** A modern computer-aided set-up at the Britannia Row training studio

**FAR LEFT:** Britannia Row course director, Barry Bartlett

**ABOVE:** Britannia Row was set up in 1975 by Pink Floyd and engineered the sound for Floyd's appearance at the Knebworth festival that year

**BELOW:** Barry Bartlett (right) behind an analogue desk once used by Pink Floyd (left). Instructions for Floyd surround sound are still taped to one side (pictured centre)

regularly talk to government people like Vince Cable but we are still not certified for college grants.'

Before the IOW festivals, where the likes of Bob Dylan, Jimi Hendrix and The Who drew so many backpackers that in 1971 the UK government passed a law banning big events without a special licence, concert sound had been too weedy to cater for a large crowd.

What made the difference was the mega system put together by Charlie Watkins of WEM (Watkins Electric Music) to cope with wide open spaces and windy days. He stacked cinema-style horn speakers and bass bins in tottering towers on the stage sides, with notices warning people to keep clear.

### BLOWN OFF STAGE

The notices were very necessary. At one IOW event, Watkins was walking past a speaker stack during the pre-concert soundcheck when an organist punched a test chord. Watkins was blown clean off the stage and lucky to survive the fall.

My own ears still ring at the unhappy memory of being in the front rows of a Chuck Berry concert in the grounds of ☺

House because they were too huge to fly home to Japan.


For Barcelona (and WOMAD) B&W built four active four-way stacks from 12 separate enclosures, over 3.2m tall, powered by 30kW-worth of Class D stereo amplifiers, capable of delivering a clean 120dB at 8m.

The engineers driving the system were from Britannia Row, the concert sound company set up by Pink Floyd in 1975 to hire out the equipment and experience needed to support Floyd's pioneering use of surround sound for recording and live performance.

Although Pink Floyd no longer perform as a group, Britannia Row has become one of the world's largest concert sound specialists and is now on a new mission to sell training courses in what course director Barry Bartlett calls 'Big Hi-Fi' – live sound systems with the cruising power to handle whatever

## 'Course director Barry Bartlett calls the mission "Big Hi-Fi"'





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Alexandra Palace, in direct line of fire of the compression horn drivers.

Bass sound was completely uncontrolled. When Michael Jackson performed at Wembley Stadium in the early '90s, the rolling thunder of bass ruined a classical concert in the grass bowl at Kenwood House ten miles away across London.

Arguably the biggest single technical advance in live sound reinforcement came from French physicist Dr Christian Heil and his company L-Acoustics, in the early 1990s. Heil's Line Array is now a near standard feature for all large concert sound. A closely-spaced line of similar speakers is fed in phase. Their wavefronts sum to fire a focused slice of powerful sound in a controlled direction; the slice is wide and narrow from a vertical line array, and tall and thin from a horizontal line. Curving the line gives added control over the soundfield shape.

**NO FEAR OF FLYING**

Two identical groups of arrays are suspended or 'flown', one at each side of the stage, to create a stereo image of the live stage sound. Flying ensures that the arrays fire over the heads of the front rows and still provide meaty sound for the outer reaches of the crowd.

The use of dipole bass bins with three 18in drivers, one oppositely facing and out of phase, drastically reduces rear leakage.

In halls the use of line arrays and bass dipoles reduces reflections from the walls and ceiling, which mush the stereo image and comb-filter the spectrum. Outdoors, line arraying prevents spill-over from the

**RIGHT: Heil Line Array as used at a Robbie Williams concert in 2003 and (far right) a smaller line array at the Britannia Row training studio. Suspending, or 'flying', pairs of line arrays at either side of a stage enables sound to be fired over the front rows to those in the outer reaches of the crowd**



**BELOW LEFT: An old style crib cue sheet, listing microphone fader and Eq control settings for use with an analogue desk, is compared with a modern laptop set-up on the table behind**



**BELOW RIGHT: No 'jungle' of analogue cables here – Cat5 and optical connectors carry AES standard 48kHz or 96kHz/ 24-bit signals from the rear of this modern mixing desk**

concert site. Local resident Warren (Alf Garnett) Mitchell regularly complained about the noise escaping from Kenwood. With line arrays the audience gets the sound, not the surrounding streets.

Using more directional speakers is only part of the improvement picture. As Britannia Row's Mike Love and Barry Bartlett chorus: 'The days of the group roadie humping gear from a truck, connecting speakers and pumping sound into barbaric barn-like rooms are long gone.'

**COMPUTER WIZARDS**

Modern live sound engineers need to be networking experts, computer wizards and radio frequency specialists. The back of the mixing desk is no longer a jungle of analogue cables, and engineers no longer write a paper 'cue sheet' map of all the microphone fader and Eq control settings. Today the connections are Cat5 or fibre networking, carrying AES standard 24-bit/48 or 96kHz signals from a mixing desk with the settings stored in a digital 'show file'.

The show file remains basically the same for all venues. The feeds to the active crossovers and speakers are tailored to suit the acoustic of each individual venue. This is done with a PC or tablet touchscreen using computer software such as Meyer's SIM (Source Independent Monitoring) or Smaart Live.

The software can be programmed weeks in advance of the live event, using CadCam files for venues sent as Dropbox emails. The

settings are then tweaked on performance day with half an hour of laser measurements of the hall dimensions and shape, further tweaked with temperature and humidity readings and then acoustically checked with a reference microphone 'listening' to pink noise generated by the computer soundcard.

To pre-empt the catastrophic sound of silence if there is a 'Windows moment' and the digital network crashes, the active speakers have a fail-safe analogue feed which cuts in automatically if the digital stream disappears.

Fortunately for front rows, it's long been recognised that large halls and fields cannot be served by front speakers alone. Filler arrays are spaced around the audience zone. Because of the Haas effect, whereby the ear 'hears' the sound arriving



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**LEFT: Musicians in the Wynton Marsalis band seldom use the mics provided on stage**

**ABOVE: View from behind the mixing desk at the Classic Brit Awards 2011, which took place at the Albert Hall with sound system supplied by Britannia Row. Note the three ten-deep line arrays flying in front of the stage**

**BELOW: 'The King Of Swing' – Benny Goodman**



earliest from the closest speakers, the sound to the filler arrays must be delayed to match their distance from the stage speakers.

**FUTURE HOLY GRAIL**

Because the stage speakers are firing out into the audience, and the musicians are often widely spread on stage and moving around, there can be up to 50 wedge-shaped monitor speakers on the stage floor. But with increased awareness of hearing loss caused by overlong exposure to overloud sound, sparked by Pete Townshend's much-publicised ear damage, there is now a trend to use in-ear wireless monitors connected by radio link. Most of the stage microphones will be wireless too. Large shows now need up to a hundred UHF analogue channels, expensively licensed by Ofcom for the day.

The future Holy Grail is to use digital mics and earpieces which cram more feeds in fewer radio MHz. The bugbear is latency, with digital processing and compression delaying the sound behind analogue straight wire feeds. So radio links still remain largely analogue.

But is so much technology and audio assistance really necessary?

Like Humphrey Lyttleton, the late Benny Goodman hated amplification. But Goodman was blessed with a lot less tact and humility than Humph. (When asked what it was like to tour Russia with BG, sax player Zoot Sims famously replied 'Every day with Benny was like being in Russia'.)

Saxist Loren Schoenberg organised and played in Benny Goodman's last band from 1980 to 1985. 'Benny would arrive for an open air concert where the sound engineers had carefully set up a dozen microphones,' Schoenberg told me when I met him at the National Jazz Museum in New York a couple of years ago. 'He'd wave

his hand saying "I don't want any of that" and then play without any amplification so that only a few people could hear him.' I can personally vouch

*'The bloom on the violins was heard thanks to subtle miking'*

for this. I saw BG with a small group at an open air concert at Knebworth in 1982, using a single microphone. Only a few people at the front of the audience heard anything.

Virtuoso trumpet player Wynton Marsalis has led the Lincoln Center Jazz Orchestra since 1988. When the acoustics allow it, as for instance at the Avery Fisher Hall in New York (named after hi-fi pioneer Avery Fisher) and the Barbican in London, Marsalis and the band pointedly ignore the microphones on stage and play largely without amplification. But for an outdoors event,

like a recent festival in London's Victoria Park, they are not so Benny Goodman-stubborn as to completely eschew electronics.

**CLASSICAL CONCERNS**

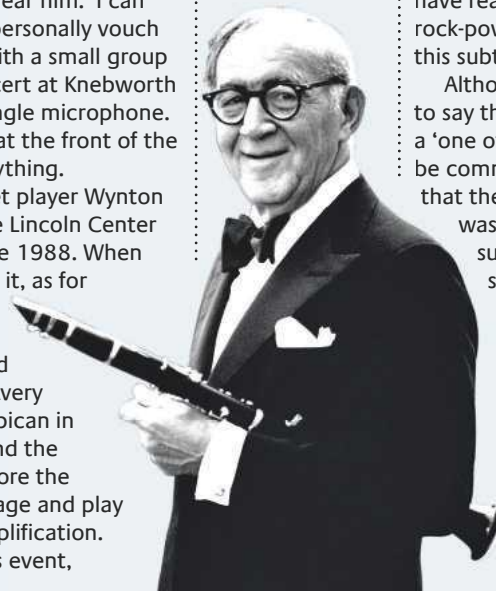
It's also now generally accepted that classical music needs amplification if it is to reach large audiences, either outside or in over-large halls. When the BBC Scottish Symphony Orchestra recently played – and Katherine Jenkins sang – in the open air on the military tattoo parade ground at Edinburgh Castle, the huge audience heard the bloom on the violins thanks to subtle miking.

And when the Age of Enlightenment Orchestra played its naturally quiet antique instruments at the Roundhouse in London, the audience heard what conductor Sir Mark Elder heard thanks to a little lift from a single M/S Neumann mic hung 1.5m above his head.

Few people in the audience will have realised that it was Pink Floyd's rock-power equipment that enabled this subtlety.

Although B&W has been at pains to say that its Sound System was just a 'one off commission and will not be commercially produced', the fact that the one-off Barcelona build was fired up again for WOMAD, suggests that we shall soon see rival high-end audio companies building Me-Too Big Hi-Fi live systems. But what's not to like if the likes of Harman, JBL, Marantz, KEF and Denon battle to improve concert sound?

I wonder whatever happened to those monster speakers Panasonic left in Austria? ☹



# Audio Research GSPre/GS150

Galileo created a telescope to peer deeper into space – an aspiration that has inspired Audio Research to produce its G-Series amps and delve deeper into the world of sound  
 Review: **José Victor Henriques** Lab: **Paul Miller**

When Livio Cucuzza, Fine Sounds' Chief Designer, visited the Audio Research product archive he was inspired to re-imagine iconic tube amplifiers (including the SP1 and D79) in the guise of the new £12,250 GSPre and £17k GS150 power amplifier reviewed here. One might argue Cucuzza did not in fact create anything new with this G Series, but to dismiss his work simply as a contemporary remake of old '70s classics would be a mistake.

Recently, Cucuzza has quite brilliantly exercised the fine art of recreation with fresh interpretations of timeless products, including the exclusive Ex3ma loudspeaker [see *HFN* July '14], originally created by the late Franco Serblin, founder of Sonus Faber, now also owned by Fine Sounds. With the Galileo Series, Livio Cucuzza and his team [see boxout, p37] are attempting to remaster classic Audio Research memorabilia in homage to founder Bill Johnson's legacy. Audacious? Perhaps, but the results are revelatory.

## A LIGHTNESS OF BEING

My first encounter with the GS150 was at Munich's High End Show in 2014, and I was left under the impression it must be a REF150 light [see *HFN* Feb '12] with better aesthetics and beefed up by the new Tung-Sol KT150 output valves. Boy, was I mistaken – the new GS150 has a genuinely minimalist aesthetic, which I think was the whole point of its industrial design. The way the stainless steel front plate reflects light, the welcome absence of the awkward handles, which are now hidden behind the plate, and the openness created by the trio of meter windows, all contribute to that false sense of lightness. In fact, the chassis is roughly the same size as the REF150 while its 39kg weight is some 5kg more.

From the fully balanced design (there are no single-ended inputs) down to the

variable speed whisper fans at the back, it all looks like an undercover REF150. Besides, all its factory specifications are basically the same. I could swear it even uses the same patented output stage configuration, the main difference being the choice of output matching loads: 4 and 8ohm with a common ground terminal (few will miss the 16ohm option anyway).

By contrast, the GSPre is less obviously a REF5 in new attire [*HFN* Jan '10]. Technically you'd have to go back to the SP20 to find something vaguely similar with both line and phono stages. The new 'retro' preamp has two large rotaries for volume and source selection and five function push

buttons inbetween catering for power, mono, muting, headphone switching and access to the limited onboard menu. The GSPre also offers a pair of balanced and four single-ended inputs alongside balanced and single-ended outputs.

## FETS AND TUBES

Unsurprisingly, the line stage circuit is based on ARC's valve of choice – four 6H30 double triodes albeit with a low-noise J-FET front-end. The programmable phono stage is a separate circuit also fronted by J-FETs and powered by two 6H30 tubes, the combination providing up to a claimed 58dB gain to accommodate a variety



**RIGHT:** The GS150 features no fewer than two matched pairs of KT150 output tubes per channel driven by pairs of 6H30 double triodes. This is the first ARC amp to use KT150s



of MM and high output MC cartridges. However, while the GSPre boasts a tube-based headphone amplifier, it hasn't gone the whole hog and dropped in a DAC, as featured in the Galileo Series' GS175 integrated amplifier [see boxout, p37].

Before operating the GS150 you have to install the four 6H30 valves and the two matched quads of KT150 power output valves. The same applies to the critical bias adjustment. As shipped from the factory bias is set to a nominal 65mA per KT150 and the GS150 is ready to go out of the box. But you can and should check it from time to time under zero-signal conditions after a 15 minute warming-up period.

Frankly, and bearing in mind the cost of ownership, you should insist your dealer do all this initial set-up and optimisation for you while also helping familiarise you with its features and functions. A similar valve installation ritual has to be performed before operating the GSPre, I might add.

#### METERS AND MENUS

A word about those 'fishbowl' meters which, in this instance, look far more

accurate than our lab tests suggest [see caption, p37]. Such decoration may be a little cruder in its calibration than we'd care to see, but they always look nice and, in today's retro-loving market, are nothing if not a boon to sales. Just ask McIntosh Laboratories another company, along with Wadia, now owned by Fine Sounds. You could do better with a multimeter, but unless you have the necessary skills, never touch the innards of a powered amplifier (especially a tube amplifier which hosts lethal operating voltages).

Of course, in the manual you'll find out all about the control functions and displays, and that it even has a valve hour counter. You'll also discover how you can set up the amp to auto shut-down via the menu, which is nice if you are a late night low-level listener.

To run the menu you just have to press the Menu button repeatedly, while watching the fluorescent display

**ABOVE:** No touchscreen gimmickry here as the GSPre marks a return to traditional rotary and pushbutton controls. The former also facilitate navigation of the on-board menu

(fortunately less garish than in previous iterations), adjust the settings with the volume knob and press Mute to confirm. You can also do this with the remote. The audiophile will like the fact that the GSPre also offers mono and inverted polarity

operation – very useful for centre focus tuning) – and easy (if limited) adjustment of pick-up impedances. Alas, the processor on/off function has nothing to do with any internal DAC, rather the

integration of the GSPre in a multichannel surround sound system.

'A large, colourful musical wall-to-wall canvas opened up'

#### EX3MA POWER

For the world's first review of the GSPre/150 duo, a superb associated system was *de rigueur*, comprising an ARC CD9 disc player/DAC and a pair of appropriately rare Sonus faber Ex3ma loudspeakers.

The Galileo pairing was also auditioned in a second system with Sonus faber Lilium loudspeakers, alongside a REF 5SE/150 pairing to enable a further comparative test. The analogue front-end was equally cutting-edge and comprised an SME 30/2 turntable/SME Series V tonearm fitted with an Air-Tight PC1 cartridge feeding an ARC REF PH2 SE phono preamp. All cabling was by Transparent Audio Ultra.

Driving the Ex3ma, the GS150's 8ohm outputs sounded audibly louder than the 4ohm taps, an observation that might otherwise be mistaken for a 'better' sound due to its more urgent sense of projection and focus. But to my ears the 4ohm ➔

#### ARC'S KT150 DEBUT

The KT150 power output vacuum tube is a new Tung-Sol branded design from New Sensor. New Jersey-based Tung-Sol was the inventor of the 6550 tube back in 1955 and, alongside EMI/Marconi's 'kinkless tetrode' KT88, was one of the first valves designed specifically for the audio market. The KT150, by contrast, is manufactured in Russia by the New Sensor Corporation, which now owns the Tung-Sol brandname alongside the familiar Sovtek and Electro-Harmonix marques. In practice, the KT150 is a development of the KT120 which was launched in 2009, itself substantially more powerful than the longstanding but still commonly-used KT88. Today, the KT150 is billed as 'the most powerful octal beam tetrode ever produced', with a plate (anode) dissipation of 70W, against 60W for the KT120, or about 40W for a KT88. Its gerkin-shaped glass envelope not only improves thermal dissipation and reduces microphony but, some audiophiles have suggested, also contributes a hint of the rose-tinted '6550 coloration', so cherished by ARC's founder, the late Bill Johnson.



## Xtension 9 SuperPack

The Xtension 9 SuperPack from Pro-Ject Audio Systems represents one of the finest high-end turntable packages available today. Drawing inspiration from Pro-Ject's first ever 'money-no-option' turntable, the Xtension 12, this streamlined version boasts advanced technologies and phenomenal value for money. The high-gloss plinth (available in Black, Red or White) is an MDF construction filled with metal granulate, making it high-mass and non-resonant just like the platter, which is made from a special alloy lined with Thermo-Plastic Elastomers and topped with recycled vinyl records. The whole turntable is magnetically decoupled from a rack by three specially designed feet.

The Xtension 9 SuperPack's motor efficiency is improved by the built-in speed control module, and the whole package is finished off by the stunning 9CC Evolution Tonearm and pre-fitted Ortofon Quintet Black.

Available in the UK for **£2,200** (UK SRP)



**ABOVE:** Dominating but also graceful, ARC's trio of analogue meters conveys a measure of mains line voltage, tube bias current (in adjustment mode) and power output. The log scaling of the latter seems of decorative value only as a sustained 10W/8ohm registered just '0.015' on the display

outputs exhibited a wider and deeper soundstage, albeit in lieu of a slightly more laid-back image that some might describe as 'romantic' in nature but that others, myself included, will hear as simply more musical. Neither the perfect placement of voices and instruments nor the rendering of the spaces between them or fine detail were affected by my 4ohm preference.

A large, transparent, colourful and multi-layered musical wall-to-wall canvas opened like a hovering parachute, the enfolding acoustic conferring a sense of space that was both staggering and utterly immersive.

Image focus versus a more 'holographic' presentation is a trade-off that's in the very nature of many valve amplifiers. Not so the GS150, which is of a more neutral, focused and transparent persuasion, though not at the cost of image dimensionality or midrange bloom.

From the onset, the GS150 took immediate charge of all the musical proceedings with poise and aplomb, presence and control, exhibiting clarity, speed, and supreme resolution of instrumental and vocal textures.

The GSPre sang joyfully along as it should do, not imposing its character on the sound – although I suspect the built-in phono stage lacks the same ultimate degree of dynamics and transparency as does the line level. (I admit that I didn't experiment extensively with different cartridges and cartridge loadings when using the SME/Air Tight front-end.)

With track after track, the 'four elements' were consistently present: 'air' (spaciousness), 'water' (liquidity), 'fire' (dynamics) and 'earth' (solidity and presence), whether with the complexity of Beethoven, the romanticism of Berlioz

or Handel's religiousness, depending on programme material. The same with Dylan's raucity, Sinatra's velvety crooning or Supertramp's buoyant productions. I could go on and on, such is the versatility of the GS duo!

I listened to too many records to bore you here with a detailed list and description. But being Portuguese, let me speak about *Fado* (songs of fate and sorrow). I listened to part of Mariza's *Transparente* [EMI 7243 4 77119 2 3] where she sings 'Duas Lágrimas de Orvalho' (which has solo voice accompanied by a weeping cello), and there were tears in my eyes, such was the power of the GS duo to convey pathos, emotion, sadness, suffering and pain. And I also felt *saudade* – that Portuguese word that expresses the longing for something that does not exist and yet which is still felt as overwhelmingly real. It was an emotional experience I shall never forget.

### HARMONIC COMPLEXITY

The Sonus faber Ex3ma sounds bigger than it ought to, if you judge it by its looks alone. But you can't fool the laws of physics. In terms of macro dynamics, comparing the Ex3ma to the Lilium loudspeaker is like comparing your regular rose garden hose to a fire hose.

It is easy to fall in love with it for its sheer beauty and musical perfume, the harmonic complexity, tonal neutrality and timbral honesty, but the GS/Lilium pairing moves so much more air in the room (it's a little reticent at the low end though), that it will blow you away if you are into big bands and large symphonic forces.

The GS duo not only looks much better it also *sounds* way better than the ARC ➤

'The ARC GS150 is a much better amplifier than the REF150'

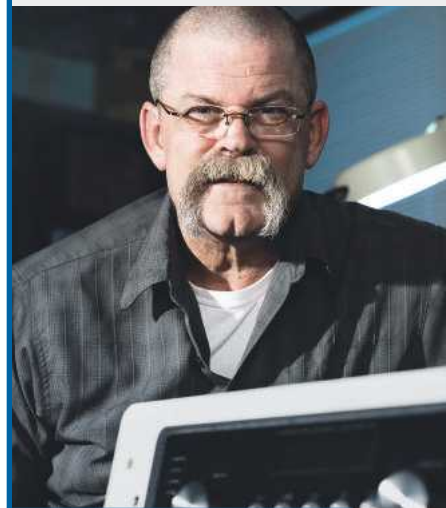
## WARREN & WARD

During our review we were able to quiz Warren Gehl, responsible for 'sonic design', and Ward Fiebiger, chief engineer responsible for ARC's technical design [pictured, below].

So is the GS150 really just a REF150 with new looks? 'As with many designs from Audio Research, the GS150 is an evolutionary step from the REF150', explained Warren. 'For while the two amplifiers share many common aspects, there have been numerous parts and layout changes which affect the sound. 'By contrast the GSPre is really more a hybrid of a variety of products. Performance-wise, it nears the sonic capabilities of the Reference 5SE preamplifier and the PH8 phono preamplifier.'

ARC's engineers did consider implementing a DAC in the GSPre but with limited real estate inside the case, and the inevitable cost implications, finally decided against it. More important was the decision to make the GS150 the first ARC amp to feature the more powerful KT150 tube. 'In practice, it's not just the headroom offered by the KT150 that's attractive', says Ward. 'The larger glass envelope, as well as its shape, seems also be key to many of the design and subsequent performance enhancements.'

Owners of the REF150 will probably be wondering if they might achieve a better sound still, with KT150s. 'They'd undoubtedly sound more similar,' says Ward, 'but other design changes and advancements will still provide the GS150 with an edge over the REF150.'





# Asimi Ultra RCA Interconnect

hi-finews  
EDITOR'S  
CHOICE

“ Reflecting the mood of the music, the Asimi Ultra allows the very best hi-fi systems to sing – sing loud, sharp and clear when required or soft, slow and relaxed as the recording demands. It’s a true flagship cable. ”

*HiFi News,  
December 2014*

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## AUDIO RESEARCH GSPRE/GS150

This is not only ARC's first outing with KT150 tubes but its host, the GS150, is also the most powerful amplifier we've tested from this marque. Besting even the REF150 [HFN Feb '12], the GS150 succeeds in offering 2x170W into 8/4ohm loads via its 8/4ohm taps with a dynamic output of 185W/8ohm (8ohm tap) and 185W, 200W, 175W into 4, 2 and 1ohm (4ohm tap). The output stage configuration and – particularly – that of the associated coupling transformers looks to be very similar in performance to the REF150. The 'shaped' response with its mild +0.1dB bass shelf from 300Hz down to 20Hz allied to a gentle mid/presence roll-off of -0.1dB/5kHz to -0.2dB/20kHz (and -1.7dB/100kHz) is common to both the REF150 and GS150 as is the exaggeration of the trend with reducing load impedance (-0.4dB/20kHz into 4ohm and -0.9dB/20kHz into 2ohm). The 0.6-1ohm output impedance (20Hz-20kHz) is also shared between the models.

Distortion increases gently with output level from 0.03%/1W to 0.1%/10W and 0.4%/100W. Versus frequency, the minimum is at 100Hz (0.06% at 10W), increasing to 0.12%/20Hz and 0.14%/20kHz. Even at 10W/8ohm, the GS150 only breaks 1% THD at a very low 7Hz – impressive stuff and testament to the quality of those transformers [see blue trace, Graph 2, below]. By contrast, the partnering GSPre offers a vanishingly low 0.0004-0.0026% THD (20Hz-20kHz at 1V) together with a usefully wide 96dB A-wtd S/N ratio but the HF response is slightly more tailored still, rolling away to -0.6dB/20kHz. Readers may view extensive QC Suite test reports for the ARC GSPre and GS150 power amp by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



**ABOVE:** While the GSPre [top] offers both single-ended (RCA) and balanced (XLR) outputs (plus MM and three RCA line ins and two XLR ins), the partnering GS150 has balanced ins only. A choice of 8 and 4ohm speaker taps are offered on 4mm sockets

REF 5E/150 combination with KT120 valves installed (which are congested and closed-in by comparison). The GSPre/GS150 won hands down, I must say. As well it should, considering that it costs almost double the price.

However, I regret to say the GSPre phono stage is not a match for the remarkable PH2 SE phono preamplifier. To put it bluntly, the GS150 is a *much better* amplifier than the REF150 [HFN Feb '12], anyway you look at and listen to it.

And the GSPre (at line levels) is marginally a better choice – more open, transparent and musically relaxed – but the PH2 SE walks all over the GSPre's phono stage which is more of a bonus than a real asset to the preamplifier.

### ALTERNATIVE AESTHETIC

Audio Research says its Galileo Series is not intended as a replacement for the existing REFs, and will coexist with the rest of the ARC product range to provide an alternative aesthetic as well as a platform for new ideas. So, before REF owners feel tempted to upgrade lock, stock and barrel, I'd urge them to first

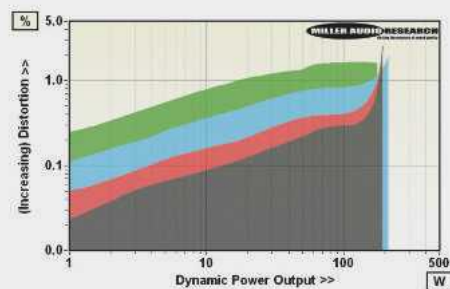
audition an ARC REF150 with KT150s in place of the stock KT120s.

I would keep my fingers crossed though: the GS150 puts the tube-loving audio world on the verge of a revolution to which it may not be prepared, either psychologically or, for most of us at least, financially. Unless your pockets are especially deep, nay cavernous, the GSPre/GS150 sounds so good that to part with it after an extended audition would prove a very painful wrench. ☹

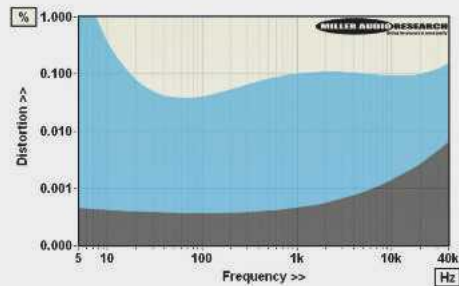
### HI-FI NEWS VERDICT

The GS150 is not only the finest sounding but also the most *beautiful* stereo amplifier Audio Research has ever built, which is saying a lot for a company that makes some of the best tube amplifiers in the world. The GSPre is the perfect partner both aesthetically and sonically, its beauty within matching the beauty without. Together they've restored my fading faith in vacuum tube technology!

Sound Quality: 89%



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green). Maximum current is 13.2A



**ABOVE:** THD versus extended frequency; GSPre (1V out, black trace) versus GS150 (10W/8ohm, blue)

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	171W / 170W
Dynamic power (<1% THD, 8/4/2/1ohm)	185W / 185W / 200W / 175W
Output imp. (20Hz-20kHz, pre/power)	995-315ohm / 0.600-1.00ohm
Freq. resp. (20Hz-100kHz, pre/power)	+0.0 to -0.55dB / +0.1 to -0.2dB
Input sensitivity (for 0dBV/0dBW)	204mV (pre) / 170mV (power)
A-wtd S/N ratio (re. 0dBV/0dBW)	96.2dB (pre) / 88.3dB (power)
Distortion (20Hz-20kHz, 1V/10W)	0.0004-0.0026%/0.038-0.098%
Power consump. (pre/idle/rated o/p)	90W / 470W/780W
Dimensions (WHD Pre/150)	483x197x438/483x251x572mm

# TAD CE1

Japan's TAD Labs expands its Evolution Series: are these the ultimate standmounts for space-starved audiophiles?  
 Review: Adam Smith Lab: Keith Howard

It is relatively common to lump together small loudspeaker designs under the dual banners of both 'standmount' and 'bookshelf' but there can, and perhaps should, be significant differences between the two types. Such a confusion *ought* not to arise with these new TAD CE1 loudspeakers, as the 67litre cabinet volume and 30kg weight suggest that most domestic bookshelves would collapse under their bulk. Even so, the TAD Laboratories web page does call the CE1 'a bookshelf speaker'.

The CE1s, which can be supplied with their own matching stands in matt and piano black, the £1395 TAD-ST2-K [as seen here], are a new design from TAD Labs and were conceived to partner the Evolution One floorstanding model as part of this TAD series.

Designer Andrew Jones cites the ethos behind the development of the CE1 as a logical continuation of the Evolution models. As he puts it 'TAD's philosophy has always encompassed the belief that audiences should be able to access the richest and purest sound experience possible in their own home environment' and the £15,995 CE1 drops the price point of a complete TAD system somewhat, thus opening up a set-up of this type to a wider base of customers.

As it stands, the Evolution series encompasses the D1000 disc player, DA1000 DAC [HFN May '14], C2000 preamplifier and M2500/M4300 power amplifiers [HFN May '12], as well as the existing Evolution One loudspeaker.

The design of the CE1 is clearly a nod towards the company's CR1 Mk2 standmount design from the Reference Series, but with a few new innovations of its own. Consequently, the CE1 is not simply a scaled-down version, either in appearance or configuration terms, and demonstrates that a great deal of thought and consideration has been involved during the design process.

Two technologies that the CE1 does share with the CR1 Mk2, however, are TAD's driver design and cabinet construction (known as CST and SILENT respectively). CST stands for 'Coherent Source Transducer' and reflects the coaxial design of the main drive unit. There's an intriguing 'family connection' here as Andrew Jones formerly worked for KEF in the UK, alongside such luminaries as Raymond Cooke and Laurie Fincham, and was instrumental in the development of KEF's own coaxial Uni-Q design.

## HIGH RIGIDITY, LOW MASS

He continued his research at TAD when, exploring the possibility of a patent for a new type of coaxial driver, he discovered that the patent holder for the original

concept was already none other than TAD and its parent company, Pioneer.

Development continued, resulting in a design that forms the basis of the main unit in the CE1. This

sports a 140mm magnesium main driver and 35mm beryllium dome tweeter with a crossover point of 2kHz. The latter is manufactured using a vapour deposition process that TAD claims gives excellent rigidity and strength but with low mass and reduced coloration.

Below 250Hz, this driver crosses over to a dedicated 180mm bass unit, based around a one-piece dust cap and cone assembly built from multiple layers of aramid fibres – both concepts again aiming to achieve high rigidity but low mass. The unit's surround is a pleated 'accordion' and while this is a relatively uncommon cone termination for a modern hi-fi

**RIGHT:** TAD's coaxial driver combines a magnesium midrange with a beryllium tweeter for the CE1. The aramid fibre-based bass driver is augmented by side-firing reflex ports [see boxout, adjacent]

'Each performance is a masterclass in atmosphere, detail and insight'





## BI-DIRECTIONAL PORT

Most reflex ports are circular or thereabouts but there are exceptions where the port opening is instead a slit. Sonus faber's paralaminar stealth flow port is an example; more prosaically, speakers with downward-firing ports often exhaust through a narrow gap between the bottom of the cabinet proper and a plinth beneath. But Andrew Jones's complex ADS (Aero Dynamic Slot) arrangement in the CE1 seeks to develop the slot port to a whole new level. Vertical slots in both cabinet side panels form the throats of four horns – two forward-firing, two rear-firing – formed by large machined aluminium plates which attach to the cabinet sides. All the forces in the system are thereby in balance, while the horn profiles, hidden behind the side plates, provide a long, gradual flare to prevent noisy airflow turbulence even at high bass output levels. KH

loudspeaker it offers distinct advantages in terms of linearity and high power handling.

The bass driver is reflex-loaded, but, in a departure from its siblings and predecessors, the CE1 utilises a novel form of slotted port [see boxout, above].

The cabinet utilises TAD's SILENT [Structurally Inert Laminated Enclosure Technology] construction technique,

introduced with its Reference One speaker, and is based around a framework of rigid plywood combined with MDF, achieving high strength with low levels of 'boxy' resonance. Internally, the enclosure contains absorbent material to damp standing waves, all strategically placed as a result of acoustical analysis.

Naturally the fit and finish of the loudspeakers is nothing short of stunning, even on our early review samples (release date is Jan '15). The central section is completed in a high gloss Tropical Olive wood veneer and the side sections are available in black or white. Additionally, the brushed aluminium panels are envisaged to be offered in a choice of silver or dark grey.

### A 'WOW' MOMENT

Listening was carried out in the Editor's media room with the loudspeakers located on a pair of Track Audio stands and driven by a pair of Devialet 800 monoblock amplifiers. Hi-res music was delivered via USB from a battery-powered Sony Vaio laptop.

It is not unreasonable to expect something of a 'Wow' moment when first listening to a pair of standmounting loudspeakers bearing a £16k price tag and I am pleased to report that the TAD CE1s delivered exactly that – I

may have even uttered the word aloud!


Having heard many high spec TAD systems at events such as the Munich High End Hi-Fi Show, I know they are capable of great things but the way in which the CE1s brought a slice of this high-end right to my ears was nothing short of breathtaking.

### FLUIDITY AND OPENNESS

The first, almost overwhelming, aspect of the loudspeakers' performance that strikes you is their truly remarkable clarity. The rising response that can be seen in the Lab Report is possibly the root of this, but the magnesium midrange driver and beryllium tweeter exhibit not even the tiniest hint of steeliness or sting between them. Rather, they have a delicacy, fluidity and openness that rival some of the best drive units of any type that I have heard.

As a result of this, every musical performance is a masterclass in atmosphere, detail and insight and, try as I might, I found absolutely no material that challenged this sense of composure at any time. The subtle effects that linger in the background of Madonna's 'Frozen' from her *Ray Of Light* album [Warner 9 46884-2] seemed to hang in the air in the space between the loudspeakers in a most uncanny way, and maintained a positive presence throughout the track rather than being somewhat overshadowed by the main musical performance.

As my listening continued, I realised that this was a very strong trait exhibited by the CE1s. They have a monitor-like sense of incisiveness and openness that places instruments with utmost precision in the recording while ensuring they have plenty of space around them. However, the overall sonic picture is not overblown, nor do the TADs push the overall image artificially in width or depth.

On occasion, it almost sounded as if the studio manager had removed a series of 

# Primare 60 Series Goose Bumps Included



“Primare’s flagship audio components tell it like it is, their honesty raising goose bumps with common regularity... these Series 60 components ooze style and sophistication...in the high-end arena they represent outstanding value, especially as you’re getting a high-res DAC and network player included in the price.”



November 2014

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audio - visual

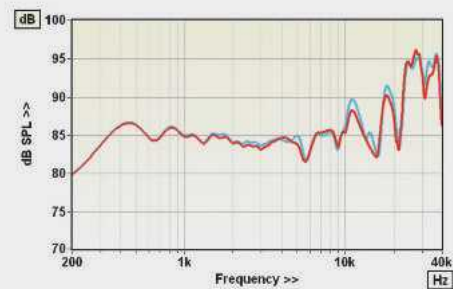
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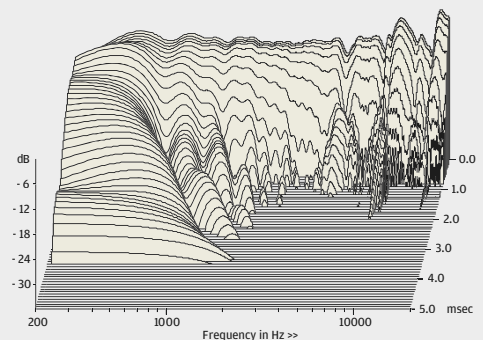
## TAD CE1

TAD claims 85dB sensitivity for the CE1 which accords well with the pink noise figure we obtained of 85.4dB. Although this is on the low side for a reflex-loaded standmount, low impedance has still been necessary to achieve it. Our measured minimum impedance modulus of 3.7ohm is entirely consistent with the claimed 4ohm but the extremes of impedance phase angle are high, particularly at low frequency where the modulus is also low. The result is that the EPDR (equivalent peak dissipation resistance) dips to a minimum of 1.5ohm at 32Hz. While this isn't scarily low it does indicate that the CE1 is a more challenging amplifier load than presented by today's typical floorstanders, for which the EPDR is usually around 1.7ohm.

Frequency response [Graph 1, below], measured on the axis of the coaxial driver, displays a mild presence band dip followed by a rising treble trend, albeit with the large HF response ripples typical of coaxial drivers. (Ignore the low frequency roll-off which is a measurement artefact.) This suggests that listening slightly off-axis may give the most neutral tonal balance. Because of the treble ripples the frequency response errors are a little on the high side at  $\pm 4.4$ dB and  $\pm 4.9$ dB respectively (300Hz-20kHz), and over the same frequency range the pair matching is a little disappointing too at  $\pm 1.7$ dB, although this fell to  $\pm 1.0$ dB below 10kHz. Diffraction-corrected near-field measurement showed the bass extension to be 48Hz (-6dB re. 200Hz) but the unusual port arrangement lends some uncertainty to this figure. The CSD waterfall [Graph 2] shows a high-Q resonance at around 11kHz, presumably caused by breakup in the magnesium midrange cone. KH



ABOVE: Treble ripples are typical of coaxial driver geometries – listen off-axis for the flattest response



ABOVE: Cabinet resonances are very well controlled but there's a breakup in the alloy mid cone at 11kHz

## HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	86.4dB/85.4dB/84.8dB
Impedance modulus min/max (20Hz–20kHz)	3.7ohm @ 125Hz 31.7ohm @ 3.9kHz
Impedance phase min/max (20Hz–20kHz)	-66° @ 25Hz 52° @ 1.9kHz
Pair matching (300Hz–20kHz)	$\pm 1.7$ dB
LF/HF extension (-6dB ref 200Hz/10kHz)	48Hz   >40kHz/>40kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.7% / 0.1% / 0.1%
Dimensions (HWD)	524x290x446mm



**LEFT:** The superb Tropical Olive wood finish extends around the front, top and back of the CE1 loudspeaker cabinets; and four chunky binding posts permit bi-wiring or bi-amping

was as deliciously fruity and deep as could be hoped. Each note arrived with impeccable timing, exhibited a vivid fulsomeness and then faded sumptuously off into the distance.

An equal delight on this particular track was the piano accompaniment; never an especially easy instrument at the best of times. The CE1s captured the innate nature of the ivories being tinkled and presented them magnificently – so much so that I hit the 'repeat' button a number of times and forgot about review notes and analysis for a good ten minutes!

Ultimately, this was to be something of a precedent throughout my time with the loudspeakers. Their sheer openness and sense of musical ease meant that, while it was relatively easy to characterise their performance and pick up on individual aspects of recordings, it was sometimes difficult to concentrate on doing so, due to the utterly enthralling musical picture that they painted.

I have rarely encountered a piece of audio equipment that repeatedly compelled me to listen to everything twice: the second time to pick out the bits I'd missed while simply being swept away by the whole performance first time round. If you do buy a pair of these loudspeakers, make sure you have ample time on your hands, as you are unlikely to want ever to 'switch them off'. ☺

## HI-FI NEWS VERDICT

The CE1s may be TAD's 'entry level' loudspeaker but there is absolutely no sense that any corners have been cut in its design or implementation. Intelligent engineering, magnificent build quality and an impeccable finish all add up to loudspeakers that can claim a place among the finest made. Music through the CE1s is never less than an experience, and a truly captivating one at that.

Sound Quality: 88%



big cotton-wool bolsters that had previously been sitting between each performer, such was the sense of focus placed on every instrument within the soundstage.

## ENTHRALLING PICTURES

At the bottom end, the TADs' relatively generous proportions paid dividends and they revealed themselves to be more than capable of digging deeply when required. The bass line to 'What I Am' from Edie Brickell And The New Bohemians' *Shooting Rubberbands At The Stars* [Geffen Records GFLD 19268] was beautifully detailed and tautly rhythmical throughout.

A little less convincing at times, however, was Dire Straits' 'Private Investigations' from the remastered version of *Love Over Gold* [44.1kHz rip from Vertigo 800 088-2]. While the individual bass notes during the quieter parts were still deep and solid, there was something of a lack of impact from the crescendo towards the end of the track. I am used to this pinning me to my seat through larger loudspeakers but the TADs felt just a little too restrained.

Although not generally lacking in depth or scale in general, I felt that perhaps this was the laws of physics gently tapping me on my shoulder to remind me I wasn't actually auditioning a pair of floorstanding behemoths – it had been easy to forget up to this point.

In contrast, the double-bass pattern supporting Patricia Barber on 'Bye Bye Blackbird' from *Night Club* [Blue Note 7243 5 27290 2 9]

"I have to say,  
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**John Bamford –  
Hi-Fi News**



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### Reviewer quotes:

"It's easily the best DAC I've ever heard in my system, making digitally-recorded music sound better than I've ever heard it"

**Vade Forrester – The Absolute Sound**

"I witnessed the best sound quality I've ever heard from these DSD recordings"

**John Bamford –  
Hi-Fi News**

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**Hi-Fi News**

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### Customer quotes:

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"With most components you get used to them and they cease to impress but the DirectStream keeps delivering the goods consistently. The magic never stops... Nothing but the music".

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**GN – West Midlands**

"In my experience never before has there been a game changing component like PS Audio's Perfect Wave Direct Stream DAC. It completely re-defines hi-fi as we have known it! Easy enough to wax lyrical about definition, soundstage, space, transients, musicality etc, but what it does best of all is put this huge smile on your face which just won't go away. Much of this is the sheer pleasure of what you are hearing, but it is also the realisation that the years of searching are over, you have finally found what you have been looking for."

**RB – Suffolk**

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# Ayre QB-9 DSD

No jack of all trades, this DAC only does one thing: it plays audio over USB from a computer. But it makes up for that limitation by tackling its task spectacularly well  
 Review: **Andrew Everard** Lab: **Paul Miller**

There are some definite oddities about the £2495 Ayre QB-9 DSD DAC, not least of which is the fact that, in an age when almost every manufacturer seems to be toiling to increase the flexibility of its digital products, this is resolutely a one-trick pony. It is an asynchronous USB converter and that's all: it has just a single input – a USB Type B – plus RCA phono and XLR balanced outputs, and a display to show the sample rate to which it's locked.

No remote control (it doesn't need one), no Bluetooth or AirPlay, not a sniff of a conventional coaxial or optical digital input, nor even a power switch... Connect USB, mains and audio cables, and after that the QB-9 DSD will simply wake up when the computer starts, and do its job.

## PLAIN TO LOOK AT

The styling of the Ayre is self-effacing almost to the point of anonymity: true, the casework is beautifully finished, but it's compact at just 215mm wide and 75mm in height, so hardly the archetype of American 'heavy metal' high-end. In fact it weighs just 2.3kg, but nevertheless feels good and solid.

And while one might expect a range of controls on the front-panel, the only visible feature is the display – and that, with its blue numerals, is just a little old-fashioned. Or should that be 'retro'? Actually, perhaps that last point is forgivable, since the QB-9 was first launched almost six years ago, in April 2009. In July '10, it was upgraded to add 192kHz capability, no doubt in response to the increasing availability of 192kHz/24-bit files via services such as HDtracks; and in May '13 it hit the specification we have to hand here, with the addition of DSD compatibility.

That last step is an interesting one – and another oddity – not least because for

some while Ayre resisted any move to DSD, with the company's founder and designer Charlie Hansen being pretty outspoken on why he wasn't exactly keen (to put it politely!) on DSD audio.

You can read the argument in an Ayre document available online [[http://www.ayre.com/insights\\_dsdvpcm.htm](http://www.ayre.com/insights_dsdvpcm.htm)]; but the upshot is that DSD takes a lot more manipulation in the recording process, requiring conversion to and from PCM for mixing (which is why we have the DXD format, designed for exactly this purpose).

Read the document and it's clear that, in Hansen's opinion, DSD isn't quite the silver bullet its advocates would have you believe. Ayre provides some 'needle drop' comparisons between DSD and PCM to help you decide for yourself, and while it's basic tenet is 'this is what we think – make your own decision', it's clear the company retains its doubts.

However, what is beyond a doubt is that there is a demand, from those describing themselves as 'computer audiophiles',

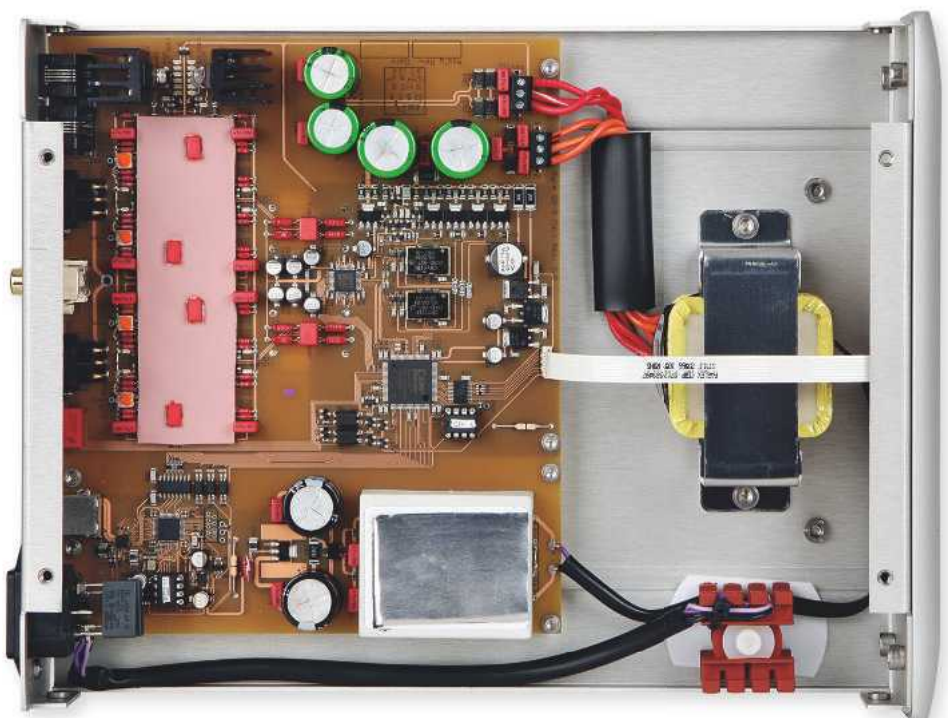
for DSD-capable digital hardware, and so we have this version of the QB-9, which currently only supports 'single' DSD, aka DSD64 or DSD2.8. Ayre promises that a DSD128 upgrade will follow in time and this will also add 352.8kHz and 384kHz PCM capability. A free upgrade will be offered to owners of the QB-9 DSD when that 'double' option becomes available.

## KEEPING THE BASICS

The upgrades involved in creating this DSD-capable version of the DAC were a little more extensive, however. The Burr-Brown DSD1796 DAC of the original QB-9 was replaced with the ES9016S 'Sabre Ultra' 32-bit converter from ESS, and the audio master clocks upgraded to devices running at twice the speed to get more from the new DAC. Changes were also made to the analogue audio circuitry, and the power supplies for the analogue and USB sections.

Retained, however, were the basics of the QB-9, including its use of Wavelength Audio's Asynchronous USB Streamlength

**RIGHT:** A Xilinx Spartan FPGA handles all input processing and 16x upsampling while an ESS Sabre 'Ultra' 9016S 32-bit DAC feeds the balanced analogue output stage (masked here under a pink blanket of damping material)





technology, which was developed by asynchronous USB audio pioneer Gordon Rankin. Ayre was the first licensee for this codec, which is now found in products from a number of other manufacturers, not least Wavelength Audio itself. Oh, and in the AudioQuest DragonFly pocket DAC.

I mentioned before the lack of controls on the QB-9 DSD: well, there are some, but they're on little dip-switches to the rear of the product, and these cover: 1) digital filtering – 'Listen' to improve time-domain performance, or 'Measure' to tidy up the frequency-domain [PM measured in 'Listen' mode, p49]; 2) power mode – on when computer is on, or only on when an audio application is sending data; and 3) display on/off.

There's also a USB mode selector, allowing for standard or high-speed working: the 'Rsrv B' position is required for anything above 96kHz audio, and will work fine with Mac OS X computers, while requiring an Ayre driver available as a free download for Windows.

*I can describe the sound of the QB-9 in one word: "Wow!"*

It's also possible for the QB-9 DSD to control, and be controlled by, other Ayre components, using the AyreLink connections provided over simple 'phone cables' terminated in RJ-11 plugs.

This allows niceties such as display dimming, and system wake-up/source selection as soon as your computer starts sending music. Beyond that, however, this is perhaps the most 'plug and play' product

I have encountered since – well, since perhaps the likes of the little M2Tech HiFace DAC and a number of other products of the same kind. Even setting it up with Windows computers won't be onerous once

the correct drivers are in place, while using it with OS X is a snap.

Anyone who believes this whole high-end audio lark is fiddly, tweaky and complicated really needs to start here: with this DAC, virtually any computer can be used. I tested it with my usual MacBook Air and Mac mini computers, but also found it worked well with an Asus 'netbook' of

**ABOVE:** From left to right, the Ayre front panel contains – nothing, actually! No controls, and the display simply lights up when a signal is locked to show the sample rate in use

a couple of years back which – if memory serves – was bought for less than £200.

### **INSTINCTIVELY RIGHT**

Usually we begin the sound quality section of our tests with a paragraph describing how the component in question sounds overall. But for once I must break with tradition as I can describe the sound of the Ayre QB-9 in one word: 'Wow!'.

I can safely say I have never encountered a product with a presentation that seems so instinctively right from the get-go, while absolutely making the most of the system with which it's used. Of course it's an illusion that a big, powerful sound requires a big, impressive-looking hi-fi component (after all, a DAC chipset is tiny), but for anyone still labouring under that misconception the Ayre has everything required to set the record straight.

You see, what pours forth from this little box is a sound with striking bass weight and definition allied to all the vibrancy and attention-grabbing detail one could want. It's the kind of audio experience that just leaps out of the speakers and sits there in the room, lasciviously suggesting that 'perhaps Sir would like to crank the amplifier up just a *leettle beet* more, just so we can show you what we can *really* do?' – and that temptation proves hard to resist.

The Ayre just 'does it', and it does it with any music you throw at it, be it DSD, 'hi-res' PCM or CD rips, making even the most unlikely candidate come shining through. On the deluxe edition of Wings' *At The Speed Of Sound* album [Concord HRM 35671-02] there's a 'John Bonham version' of 'Beware My Love', which is a very long way from the slightly limp-rocking original, underpinned as it is with some serious

## **HIGH ALTITUDE HI-FI**

Founded in 1993 and still based in Boulder, Colorado, Ayre was started by Charlie Hansen in order to offer the kind of performance available from the products he'd been making at Avalon, but at more affordable prices. One major aspect of Ayre's products is the fact that they are designed and built in the USA, both in-house and using trusted US-based subcontractors. That's no longer a given even in high-end audio, where more than a few companies have turned to external manufacturing to keep costs in check. But at Ayre things go even further: each component is hand-assembled by a single technician in the company's Colorado facility, and extensively tested before despatch. At the heart of the company's design philosophy is fully-balanced, zero feedback circuit design, and since its foundation Ayre has been leading digital innovation, not least with the original version of the QB-9, the world's first solid-state DAC with asynchronous USB transfer. The latest arrivals from Ayre via UK distributor Symmetry are 'Twenty' versions of the flagship KX-R preamplifier and MX-R monoblock power amps, selling for £20,995 and £11,795 apiece respectively.



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### SSC RECORD POINT 420

The new SSC Record Point 420 can be used with most record players. Providing a good contact between the record and the platter thus greatly stabilising the record, giving less distortion and a more realistic sound image as a result.

As you can see from the image, inside the SSC Record Point 420 is the integrated string suspension design. Between two anodised aluminium caps is the high grade steel core with the SSC triple ring technology which is typical of SSC products.

You can fit the SSC Record Point 420 easily. Simply place on the turntable spindle above your record to give the sound more dynamics, improving the sound with minimal cost.

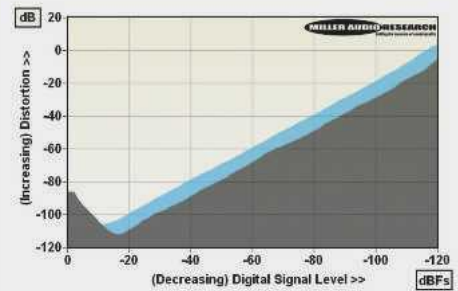




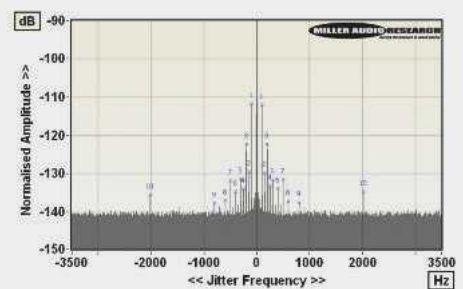
## AYRE QB-9 DSD

Charlie Hansen of Ayre Acoustics has certainly 'tickled-up' the QB-9 with its new 45.1584MHz and 49.152MHz clocks and upgraded ES9016S DAC although the XMOS USB driver software is the familiar v1.26 release. Nevertheless, the generalised performance of the QB-9 over the top 15dB of its dynamic range is determined more by Ayre's balanced analogue output stage, with midband distortion increasing slightly from a minimum of 0.00018% at -16dBfs to 0.0065% at 0dBfs [see Graph 1, below]. The increase comprises 2nd and principally 3rd harmonics with higher orders usefully suppressed to <0.0001%. We have seen the ES9016S achieve a THD of <0.0001% at 0dBfs but this is of technical rather than subjective interest! The balanced outs offer a maximum 3.92V from a low 60ohm source impedance and the A-wtd S/N ratio is an impressively wide 111dB. Furthermore, the use of a dual-mono DAC (eight channels, in fact) together with very careful analogue PCB layout maintains stereo separation up to 125dB.

Ayre specifies an apodising-type minimum phase digital filter and this is reflected in the reduced time domain pre-echo/ringing but also in the very limited 6dB stopband suppression (with 48kHz media) as well as the early treble roll-off: from -0.15dB/10kHz to -2.4dB/20kHz with 48kHz media, -5.9dB/45kHz with 96kHz inputs and -10.2dB/90kHz with 192kHz media (the maximum accepted by the QB-9). Noise-like (uncorrelated) jitter is almost absent but there's a hint of PSU-related artefacts amounting to a mere 145psec [see Graph 2]. Readers may view a comprehensive QC Suite test report for Ayre's QB-9 DSD DAC by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



ABOVE: Distortion versus 24-bit/48kHz LPCM digital signal level over a 120dB dynamic range via USB input (1kHz, black; 20kHz, blue)



ABOVE: High resolution jitter plot with 24-bit/48kHz data showing very mild PSU-related sidebands

## HI-FI NEWS SPECIFICATIONS

Maximum output level (Balanced)	3.92Vrms at 61ohm
A-wtd S/N ratio	110.5dB
Distortion (1kHz, 0dBfs/-30dBfs)	0.0065% / 0.0012%
Dist. & Noise (20kHz, 0dBfs/-30dBfs)	0.0037% / 0.0032%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	+0.0 to -2.4dB/-5.9dB/-10.2dB
Digital jitter (48kHz/96kHz)	145psec / 150psec
Resolution @ -100dB	±0.1dB
Power consumption	12W (standby 11W)
Dimensions (WHD) / Weight	215x75x290mm / 2.3kg



ABOVE: Rather than the usual host of digital inputs, the QB-9 offers USB Type B only alongside single-ended (RCA) and balanced (XLR) analogue outs and AyreLink ports

Bonzo tub-thumping. It kicks off with fast-paced cymbal work, and then the drums crash in, the Ayre giving them full weight and slam, to the extent that I found myself listening to the drumming and more or less dialling out what else was going on in the mix.

Similarly with Bowie's 'Fashion', from the recent *Nothing Has Changed* retrospective [Parlophone 825646205745], the Ayre lays down a tight, funky, wall-shaking groove with metronomic precision, driving the track on relentlessly.

### SPOT THE DIFFERENCE

It's a thrilling, addictive sound, and it gets better as you explore higher resolution musical formats. When reviewing the Ayre I'd just downloaded Joe Stilgoe's witty *Songs On Film Live* set [Linn Records AKD 498], recorded at the 2013 London Jazz festival. Starting with the 'spot the reference' opener, 'Cartooning Up', the Ayre just hit me with a great 'whoomp' of live ambience, and some of the most realistic piano, bass and drums I'd heard for a very long time.

Chris Hill's stand-up bass instantly grabbed me with its extension and the way the notes were clearly struck, then decayed, while Ben Reynolds' taut, bang on the money drumming kept the rhythms honest, aided by the Ayre's extension and speed. It's a real 'it's doing *what???*' presentation, daring your attention to drift for a moment, lest it snaps you back into focus with the sheer - well, the sheer *everything* of what it does. This isn't a 'you had to be there' recording when heard through the Ayre: instead it sounds just like *being there*, so well is the atmosphere conveyed.

In fact, I was enjoying myself so much with what was still CD-quality material (or just above: the Stilgoe is in 48kHz/24-bit) by this point that I almost overlooked the need to address the question of whether

the QB-9 DSD sounds better when playing high bit- or sample-rate PCM or DSD files.

The answer to that would have to be 'yes': it plays both kinds of files splendidly, thank you very much, with even greater clarity, dynamic range and presence; and even doing some direct comparisons between DSD files and downsamples to PCM (to eliminate any mastering differences) revealed little to tell between DSD64 and 176.4kHz/24-bit PCM. Indeed, some recordings sounded better in their DSD form, with better vitality and dynamics, while others had just an edge of sparkle in 'hi-res' PCM.

Both showed clear benefits in detail and dynamic range over CD quality files, superbly though the Ayre does play 44.1kHz/16-bit.

I think it's safe to say that the Ayre doesn't favour one hi-res 'philosophy' over the other, but rather plays the two equally well, so whatever your file format of choice - or if you maintain a mixed music library bought on the basis of content rather than format - it will serve either extremely well. The QB-9 DSD is worthy of serious consideration by anyone looking for a high-end 'Macs and DACs' computer audio solution. ⤴

### HI-FI NEWS VERDICT

Ayre may not be sold on the idea of DSD, but you'd never guess: the QB-9 DSD DAC excels with one-bit music and high-resolution PCM alike, to the point that choosing between the two hi-res methods becomes irrelevant. Even more striking is just how good it can make CD-quality files sound, with a rich, solid and taut bass combining with treble and midband clarity for an involving and satisfying presentation.

Sound Quality: 88%



# Clearaudio Goldfinger Statement

Clearaudio's Goldfinger Statement cartridge certainly makes a statement thanks to the liberal use of exotic materials in its construction. Is its beauty more than skin deep?

Review: Adam Smith Lab: Paul Miller

There is no doubt that the high-end cartridge market is enjoying something of a resurgence at the moment; an occurrence that might have been virtually inconceivable ten to 15 years ago. With the likes of the TechDAS TCD01 Ti at £8750 [*HFN* Sep '14], the £5000 Ortofon MC Anna [*HFN* Oct '12] and the £7495 Lyra Atlas all having fairly recently appeared on the scene, it was only a matter of time before German analogue-*meister* Clearaudio upped its game. In respect of price and appearance, the glittering result leaves both its competition and its other models somewhat in the shade.

## POINTING THE FINGER

The new Goldfinger Statement hits the market at £8995 and it is not difficult to see where much of that cost lies. The body itself is made from a solid piece of 14-carat gold which endows the cartridge with undeniable wow factor. In theory, it offers benefits in terms of absorbing internal resonances yet, conversely, it's also a slightly strange choice due to the material's concomitant downsides.

The first of these is sheer mass. The next model down in Clearaudio's range, the Titanium V2, weighs 9g, which is perfectly standard. The Goldfinger Statement nearly doubles this to 16g, thus limiting the potential range of compatible arms. Of greater concern, however, is the softness of the material itself. On the Mohs scale of mineral hardness, gold comes

in at a paltry 2.5-3, compared to 4-4.5 for steel and 6 for titanium. I was not surprised at Sound Foundations' (Clearaudio's UK distributor) concern that I not over-tighten the mounting screws on this one-and-only review sample. If you adhere to the 'Linn' mindset of cartridge tightening (along the lines of 'as tight as you can, then keep going until the Allen key starts to bend'), I would humbly suggest that the Goldfinger Statement is possibly not for you!

The external 'bling' is rounded off on the front of the cartridge by a diamond – and not the one on the end of the cantilever. Instead, a rather larger gemstone takes pride of place on the front of the cartridge body just like its predecessor, the Goldfinger Diamond V2.

One could perhaps argue that this is to aid stylus positioning when cueing, but given the 'nude' nature of the cantilever, this is a bit of a stretch. Frankly, it's all a bit 'Elizabeth Duke at Argos' for my liking but it

undeniably makes the Statement stand out: no bad thing. Digging deeper, however, the use of gold in the cartridge's 'engine room' continues, but here things start to make more sense. The coils themselves are 24-carat gold and composed of wire that is 30% thinner than previously, permitting a lower moving mass. So that this does not adversely affect sensitivity, Clearaudio's patented ring magnet array now boasts 12 individual magnets: up from the eight of the Diamond V2.

As a result, output level remains at a quoted 0.7mV and the cartridge's internal impedance remains unchanged at 50ohm. Another bodywork feature is that this is its first production cartridge to feature EMC screening. Clearaudio claims this pays dividends in terms of both clarity and dynamic range.

## FORCEFUL TRACKING

At the business end of the cartridge, a boron cantilever supports Clearaudio's Micro HD stylus (or polished 'GS', depending on which literature you read), which has hybrid parabolic geometry and a tip size of 4x84µm. It tracks at a rather alarming nominal 2.8g. While this is undoubtedly good for locking the stylus firmly into the groove, it is another slightly disconcerting aspect of the Goldfinger Statement, especially for those who remember the Shure designs of the '70s and '80s which often played well at mere fractions of a gram. Still, it is easier to damage a record groove by tracking a stylus at too low a force than too high, even though it makes that unprotected stylus feel extra vulnerable when in use.

The Goldfinger Statement comes packed in Clearaudio's traditional small pyramidal case and



**RIGHT:** Clearaudio's long and exposed boron cantilever is used in all its MCs, fitted here with a 'GS' stylus. Inside the Statement, fine 24k gold coils are surrounded by a ring of 12 powerful magnets



**LEFT:** Clearaudio's iconic 'flower' mounting plate is hewn from 14k gold – harder than 24k gold but take care not to strip those threaded lugs. The embedded diamond is pure bling!

an acquired taste in appearance terms; it's no walk in the park to install and align; it tracks at a disconcertingly high value; and it requires your arm's counterbalance weight to be set further back than you have ever seen it before. By now you might be wondering, as I was – is it really worth it? Fortunately, the answer is 'yes'.

**CLEAN AND PURE**

I'm going to cut straight to the chase here with a 'statement' of my own: the Clearaudio Goldfinger Statement is one of the finest cartridges that I have heard to date. The alignment woes and the downforce concerns simply evaporated as soon as I started listening. This is a cartridge that sounds exactly as one might expect given its mass and tracking weight. Put simply, it has a big, bold, enveloping sound and dynamic abilities that absolutely take your breath away. It brings performers right to the fore, laps up complex bass lines, images with pinpoint perfection and yet can rustle up the most ethereal sense of delicacy when required.

I always like to commence auditioning with a few old favourite tracks and the cut of choice for this review happened to be The Eagles' 'New Kid in Town' from *Hotel California* [Asylum AS53051]. The Goldfinger Statement pulled the studio, the performance and the individual players out from the depths of the grooves like a master. Randy Meisner's guitar underpinned the track with concrete-like solidity while Don Henley's vocals surged forth from my speakers with scale, feeling and incredible passion.

I had only intended to listen to the one track from this particular album but, as the last bars faded out and I rose from my listening chair, I found myself sitting back down again promptly as 'Life In The Fast Lane' started. Once again, the Clearaudio

gripped the underlying track with an iron fist and really punched the bass line out with aplomb. However, above it was a glorious sense of insight and real emotion to the performance. I am gradually becoming a convert to the magnificent clarity of high resolution digital sources but all too often I find them accompanied by a distinct flatness of timbre and a poor sense

this in turn sits in a rather lovely wooden box. Inside are a screwdriver and fixing hardware, both metal and plastic – the latter just in case you don't trust yourself with traditional alloy fixing bolts.

A bundle of paperwork includes the instruction manual, plus a lovely close-up photograph of the stylus and a full test report for the cartridge [see Lab Report, p53]. Also included is a large, solid and heartily reassuring plastic stylus guard.

Installation of the Goldfinger Statement showed that the slightly irregular body shape makes alignment a little less easy than usual, compared to more conventional designs with square mounting surfaces. In terms of setup, the Clearaudio demands more of the user than any cartridge I have

ever encountered: azimuth, VTA and bias must all be tuned to their respective (and narrow) sweet spots before the device really sings. None of these can be guessed.

Having installed innumerable cartridges over the years, I can usually have one set to around 95% optimum by simply using the instructions, eyes, ears and trusty stylus gauge.

With the Goldfinger Statement, I realised fairly early on that test LPs and some form of basic metering would really be required, and the difference these made was not at all subtle. So I would say it's essential your dealer is suitably equipped to do this job for you.

To sum up so far then: the Goldfinger Statement is not cheap; it is decidedly

*'The Statement's ebullience was positively grin-inducing'*



**PRECIOUS BODIES**

Clearaudio's use of gold follows a tradition among exotic MCs that typically feature novel and often precious body materials. Goldbug's 80s Brier range featured wooden bodies hand-carved by Japan's only female pipe maker, and Kiseki was renowned for its use of mineral exotica including Lapis Lazuli. Koetsu has made extensive use of onyx as well as coral, jade and yet more exotic woods. Ortofon also utilised both black and white 'sapphire' for the likes of the MC-2000 and MC-3000. Even today, it is not difficult to find an exotic-bodied cartridge design. Koetsu and Kiseki are still going strong and Ortofon has moved on to make increasing use of Selective Laser Melting to fuse fine metallic powder into its range-topping models. In the USA, Soundsmith use composite bodies for its Hyperion and Zephyr cartridges, and acrylic for the Otello model. Finally, if all this material choice is too much, the likes of EMT, Van den Hul and Lyra can help, offering 'nude' cartridges that have virtually no body at all!



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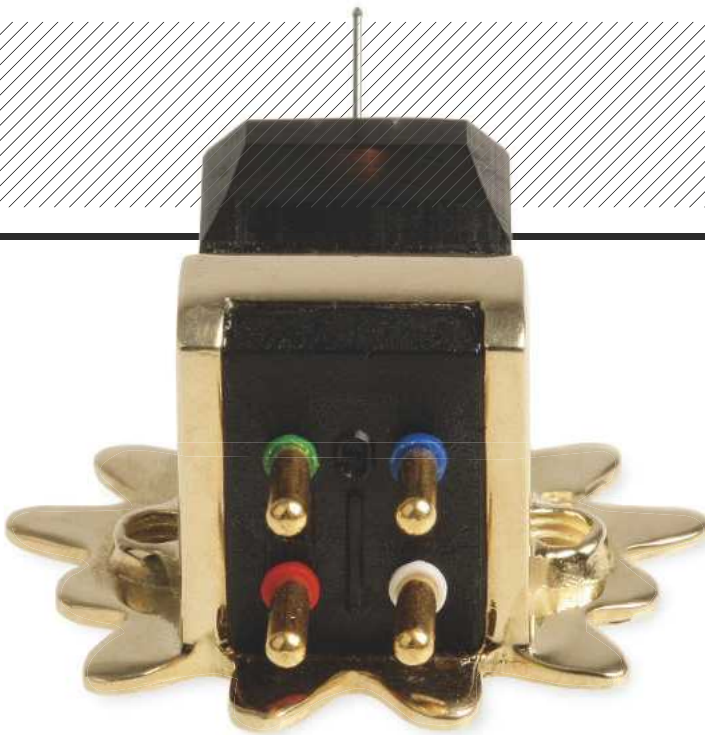
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## CLEARAUDIO GOLDFINGER STMT.



**ABOVE:** The cartridge pins are gold-plated and well spaced to accommodate most tonearm leads/tags. High 16g bodyweight may limit your choice of tonearm

of warmth and musical cohesiveness. Somehow the Goldfinger Statement managed to combine the best aspects of analogue, yet imbue performances with a positively 'high-res' sense of cleanliness and purity.

### GOES BACK IN THE SLEEVE

This purity was demonstrated most ably by Mazzy Star's 2013 LP, *Seasons Of Your Day* [Rhymes of an Hour Records Rhymes 004] and the track 'In Your Kingdom'. The song began with some subtle and atmospheric organ work and Mazzy Star's traditional sweeping guitars, before the backing drums came in with an impact that seemed almost at odds with the delicacy of the other instrumentation.

Lead singer Hope Sandoval's voice has been described in the past as both 'languid' and 'sorrowful' and the Clearaudio dug right to the heart of it. She was located gloriously centre-stage and every single inflection of her performance was vivid and breathtaking.

Moving on to something a little more up-tempo I did discover a small chink in the Goldfinger Statement's armour. It is one which concerns less than perfect pressings or recordings. Budget cartridges usually fail to cope with these; better ones seem more able to manage. However, while true high-end designs such as this Clearaudio certainly make imperfect source material eminently listenable, I often find that subconsciously you are always aware of what else the cartridge is capable of. Consequently, the urge to sideline those lesser recordings and head for

the better ones that really let the transducer perform can become very strong indeed.

In my case the track in question was the 12in single version of Phil Fearon and Galaxy's 'Dancing Tight' [Island 12ENY-501]. The rhythmical ebullience that I hoped for from the Clearaudio was present, correct and positively grin-inducing, but the rather ragged and compressed nature of the rest of the recording meant that I didn't make it to the end. Instead, I went in search of something better engineered.

It seems a little ironic that the level of expenditure required by the Goldfinger Statement might well mean you are less likely to play a few of your existing records. It seems a shame, but is a potential risk that must be considered. Speaking personally, however, I think it would be unlikely to stop me from wielding the credit card... ☹️

### HI-FI NEWS VERDICT

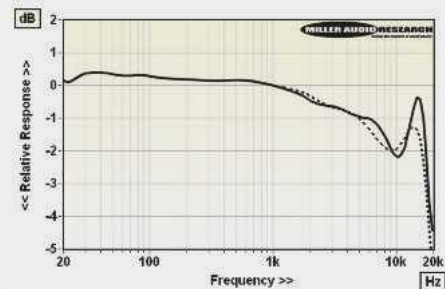
The Clearaudio Goldfinger Statement is heavy, shiny and it demands a high level of attention to detail in terms of setup and alignment. Get this right, however, and the cartridge transfixes from the first listen. It has stupendous dynamism and scale but coupled with a surprising delicacy when required. It could cause you to lose days at a time as you rediscover your record collection!

Sound Quality: 86%

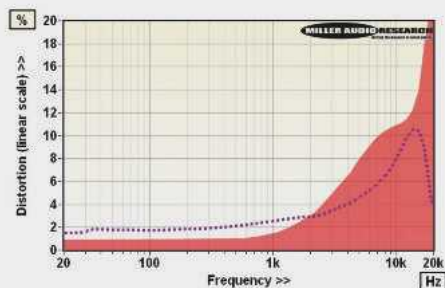


Despite proprietary 'tweaks' – the 24-karat gold coils and increase from eight to 12 magnets in the generator assembly – the Goldfinger Statement's performance is still recognisably similar to that of Clearaudio's Concerto [HFN Sep '06], Stradivari v2 [HFN Aug '10] and Talisman v2 Gold [HFN Jul '12]. Once again the frequency response is consistently *different* from that offered by Clearaudio. Measured at the specified 2.7g downforce, we see the same emboldened bass, gently rolled-off presence/treble (-4.4dB/20kHz lateral; -5.9dB/20kHz vertical) and mild HF resonance (here at 15kHz) from this generator with its long boron cantilever. I make no quality judgement here – it is what it is – and the fact that Clearaudio has achieved such a close match in the lateral/vertical response *shape* is likely of far greater subjective significance [see Graph 1, below].

Output is generous at 650µV (re. 1kHz/5cm/sec into 500ohm) with a channel imbalance of just 0.28dB. Its 16g shell is also matched by an appropriately low 11/15cu (vertical/lateral) dynamic compliance. Distortion follows Clearaudio's established trend – the unequaled 1kHz/5cm/sec figure is not 'low' at 3.8% but it's a benign 2nd harmonic while the equalised trace hovers between 1-5% through bass and midrange at -8dB [see Graph 2]. This heavyweight MC is a good tracker (as it should at 2.7g!) surmounting the 80µm groove pitch, sailing through the +15dB band and just breaking loose at the maximum +18dB (315Hz lateral cut, re. 11.2µm). Readers may view a comprehensive QC Suite test report for the Goldfinger Statement MC by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'Download' button. PM



**ABOVE:** Frequency response curves (-8dB re. 5cm/sec) lateral (L+R, solid) versus vertical (L-R, dashed)



**ABOVE:** Lateral (L+R, solid) and vertical (L-R, dashed) tracing and generator distortion (2nd-4th harmonics) vs. frequency from 20Hz-20kHz (-8dB re. 5cm/sec)

### HI-FI NEWS SPECIFICATIONS

Generator type/weight	Moving coil / 16g
Recommended tracking force	2.6-2.8mN (2.7mN)
Sensitivity/balance (re. 5cm/sec)	650µV / 0.28dB
Compliance (vertical/lateral)	11cu / 15cu
Vertical tracking angle	26 degrees
L/R Tracking ability	80µm / 80µm
L/R Distortion (-8dB, 20Hz-20kHz)	1.0-21% / 1.1-12.4%
L/R Frequency resp. (20Hz-20kHz)	+0.5 to -4.4dB / +0.2 to -6.2dB
Stereo separation (1kHz / 20kHz)	26dB / 21dB

# Marantz NA8005

The latest Marantz network player combines DAC functionality with pure streaming (including DSD over a home network), but has some devils in its operational details  
 Review: **Andrew Everard** Lab: **Paul Miller**

The ongoing argument in the computer music world concerns the preferred route to 'new digital' nirvana: do we store our music on a NAS drive, accessible using a variety of playback devices on the home network, or take the 'Macs and DACs' approach, using a digital-to-analogue converter connected directly to a home computer?

While preferences between the two methods seem to split as much on geographical grounds as for any other reason, Marantz has taken the sensible decision to make its second-generation 'core range' network music player as agnostic as possible: not only will the £999 NA8005 accept digital inputs including asynchronous USB, it also has network streaming playback of files up to 192kHz/24-bit and – unusually – can handle DSD files in this manner too.

It also has Apple AirPlay reception, so Apple tablets and smartphones, as well as computers running iTunes, can send music to it wirelessly – although of late I've been reading that this Apple-specific system is falling out of favour, losing out to the more universal Bluetooth.

## UPMARKET LOOKS

Anyway, the NA8005 looks like a more thoroughly thought-through device than the company's old NA7004 [*HFN* Aug '12], which was initially hamstrung by the need for more firmware upgrading, to keep it on the pace with rival devices in areas such as the range of formats supported, the provision of gapless playback, and Apple AirPlay. And to a casual observer it seemed to swing between not being available while updates were worked on, and then a variety of discounts to shift the units when they were on sale. Launched at £700, the player was later slashed by Marantz to £430 in the light of competition...

**RIGHT:** Marantz employs its favoured CS4398 DAC from Cirrus Logic together with its own 'HDAM SA2' op-amps in the analogue filter, output and headphone amp but it's not a carbon copy of the SA8005 [*HFN* Oct '14]

Since then Marantz has launched the reassuringly upmarket NA-11S1 network player/DAC [*HFN* Jul '13], part of its Reference range, and it's from this that the new NA8005 is partially derived, although the digital stage here is closer to that of the SA8005 SACD/CD player [*HFN* Oct '14] from the same Marantz series as the network machine we have here.

The NA8005 is pitched somewhat higher than the NA7004, and as such has a more upmarket look and feel, plus an expanded range of connectivity. Rear inputs allow the connection of both optical and coaxial digital sources (at up to 192kHz/24-bit) as well as audio direct from computers at up to 192kHz/24-bit, as well as DSD2.8/5.6MHz via the asynchronous USB Type B socket.

There's also a USB Type A socket on the front panel to connect Apple and other smartphones and tablets, as well as USB memory devices. The Ethernet port completes the 'inbound' connectivity

options, along with the provision of Apple AirPlay and Spotify Connect, while outputs run to conventional RCA phono for analogue out, optical/coaxial digital outs, and a headphone socket on the front panel with its own volume control.

## PROBLEMS WITH THE APP

Under the lid the design is very familiar Marantz, using as it does the Cirrus Logic CS4398 192kHz/24-bit 'multi-bit/delta-sigma' DAC chip, with a dual system clock to handle multiples of 44.1kHz and 48kHz. Also present and correct are the proprietary Marantz HDAM and HDAM-SA2 Hyper Dynamic Amplifier Modules for the low-pass analogue filtering, output buffering and headphone amplification.

However, there's no sign of that trademark Marantz 'porthole' on the front panel: instead there's a large, easy to read – at least from a reasonable distance – three-line display, making it possible to 'drive' the NA8005, even





through subfolder-heavy sources such as internet radio and DLNA streaming from a NAS drive, using just that display and the substantial, well-labelled remote control handset supplied as standard.

OK, so you need to be ready for a lot of patient scrolling through multiple screens and so on, and that means deciding on a track or album to play is hardly a matter of a moment of inspiration and then within seconds music flooding the room, but it can be done. That's certainly not something you can say for every network music device on the market.

The ability to operate the player with just the remote may come in handy depending on how well you get on with the optional Marantz Remote App, available for both Apple and Android smartphones and tablets. Having checked for updates to both versions, I found they took a good while to get their act together, and would occasionally go a bit bonkers, either failing to find internet radio stations, for example, or just hanging for a while before showing a 'Marantz Remote

**'Yes, it can turn on the drama when given a fine recording'**

App is not responding. Do you want to close it?' sign and requiring a reboot.

It's all a bit frustrating: when the app is good, it's as good as I ever remember it being, finding albums and tracks relatively quickly whether used with Twonkymedia or MinimServer as the supplying software on the NAS drive. And then it goes and spoils it all by doing something stupid like going unresponsive, which happened far too many times during the period I spent with the NA8005. Perhaps now it's time for some extra software work to slick things up?

Otherwise, the rest of the Marantz works clearly enough: network set-up is automatic, but if you want to DIY you can – perhaps to set up a fixed IP address – and other settings can be tweaked fairly simply once you've worked out the menu system.

### SUAVE AND DAPPER

The quick sum-up? While lacking some of the solidity, impact, verve and brio available from the very best music-streaming players – including the same

**ABOVE:** The NA8005 plays it simple with little more than menu/selector and play controls: the display is just about big enough to allow it to be 'driven' with the supplied remote handset

company's NA-11S1 – the Marantz NA8005 is a safe pair of hands into which to entrust your music collection, whether stored on your computer, streamed from a NAS drive, or existing only in your imagination and Spotify playlists.

Its presentation has fine body and scale, allied to a sweet, smooth treble – just the thing to flatter internet radio stations, Spotify and those AAC or MP3 rips on your iThing or Android whatever.

Yes, it can turn on the drama with a fine recording, and revels in high-resolution content, but it's still more suave and dapper than an all-night party animal.

As usual, the Marantz was tested with my Naim Supernait 2/HiCap amplifier and PMC OB1 speakers, with all cabling from the Chord Company. Music came from a QNAP NAS and my MacBook Air computer running Audirvana Plus, with control and wireless streaming courtesy of an original iPad Mini, plus an Asus MeMo Pad 7 tablet used to reassess the Android version of the Remote App.

Kicking off listening with the HDtracks 96kHz/24-bit version of Pink Floyd's *The Endless River* [Parlophone] – the album more or less defining the term 'aimless noodling' – the Marantz offers good insight into the layering of the tracks, with punchy drums and that very 'Floyd' wash of sound, while allowing the guitars to soar out of the mix when required. But the NA8005 can't really inject a spark of interest into the listening experience (hey, it's not a miracle-worker!) with the result that even tracks such as the slightly rockier 'Allons-y' sound resolutely easy-listening.

The Marantz is much happier with music delivering more challenging instrumental dynamics: play the Amsterdam Sinfonietta's *The Argentinian Album* [Channel Classics] ➔

## THE 8005 SERIES

The Marantz 8005 series sits at the top of the company's mainstream hi-fi separates line-up, and draws heavily on the design of the flagship Reference products. It's a recent addition to the catalogue, and allowing more of the technology from above to be trickled down. Arguably the real action in the mainstream Marantz range is at the lower level, where the CD6005 CD player, in particular, remains a popular budget buy. Drawing on a heritage going back to the classic CD-63MkII KI Signature, this player has undergone sensible updating over the years to keep it on the pace. The NA8005 network player, SA8005 SACD/CD player/DAC and PM8005 amplifier bridge the gap between Marantz's entry-level and its impressive Reference models: they are clearly 'of a piece', and can be operated together using the Marantz Remote App. The NA8005 and SA8005 use the same digital-to-analogue conversion, though implementation and circuit design differs, and it's worth noting that if you only intend to use a computer as your main music source, the SA8005 will do the job for you, having an asynchronous USB input able to handle content up to DSD2.8/5.6.

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## NETWORK AUDIO PLAYER



**ABOVE:** Two S/PDIF inputs and outputs, asynchronous USB-B, an iDevice-compatible USB-A input (front), trigger, external IR and RS232. Analogue outs are via RCA only

33014] in a striking DSD download, and the sound comes to life with the four movements of Piazzola's 'Four Seasons of Buenos Aires', wrapping Vivaldi's themes in the composer's signature tango rhythms and shadings to dramatic effect.

Even here, however, there's a sense of the NA8005 playing things a little safe: a bit more openness and space in the treble wouldn't go amiss, and while the bass is lush and substantial, some more rhythmic drive would be welcome.

There's nothing actually wrong: it's just that there's a nagging sense the Marantz could be giving a bit more, delivering richer instrumental textures and a more involving listen.

### A CHANGE IN THE SOUND

Add in that annoying tendency for the control app to throw the occasional wobbly – and this is on a simplified system with the NAS hardwired via an Ethernet switch to the NA8005, and wireless only used for control – and playing 'streamed' music via the Marantz can be a frustrating experience from time to time. Certainly there are rival network music player systems offering a much slicker interface and smoother operation.

These operational problems vanish, of course, when the asynchronous USB input is used, turning the NA8005 into a DAC and allowing the computer serving it to take over control duties. Also noticeable is that the sound of the Marantz changes, the basses in the Piazzola having a much more satisfying growl and the violins better snap and attack. Interesting...

The same is true when playing CD-quality tracks through it in this manner: Supertramp's live Paris set

[A&M/Universal 4933502] has both an impressive sense of being live and real punch when played from FLAC through Audirvana into the Marantz's USB input, and the same is even more true of Bill Nelson's *Live In Concert At Metropolis Studios London* set with his Gentleman Rocketeers [Salvo SVX 001].

The recording is delivered with a good balance of small-gig intimacy and the power of the band, and tracks such as 'Adventures In A Yorkshire Landscape' sing out with a beautiful tonality to Nelson's guitar. The mix has excellent clarity when played this way – ie, through the USB connection – while changing back to streaming seemed to veil it slightly, robbing the sound of some presence and ambience.

The NA8005 doesn't match up to the sonic ability of its big brother, but then the NA-11S1 is more than three times the price of this new network player. However, if your intention is to use it mainly as a wired DAC with a computer, but with the added benefits of occasional use, it's well worth an audition – though more work needs to be done on Marantz's Remote App to make it truly convincing. ⚡

### HI-FI NEWS VERDICT

Slightly curate's egg, the Marantz, with a much more convincing performance via its USB input than when streaming from network storage: when it's good, it's impressive; when it's not, it's a bit humdrum. Of course, the slightly flaky Remote App doesn't help too much in this respect, making network playback a hit-and-miss affair; making it as slick as the best of its kind would help the Marantz's cause no end.

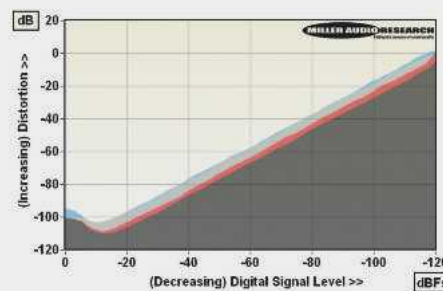
Sound Quality: 82%



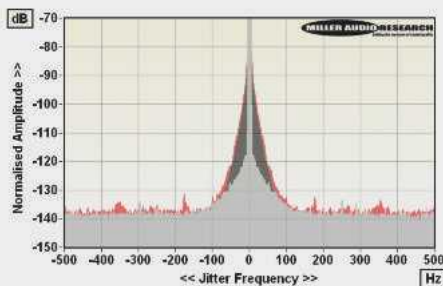
## MARANTZ NA8005

Despite employing the same CS4398 DAC – a popular 192kHz chip that offers compatibility with DSD inputs – the performance of Marantz's NA8005 is distinct from that of the SA8005 player/DAC [HFN Oct '14]. Maximum output from the HDAM SA2 buffer is 2.45V through a moderate 120ohm source impedance while distortion falls to a minimum of 0.0002% at –10dBfs, rising slightly to 0.00075% at peak output (0.0016% at 20kHz). This trend is almost identical via S/PDIF and network inputs and fractionally higher via USB [see Graph 1, below]. The 107dB A-wtd S/N ratio, the  $\pm 0.3$ dB linearity error over a full 100dB range and the limited 24dB stopband rejection (a function of the CS4398's 'slow roll-off interpolation filter' mode selected by Marantz) are all unchanged regardless of input. The 44.1kHz/48kHz responses are very flat – our sample extending to +0.05dB/20kHz (left) and –0.09dB/20kHz (right channel) while 96kHz and 192kHz media inputs reach out to –1.0dB/40kHz and –1.9dB/90kHz. The progressive roll-off beyond 50kHz is a reflection of the Scarlet Book specification for SACD rather than a requirement of LPCM audio.

The NA8005's 'blips' are minor but nonetheless interesting. 44.1kHz, 88.2kHz (etc) inputs incur a full ~500psec correlated jitter while 48kHz, 96kHz (etc) inputs suffer less than 15psec. However this does not include a measure of the uncorrelated or noise-like jitter evident on all inputs [see Graph 2]. USB is least affected but this  $\lt \pm 100$ Hz jitter can impact on the solidity and focus of stereo soundstaging. Readers may view comprehensive QC Suite test reports for the S/PDIF, USB and network audio performance of Marantz's NA8005 by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



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



**ABOVE:**  $\pm 500$ Hz zoomed, low-rate jitter spectra comparing USB, grey; S/PDIF, black and Network, red

### HI-FI NEWS SPECIFICATIONS

Maximum output level (Balanced)	2.43Vrms at 120ohm
A-wtd S/N ratio (S/PDIF / USB / Net.)	107.2dB / 107.3dB / 107.0dB
Distortion (1kHz, 0dBfs/-30dBfs)	0.00075% / 0.00019%
Dist. & Noise (20kHz, 0dBfs/-30dBfs)	0.0016% / 0.00050%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	+0.0dB to +0.1dB/-2.4dB/-11.9dB
Digital jitter (S/PDIF / USB / network)	<10psec / 15psec / 15psec
Resolution @ -100dB	$\pm 0.3$ dB
Power consumption	15W (<1W standby)
Dimensions (WHD) / Weight	440x105x343mm / 7.2kg

# Quad Vena

Quad's entry into the ultra-contemporary world of all-singing-all-dancing digital-embracing integrated amplifiers, the chic Vena, offers more than a whiff of retro  
 Review: **Ken Kessler** Lab: **Paul Miller**

**N**o-one has yet named a sub-genre that has been gestating for, oh, the last five or so years. Integrated amps with built-in DACs are nothing new, but the double-whammy need to accommodate 1) wireless connectivity and 2) the pervasive growth of streaming means an increase in the number of digital inputs sharing space with legacy analogue line inputs.

Quad's new Vena, a bargain at £599, name-checks the iPod while, tellingly, the first input on the left is Bluetooth. This sub-genre also has to address a lifestyle market made up of those unwilling to suffer setup inconvenience. While satisfying modern needs, the Vena also assuages doubts among the audiophiles, if drawing short of adding phono. Its competition includes similar all-in-ones from Musical Fidelity, Project, the big Japanese brands, and anyone else who wants to capture those ready to move on from B&W Zeppelins and the like.

## A RETRO LOOK

This is emblematic 21st century hi-fi-without-the-tears: remote control and a Bluetooth aerial sticking out of the back are *de rigueur*. Where Quad got clever is through a juggling act. Instead of bland modernism (that is, copying the look of Apple-ware), it presents this little 313mm-wide beauty in a quasi-vintage housing. It will enthrall those familiar with the brand and who can't live without the round-corner'd, 'Lancaster Grey' look, a shape with roots back in the Quad II of the 1950s.

For those with no grasp whatsoever of Quad's heritage, it's merely a cool grey box. It will satisfy today's default position in hi-fi purchases thanks to the digital hospitality, a remote that does all it should and a decent headphone amp – albeit one with a high-end-headphone-friendly 6.35mm socket instead of the 3.5mm norm. Its front panel, with rotary volume

**RIGHT:** A single toroidal transformer (with multiple taps) feeds independently-regulated supplies for the (integrated) Class A/B power amp and DAC section. Note motorised volume

control, on/off button and eight sources in a row of illuminating pushbuttons, is self-explanatory. Aside from determining the Bluetooth handshaking procedure, you won't need to look at the owner's manual.

Around the back, it's a smorgasbord of socketry, the only thing missing being any phono input and the less popular digital types such as BNC, XLR and AT&T optical – and when's the last time anyone asked for *that*? Two analogue auxiliary line inputs mean you can connect an external phono amp or other component, a legacy FM tuner or a tape deck.

What you're left with leaves nothing to be desired for digital sources: the back contains a screw socket for the aerial to talk to the aptX-supporting Bluetooth; two optical inputs and one coaxial; and

both USB B-type and USB A-type, the latter Apple-compatible. (The manual contains a detailed list of iPhones, iPods and iPads.) Digital outputs include one each for coaxial and optical egress.

The Vena doesn't just resemble a Quad preamp: it can serve as one. In addition to the line inputs 'Aux 1' and 'Aux 2' there is a preamp output, should you ever wish to by-pass the built in 45W/ch amplifier for something more powerful. The speaker terminals, though, deserve special mention: they are multi-way and even accepted the spade lugs fitted to my Crystal Ultra cables through side slots.

## CHEERFUL, NOT CHEAP

Inside is a 24-bit/192kHz chipset as used in the company's Platinum CD player,





while the Class A/B power amp sounded fine through an ageing pair of Spendor's 11 ohm LS3/5As. A quartet of modern headphones met with ample power from the front panel socket, the list including Audeze LCD-XC and LCD-X, B&W P7 and oBravo HAMT-1 [see p66].

A nice touch is a slick remote covering source selection, level, muting and power on/off. It's not much larger than a credit card and is fitted with a metal back, so it doesn't feel cheap – just cheerful.

Just before this test began, a second Vena press release arrived, reinforcing the company's wise decision to address a larger market. If Quad's Lancaster Grey is too militaristic for your tastes, an extra £100 will secure a luxury finish to ensure that 'the amp slips neatly into a range of environments'. I love the grey, but left-wing hipsters and poseurs may be more at ease with Piano Black, Piano White or Rosewood.

Let me save you some heartache, even if you are wedded to music via a computer or a digital player with USB connectivity.

**'The Quad Vena may sell for just £600, but it acts like £2000'**

While not as unpleasant as Bluetooth, USB is proving to be just an unpleasant detour in the hi-fi highway. I'm not saying that it's a detriment unique to the Vena, merely that it's not as satisfactory as either the line inputs or the other 'proper' digital inputs.

To wring the neck of this wee amp, I fed it from an iMac and a MacBook Air with iTunes and Fidelia front-ends, CDs via Musical Fidelity's M1 CDT transport (which sounded nicest with the digital feed played through the coaxial input), and with analogue/line level feeds from an iPod Classic, an iPhone 5C, an early Pono player and a first-generation Astell & Kern. The players were connected with either their own or – in the case of the Pono – with special cables made for Pono by Cardas.

**HARVEST TIME (AND AGAIN)** Musical formats ran the gamut from CD to various compressed computer codecs, as well as high-res downloads up to 192kHz/24-bit. But not wishing to get too far ahead of myself – I must stress that the

**ABOVE: Absolute clarity and nothing superfluous: a row of eight pushbuttons for sources, volume control, a headphone socket and power-on, each button bearing illumination**

Pono I'm testing is an early one – the most impressive all-digital recording I used was the 192kHz/24-bit FLAC version of Neil Young's *Harvest* pre-loaded in the player, and which will be available as a download from the Pono music store.

Suffice it to say, the sound – especially the lower registers – was dazzling. I can't count how many times I played the whole of *Harvest* on repeat, the opening seconds serving the dual purpose of showing how smooth, clean and detailed is the sound of the Vena, while increasing my optimism for the Pono. I've known this album for 40 years-plus, and I was hearing stuff that had eluded me before.

Quad's little Vena perfectly reproduced the various textures of electric bass, dry percussion, harmonic, slide and – crucially – Young's distinctive voice. He's rarely sounded better than on 'Out On The Weekend' while the rolling, almost jaunty title track rang with realistic piano, arid snare and – oh, that pedal steel! As for the LSO on 'A Man Needs A Maid' – all of the sweeping majesty was evident through both speakers or cans, and this speaks volumes too about the quality of the headphone output.

Then came 'Heart of Gold'. Percussion with impact but no excess, chiming pedal steel, rich acoustic guitars, harmonica dead centre – the sound coalesced without any single instrument sacrificing a shred of its pomp nor its individuality. It is the ultimate audio conundrum: how can a piece sound 'of a whole' while each of its constituent parts remains distinct and separate? I can only liken it to a bowl of rice, in which each grain is separate, yet it's still a bowl of rice (though not in the Japanese fashion). ↪

## THE QUAD TRADITION

As Quad nears its 80th Anniversary, one can only marvel at the changes but also at how the brand respects tradition. Perhaps the most extreme example of how things have evolved is the realisation that Quad circa 2015 is exercising prolificacy that never would have been countenanced by Peter Walker. Not just new models but whole ranges have been appearing these past few years. Gone are the days when Quad's catalogue contained a mere four or five items. The Vena, although as contemporary as can be, represents a continuation of the Quad tradition: the identity has been maintained, even if primarily through aesthetics. The minimalism is new (Peter Walker loved his tilt and balance controls) but the plethora of inputs isn't. Quad preamps always accommodated a full system's worth of sources. The Vena certainly foreshadows the next model to come, the PA-One; this valve headphone amp/digital preamplifier features the unmistakable looks, and mixes valves with an array of digital inputs [see p17].

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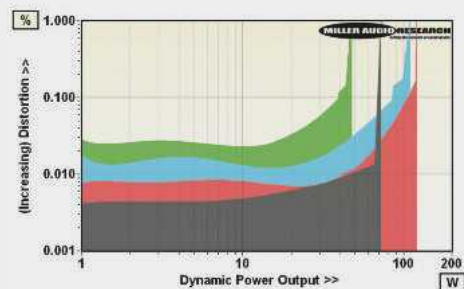


# LAB REPORT

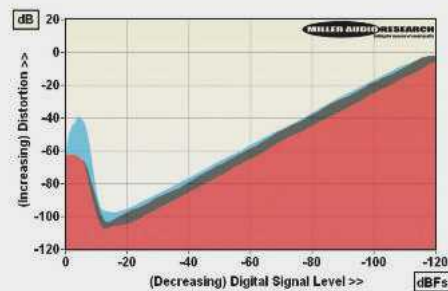
## QUAD VENA

This is a modestly powerful little amp. Rated at 2x45W it achieves closer to 50W/8ohm and 60W/4ohm with 70W/8ohm and a full 120W/4ohm under dynamic conditions, the load for which the Vena has clearly been optimised [see Graph 1, below]. Distortion was a little higher on the left (0.01% at 1kHz/10W) than right channel (0.003%) in our sample; THD in both channels increasing with frequency (0.08% and 0.04%, respectively). Quad has engineered a gentle HF roll-off amounting to -0.7dB/20kHz to -8.4dB/100kHz while the 0.089-0.125ohm source impedance may result in a further, minor variation depending on choice of speaker. The 88.8dB A-wtd S/N ratio is slightly above average for an amp in this class.

While the Vena *can* be used as an outboard DAC via its pre outs, I'd not recommend it as the amp stage is still in circuit. Hence even at a 'standard' 2V line out (0dBfs/1kHz) distortion climbs to 0.05%, falling to 0.0002% at -10dBfs and 0.0004% at -30dBfs [see Graph 2]. Quad uses the same CS4398 DAC as Marantz in its NA8005 [p54] but jitter is far higher in the Vena, amounting to ~1500psec via S/PDIF and a huge ~20,000psec via USB (principally sub-20Hz). The 108dB A-wtd S/N via S/PDIF falls back to a ~16-bit 96dB via USB. (We've seen this before with some early USB driver implementations.) Quad has selected the DAC's slow roll-off mode, so its response reaches -0.5dB/20kHz with 44.1/48kHz media, -2.5dB/45kHz with 96kHz files and -9.1dB/90kHz with 192kHz files. Readers may download full QC Suite test reports for the analogue and digital performance of Quad's Vena amplifier by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



ABOVE: Dynamic power versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (cyan) and 1ohm (green) speaker loads. Maximum current is 7.4A



ABOVE: THD vs digital level over a 120dB range via line out (S/PDIF 1kHz, red; USB 1kHz, black & 20kHz, blue)

## HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	51W / 62W
Dynamic power (<1% THD, 8/4/2/1ohm)	72W / 122W / 111W / 48W
Output impedance (20Hz-20kHz)	0.089-0.125ohm
Frequency response (20Hz-100kHz)	-0.07dB to -8.4dB
Input sensitivity (for 0dBW/45W)	67mV / 459mV
A-wtd S/N ratio (Analogue/Digital)	88.8dB (0dBW) / 108.0dB (0dBfs)
Distortion (20Hz-20kHz, An/Dig)	0.0020-0.045% / 0.0002-0.002%
Power consumption (Idle/Rated o/p)	15W / 166W (1W standby)
Dimensions (WHD) / Weight	313x94x302mm / 6.1kg



ABOVE: Three S/PDIF ins and two outs, asynchronous USB-B, Bluetooth and an iDevice-ready USB-A input. Two RCA line ins, one pre out and 4mm speaker terminals

The following observations are about the Vena's overall character. I suspect for any *hFN* reader who is contemplating a Vena (ideal for the seasoned audiophile wanting a second system), the quality inputs will be your defaults.

CSNY 1974 [Rhino R2-541729] is three discs' worth of beautifully-recorded live material, remastered to perfection and possessing a sense of space that will transport you to the gigs proper. This small Quad delivered it with scale that even belied my adored LS3/5As, the sound encircling the transducers with such breadth and depth that I was reminded in some ways of the Vena's speaker forebear: the Quad ESL.

### ALWAYS A CONSISTENCY

The warmth and smoothness of the Vena's Class A/B output stage rendered the atmosphere of those concerts with a seamless openness redolent of an outside venue. You could hear PA artefacts, small echoes and a crowd that did not sound like a certain popular cereal fronted by three elves.

Rather, the Vena welcomed CSNY's close harmonies – not that it's difficult to separate C from S from N from Y with such readily identifiable voices. What the Vena did was allow them to weave their communal magic while also allowing you to home in on a single voice.

It only got better, but, as the sound improved due to a mix of warm-up times and familiarity with the Vena's character, I grew slightly befuddled. How could a kitchen-

sink product like this, which crams so much into such a small package, and for so little outlay, perform so consistently well? It may sell for £600, but it acts like £2000.

Whether using ancient material from George Formby or last year's Adele, or two Neil Young albums recorded 42 years apart, the Vena exhibited the kind of consistency that goes a long way toward obscuring any deficiencies. There's no doubt that it errs on the warm side of neutral, almost doing an impression of a small valve amp.

Even streaming Radio 1 through a MacBook Air was acceptable, although too long with 'BBC Radio 1's Teen Awards 2014' was enough to make me less hostile to the Grim Reaper and ecstatic that I was 14 in 1966. Tens of thousands of teens screaming at The Vamps? Just gimme The Beatles...

Which I did. The Japanese box set via the Musical Fidelity M1 CDT and coaxial truly sparked. I banished any thoughts of compromise or corner-cutting due to price or size. The Vena is simply the quintessential hassle-free, amp-plus-DAC, single-box solution for the 2010s. ☺

## HI-FI NEWS VERDICT

Quad chose not to compromise its 'lifestyle' contender, so the Vena may be the best of both worlds. It looks and acts like something an Apple-worshipping fashion victim could handle, yet its build, facilities and sound quality will satisfy any purist, USB notwithstanding. At £599, it's great value. Anyone desiring a superb amp/DAC combination with only £600 to spare will feel as if the audio gods are smiling.

Sound Quality: 85%



# Auralic Taurus MkII

Taking inspiration from a classic Neve mixing desk, the latest version of this headphone amp aims to deliver a warm, natural sound. Does it succeed – and is that enough?

Review: **Keith Howard** Lab: **Paul Miller**

This is a great time to be a headphone-loving audiophile, or even one who is forced into headphone listening by domestic circumstances. The well-publicised buoyancy of the headphone market has encouraged lots of new manufacturers to enter it and established players to introduce new models. As a corollary, the dedicated headphone amplifier – not so long ago a moribund backwater of hi-fi electronics – has thrived alongside it.

An increasing number of headphone amps – such as the Meridian Prime and Oppo HA-1 [*HFN* Feb and Sep '14] – now incorporate digital as well as analogue inputs, and are thus really DAC/headphone amplifier hybrids. They're great if you want the simplest means of driving headphones from a computer music source, but if you listen exclusively to analogue sources or already have a high-performance DAC then that extra DAC stage is surplus to requirements. What you need is a classic headphone amplifier with analogue inputs only – like the £1590 Auralic Taurus MkII.

## PRO DERIVATION

So remote from one another are the worlds of domestic and professional audio that I can't be sure the name Rupert Neve will mean anything to you, whereas in recording studios it has almost mythic status. English electronics engineer and entrepreneur (to borrow the Wikipedia description), Neve gained his considerable reputation by designing pro audio electronics – microphone preamplifiers, equalisers and mixing desks – that were widely admired for their sound quality and which now enjoy classic status.

Who in the world of domestic audio amplifier design can I cite as having equivalent kudos? John Curl and Walt Jung, perhaps, although Dan D'Agostino arguably fits the bill best.

**RIGHT:** Auralic's Orfeo Class A output modules are independently screened and capped off with the black heatsinking seen here. The linear PSU features multiple, independent regulation

What this has to do with the Taurus MkII is that its Orfeo Class A output module claims to be inspired by the circuit design of the 8078, the last of the hand-wired analogue mixing consoles Neve produced during the 1970s. Like other Neve designs it was renowned for what Auralic calls its 'warm, natural sound': qualities the Taurus MkII is intended to emulate.

Unfortunately Auralic, headquartered in Beijing with a subsidiary in Vancouver, seems to have skimped on Chinese-English translation services, so it's not entirely clear from its literature exactly what Neve circuit features have been adopted. But I take 'The principle of this module is to use a mass of small signal components with best linear characteristic' to mean that the Class A output stage of the Taurus uses multiple devices in parallel.

Auralic claims open-loop distortion – that is, distortion before the application of negative feedback – of 0.001%, which

would be an exceptional performance. But maybe there's something lost in translation there too.

What differentiates the MkII version from the original Taurus, introduced in 2010, is also subject to some linguistic uncertainties but I take Auralic's description to mean that three principal areas have been improved. First, the board layout has been changed, apparently to shorten the signal path; second, electromagnetic shielding has been enhanced; and third, the input switching has been revised to improve isolation of the two inputs and thereby reduce crosstalk between them.

## BALANCED OPTIONS

A headline feature of the Taurus is its provision of both balanced and unbalanced inputs and outputs [see boxout]. The inputs are on a pair of back-panel three-pin XLRs and phono sockets respectively, the





front-panel outputs on a four-pin XLR and the usual 1/4in jack. Note the mild lack of standardisation as balanced headphone outlets are typically on twin three-pin XLRs or a five-pin XLR rather than the four-pin XLR used here. Auralic warns, by the way, against the use of mono jack connectors with the unbalanced output as these can result in damage to the output stages.

Two push-buttons on the fascia toggle between the phono and XLR inputs and the balanced and unbalanced outputs. The only other controls are a power push-button to the extreme right (there is an isolating power switch on the back panel) and a domed volume knob inboard of it. Three LEDs indicate, respectively, whether the unit is powered and, if so, which input and output are selected.

Because the Taurus MkII dissipates 19W at idle, its smart brushed aluminium wraparound case has ventilation holes along both sides and across the back of the top surface. (So keep liquids or small metal objects well away!) The unit is best placed within an equipment rack, with a shelf above, taking note of Auralic's ventilation requirements. Unusually, the case has three feet rather than four.

*'The Taurus MkII would have to be provoked ever to sound harsh'*

Output capability of the unbalanced feed is rated at 4.5W into a 32ohm load, equivalent to an output voltage of 12Vrms [see Lab Report, p65]. This is sufficient to accommodate transient peaks of 120dB SPL or greater on high dynamic range material, even with low-sensitivity 'phones.

Noise is something not talked about often with headphone amplifiers but high-sensitivity headphones can expose output noise issues just as high-efficiency loudspeakers can with power amps. Auralic has paid close attention to this in the Taurus MkII, which is claimed to have output noise of less than 5µV.

In the case of a headphone with the high sensitivity of 120dB SPL for 1V input this implies a noise level of less than 14dB SPL – much quieter than the background noise in an average living room and around the level of the self-noise of a typical studio condenser microphone. With lower-sensitivity headphones the noise level will be reduced proportionately. PM's lab testing recorded output noise about 7.5dB higher for the review sample but this is still a low figure.

I wish I could give you a note-by-note account of the audible differences between the Taurus MkII's unbalanced and balanced

**ABOVE:** Simple fascia incorporates unbalanced and balanced outputs on 1/4in jack and four-pin XLR, input and output switching by toggling push-buttons, and a domed volume knob

output options but when preparing this review I had no headphones to hand terminated in balanced XLRs (of any type). So my following comments refer solely to my experiences with the unbalanced output, principally using the fine Sony MDR-MA900 [HFN Oct '12] but with an early sample of the Audeze LCD-2 to hand too [HFN Mar '13], principally to check out the audibility of the bass roll-off noted in PM's Lab Report.

### THE RIGHT PARTNER

As already mentioned, Auralic has manifestly sought to achieve a warm, refined sound quality with the Taurus MkII, just as JB reported from the marque's Vega DAC [HFN Jan '14]. In this they have undoubtedly succeeded: the Taurus MkII would have to be provoked ever to sound hard or harsh, it's just not in its makeup. The downside is that it can sound a little underwhelming, a little lacking in fire and sparkle. So it will partner better with 'phones having an explicit sound (like the Sony) and less well with those that are at all reticent to begin with.

Shortly before I began the listening I'd bought the 96kHz/24-bit download of *Journey To Aldeburgh: Young Britten*, a fine performance and no less fine recording of early works by Benjamin Britten. When deciding whether to buy it, of course, I'd had to listen to an MP3 file streamed from the Resonus Classics website – but that was good enough for the Sony 'phones to indicate whether shelling out was merited or not. When I came to listening to the uncompressed, hi-res download in my listening room, naturally I was looking to hear the fine recording I'd experienced online and then some.

The short 'Introduction' to the *Suite for Violin and Pianoforte Op.6* proved to be particularly revealing. It delivered the open soundstage I was expecting but not ☞

## WHY BALANCED?

**Although some hi-fi equipment provides for balanced connection – where two signal waveforms are conveyed in reverse polarity to one another – most analogue inputs and outputs in domestic audio equipment are unbalanced, where one wire carries the signal and the other is connected to ground. Balanced connection is much more widely employed in the pro sector, to provide maximum immunity to interference in environments where there may be many potential sources of it. In domestic circumstances it has traditionally been thought of as overkill, although with today's electromagnetic spectrum being busy as never before, that argument is weakened. At the moderately high voltages and currents involved in driving headphones, unbalanced connection ought to be sufficient. So why the fashion for balanced connection? The question has yet to be convincingly answered. As balanced connection generally requires about twice the circuitry of unbalanced, it should never be assumed that it will sound better – between pre and power amp, or for driving compatible 'phones.**



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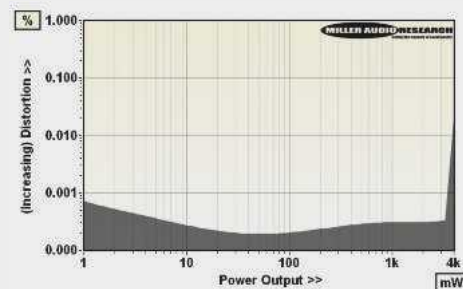


## AURALIC TAURUS MKII

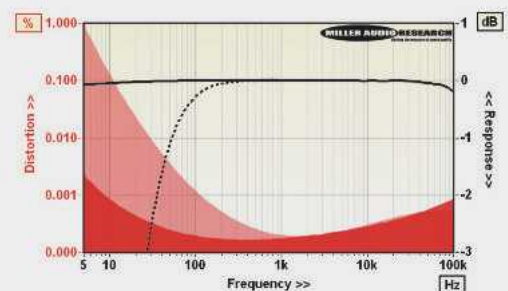
This headphone amp represents a very valid alternative to the Oppo HA-1 [HFN Sep '14]. The Taurus MkII offers about half the output power, but at 4290mW/25ohm [see Graph 1, below] is more than capable of wrestling with the lowest sensitivity/low impedance phones (this figure also accords well with Auralic's own 4.5W/32ohm specification). The huge maximum 25Vrms output voltage is also more than sufficient to feed high impedance 'phones. Output impedance is usefully low at 1.6ohm through mid and treble frequencies, increasing slightly to 2.65ohm/20Hz. The response of the Class A Orfeo output stage is ruler flat at  $\pm 0.2\text{dB}$  from 8Hz-100kHz but the bass end is progressively rolled away with reducing headphone load impedance [see dashed trace, Graph 2 below]. Into our 25ohm test load this amounts to a  $-3\text{dB}$  point of 27Hz, reaching  $-4.4\text{dB}/20\text{Hz}$  and  $-20\text{dB}/3\text{Hz}$ .

There's an associated increase in distortion at lower frequencies with decreasing load impedance [see red infills, Graph 2]. With high impedance 'phones, distortion is vanishingly low at just 0.00007% through the midrange and 0.00025% at 20kHz but this 'increases' to 0.0007%/100Hz, 0.019%/20Hz and 1%/5Hz at 40mW (1Vrms) into a 25ohm load. Interestingly, there's also a +3.5dB channel imbalance at 20Hz under load while channel separation is good to 70dB midband and 55dB at 20kHz. Noise is exceptionally low with a  $-98.4\text{dBV}$  residual (12 $\mu\text{V}$ ) and 99.7dB A-wtd S/N ratio (re. 0dBV).

Readers are invited to view comprehensive QC Suite test report for Auralic's Taurus MkII headphone preamp by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



ABOVE: Continuous power output versus distortion into 25ohm 'headphone' load



ABOVE: Freq. resp. from 5Hz-100kHz (black) and into 25ohm (dashed) with distortion versus frequency (red, 1V; shaded, 40mW) from 5Hz-40kHz



ABOVE: Analogue inputs (and outputs) only – single-ended via pairs of RCA phonos and balanced via pairs of XLRs. The Taurus MkII has no USB or S/PDIF DAC inputs

quite the energy and explicitness of sound that, even on such recent acquaintance, I expect from this piece. In particular the violin sound lost some of its edge and bite – and with this piece, edge and bite are *appropriate* qualities, not failings. On 'phones less scrupulously honest than the Sony this might pass barely noticed but its determinedly informative nature was a little censored, the stridency of the music a little played down by the Taurus.

### BASS FREAKS BEWARE

On less telling material any such shortfall was obscured by limitations in the source. Having stumbled across it on one of my hard drives recently, I tried the 96kHz/24-bit version of Peter Frampton's *Show Me The Way* [HDtracks download], a recording which no-one with any respect for the term would call hi-res, whatever its bit depth and sampling rate. Via the Taurus MkII it sounded just fine: opulent but without any hint of compromised resolution. Just plain enjoyable, in fact – provided that you didn't overdose on talk box at the time.

The 96kHz/24-bit download (from e-onkyo) of Nina Simone's 'Baltimore', from the album of the same name, isn't the highest of res either but its snappy reggae 'ground' was enough to again highlight the laid-back *mien* of the Taurus MkII. Its delivery was smooth, cool, solid but the rhythm dragged a little, the funky guitar embellishments were less telling and Simone's voice was mildly clouded in comparison to what the very best – by which I mean the most informative and engaging – headphone amps deliver.

Turning attention to the Taurus MkII's bass performance, at this juncture I swapped the Sony for the Audeze and called up again some of the tracks with challenging bass that I mentioned in the AKG K812 review [HFN Dec '14]. It's clear from PM's Lab Report that 'phones with lower

impedance than the LCD-2's 59ohm will provoke greater bass roll-off but, countering that, the LCD-2 does have exceptional bass extension.

So was I aware of it being a little short-changed in the low bass? Actually I did think that the incongruous LF grumblings and pulsings in James Blake's 'Limit To Your Love' [Atlas Records ATLAS05CD] plunged a little less deeply via the Taurus MkII but honestly – with the Audeze LCD-2 at any rate – you'd have to listen out for this to notice it, and even then I couldn't say that it would significantly influence musical enjoyment. But if you're a bass freak and use unusually low impedance headphones, it's a matter about which you'd be wise to reassure yourself before purchase.

Reconnecting the Sony I plunged myself – and emotionally it's a deep plunge – into *Elegy For Strings 'In Memoriam Rupert Brooke'* [Dutton Digital CDLX 7172] by the wonderfully named Frederick Septimus Kelly. Compositionally simple, it relies in large part for its impact on the plaintive string harmonies of its opening theme – a theme which, via the Taurus MkII, was big and noble but lost just a hint of its bittersweet impact. ☹

### HI-FI NEWS VERDICT

The deal with the Taurus MkII is simple. Auralic intended to create a headphone amp with a particular sonic signature and it has succeeded. The issue is whether you consider that sound 'warm and natural', as Auralic says, or a little soft and lacking in resolution, which would be my one-line summary. To some extent judgment will rest with the headphone; some of the brighter Grados would be complementary.

Sound Quality: 80%



# oBravo HAMT-1

Absolute Sounds has waited years to distribute a headphone that it felt worthy of the other brands it represents. Does oBravo's HAMT-1 make the grade?

Review: **Ken Kessler** Lab: **Keith Howard**

**O**Bravo's HAMT-1 headphones are very much a product of their time: our time. They are unabashedly aimed at purists, thanks to size and price, and they boast high-tech innards as well as a luxurious *mien*. This is the brave new world of headphones, targeted squarely at, well, audiophiles. (Or those who have outgrown their Beats.)

Thinking back to my early days in audio – the mid-'60s – the headphone situation was created almost solely by a need for privacy. One bought headphones in order to be able to listen to one's system without disturbing others. For the life of me, I cannot name a single fellow enthusiast who used cans for any other reason, certainly not for absolute audio quality.

## FACING A REACTION

Sony's Walkman changed all that, when it made acceptable sound quality a mobile/portable possibility. The result was the creation of a pragmatic need for compact, ultra-light headphones (even though Sennheiser had been making them for years with the HD414). A couple of decades later, and the iPod would force a demand for in-ear types. Now we face a backlash against earbuds, which are uncomfortable and arguably will lead to a generation that will suffer hearing loss.

This has resulted in a market so rich with intriguing headphones that I think we may have access to more fine cans right now than at any time since stereo first appeared. OBravo addresses a listener who will opt for the HAMT-1 primarily because the headphones are of the genre – like the latest from Audeze and Oppo – that places sound quality at their design summit. Their price of £1499 is far from the market's dearest, but it indicates the need for serious consideration when there are so many amazing headphones below £350.

**RIGHT:** The large, high-end oBravo phones have hand-stitched leather ear cups and wooden cheeks, emphasising the fact these are 'closed back' listening types

A giveaway as to oBravo's no-compromise attitude is size that absolutely mitigates against using them on the go. They are comically huge, and you would no sooner want to be seen wearing them outdoors than you would the most ludicrously large and ungainly headphones of all-time: the 'Darth Vader's helmet'-like Jecklin Float. Perhaps it's no coincidence that both the Jecklin and the oBravo use the astounding Heil Air Motion Transformer drive unit (hence the designation), found here in a two-way, coaxial configuration.

Those massive, wooden-faced oBravo earcups, which make you look like Princess Leia (geddit? Darth Vader and Princess Leia...), house two separate drivers which share a common axis. The 40mm AMT tweeter [see boxout] is supported by a dynamic Neodymium bass/mid driver, working like a mini-Tannoy or KEF Uni-Q by radiating sound from a single point.



'The lifelike and deep bass was chilling in its authenticity'

Looking like no others, the oBravo's earpieces are made from aluminium, wood and lush, hand-stitched leather. Despite the sheer 'hugeness' and weight of the HAMT-1s, they are supremely comfortable thanks to the admittedly Cyberman-ish headband construction and earcup rods. The only reservation one might have is related to the pressure on the skull.

They do form a tight seal to ensure controlled bass; and I will admit to not wearing my glasses

while donning the oBravos for more than a half-hour at a time.

Like the Oppos, all Staxes, the Audezes and a few other unconventional types, the oBravo uses a dipole driver that will find immediate favour among those who own Quad ESLs, MartinLogans or other panel-type speakers. Even with sealed backs, these headphones deliver an airy, open sound which goes a long way toward relieving the disconcerting effect endemic with *all* headphones: the unnatural 'in the head' sensation that can never be mistaken for realistic portrayal of a musical event. When it comes to using cans, you either accept it, or you listen to speakers.

## BALANCED CABLE OPTION

Arriving in an aluminium flight case, the review pair was fitted with a stiff, monocrystal cable that connects via screw-threaded plugs and sockets, terminating in a 3.5mm plug. The balanced alternative, though, is the *tech du jour* in high-end cans, and always superior to single-ended connections, whatever anyone tells you. OBravo charges £200-£250 for the necessary balanced cables of your choice.

My own antipathy towards cables aside, I would rather see 'universal' cable connectors at the earcups, for those who like to experiment with wires. This, however, also applies to Audezes, B&Ws and other headphones with either atypical connector types or tight spaces within the cups (the B&Ws), so it's only an observation



**LEFT:** There's an adjustable rod and swivel to assist a tight fit to the head with these headphones. OBravo offers optional cables to allow for balanced connection

off into the ether. A second, immediate stand-out trait is their exceptional talent at feeding you microscopically small details. In this respect, they remind me most of the Audeze LCD-XC (the version with the sealed backs) especially with recordings that feature studio chatter being rendered sublimely life-like.

What might jar, though, is a slight nasality that I find endemic in almost all sealed-back headphones, and which is doubly curious in headphones using dipole drivers (here, just for the treble) which would otherwise beg for open-backed capsules.

Conversely, what always delights me about the isolation inherent in headphone listening is the way it not only enables greater concentration, it demands it. Short of falling asleep with your cans on, this is to hi-fi what a double espresso is to a latte: industrial-strength potency.

Dying to hear how the Four Seasons' harmonies mesh? 'Big Girls Don't Cry' and 'Walk Like A Man' [Rhino Box Set 8122795939], familiar to the point of habit or instinct, were reproduced with the requisite amount of transparency needed to separate Valli from the rest. It goes some way toward making real those near-mythical claims from reviewers who'd say stuff like, 'I could single-out the second violin from the left' or 'One could hear the spittle on the reed.'

Also apparent was the lifelike and deep bass, occasionally over-rich but chilling in its authenticity. It is not my wont to listen to Kodo's *Heartbeat: Drummers Of Japan* [Sheffield Lab CD-KODO] for ↪

– not a criticism. Even my aged Sennheiser HD414 'phones use their own proprietary two-pin connector.

Trying these with headphone amps and USB DACs from Musical Fidelity, Oppo, Chord and AudioQuest, I also used the Pono, Astell & Kern and iPod Classic portables. While in every case the levels were adequate, the oBravos are like high-end speakers that want more, despite what their sensitivity suggests, and you will want to fiddle with the impedance if your headphone amplifier allows it.

Once you 'get' what oBravo is doing – and these are not without their own unique quirks, as you will see – you will agree that the HAMT-1 is worthy of the best headphone amplifier you can muster. Then again, who on earth would drop £1.5k on headphones and feed them from a cheesy socket output?

### SILKY AND SWEET

If ever a pair of headphones presented the case for 'one type for the home, one type for the road,' the oBravo and the other super-cans demonstrate that their bulk and

mass pay off in sound quality. Buying two pairs of headphones may seem profligate, but it's a case of horses for courses. So, no, I didn't take these on the road – they deserve rather better than fighting ambient noise, or the thrum of a jet-engine in the background.

Without doubt, the initial impression they make is skewed toward the treble, which is silky and sweet if not soaring

## HEIL'S AIR MOTION TRANSFORMER

However they are set in motion – by electromagnetic force in moving-coil, isodynamic or ribbon drivers, or electrostatic forces in electrostatic panels – conventional loudspeaker diaphragms are all like paddles: they displace air, and thereby generate pressure waves, in the same direction as they radiate sound. The air motion transformer, patented by German engineer Dr Oskar Heil in 1973, is quite different: made of plastic film to which thin aluminium strips are bonded which carry the signal current, and pleated rather like an accordion, it displaces air by squeezing it out from its V-shaped crevasses. While there are more AMT drivers, principally tweeters, around today than ever before they remain rare, and AMT-toting headphones are scarcer still. When Precide – the successor to Jecklin – reinvented the famous Float Electrostat in the 1990s, it used AMT drivers instead of electrostatic panels but in the Precide the AMT unit was used full-range. Here, in the two-way oBravo, it carries the treble frequencies only. KH

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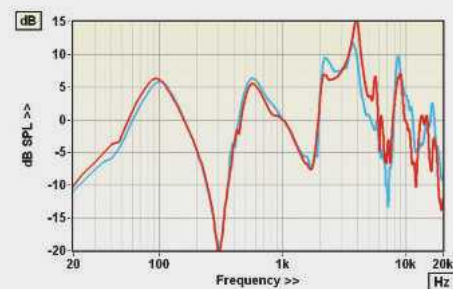
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# LAB REPORT

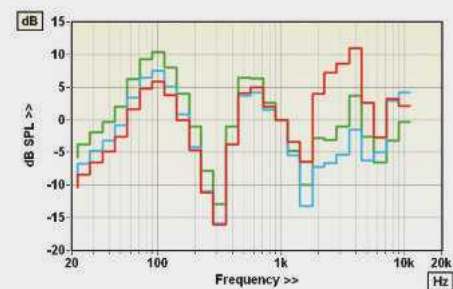
## OBRAVO HAMT-1

Claimed sensitivity for the HAMT-1 is 105dB but as oBravo doesn't specify the input, that figure is meaningless. On the artificial ear we obtained a mean sensitivity for the two capsules of 112.1dB at 1kHz for 1Vrms, significantly above the oBravo spec. but no better than average for a modern closed-back circumaural design. Impedance is specified as 56ohm but this is wishful thinking given that we measured a maximum and minimum modulus of 75.4 and 12.0ohm respectively over the frequency range 20Hz to 20kHz. This huge variation – by a factor of over 6:1 – makes the HAMT-1 exceptionally sensitive to source resistance. If the output resistance of the source is 10ohm that will be sufficient to introduce a 4.2dB variation into the frequency response; if the source impedance is 30ohm then this rises to 8.0dB. As the HAMT-1's impedance is high at low frequency and low at high frequency (where the AMT driver takes over from the moving coil bass unit) these errors will take the form of a suppressed treble output.

If the HAMT-1's impedance characteristic is idiosyncratic, its frequency response is even worse. The uncorrected frequency response on the artificial ear is a rollercoaster ride below 1kHz, where most headphones have a fairly flat response characteristic perhaps with a gentle bass roll-off [see Graph 1, below]. Above 1kHz the output initially falls before recovering to a somewhat late and narrow peak at 4kHz. These features are reflected in the diffuse-field corrected response [green trace, Graph 2] as gross perceived differences in output across the audible range. The only good news from the frequency response is that variability is at a pretty low level with different headphone positioning, and the vice-like grip of the capsules ensures a pretty consistent seal at bass frequencies. All told, though, this is a highly irregular performance for what is a very costly, albeit innovative, headphone. KH



ABOVE: Uncorrected response shows a notch at 300Hz and peaks at 100Hz, 600Hz and 4kHz. High preamp source impedance will exaggerate this trend



ABOVE: Third-octave freq. resp. (red = uncorrected; cyan = FF corrected; green = DF corrected)

## HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL at 1kHz for 1Vrms input)	112.1dB
Impedance modulus min/max (20Hz-20kHz)	12.0ohm @ 8.8kHz 75.4ohm @ 92Hz
Capsule matching (40Hz-10kHz)	±7.2dB
LF extension (-6dB ref. 200Hz)	20Hz
Distortion 100Hz/1kHz (for 90dB SPL)	0.1% / <0.1%
Weight (headset only)	500g



ABOVE: The sturdy headband construction reflects the high-end calibre of the HAMT-1s. But the side pressure might make them uncomfortable if you wear specs

pleasure, but it is invaluable for assessing equipment. The lower octaves were so deliciously massive that it was a rare occasion when a pair of headphones delivered as much satisfaction as a system with a correctly-matched subwoofer. Because the drivers are well-controlled and fast, the decay was smooth and perfectly paced, the impact a Herculean thud.

### LISTENING TO MONO

Because I was revelling in the details unveiled by the HAMT-1s, I turned to my favourite, near-antediluvian recordings, George Formby's *When I'm Cleaning Windows - His 52 Finest 1932-1946* [Retrospective RTS 410]. I cannot count the number of times I've played the title track, trying to decipher his strumming technique, but the initial blast through the oBravos was an ear-opener. Frank Skinner's praise of Formby in a TV special suddenly meant more to this fledgling uke player, the strums appearing so fast that they're almost too quick to reproduce without smearing.

Listening *in* to a mono recording is ever an education, and the oBravos do a fine job of recreating, albeit in one's head, a sense of three dimensions. OK, so it's near-spherical with no imagery because it simply doesn't exist in mono, but there *is* a fullness that is more satisfying than listening to a tiny point. Is it accurate or an artefact of the headphone? I don't know, but it certainly sounded wonderful.

But there are minor reservations, or perhaps observations. Because these are sealed-back enclosures, as all seasoned audiophiles know, there is less of the 'out of the head'

capability than with open-backed types. If you were to take a model offered in both sealed and open-backed versions and play both side-by-side, you would hear the trade-off: openness versus tight, solid bass. You can't have both.

Playing the title track from Lou Rawls *At Last* [Blue Note CDP 7 91937 2], I was consistently able to hear the classic manifestations of a sealed headphone, but compounded by the presence of a dipole driver. It is the very reason why the oBravo possesses its own unique character, and it is distinctive enough to make this an easy choice. My schizophrenia is compounded here by a preference for open-backs and a lifelong love for the Heil tweeter.

Thus, as if to reinforce my belief in Ouroboros, I hasten to add that, at university over 42 years ago, the system I lived with during my senior year included ESS AMT1s – with Heil AMT tweeters. I was back in Bangor, Maine, however briefly. What goes around, comes around. Blessedly. ☺

### HI-FI NEWS VERDICT

These join my shortlist of Staxes, Audezes and B&Ws. They are unapologetically *not* portable, though some road warriors may choose to schlep them around for their isolation properties. The HAMT-1s are among very few headphones that satisfy as much as listening to a high-end floorstander, but they have their own odd, distinctive traits. Quirks aside, one of the most satisfying headphones you can buy.

Sound Quality: 85%



# Micromega MyAmp

An integrated amplifier designed to bridge the gap between desktop audio and hi-fi, this diminutive box packs a serious punch and does so in a way that belies its size  
Review: **Nick Tate** Lab: **Paul Miller**

If ever one needed further proof that the hi-fi world is changing dramatically, then look no further than the burgeoning market for desktop integrated amplifiers with audiophile aspirations. From NAD's genre-defining D 3020 [HFN Aug '14] and Monitor Audio's A100 to TEAC's AI-301DA, the past 12 or so months have seen a new breed of baby boxes which look comfier sitting next to a fashionable computer system than they do a rack with full size hi-fi separates.

French company Micromega was one of the first to capture the zeitgeist when it launched its MyDac [HFN Jun '13]. Since then the company has been busy unveiling various other 'My' components, of which the £480 MyAmp is the ultimate expression. The idea is to offer connectivity to a wide range of sources (including, but not exclusively, digital ones) in a small yet attractive case.

Interestingly, unlike many of its commercial rivals, Micromega hasn't gone down the Class D road. You would think this would be an ideal solution for an amplifier such as this, given that it is so thermally efficient, produces a goodly amount of power for its size, and is so affordable. However, the company told us that it recognizes traditional Class A/B amplifiers are still favoured by many audiophiles, and for this reason has decided not to implement a Class D technology.

Making the MyAmp wasn't just a case of dropping a few MOSFETs in place of what would otherwise have been Class D modules. Instead, the whole amplifier has had to be packaged around its need to use warm-running Class A/B circuitry [see boxout]. Paradoxically for something that is supposed to be a small, unobtrusive, 'fit and forget' sort of product, the unit does need at least 10cm of space on either side for its cooling system to work optimally [see Lab Report, p73]. While this baby box

never gets anywhere near as hot as your average Class A design, heat is still an issue for any owner, so it will need more careful siting than usual.

## MONEY WHERE IT MATTERS

The company says with candour that the ABS polymer casing (available in either white or black matt finishes) was chosen for its relatively unresonant character, and also for its low cost. This, suggests Micromega, left more money to spend on the electronic components themselves. I found the MyAmp looked good and worked well, and didn't *feel* particularly cheaper than any of its rivals – notwithstanding the superbly turned out, metal-cased TEAC '301DA.

The unit is rated at 30W/8ohm (and allegedly twice that into half the load), and this is said to be possible thanks to its

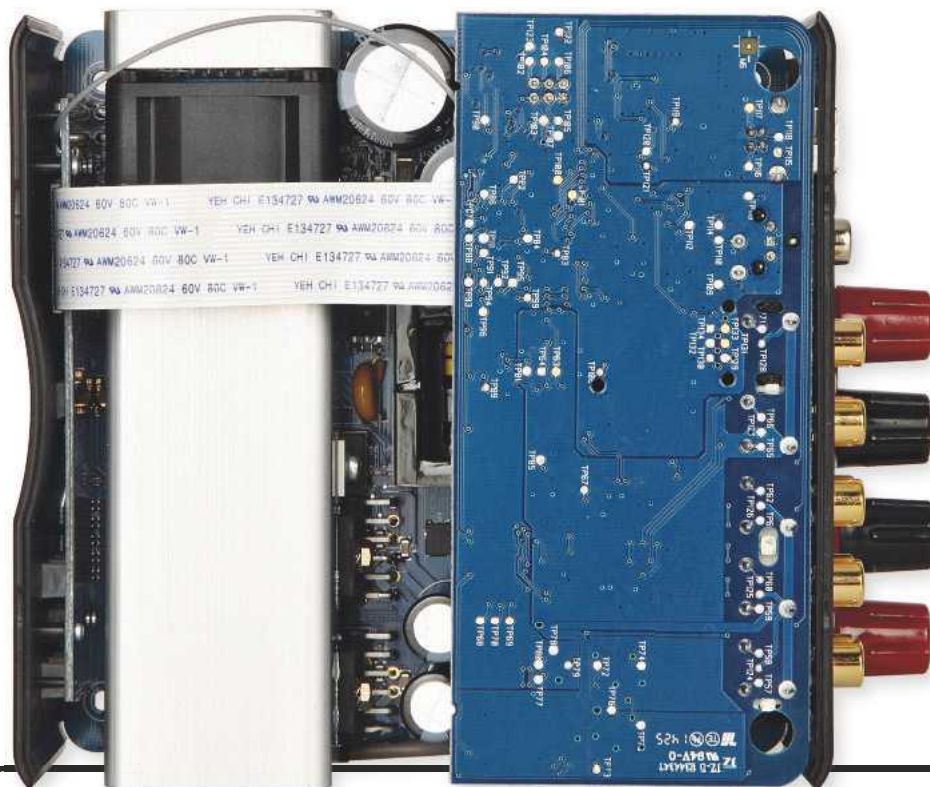
'260W LLC Resonant Mode' power supply, which is claimed by the manufacturer to be equivalent to a 250VA transformer with 15,000µF capacitors.

This amplifier does get noticeably more gritty sounding as you really push it hard, so is best run a little less than flat-out with modern, sensitive loudspeakers. I found

an excellent match came in the shape of Cambridge Audio's AeroMax 6 floorstanders (£900). Using more efficient loudspeakers makes for lower volume control settings and cooler running too.

Operationally it's straightforward enough. The bottom right of the fascia offers source selection between USB, coaxial and optical digital inputs, and there's aptX Bluetooth too. Three analogue inputs complete the picture, along with a 3.5mm headphone socket. The 256-point

'Micromega's  
wee MyAmp  
has a lively and  
percussive nature'



**RIGHT:** Fan-assisted cooling system and power supply components take up most of the space. Split-level circuit boards use surface mount devices; ribbon cables connect the two



**LEFT:** Three buttons bottom right of the fascia provide volume control and source selection; LEDs above confirm input; the central vertical row indicates volume level

volume control has fine 0.5dB steps, and is best worked via the supplied card remote control because the fascia buttons are fiddly. Also, the amplifier weighs only 1kg, and so is easily dislodged if you stab at the buttons. The unit pairs up easily enough on Bluetooth and delivers glitch-free hi-res via the built-in DAC. There's a rear subwoofer output too, which some will find useful, as an active sub can take the strain off the MyAmp when delivering high volumes.

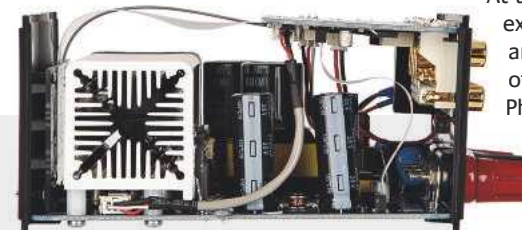
### JUST LIKE A GROWN-UP

Put any decent source into the MyAmp and you soon realise that its sound is rather more grown-up than its size suggests; this is not just any old desktop audio product. Rather, it presents far more like a full-size lower mid-price hi-fi separate. You'd never describe it as a 'high-end' performer, but certainly its sonics are more sophisticated than expected. Indeed, it's an unremittingly nice-sounding machine.

### POCKET ROCKET

Given the need to run a reasonably powerful Class A/B amplifier in a small box where one would normally expect cooler-running Class D operation,

Micromega has designed a special cooling system for the MyAmp. It comprises a largish diameter finned and heatsinked pipe that runs the full width of the unit, with a quiet, magnetic levitation fan set inside. This is mounted on the main lower circuitboard; the other board is tucked above. The system works well but is occasionally intrusive, and it doesn't take very high volume levels to get it running. The problem is that the ABS casework doesn't provide much in the way of natural heatsinking, and there are no top or side vents. The unit runs at around 35°C when driven hard, and shuts itself down after only relatively short runs at near-full power [see Lab Report, p73], so it's not an ideal party amplifier.



In essence, the wee Micromega has a lively and percussive nature allied to a relatively smooth tonal balance. It's certainly not as sumptuous as your average valve amplifier, but nor does it have the hard, stark tonality of some budget solid-state rivals. Tonally it's nowhere near as grey or anodyne as you might expect at its price: rather it proves really rather well-rounded and shouldn't offend whichever pair of loudspeakers you choose to partner it with. In absolute terms it's close to both the NAD D 3020 and the Cambridge Audio Azur 651A [HFN Sep '12], which is a good place to be; it has some of the former's warmth and some of the latter's punch, but betters neither in any single respect.

No matter what type of music you choose to play, from the repetitive house beats of LFO's 'We Are Back' [WARP WAP

14CD] to the flowing saccharine pop of Swing Out Sister's 'Twilight World' [*Its Better To Travel*, Phonogram 832 213-2], this amplifier gets to grip with the fundamentals yet doesn't assert too much of its own identity.

It's actually a surprisingly mature device, and plays music in a spirited and enjoyable way – yet it never sounds overexcited, and only loses poise when you really run it loud. At normal listening levels, the MyAmp always gives a satisfying yet well ordered kind of performance, and this goes not just for its ability to involve a listener in the rhythmic elements of the song but also the way it tracks dynamics.

It is also rather good at carrying the music's individual inflections and accents, but perhaps less convincing at reproducing the recorded acoustic in orchestral music. At this price you'd never expect it to have exceptional soundstaging capabilities, and so it proved with the first movement of Beethoven's Symphony No 6, with Philharmonia/Ashkenazy [Decca 410 003-2]. Here it conjured a reasonably spacious soundstage but the location of the instruments was a little vague, and the amplifier failed to convey depth perspective well. Stereo images hung around the speaker planes.

Although the basic sonic signature of this amplifier remained fairly consistent across all its inputs, moving to the internal DAC did bring subtle changes. The Beethoven for example showed a slight tightening of the soundstage, and there was sense of some mist clearing from the midband with a more explicit and upfront sound. As a DAC it is no match ☞

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## MICROMEGA MYAMP



**ABOVE:** Three analogue inputs plus coaxial, optical and USB digital are fitted, with loudspeaker binding posts and subwoofer output. Clover-leaf IEC mains is used

for a high-quality external digital converter but is still perfectly usable, especially considering the cost of the MyAmp. It certainly boosted the sound coming from my Apple MacBook Pro running Audirvana. Via the Micromega's USB input it made a very agreeable job of Wings' *Band On The Run* [96kHz/24-bit FLAC; MPL HRM-32565-00].

There was lots of low-level detail here, a pleasing sense of space and more depth than expected. The track showed the MyAmp's respectable dynamic quality, but again it struggled when the volume control was sent skywards, adding some grain and muddle.

### ACCEPTABLE BLUETOOTH

Overall, the analogue inputs sounded best, but digital came a close second, followed rather later by aptX Bluetooth. This certainly didn't stretch the amplifier to its limits sonically, making most music sound processed and two-dimensional, but that's the format's fault and not the amplifier's.

Still, the wonderful convenience this brings is likely to see many people using this function, even if just for casual listening. Playing back my own rip of Daft Punk's 'Get Lucky' [*Random Access Memories* – Columbia 88883716862] it didn't give the smoothness, depth and subtlety that you get from piping music from your computer via USB.

Unlike some of its higher efficiency rivals, which, to these ears, can sound a little opaque with jazz, the MyAmp actually rather shone given this sort of programme material. Herbie Hancock's 'I Have A Dream' [*The Prisoner* – Blue Note

7243 5 25649 2 7] was endowed with a rather sumptuous and flowing feel. Bass was decently tight and well articulated, and it pushed the song along with ease. I enjoyed the quite rich and lustrous piano sound, and the flute came over in a pleasingly mellifluous way. The hi-hat cymbal work was also delicate.

Driving a pair of the superb Jays v-JAYS phones from its 3.5mm headphone socket, the little amplifier showed that the company has even paid attention to this aspect of performance. Sounding fast, crisp, incisive and fluid, it gave a most enjoyable rendition of Kraftwerk's 'Music Non-Stop' [*Electric Café* – CDP564-7 46420 2].

In absolute terms one could hear that slight opacity to instruments at the back of the mix, and also the ever-so-slightly-rounded bass transients. But again, given the modest price, this unit does not embarrass itself. It's a truly accomplished jack of all trades. ☺

### HI-FI NEWS VERDICT

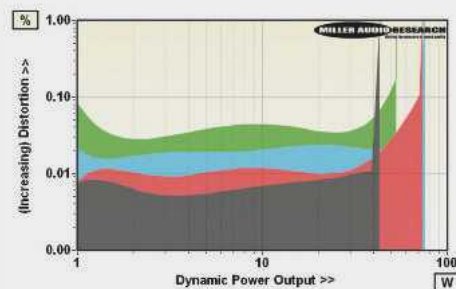
Micromega's MyAmp doesn't quite demolish its price rivals, but certainly gives them much to worry about. It's essentially a really decent sounding little box that has lots of useful functionality, with a dash of Gallic flair thrown in for good measure. It's a tough competitor right across the board, with excellent connectivity, decent power output and no small measure of style. Many people will love it.

Sound Quality: 80%

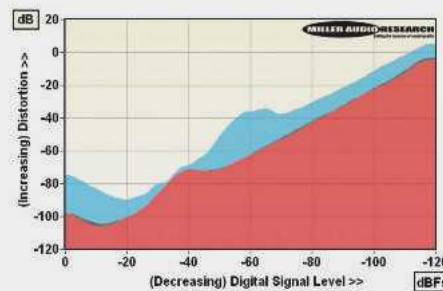


Rated at a conservative 2x30W/8ohm, Micromega's MyAmp will deliver closer to 2x42W/8ohm and 2x64W/4ohm although it will not sustain these outputs indefinitely. Despite its forced convection cooling, the amp shuts down if run at 10W/8ohm for longer than 14 minutes. Output is slightly lustier under dynamic conditions where 43W, 74W, 75W and 54W (7.3A) is available [see Graph 1, below], though the MyAmp is still clearly best suited to very sensitive 4-8ohm loudspeakers. Whether a function of the 'LLC Resonant PSU' or interference from the Bluetooth adaptor, the amplifier's noise floor is not wholly 'clean' and the A-wtd S/N ratio reduced to 80.9dB (re. 0dBW) but distortion is impressively managed – increasing very gently from 0.0073% at 1W/8ohm to 0.011% at the rated 30W output through the midrange. Distortion is equally 'flat' with frequency from 0.003% at 20Hz to 0.01% at 20kHz, rising thereafter.

The analogue response (2Hz-60kHz, -1dB) is sufficiently wide to accommodate 192kHz digital inputs (-8dB/90kHz), tested here via the 'Rec Out' RCAs which are fixed line outs, independent of the volume control, offering 1.95V for a maximum 0dBFS digital input (S/PDIF or USB). This output is far 'cleaner' than that derived via the Class AB power amp, with a 106dB A-wtd S/N ratio and THD held to 0.0009-0.015% over 20Hz-20kHz at peak output (just 0.0004-0.007% at -10dBFS). There's some slight irregularity with digital level [see Graph 2] but jitter is very low at <15psec (S/PDIF and USB). Readers may download full QC Suite test reports for the analogue and digital performance of Micromega's MyAmp by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



**ABOVE:** Dynamic power versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (cyan) and 1ohm (green) speaker loads. Maximum current is 7.3A



**ABOVE:** THD vs digital level over a 120dB range via line out (S/PDIF 1kHz, red; USB 1kHz, black & 20kHz, blue)

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	42W / 64W
Dynamic power (<1% THD, 8/4/2/1ohm)	43W / 74W / 75W / 54W
Output impedance (20Hz-20kHz)	0.044-0.050ohm
Frequency response (20Hz-100kHz)	+0.0dB to -2.5dB
Input sensitivity (for 0dBW/30W)	33mV / 186mV
A-wtd S/N ratio (Analogue/Digital)	80.9dB (0dBW) / 106.1dB (0dBFS)
Distortion (20Hz-20kHz, An/Dig)	0.0029-0.012% / 0.0009-0.02%
Power consumption (Idle/Rated o/p)	14W / 115W (1W standby)
Dimensions (WHD) / Weight	140x75x165mm / 1kg

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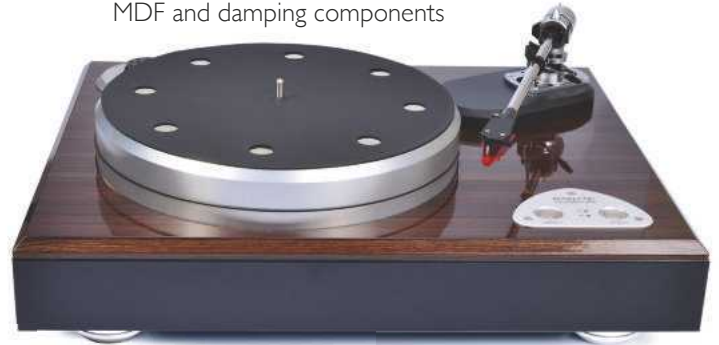
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# Classical Companion

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

## Le Sacre du Printemps *The piano duo transcription*

The simultaneous release of two new Deutsche Grammophon recordings prompts **Christopher Breunig** to make a few comparisons

Stravinsky left the Ukraine in 1911 to take up a small apartment in Clarens, Switzerland, where he continued to work for another two years on what would become a seminal orchestral masterpiece, *Le Sacre du Printemps*.

His first piano score reduction (by which he introduced the music to a disconcerted Diaghilev, who had commissioned the ballet score for his new Ballets Russes season after the successes of *The Firebird* and *Petrushka*) was lost, but the first publication, in May 1913, was of a reduction for one piano/four hands.

### SPOILT FOR CHOICE

On the face of it, it's not an attractive recording proposition: the opening to Part 2 is a relatively featureless landscape, while the pivotal string chord of 'Le Sage' before the tumultuous ending to

→ Martha Argerich and Daniel Barenboim performed *Le Sacre* at the Berlin Philharmonie on 19 April 2014: now it's on CD



Part 1 is a feeble sound on the piano(s). Fifty years ago there were no available recordings, and only half a dozen of the orchestral score – now you can buy a 20CD Decca set with 38 alternatives of *Le Sacre*!

If you just want a budget

example of the four-hands piano version, Naxos has an excellent account with other Stravinsky piano works, played by Peter Hill and Benjamin Frith [8.553386, also

44.1kHz/16-bit FLAC]. Hill has written a comprehensive study of *Le Sacre* as well: ISBN 9780521627146, paperback £19.99.

Rather harder to find today is a marvellous two-piano 1992 Decca CD by Vladimir Ashkenazy and Andrei Gavrilov, made when the latter was certainly at the height of his powers – although his career would later nose-dive [433 839-2]. (He had won the 1974 Tchaikovsky competition.) It has the virtue of 13 separate movement tracks, whereas the two new CDs discussed here just have two; and as with the Naxos disc there are two-piano Stravinsky couplings, plus *Scherzo à la Russe*.

This is indeed a most 'Russian-sounding' *Le Sacre*, where the

players seek out as much 'orchestral' colour as possible to simulate a full-scale realisation.

Back in 1968 we had a memorably keen Southbank Festival performance at the Queen Elizabeth Hall with a very youthful Ashkenazy partnered by Daniel Barenboim. Of course, no recording was possible as they were under contracts to the opposing camps of Decca and EMI – only in 1975 did we find them on the same LP, Mozart's Double Concerto, K365. (Christopher Nupen's documentary DVD about Ashkenazy, *The Vital Juices Are Russian*, shows them discussing the Stravinsky work.)

### ARGENTINIANS REUNITED

When he was just starting to learn the piano, Daniel Barenboim enjoyed children's games at a house in Buenos Aires with Martha Argerich: both were destined for greatness. However, they only appeared

'Listen to those glissandi at the end of Ravel's *La Valse*!'

together on the concert platform in Paris in the 1980s, until Barenboim invited her to perform at the 2014 Festtage in Berlin. Along with music by Mozart and Schubert (the two-piano sonata K448 and Variations on an Original Theme, D813), they sat together at two Steinways for *Le Sacre du Printemps*, and it's just come out as a live CD [DG 479 3922]. You can see excerpts at <http://vimeo.com/101324810>.

But simultaneously, DG has issued a very different 'take' on the piece by two far younger keyboard virtuosos: Alice Sara Ott and Francesco Tristano. Ott, 26 and with German and Japanese parents, is eminently marketable, her 'USP' being that she prefers to play bare-footed –

← Alice Sara Ott records exclusively for DG



PHOTO: MARIE STACCAT/DG

unlike her DG contemporary Yuja Wang, who favours high heels and ultra-mini-skirts! (You can see the Munich born pianist at her most appealing in a Sept '12 concert performance of Ravel's G major Concerto, with Lorin Maazel conducting: <http://www.youtube.com/watch?v=fYSRKWTkOtl>.)

'Scandale' – after the uproar prompted by the May 1913 Théâtre des Champs-Élysées premiere of *Le Sacre* – also has composer-transcriptions by Ravel (*La Valse*) and Rimsky-Korsakov ('The Story of the Kalendar Princess' from *Sheherazade*), both musicians associated with Diaghilev, and is prefaced by the Luxembourg pianist Francesco Tristano's seven-minute composition, *A Soft Shell Groove*, which he suggests has 'a techno beat' [DG 479 3541; also 96kHz/24-bit FLAC at Highresaudio].



PHOTO: CHRISTOPHER NUPEN FILMS

This has occasional added percussion in the background – as does Stravinsky's 'Procession of the Sage' here, which is a needless bit of cheating, as the Ashkenazy/Gavrilov recording amply demonstrates!

Their *Sacre du Printemps* could not be more different from the weighty realisation by Barenboim/Argerich: these young European pianists, says the album note, have a 'playful uninhibitedness... they have bundled these pieces off to the world of today's clubs.' Yet apparently they also "transport the works of these three great composers back to the period from which they came.' Huh? You'll find a better written note at [francescotristano.com](http://francescotristano.com).

*Scandale* is also 'Steinway meets Yamaha', the two concert grands spaced apart at Teldex Studio – not the redundant warehouse of the DG promo video (those disturbed by flashing lights or rapid intercutting

➔ DG's *Scandale* has music by composers associated with Diaghilev, who commissioned *Le Sacre du Printemps*, which enjoyed a 'scandalous' 1913 premiere



should avoid watching this trailer). The sound is clean and dynamic: a proper reflection of the sharp interplay between the young pianists. With Barenboim/Argerich, although the piano tone is good, there is perhaps inevitably a certain amount of audience and platform noise (from page-turning).

They truly strike sparks off each other – listen to those exuberant glissandi at the end of *La Valse* – but there's plenty of sensitivity and quiet playing too. They seem to have sought out the *tunefulness* in the piano reduction, where Barenboim and Argerich reflect more the density of Stravinsky's orchestral scoring and give the music a darker quality, an interpretation more

evocative of the shockwaves of that Paris premiere – it's almost like Schoenberg's writing at times.

All in all, though, *Scandale* is a really enjoyable and magnetic programme: targeted at a youthful audience it may be, to judge from the booklet styling and promotional extras, but it ought not to be dismissed by older, conservative listeners! It's a shame, I think, that the opener, *A Soft Shell Groove*, just fades away at the ending.

You can see another very recent complete piano version with Argerich, partnered by one of her protégées, Akane Sakai, given at the 2014 Lugano Festival [<http://www.youtube.com/watch?v=RcsKVcLxXAI>]. ☺

➔ Vladimir Ashkenazy with Daniel Barenboim are seen in a 1968 Christopher Nupen film documentary discussing *Le Sacre*

## ESSENTIAL RECORDINGS

### Igor Stravinsky (Columbia SO)

Sony 88765442692 (two discs)  
First issued with the composer talking about the work and its first performance, this essential 1960 version now comes with his 1940 NYPO recording and two different Firebird Suites (1967/1946).

### Igor Markevitch (Philharmonia)

Testament SBT 1076  
The 1951 mono recording with the Philharmonia set a benchmark for clarity and accuracy. In 1959 EMI re-scheduled sessions for a stereo remake. Testament has both versions on this one CD, while there's a 1952 broadcast version with the Berlin RIAS Orchestra on Audite 95605.

### Leonard Bernstein (NYPO)

Sony 0888837074728  
Bernstein's 1958 NYPO LP prompted Stravinsky's one-word critique, 'Wow!' His 1972 LSO sessions were for a quadraphonic LP, Part 2 without edits, I believe. Videos of two performances and rehearsals with the LSO are on ICA Classics DVDs, ICAD 5082/5124.

### Pierre Boulez (Cleveland Orchestra)

DG 4790005 (two mid-priced discs)  
It was a 1963 Orchestre National (ORTF) LP of *Le Sacre* which pointed to Boulez's talents as a conductor, rather than as avant-garde composer. It led to re-recordings for CBS/Sony and later DG – and many memorable London concert performances.

# Vinyl Release

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

## Elvis Costello *My Aim Is True*

Recorded after hours, this debut LP launched the career of an unlikely rock hero. **Steve Sutherland** re-examines *My Aim Is True*, now available on 180g vinyl

I really want to tell you about the parcel, but first you need to understand the impact the release of Francis Ford Coppola's *Godfather* had on lots of blokes around these parts.

Perfectly decent chaps with perfectly normal lives would enter the cinema only to emerge a couple of hours later gesticulating wildly, suddenly in touch with all their inner emotions and convinced that they were now playing a lead role in some grand macho opera.

Some changed the way they spelled their names to make them sound more Italianate, some took to talking an awful lot about abstract concepts like honour and respect, some took to walking with an exaggerated swagger, and some took to slathering Brylcreem on their hair, dressing kinda spivvy and drinking cappuccinos. I can't tell you how silly it all was.

### FISHY BUSINESS

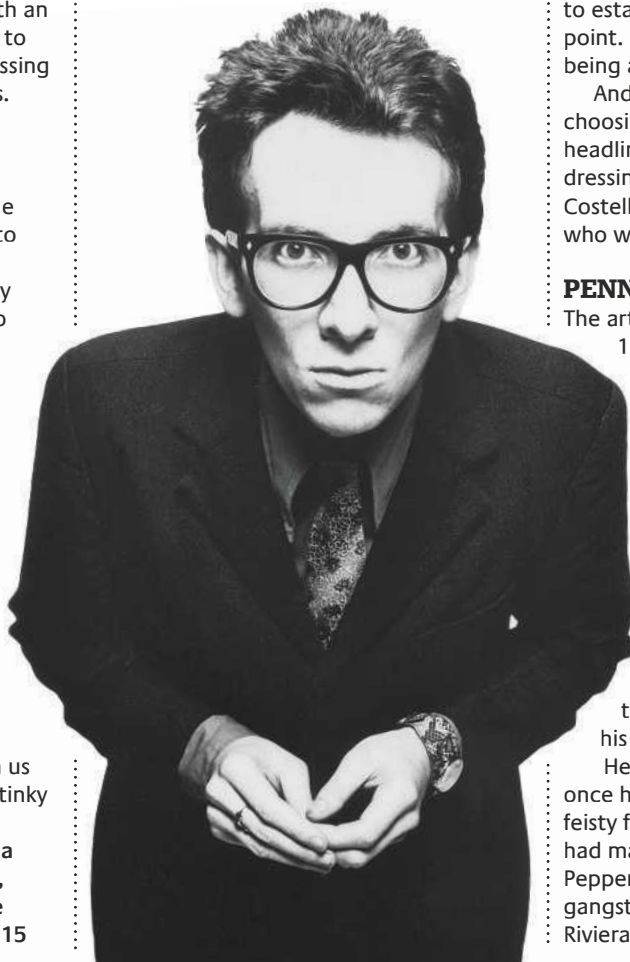
Anyway, to cut to the chase, one of the characters in the movie that seemed to resonate deeply with these blokes for some strange reason was a particularly unpleasant thug called Luca Brazi who was a kind of Mafia enforcer and Marlon Brando's go-to guy whenever some serious, don't-f\*\*\*-with-me message-sending ultra-violence was deemed necessary.

Luca, if memory serves, finally got garrotted in a bar after being stabbed through the hand and this time the message got relayed *back to* Papa Brando: 'Luca Brazi sleeps with the fishes.' Which means, apparently, that they've dumped his remains in the river. I believe it's the same as being told someone's wearing a concrete overcoat.

Whatever, it's the fish that concern us here. 'Cos that's what the extremely stinky

brown paper parcel that ended up on my desk at *Melody Maker* was stuffed full of – rotten, dead fish. Mr Elvis Costello, it seems, was sending me a message.

I can't recall which of Mr Costello's interminably dull mid-career albums I must have slugged off to warrant this melodramatic death threat but, at the time, I remember thinking he must have been a bit of a dummy to send such a clichéd response to my review. I mean, he wasn't actually going to have me killed, was he? But looking back now, I've come to appreciate that, unlike all the other play-acting little *Godfathers* over-dramatising their petty little lives for a month or so until



➔ Elvis Costello pictured in 1978 in a promo shot for his second album, *This Year's Model*. He is rumoured to be planning a world tour for the end of 2015

### 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...



the next fad took hold, Mr Costello was sincerely neck-deep in this acting tough malarkey for the long haul.

After all, in 1977, around the release of *My Aim Is True*, his debut album and the one we're here to eulogise, Mr Costello told NME's Nick Kent that, 'the only two things that matter to me, the only motivation points for writing all these songs, are revenge and guilt. Those are the only emotions that I know I can feel.'

He also shows Kent a bent nail he keeps in his pocket for when he gets into fights and tells him that he has a little black book full of the names of all the business people who've crossed or frustrated him in his bid to establish a career in music up to this point. New names, he assures Kent, are being added by the day.

And Kent was nearly one of them, choosing to chat to Wilko Johnson of headliners Dr Feelgood in the Marquee dressing room rather than check out Mr Costello's band-in-a-previous-life, Flip City, who were supporting.

### PENNING DITTIES

The article, which was published in August 1977 around the time *My Aim Is True* was released by the fledgling independent Stiff label, was entitled: 'D P Costello of Whitten, Middlesex, it is your turn to be the future of rock & roll'.

The D P refers to the singer's time spent trundling around the pre-pub rock circuit under the moniker D P Costello.

His real name was actually Declan Patrick McManus, but his dad – a musician too – occasionally traded under the Costello brand so his son took it on as a tribute.

He then started calling himself Elvis once he'd fallen under the influence of a feisty fellow called Andrew Jakeman who had managed Chili Willi & The Red Hot Peppers and The Feelgoods under his own gangster-ish nom de plume, Jake Riviera. Riviera had selected Costello from a pile of



➔ Priced £24.99, the 180g Mobile Fidelity reissue of Elvis Costello's *My Aim Is True* is available online from [www.snviny.co.uk](http://www.snviny.co.uk)

hopefuls who'd sent cassettes to the new Stiff label and soon had him penning ditties for Welsh rocker Dave Edmunds who, for some reason, rejected them.

So, using cheap down-time at Pathway Studios in Holloway with ex-Brinsley Schwarzer Nick Lowe behind the mixing desk, they banged out an album over six four-hour sessions for the princely total sum of two grand, using Clover, an American country rock outfit lurking around town, as the uncredited backing band.

And what a strange and seismic album it turned out to be: a weird and wired hybrid, musically pretty traditional with an occasional whiff of reggae thrown in, lyrically completely unique.

### LOSER IN LIFE

The opener, 'Welcome To The Working Week', sets the tone with the words: 'Now your picture's in the paper being rhythmically admired', its references to masturbation and barbed-wire wordplay (he feels like a juggler running out of hands!) born of a deep-seated loathing, aimed both at himself and the hard, cruel world in which he just doesn't fit.

This is an album about being a loser in life and a no-hoper in love, but it doesn't romanticise these situations like the famous '70s singer-songwriters did and doesn't once plead for our pity. It writhes and it hurts and it gets all nasty, like a punked-up version of Mr Costello's only awowed hero, Gram Parsons.

Delivered with a barely suppressed sneer, Costello's songs exhibit a wicked way with words. Take the album title, *My Aim Is True*: are his intentions honourable or does he dream of shooting the girl?

The title's taken from 'Alison', the album's pivotal track which, if you weren't

**'They banged out the album over six four-hour sessions for just two grand'**

really listening, could be taken for a love song. But lend an ear and... ouch! 'Sometimes I wish that I could stop you from talking when I hear the silly things that you say.' Impotent threats are Mr Costello's calling cards.

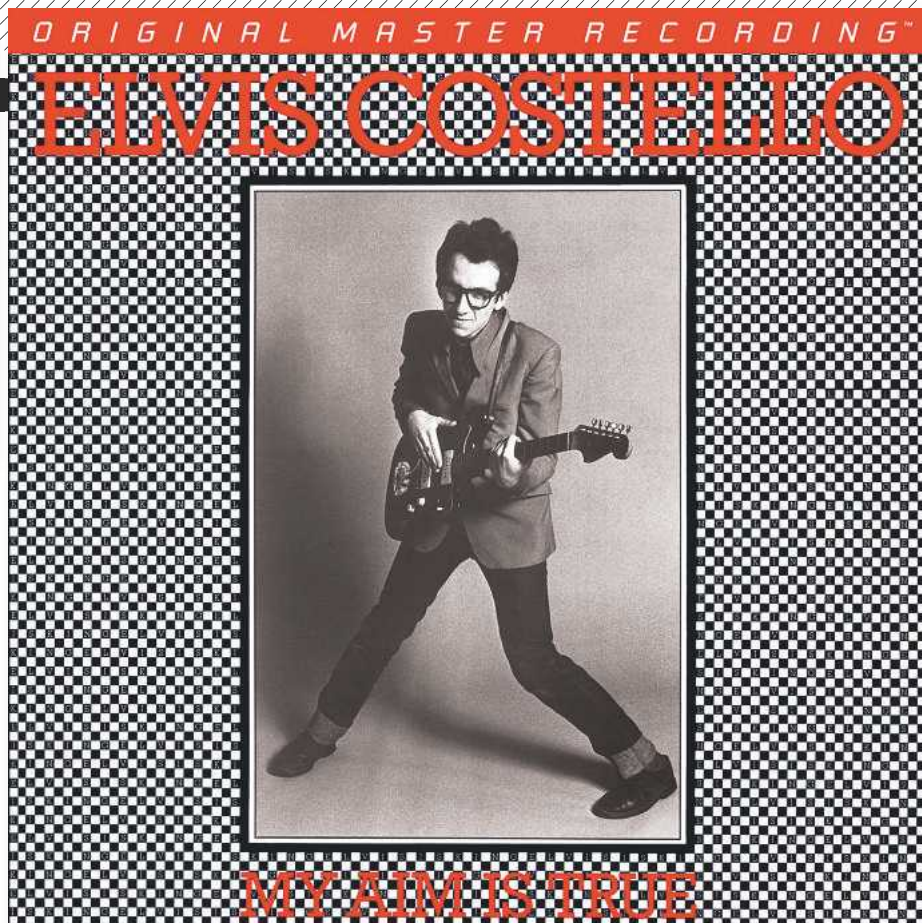
'The Angels Wanna Wear My Red Shoes' goes: 'I said, "I'm so happy I could die." She said, "Drop dead", then left with another guy.' No-one had ever heard anything like it.

And it wasn't just the ladies Mr Costello had it in for. 'I'm Not Angry' rails against the crap data-processing job he had before Stiff came to the rescue, while 'Less Than Zero' lambasts the BBC for a documentary they screened going easy on fascist leader Oswald Mosley.

### KNOCK-KNEES

And it didn't even stop there! Oh no! Styled like a bitter and (literally) twisted Buddy Holly (all knock-knees and spittle), Mr Costello went the whole ten yards and beyond to get his album noticed.

First he plugged in outside a convention of CBS record executives in London and busked a protest at not being picked up by an American distributor. He got arrested and his album got a deal. Then he broke America on his own terms, taking the



opportunity to play *Saturday Night Live* when The Sex Pistols couldn't get visas and, inspired by what Jimi Hendrix once did on the Lulu show, he stopped playing 'Less Than Zero', the song he was scheduled to play, and launched into something new called 'Radio Radio', which was critical of the corporations who owned the airwaves. It was a song which he had been specifically requested not to play.

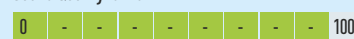
An SNL ban followed toot sweet and bad boy Elvis was on his way. He's surely mellowed by now, but I'm still watching my back all the same. ☺

### RE-RELEASE VERDICT

This Mobile Fidelity release has been half-speed mastered from the original analogue tapes by Shawn Britton. The gatefold sleeve is made of heavy cardstock and inside carries photos of the original analogue tapes inside their boxes.

Unlike the UK Stiff original, this MoFi reissue also includes 'Watching The Detectives', recorded by Costello in 1977 with future backing band, The Attractions. Cleaner and somewhat brighter-sounding than the UK original, this 180g reissue comes heartily recommended. HFN

Sound Quality: 89%





# The Beach Boys *Pet Sounds*

The band's fantasy of California as a land of perpetual sun and fun rang out from radios across the US and Europe during the early '60s. But the group's creative powerhouse had a grander vision and, as the band hit the road to tour without him, he set to work...

Words: **Mike Barnes**



By mid 1965 The Beach Boys had already released nine albums in their three years' existence. This might seem remarkable by today's standards, but record company demands for more music were relentless, particularly when the band happened to be one of the most commercially successful pop groups in the world.

Main songwriter Brian Wilson had managed to deliver the material requested so far, but the group now had a busy tour itinerary and after having experienced an anxiety attack during a plane flight, Wilson let Al Jardine, his brothers Dennis and Carl, and cousin Mike Love take care of business on stage.

They were augmented by Glen Campbell on vocals and guitar, and by the handsome, wholesome-looking Bruce Johnston, who was soon to become a full-time member. The situation suited everyone just fine and gave Wilson time to create the next batch of the group's music.

### PARTIES AND GIRLS

So far, this compositional conveyor belt had produced songs painting an idealised picture of the Californian lifestyle, which meant surfing, hot-rods and beach parties with lots of girls. On 'Surf City', a song Wilson had written with Jan Berry of Jan and Dean, this became the utopian promise of 'two girls for every boy'.

But Wilson had already started to expand his remit, with bittersweet ballads and increasingly elaborate vocal arrangements, which had appeared on the LPs released in the US the previous year – *Today!* and *Summer Days (And Summer Nights!!)* – though these albums didn't appear in the UK until 1966. The flow was slowing somewhat,



↑ Beach Boys (l-r): Mike Love, Al Jardine, Brian, Carl and Dennis Wilson

↗ First single from the LP, and the band on *The Ed Sullivan Show* in 1964

↙ Promo shot used for the 1965 single 'California Girls'



because Wilson was taking his time over a new studio set, *Pet Sounds*, which he had declared would be his magnum opus.

### CASH COWS

*Pet Sounds* is generally regarded as one of the best and most influential albums ever made. Today, the idea of repeating oneself endlessly is thought to signify creative stagnation, but back in the mid-'60s record companies could not have foreseen the explosion in experimental and innovative music that was just around the corner. Instead, they wanted to milk their cash cows for as long as they could.

The Beach Boys' whole surfing shtick was easily marketed and who knew what would happen beyond that? Maybe the group would be eclipsed by some new youth craze, so best keep the conveyor belt moving. As Wilson's cousin,

the domineering Mike Love had reputedly warned Wilson, 'Don't f\*\*k with the formula'. Which, with *Pet Sounds*, is exactly what he did.

Most albums by contemporary pop acts were short – 30 minutes or less – and offered a few hits with a fair amount of filler, but Wilson was a singularly gifted composer full of confidence in his own abilities. While he had always delivered a superior product, now he wanted to make an

album of classic tunes that other artists would want to cover.

Wilson was also a driven musician and his competitive instincts were

**'The music was radical; the group felt their livelihood was under threat'**

particularly piqued by The Beatles' 1965 album, *Rubber Soul*, which had an overall coherence that even Ringo's showcase 'What Goes On?' couldn't stymie.

But he was also riven with insecurities. Of course he wanted to appeal to the group's fanbase and luxuriate in the mythical endless ↻

## PRODUCTION NOTES

The recording sessions for *Pet Sounds* began in July 1965 at the Western Recorders studio in Hollywood, CA, with a West Indian song – ‘The John B Sails’ – which had been a hit for the Kingston Trio as ‘Sloop John B’.

Wilson’s method for this song was to get a live instrumental recording using a four-track machine, setting the levels so that he effectively achieved a ‘mixed’ take. This was then transferred to just one track on an eight-track machine, with four of the remaining tracks used to record vocals and another reserved for further overdubs. This explains why some instruments have a rather recessed feel in the finished mix.

Wilson wrote horn and string charts from the keyboard and would assemble a cast of musicians in the studio. Nearly 70 musicians and engineers were involved, including the Sid Sharp strings, Sharp being one of the first classically trained orchestral players of pedigree to have his ensemble play on rock and pop records.

Wilson excelled at orchestrating unusual instruments for rock music but the most striking sound on the album is the rasping, near brass timbre of the bass harmonica, which solos on ‘I Know There’s An Answer’. Wilson would work quickly and spontaneously trying out different instrumental lines, but much to the group’s chagrin, he would also change some of the difficult vocal harmony parts on a whim and have them re-learn their lines.

Despite having a state of the art Ampex eight-track machine at his disposal, Wilson made the principal mix in mono. This method – also favoured by Phil Spector – was hardly unusual as most playback sources at the time were mono. Stereo mixes were often something of an afterthought. It also benefited Wilson who was nearly deaf in his right ear.



Californian summer that he had helped create. Although he felt worried that he was taking the music ‘too far out’, he was impelled to continue doing so.

Still just 23 years old, Wilson was now thinking beyond the influences of the barbershop-style harmonies of The Four Freshmen – which he had basically duplicated – Chuck Berry and even his hero Phil Spector. He was to dig deeper into his own creativity and into making an album that he hoped would top even Lennon and McCartney’s best efforts.

### IDEALISED YOUTH

*Pet Sounds* was a balance of all these opposing forces. It’s not, as some suggest, a concept album, but many songs are thematically linked. At this point Wilson was a married man but some of the lyrical themes on the album find him hanging onto an innocence, the safety of an

idealised version of youth, while others address rites of passage into an uncertain adulthood.

The lyricist on most of the tracks is Tony Asher, who had met Wilson

a few years before. He was a songwriter who had settled for the security of writing jingles in an advertising

agency, but jumped at the chance of this more artistic endeavour.

The collaboration entailed Wilson coming up with lyrical ideas and draft lines that Asher would then frame in elegant verse.

Some if it feels like it has come from a distant era. On ‘Wouldn’t It Be Nice’, the protagonists are two lovers that one could imagine coming back from a high-school hop, their journey ending outside the girl’s parents’ front door, both wishing they were older and married

↑ The band pose for shots that would be used for the picture sleeve of the single ‘Then I Kissed Her’, which was released in 1967

↖ *Pet Sounds* cover shoot outtakes of Brian Wilson (left) and the band by photographer George Jerman taken at the petting paddock at San Diego Zoo in California

↙ Brian Wilson caught on camera by Jasper Dailey as he worked in the Western Recorders studio in Hollywood

so wouldn't have to say good night and go their separate ways. It sounds corny, a world away from the concept of free love that was soon to hit the Sunshine State, but it would have been the poignant reality for many. And the melody is so gorgeous, the vocal harmonies so stunning that it transcends the gaucheness of its subject.

In the UK this song was the b-side of 'God Only Knows', a devotional, almost hymn-like love song so affecting precisely because it comes from this well of innocence. Wilson's deftly arranged brass, strings and mellifluous flutes produced a shimmering soundscape in perfect sympathy with the lyrics.

Wilson got his wish in that Paul McCartney has rated it as one of his favourite songs and has gone on to say, 'No one is educated musically until they've heard *Pet Sounds*'.

### WRECKING CREW

Wilson had been putting the album together with the cream of LA session musicians – the so called Wrecking Crew – who included bass player Carol Kaye and drummer Hal Blaine, with a huge cast of musicians on strings, brass and percussion. But when The Beach Boys returned from touring to be played a sizeable chunk of what was being worked on, it received a lukewarm reception.

Not only was the music radical for its time but the group felt their very livelihood was now under threat. After all, Wilson could clearly have made the entire album himself and, in the case of the track 'Caroline No', was actually intending to release it as a solo single.

Yet with Wilson clearly more talented than the other band members they had little choice but to go along with it all. The new



music was also a lot more difficult to learn and Wilson was strict in making sure it was sung exactly the way he heard it.

Mike Love did in fact make a stand with regard to 'Hang Onto Your Ego' which, he felt, was 'Brian's ego music' writ large. The lyrics were eventually changed and the song retitled to 'I Know There's An Answer'. Love later said that the group were also concerned about the effect Wilson's increasing consumption of marijuana and LSD would have on his sensitive psyche.

Yet despite these internal struggles there was a very particular

chemistry in their honeyed, high, slightly nasal harmonies that was quintessential to the album's sound. Wilson also let other singers take the lead on some tracks.

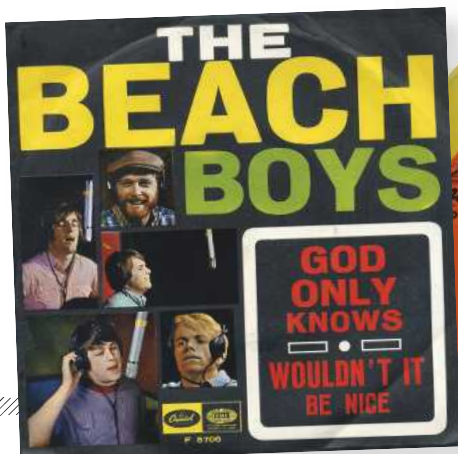
### LIKE A CHILD

One important aspect of *Pet Sounds* is that the songs stray away from rock 'n' roll. Wilson's approach to rhythm was particularly inventive, deploying a wide range of percussion instruments to punctuate the songs in a near orchestral way. With its guiros, bongos and tambourines, the album's instrumental title track reminds of Martin Denny, a pioneer of the popular Exotica movement who'd had hits with tracks like 'Quiet Village' in the late 1950s.

Wilson has said that he felt like a child when doing his best work, in that like a child he could express his ego in an unfettered way and with innocence. This came out rather literally on a song called 'In My Childhood'. The lyrics were scrapped and rewritten as 'You Still Believe In Me', but the parping bicycle horns remain. 'I Wasn't Made For These Times' is a crucial track, ☞

↩ The band with Bruce Johnston (far right) who joined the group in 1965, replacing Glen Campbell. Legend has it that Johnston flew to London in May 1966 and played *Pet Sounds* to John Lennon and Paul McCartney

↩ Italian picture sleeve of 'God Only Knows' single and (right) original US label



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# Alternate Format Discography



➔ Shoot for picture sleeve of 'California Girls' from 1965

with Wilson cast as the outsider wishing he'd emerged in a more halcyon era – which of course had never been, nor ever would be – to one of his loveliest melodies.

Asher wrote the lyrics to 'Don't Talk Put Your Head On My Shoulder' in an attempt to capture a precious silent moment between two enraptured lovers. When he heard the finished song, he admitted it was so beautiful he was 'speechless'.

The most haunting moment of the album is the closing 'Caroline No', Brian Wilson's solo single, again with lyrics by Asher. It's an elegy for a lost love and innocence set to another exquisite melody with typically wide intervallic leaps. The single was released in advance of *Pet Sounds*, but just brushed the Top 30, scotching ideas of a solo career.

## TRULY IGNORED

Prior to *Pet Sounds* release, one of the first songs recorded, 'Sloop John B' was issued as single and made the Top 5 in the US and UK while 'Wouldn't It Be Nice' was released as an A-side in the US and reached number eight.

*Pet Sounds* hit the shops in May 1966 after ten months of recording sessions, at which point Capitol had decided enough was enough. The story is that the label grabbed the tapes before vocals could be recorded for 'Let's Go Away For Awhile' and 'Pet Sounds', but at the time Wilson said that he thought they worked better without vocals.

To say, as some have, that the album 'flooded' is wrong. It charted at number two in the UK and 10 in the US. But Love's warning to Wilson not to 'mess' with the formula had been well and truly ignored.

Next stop: 'Good Vibrations'. ☺



## ORIGINAL LP

*Pet Sounds* was originally released as a mono LP in 1966 on Capitol, with the first US pressings bearing the catalogue number T 2458.

The same year saw a 'stereo' release in the UK [ST 2458] and one labelled Duophonic in the US [DT 2458]. Capitol used Duophonic to denote monaural mixes which had been processed to give a stereo effect, a technique it began to employ in order to keep up with consumers' demand for stereo LPs. In fact, the stereo UK release carried the same processed mono mix found on the US Duophonic release.

However, the UK was the only country to be blessed with a version of the album on reel-to-reel tape [Capitol TA-T 2458]. A mono release, it appeared in 1966 on two-track 3 $\frac{3}{4}$ ips tape.

## FIRST REISSUE AND CASSETTE

In 1972 the album was given a mono reissue in the US and Canada [MS 2197] on the group's own label, Brother Records, through Warner Brothers' subsidiary Reprise. This was part of a double set with The Beach Boys' then current album *Carl And The Passions – So Tough*.

In 1980 the album first appeared on cassette, in the US, again in mono [4N-16156].

## DIGITAL REMASTER

In December 1987, *Pet Sounds* was digitally remastered at the Capitol Recording Studios in Hollywood and released on LP in the UK on Capitol [EMS 1179] and on cassette [TCEMS 1179] the following year. Again, this was a 'stereo-enhanced' mono mix.

In 1990, this digitally remastered version was released on CD across the US, Canada and Europe [CDP 74 8421 2] with three extra tracks. These

were 'Unreleased Backgrounds', 'Trombone Dixie' and the original, rejected version of 'Hang On To Your Ego'. The bonus tracks were mixed by Larry Walsh and Mark Linett, who also remastered the album for CD.

These first transfers to CD were not the best quality, with critics declaring them muddy sounding.

The remastered version with the three extra tracks was also released on cassette in the UK and Europe [238-7484214] and in the US [C4-48421].

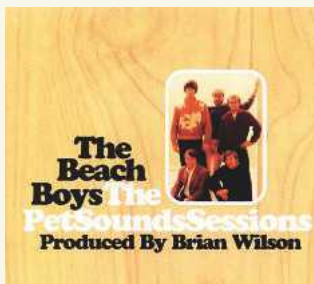
## 24 KARAT GOLD CD

The CD was further remastered in 1993 by Steve Hoffman for a Japanese 24 Karat Gold CD released as part of Capitol's DCC Compact Classics series.

## 180G VINYL MONO

A limited edition reissue of the original vinyl mono LP appeared on 180g vinyl in the UK in 1997 as part of EMI's Century collection of classic albums [7243 8 55664 1 7]. It wasn't until 1999 that a 180g version would make it to the US market [72435-21241-1-4].

Another limited edition 180g mono LP with the 13 original tracks was released in 2008 by Capitol as part of its 'From The Capitol Vaults' series [T 2458].



## FIRST TRUE STEREO MIX

The most significant reissue came in 1997 with the 4CD *Pet Sounds Sessions* box set [UK/US 7243 8 37662 2 2]. Produced by David Leaf and Mark Linett and overseen by Brian Wilson, the trio had access to the original multitracks and were thus able to produce a stereo mix.

The box included outtakes with different vocal combinations, run-throughs and isolated vocal harmonies offering a virtually alternative album.

Pride of place was still given to the original mono mix, which appears as an HDCD.

## 180G VINYL STEREO

An LP of the stereo mix with just the original 13 tracks came out in the UK on Simply Vinyl/Capitol in 1999 [SVLP 149].

## HDCD MONO

The following year the original 13 tracks appeared in the US, Canada and Europe as an HDCD, only this time in mono [7243 5 26266 2 5].

## 40TH ANNIVERSARY SETS

*The Pet Sounds Sessions: A 40th Anniversary Collection* arrived in 2006 and was available in a number of formats. In the US it came as a mono and stereo double LP on



yellow and green vinyl featuring the original 13 tracks [09463-51370-1-9]. It was also available in the US on CD [0946 3 69940 2 4] with the 13 original songs in both stereo and mono plus 'Hang On To Your Ego' as a bonus track in mono. This set also contained DVDs featuring promo films in both stereo and 5.1 surround sound.

The CD set was also available with a redesigned textured cover in the US, UK and Europe [0946 3 69939 2 8] and a standard cover [0946-3-53986-2-5].

The album was remastered again by Mark Linett in 2012 in mono and stereo and released on HDCD in a gatefold card sleeve in US and Europe [50999 404426/24] and as a FLAC download [HX5099931933957 US].



# The Hacienda, Manchester

It gave birth to the Madchester scene, became a mecca for acid house and rave, then paved the way for today's electronic dance music. A movie was made about it, too. **Steve Sutherland** brings you the story of 'FAC 51 The Hacienda' in Manchester

**E**instürzende Neubauten. There's a warning in that name. It's German for Collapsing New Buildings. Still, no-one saw it coming.

There was nobody clocking the band setting up. Nobody going, 'Lead guitar. Check. Bass guitar. Check. Floor tom. Check. Tambourine. Check. Microphone. Check. Pneumatic drill. Che...!! Hang on! Pneumatic drill!?'

No, it wasn't until halfway through the set, when one of the band revved up the drill and started hacking at the main concrete pillar holding up the roof that the management realised something was amiss.

Then, to be fair, they acted pretty smartish. A couple of guys raced onstage and wrestled the drill from the driller, there was a fair amount of bloodshed, the singer got ko'ed by the soundman, and the band got banned for life. Top gig, eh?

## A WAY OF LIFE

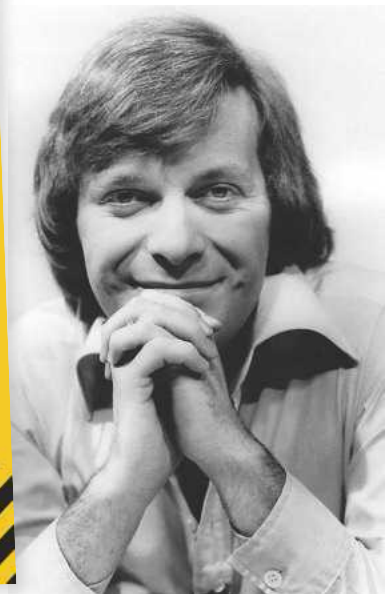
This all happened at the Hacienda in Manchester on the 28th of February 1985 and some might say the venue had it coming. Here's why.

The Hac' (or FAC 51 if you like) was the brainchild of Tony Wilson, owner of Factory Records, and Rob Gretton, the manager of Joy Division and then New Order. Their dream was to divert the profits from

→ The venue was deemed part of Factory Records' catalogue and so its full name was 'FAC 51 The Hacienda', the 51 denoting its place in the label's discography. A cat was listed as FAC 191

→ Tony Wilson in the 1980s

← The German industrial band Einstürzende Neubauten, who in 1985 set about the venue's main supporting pillar with a pneumatic drill



their most successful bands into a venue that would act as a meeting place for local talent and become a monument to Northern culture; a palace that would make Manchester proud. Not just a venue then, nor just a club, but a way of life and a symbol of vibrant creativity, open all day every day to all and sundry. Brilliant idea. But nobody came. Well, next to nobody.

The place opened, with three bars named The Gay Traitor (after posh spy Anthony Blunt), Kim Philby and Hicks (his accomplices), in an expensively reconfigured yacht builders' shop in Manchester's Whitworth Street next to the Rochdale Canal. This was on the 21st of May 1982, the launch affair hosted by racist comic Bernard Manning who so disgusted the crowd, he refused his fee, advising Messrs Wilson and Gretton to quit the project there and then.

Of course, they ploughed on regardless of the omens and, even though they immediately plunged into debt, they stayed true to the vision that Mr Wilson had named after a Situationist treatise called

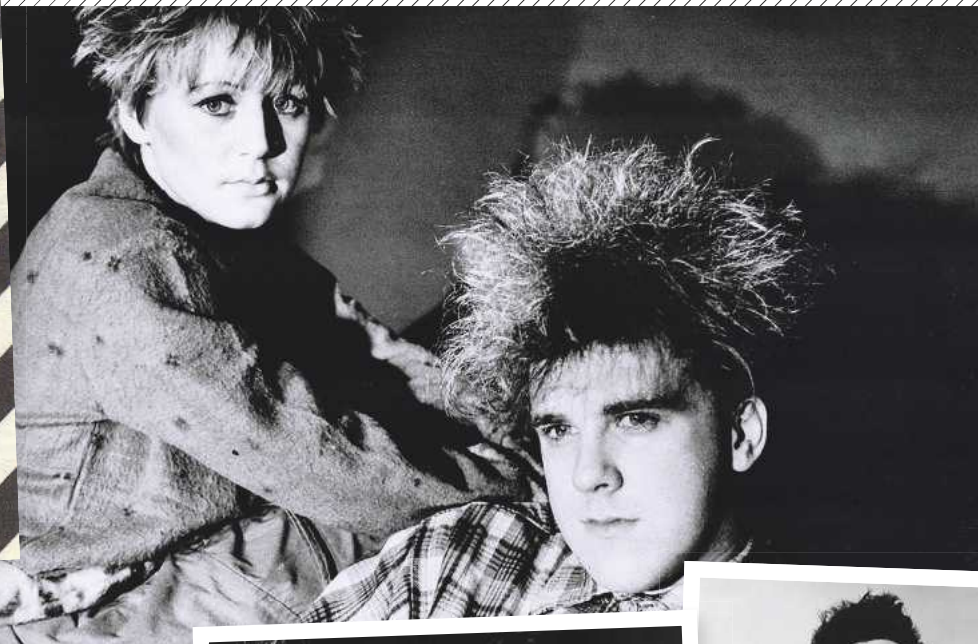
*Formulary For A New Urbanism*. Written in 1953 by some French bloke called Ivan Chitchevlov (good luck with that pronunciation!), it claimed, among other things, that, 'the Hacienda must be built' – a phrase which struck a chord with Wilson for some obscure reason.

## CATHOLIC MIX

Situationists were kind of intellectual urban theoretical planners, if you like, but what should really concern us here is that Mr Chitchevlov's other claim to fame is that he was consigned to a mental hospital after stealing some dynamite from a building site with which he intended to blow up the Eiffel Tower because he claimed its light was reflecting into his nearby apartment and keeping him awake at night. It doesn't take a genius to see that the fates may not have been looking too kindly on Mr Wilson and his dream.

Anyway, with booker Mike Pickering on board, the first year saw the Hac' play under-attended host to a catholic mix of contemporary talent including Big Country, Dillinger, Cabaret Voltaire, William





Burroughs, Psychic TV, Grandmaster Flash, The Teardrop Explodes, Echo & The Bunnymen and local heroes and club financiers New Order.

The 1983 line-up included The Cocteau Twins (singer Elizabeth Fraser allegedly weeping because of the dodgy sound), Frankie Goes To Hollywood, Orchestral Manoeuvres In The Dark, Eurythmics, Fun Boy Three, Curtis Mayfield and The Birthday Party. This was also the year that local ne'er-do-wells Happy Mondays made their Haç debut, playing a shambolic set as part of a Battle Of The Bands night.

The highlight, though, was undoubtedly the three appearances by The Smiths; the first in February supporting a long-forgotten funk band called 52nd Street, the second in July, and the third and best remembered, on the 24th of November when the band high-tailed it from their debut *Top Of The Pops* appearance in London back up



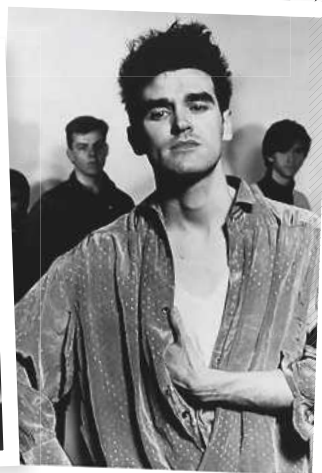
Poster for The Smiths' November 1983 appearance – the club's first sell-out gig

Liz Fraser and Robin Guthrie of The Cocteau Twins

The Smiths' Morrissey, in the early '80s

New Order (l-r) Bernard Sumner, Gillian Gilbert, Peter Hook and Stephen Morris. Hook's book, *The Hacienda: How Not to Run A Club*, offers an insider's account of the venture

In 1984 the club saw Madonna make her UK debut



on the train to Manchester where, supported by James, they played a flower-strewn celebratory show before an adoring crowd that many consider among their finest ever.

Though The Smiths gig was the venue's first bona-fide sell-out, the omens for the business were still pretty dire. Mismanagement, theft, a bad deal with the brewery alongside other financial problems, led accountants to conclude that the Hacienda was actually losing £10 for every punter that passed through the doors!

#### RUN BY COMMITTEE

Undeterred, the venue graduated to being run by a committee who had no real experience in this area while Mike Pickering continued with the club's wide-ranging booking policy. A Certain Ratio, The Cramps, Lee Scratch Perry, Dead Or Alive and Whodini all played in '84, as did Jonathan Richman who refused

any amplification and consequently bombed, Johnny Thunders who was so out-of-it he played the song 'Chinese Rocks' three times, and Madonna, who made her UK debut here lip-synching 'Holiday' on an episode of the hip TV show *The Tube* which had decamped

from Newcastle for the day.

In addition to the bands, Mike Pickering expanded on his broad musical policy by launching a

DJ night – Nude – on October the 19th and every Friday thereafter; an innovation which was to have unforeseen consequences for the club's future.

Nineteen eighty five brought the aforementioned Neubauten debacle, The Jesus & Mary Chain's equally provocative 17 Minutes Of Feedback tour, an August double bill featuring headliners Playn Jane with some local upstarts called The Stone Roses in support, and a

**'It was losing £10 for every punter that passed through the doors'**

## CLASSIC VENUES



← Poster for Stone Roses appearance in February 1989. The gig was one of a series of 'Monday Club' events featuring indie acts such as Spiritualized, fronted by Jason Pierce (above right)

December matinee/evening show event starring New Order and t'Mondays, which turned into a riot after mad overcrowding.

This latter gig was sadly a Haç' rarity numbers-wise and 1986 found the original investors having to write off at least £2 million to keep the club going while the committee was axed in favour of Paul Mason, an experienced venue manager who'd run Nottingham's Rock City. To save dosh, the club ceased as a seven days a week operation and began to focus more on DJ nights, Dave Haslam's Thursday night Temperance Club joining Nude as a regular fixture.

Artist-wise, this was the year that Primal Scream came to town, along with Nick Cave and his Bad Seeds, The Associates, The Redskins, Husker Du, The Fall and Nico, the ex-Velvet Underground legend who played her last ever gig there on January the 30th (she died on the island of Ibiza soon after).

'Eighty seven and '88 were all about the dawning of Acid House, New Order, Happy Mondays and the Stone Roses enthusiastically embracing the E-fuelled dance revolution, which was pioneered by the short-lived but hugely influential Wednesday Ibiza night, Hot.

Hot was replaced by house Nation, then Void in '89, and Saturday night's Wide joined Nude and The Temperance Club as Haç' mainstays. The club was heaving now, but the business was still under the cosh. The drug trade had brought in vicious warring local

gangs, security was a massive issue, theft and violence were rife, the cops were on the club's case and, on the 14th of July, 16-year-old Clare Leighton collapsed and died at the Haç' after taking E. It was Britain's first Ecstasy fatality.

Unsurprisingly, the police opposed the club's bid to renew its licence and the ensuing months were so full of pitched battles that in January 1991, the management decided to close its doors while it strove to get its act together.

### METAL DETECTORS

Re-opening in May with metal detectors on the door to discourage guns and knives, the gang violence nonetheless continued unabated, even as the club's reputation as the

hottest place on earth to hear new dance sounds spread around the globe.

Flesh, a gay night, was launched, Shine!

took over the Saturday slot, The Temperance Club became Beautiful 2000 and, now packed to the rafters and beyond, the building began to fall apart just as Tony Wilson's Factory Records went bust.

With no funding available and no investors mad enough to cough up the dosh to cover debts which looked too formidable ever to be paid off, the Haç' limped on from one disaster to another until, quite suddenly, on the 28th of June 1997, the Manchester temple to future sounds closed its doors for the very last time. Freak was its last club night, Spiritualized its last band,

'Now theft and violence were rife the cops were on the club's case'

having played 13 days earlier. The site was eventually acquired by Crosby Homes, the fixtures and fittings auctioned off for charity, and the building demolished to make way for upmarket flats.

Tony Wilson and Rob Gretton have since passed away but the legend of their dream lives on. The Haçienda was celebrated on the big screen in 2002 by the hilarious movie *24 Hour Party People* (with Steve Coogan playing Tony Wilson) while to mark what would have been the club's 25th anniversary in 2007, Adidas launched a special Haçienda trainer which retailed at £345 and sold out immediately. ☹

← Bez and Shaun Ryder of The Happy Mondays

↓ The film *24 Hour Party People*, released in 2002, tells the story of Factory Records and The Haçienda





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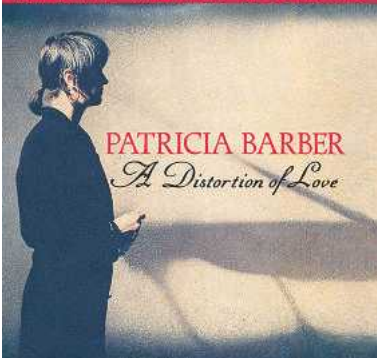
Mobile Fidelity MFSL 2-422 (two 45rpm LPs)

Shocked to find out how many times this has been reissued, I was even more startled to hear what 45rpm pressings could do for it. I shouldn't have been, as every LP I've heard in this format seems to possess greater detail and smoother transients, but this acquired an openness of breath-taking expanse. Quite simply, it's the most authentic portrayal I've ever heard of an LP so familiar that it should hold no surprises. From the opening seconds of the truly epic 'Like A Rolling Stone', the distinctive organ/piano mix, you know that this limited edition reissue will join the ranks of the most coveted audiophile releases ever. It goes without saying that the music itself earns a full 100 points. *KK*

Sound Quality: 98%



ORIGINAL MASTER RECORDING



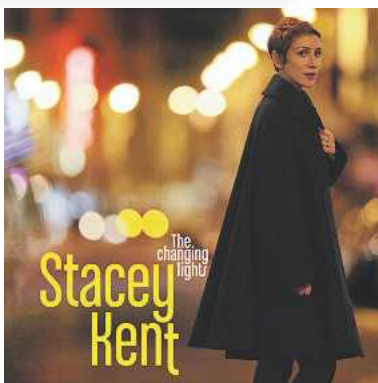
### PATRICIA BARBER

A Distortion Of Love

Mobile Fidelity MFSL 2-396 (two discs)

So long a fixture among audiophiles – she supplanted Amanda McBroom as the show-demo fave – it should shock no-one that Ms Barber's cool jazz has been around for over two decades. This double LP treatment of her second album (1992) demonstrates why hi-fi enthusiasts find her irresistible. Her voice is seductive, the sound always involving, and she sounds like a re-imagined Peggy Lee – not that Ms Lee shied away from covering songs outside of her milieu. Here the kicker is a version of the Motown classic 'My Girl' – just Barber and bass – that makes her appear so convincingly in your listening room. I'm not a full convert yet, but this one's getting to me. *KK*

Sound Quality: 88%



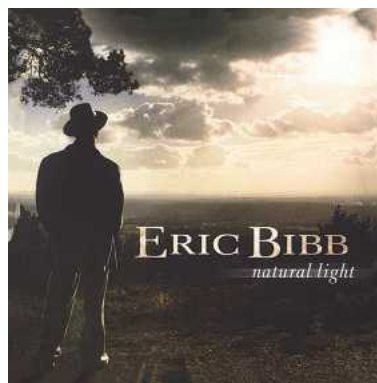
### STACEY KENT

The Changing Lights

Pure Pleasure PPAN 17529 (two discs, 180g vinyl)

Yet another 2LP set – the record labels telling us that more vinyl real estate means better sound – Kent's Latin-flavoured 2013 release (like Barber's in this month's batch) has an overall silkiness that marks it as audiophile-friendly, but that's the nature of the beast: well-recorded jazz vocals with a seductive feel can't sound any other way. Kent has 'form' with foreign language material, having issued the French album *Raconte-Moi* in 2010. *The Changing Lights* takes us to Brazil, with samba numbers, subtle injections of South American beats and lyrics courtesy of Portuguese poet Antonio Ladeira, as well as French lyricist Bernie Beauvère. Pure class. *KK*

Sound Quality: 89%



### ERIC BIBB

Natural Light

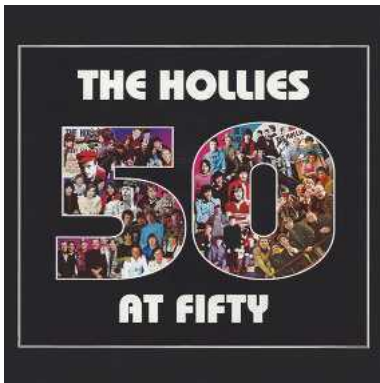
Pure Pleasure PPAN 018 (180g vinyl)

While not quite attaining the levels of fame other blues revivalists have managed, Bibb inspires devoted followers who relish his folkier feel. He is, after all, a bluesman who graced several purist recordings of deliberately uncluttered nature. Rootsiness dominates (Bibb's father is folksinger Leon Bibb) but he also handles 'slick' with aplomb, as evinced in this often 'uptown' set from 2003. 'Tell Riley', paying homage to BB King, is, ironically, more rural than anything King releases, and 'Guru Man Blues' could have come from a Keb' Mo' set, but it's his version of Jackie Wilson's 'Higher And Higher' as a gospel tune that makes this a must-own. An absolute joy. *KK*

Sound Quality: 90%



# AUDIOPHILE: DIGITAL



## THE HOLLIES 50 At Fifty

Parlophone 825646223541 (three discs)

This is an expensive year because 1964-5 was the height of the British Invasion of the USA, in the wake of The Beatles. Half-century anniversaries? The flood is underway. The Beatles' watershed was Feb '64; within 18 months the charts were filled with UK groups, and among the biggest hit-makers were The Hollies. Still performing, the band topped global charts with staggering pop masterpieces noted for Everly-grade harmonies. This set contains the hits, some obscure tracks, a couple live and one brand-new. Academics will prefer The Hollies' other, more rarity-laden box sets, but this is great for new fans. The sound is superlative. *KK*

Sound Quality: 89%



## NILS LOFGREN Face The Music

Fantasy 34731-02 9CDs + DVD)

For most artists, ten discs would cover their entire careers. For Lofgren, who joined Neil Young's band at the age of 17, that's merely 'representative'. I've always been a huge fan – who else would spend £100 on it? – so let's agree that it's for the hardcore. But what a box if you are! A gorgeous 136-page book, 40 unreleased tracks, a hand-signed and numbered card from the man himself: it's a Herculean effort, with 169 tracks chosen by Lofgren, reprints of obscure posters, the presence of Neil Young, Bruce Springsteen and Ringo Starr, homages from Bonnie Raitt, Joe Walsh and more. A magnificent profile of a versatile player – a shame the box is so cheesy. *KK*

Sound Quality: 88%



## THE PRETENDERS Learning To Crawl

Mobile Fidelity UDSACD2057 (SACD)

Am I the only person on earth who thinks Chrissie Hynde always sings off-key? I used to imagine my LPs were warped or my turntable suffered wow and flutter, but this is a carefully re-mastered SACD, and she still sets teeth on edge. I'm not saying that because of my aversion to strident, militant vegans, but it does mar the thumpingly tough music, reminiscent in places of The Remains, Nils Lofgren, and garage rock bands Hynde most surely must have adored when growing up in the USA. My reservations aside, there is much to delight here, like the sound spread, the raunchy guitar work and fantastic drumming that add majesty to 'Watching The Clothes'. *KK*

Sound Quality: 88%



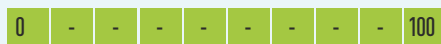
## THE BEATLES

### Japan Box

Apple/Universal UICY-76429/33 (five discs)

With the UK and US Beatles catalogues reissued as CD and LP box sets, as well as in mono and stereo, it's time for another important territory's versions to receive lavish treatment. Although Germany, Canada and other countries issued local editions, Japanese releases were legendary: lyric sheets, different tracks and artwork, stunning sound. While they resisted making these CDs red to recall the original LPs, the five discs are gorgeous facsimiles of *Meet The Beatles*, *Second Album*, *A Hard Day's Night*, *No. 5* and *Help!* – skipping the albums with identical track listings to the US or the UK. Attention to detail is so obsessive that even the 'obi' strips are packed separately. For collectors, true, but utterly cool. *KK*

Sound Quality: 92%





**NEIL COWLEY TRIO**

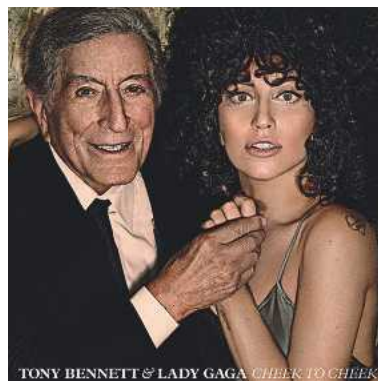
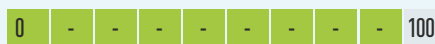
*Touch And Flee* (96kHz/24-bit; WAV, ALAC, FLAC)

[www.naimlabel.com](http://www.naimlabel.com); Naim Jazz Records Naim CD206

**Former Brand New Heavies keyboardist Neil Cowley** – a child prodigy playing Shostakovich piano concertos at the age of ten – can arguably lay claim to being one of the world’s most heard pianists in current times, having accompanied Adele on both her *19* and *21* albums. This fifth release from the trio with drummer Evan Jenkins and bassist Rex Horan (who replaced Richard Sadler after 2010’s Naim album *Radio Silence*) sees Cowley once again crossing myriad musical boundaries. His

compositions encompass everything from playful jazz-funk and dance rhythms to anthem-like pop and prog-rock chord progressions – making the description of Cowley’s trio as ‘jazz for Radiohead fans’ highly appropriate. Recorded in London’s RAK studios, *Touch And Flee* is a fabulous recording with a naturally open and authentic sound to the piano, bass and drums, and with lifelike dynamics. *JB*

Sound Quality: 85%



TONY BENNETT & LADY GAGA, CHEEK TO CHEEK

**TONY BENNETT & LADY GAGA**  
*Cheek To Cheek* (96kHz/24-bit; FLAC)

[www.hi-resaudio.com](http://www.hi-resaudio.com); Columbia/Interscope 0253799884

When Tony Bennett – famously reinvented since becoming managed by one of his sons in the 1980s – released *Duets II* in 2011 it became his first ever album to debut at No1 on America’s Billboard charts. With *Cheek To Cheek* the octogenarian crooner has scored another No 1. And make that strike *three* for Lady Gaga. This might appear an incongruous pairing. You could even consider it a cynical commercial stunt: Bennett isn’t the first ‘classic’ artist to team up with a happening hipster to attract the attention of a younger audience, nor will Lady Gaga be the last popster to rely on a grandfatherly figure to gain musical kudos. As ever, Bennett is a master of vocal understatement, while his 28-year-old Manhattan-born singing partner in this collection of standards from the *Great American Songbook* is given freedom to demonstrate her spectacular voice. *JB*

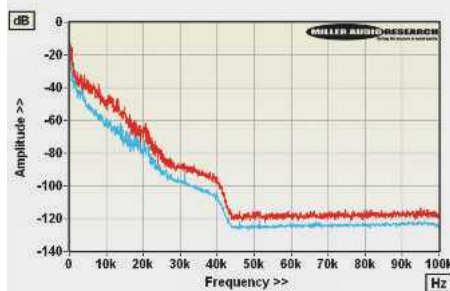
Sound Quality: 75%



**OUR PROMISE**

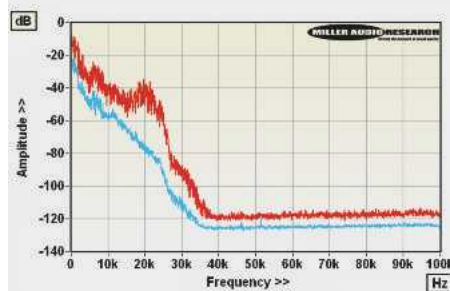
Following our Investigation feature [HFN, Jun '11] where we examined the claimed quality of high-resolution downloads, *Hi-Fi News & Record Review* is now measuring the true sample rate and bit-depth of the HD music downloads reviewed on these pages. These unique reviews will be a regular source of information 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**



This 96kHz download sees the trio performing as just that [*The Face Of Mount Molehill* – HFN Oct '12 – included strings and guitar] but the clean rendering, free of digital artifice and compression, is equally refreshing. PM

**LAB REPORT**



While this is a 96kHz rendering, because the content was subject to an early low-pass filter (at about 26kHz), its practical bandwidth is not appreciably wider than a 48kHz recording. The dynamic range is above average, however. PM



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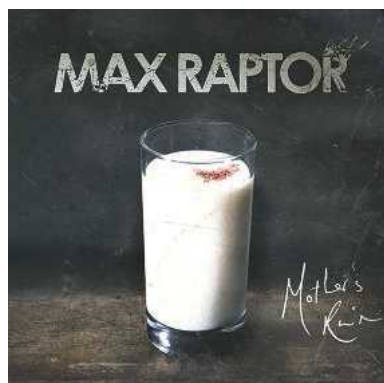
BLU-RAY



VINYL



DOWNLOAD



## MAX RAPTOR

Mother's Ruin (96kHz/24-bit; WAV, ALAC, FLAC)\*

[www.naimlabel.com](http://www.naimlabel.com); Naim CD188

Max Raptor – a four piece punk rock band formed in 2006 in Burton upon Trent – has released a clutch of singles and an eight-track mini-album *Portraits* [Naim label] since touring with The Stranglers in 2010. *Mother's Ruin* is the band's first proper album, released Sept '13. It's a full-on, riotous musical assault which will undoubtedly be considered a bone-shaking cacophony to those adverse to the punk genus; but, replete with hard-hitting riffs and air-punching choruses, it is in fact a highly-polished example of its genre. The trouble is, how *do* you capture the raw energy of a punk band in a recording studio? And alas the production here is wholly unflattering, the sound sibilant and compressed. There's little point in thinking it's worth hearing the 'high-res' file, so buy it at CD-resolution if you're a 'Raptor fan eager to wake up your neighbours. *JB*

Sound Quality: 55%



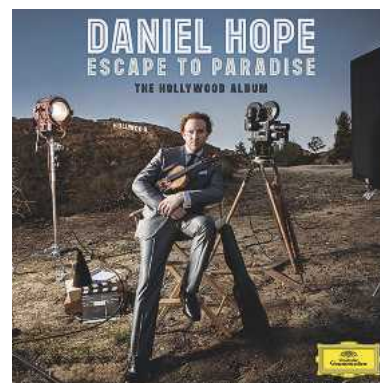
## SCHUBERT

The Late Piano Sonatas (D784, D958, D959, D960); Paul Lewis (96kHz/24-bit; FLAC)\*

[www.hiresaudio.com](http://www.hiresaudio.com); Harmonia Mundi HMC 902165.66

Although the last two Schubert sonatas are reissues from 2002, Paul Lewis has re-recorded the A-minor and C-minor (D784/958), again at the Teldex Studios Berlin, last spring. And in any case we haven't had the higher resolution until now. There's very little difference in sound: perhaps the new recordings are in tighter focus with less ambient sound, but it's marginal. No-one I have heard makes more sense of the central outburst in the *Andantino* of the Sonata in A (D959); and Lewis's Schubert suggests more affinity with Beethoven in its overtness – it's a very different approach from that of the 'reverent' Mitsuko Uchida or even Paul Lewis's mentor Alfred Brendel (whose example he followed in 2002 by omitting the exposition repeat in D960(i) – perhaps one day he'll be persuaded otherwise). *CB*

Sound Quality: 85%



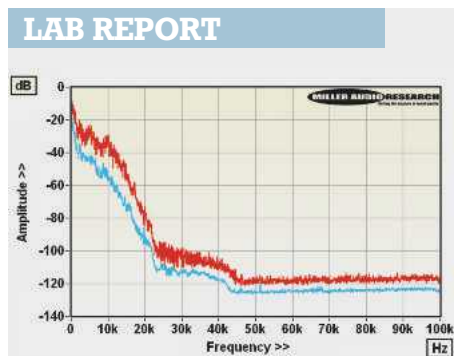
## DANIEL HOPE

Escape To Paradise – The Hollywood Album (various artists) (96kHz/24-bit; FLAC)

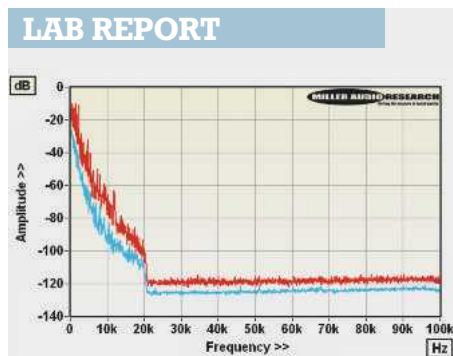
[www.hiresaudio.com](http://www.hiresaudio.com); DG 479 2954

The theme of this album is composers who found new lives in Hollywood, some but not all escaping from Germany in the 1930s. Korngold's Violin Concerto is the longest work in selections, not exclusively for films, spanning from 1908 up to *Schindler's List* and *American Beauty*. We hear themes from *Casablanca*, *Ben Hur*, *El Cid*, *et al*, 'Tränen in der Geige' bringing relief from the general romantic wash. Max Raabe is good in 'Speak Low' and Daniel Hope's friend Sting appears to swallow his mic in one arrangement. In principle there's variety, as accompaniments include harp, string quintet, piano, and orchestra (the Royal Stockholm PO under Alexander Shelley). But so much close-mic'd Hope and the added reverb does get wearing. 'As Time Goes By' in a weird solo version makes a decidedly down-beat conclusion to the album. *CB*

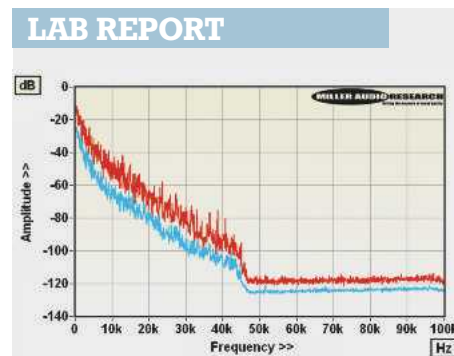
Sound Quality: 75%



This adrenaline-fuelled riot also looks to contain a riot of sample rates including a 48kHz vocal sequence [see Graph above from track 7], guitars sequenced at 24kHz and the entire messy lot mixed up to the 96kHz offered here. *PM*



Kudos to our reviewer for hearing 'very little difference in sound' for while this '96kHz/24-bit' download will illuminate the 96kHz LED on your USB DAC, the file is clearly a 44.1kHz upsample with no advantage in bandwidth over the CD. *PM*



The harmonic reach of the 1742 Guarneri violin is captured in all its rich glory here thanks to the bandwidth of this genuine 96kHz recording. Some tracks have slightly higher noise and 24kHz sampling tone, but are otherwise clean. *PM*



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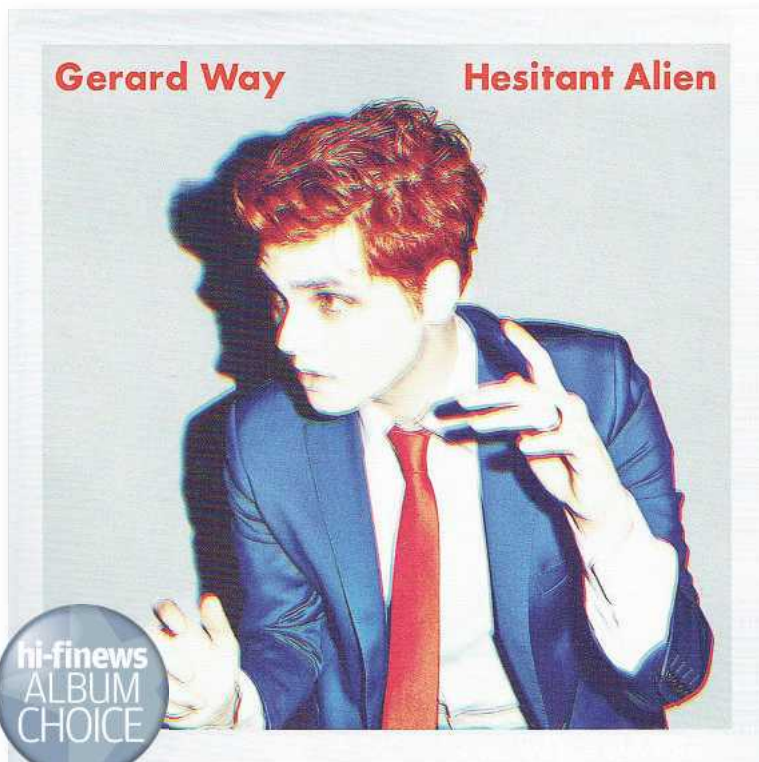
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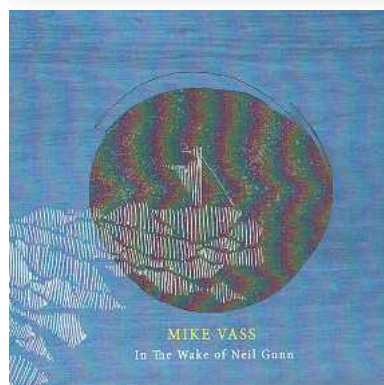
### GERARD WAY

#### Hesitant Alien

Reprise Records 9362-49372-1

When a superb band and its frontman go their separate ways it is often the beginning of the end for both. My Chemical Romance no longer exists as such, and the other members have yet to produce much, but frontman Gerard Way has returned to active service with an enormously powerful album that is in equal parts hard, driving rock and catchy pop suss. He's put a tight band – The Hormones – together, and although the album may lack light and shade as a collection of songs, there's no denying the over-driven energy that animates every track. *Hesitant Alien* batters along relentlessly through its eleven cuts, in an effort, I presume, to leave behind the emo associations of MCR. This is a terrific start to Way's solo career. *JBk*

Sound Quality: 95%



### MIKE VASS

#### In The Wake Of Neil Gunn

Unroofed Records UR001CD

I can't recall when last I recommended a folk concept album in these pages, but Scottish composer and multi-instrumentalist Mike Vass has come up with something hugely enjoyable here which I'm struggling to avoid pigeon-holing as a folksy *Tubular Bells*, but the comparison isn't entirely wrong. Inspired by a journey through Scotland taken in 1937 by the author Neil Gunn, Vass traced Gunn's steps and has written a compelling and richly-textured musical suite inspired by what he'd found. The use of vocal samples gives the work a contemporary touch, but it's Vass's tunes, rhythms and arrangements that make this a very special album indeed. *JBk*

Sound Quality: 93%



### PINK SHINY ULTRABLAST

#### Everything Else Matters

Club AC30 AC3011111

It's hard not to love this quintet from St Petersburg. Their music offers the same euphoric surge that made The Cocteau Twins and Ride so special back in the arid waste-land of the late '80s and early '90s. Female vocalist Lyubov has an angelic, often unintelligible, voice that weaves in and out of huge, fuzzy guitar and synth backdrops underpinned by solid percussion. 'Metamorphosis' somehow combines cuteness with raging distortion, while 'Umi' blends cathedral echoes with sinuous baselines and twinkly delayed guitars, but the whole album is gorgeously luminous, creating a trippy spaced-out delight – retro, yes, but none the worse for that. *JBk*

Sound Quality: 90%



### MAMA'S GUN

#### Cheap Hotel

Candelion Records CLION CD 13

The third album from this often-radio-playlisted London-based electric groove band (named after an Erykah Badu album) is a curious anomaly in today's market place. Led by songwriter Andy Platts, it's an odd hybrid of '70's lite-funk, laid-back rock and the kind of top quality musicianship and craftsmanship once associated with the likes of Squeeze, ELO or Gallagher And Lyle. Undeniably pleasant from start to finish, it nevertheless lacks the kind of punch that could elevate it to the point where it would be a must-have. Had this been released when Hot Chocolate were on top, it would now be a stone classic but right here, right now, it just sounds passé. *JBk*

Sound Quality: 85%

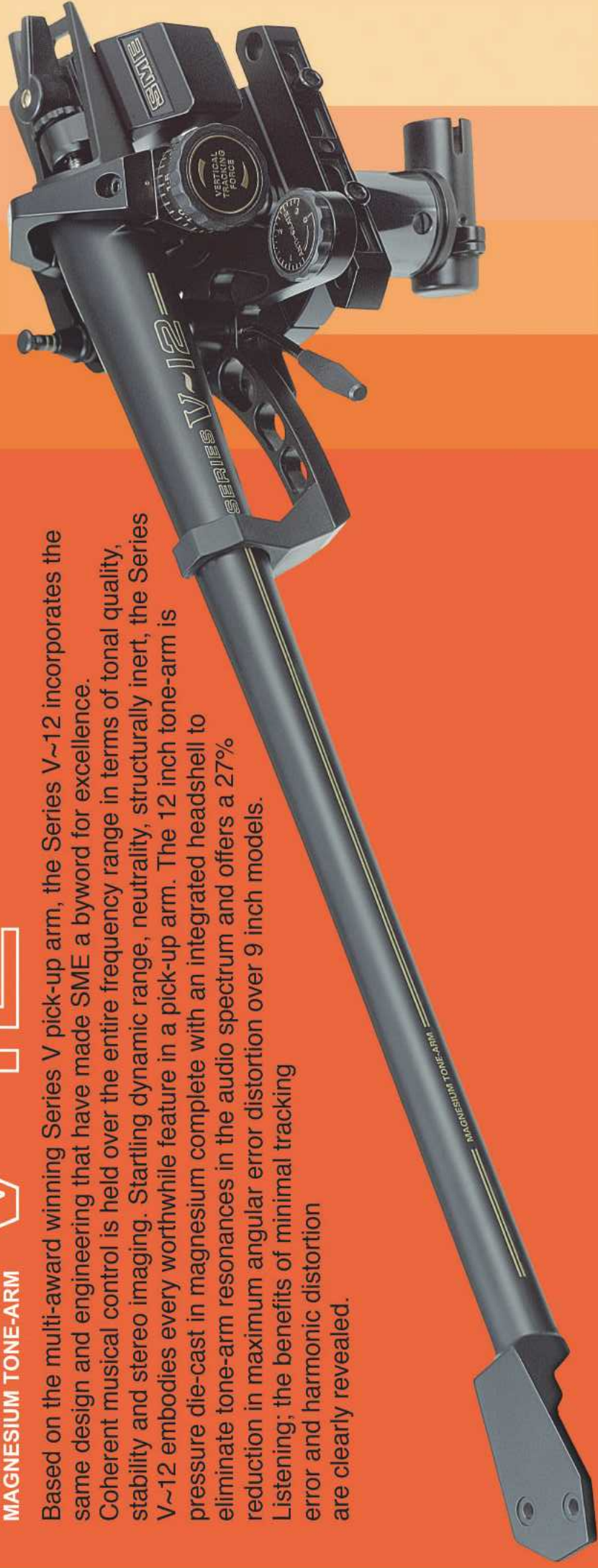




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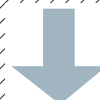
DVD



BLU-RAY



VINYL



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### CHARLES MINGUS

#### Mingus Moods

Proper Records Properbox 188 (four discs)

Yet another stunning reissue box in a seemingly endless series. This one, put together by the doyen of out-of-copyright compilers, Joop Visser, assembles tracks from nine Mingus albums, beginning with the title track of his Atlantic Records debut *Pithecanthropus Erectus* from 1956, and ending with selections from the 1960 recordings issued on the Candid label. There's the usual excellent, informative 32-page booklet, this time written with authority by Visser and, mercifully, printed in readable black-on-white. Completists and purists will want the original albums, but, from 'Fables Of Faubus' to 'Goodbye Pork Pie Hat,' this set might be all you need. *SH*

Sound Quality: 80%



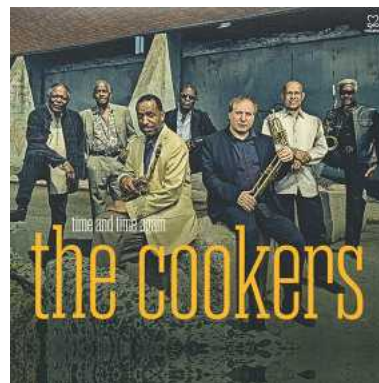
### STEFANO BOLLANI

#### Joy In Spite Of Everything

ECM 378 4459

Joining ECM in 2006, the Italian virtuoso followed up his *Piano Solo* label debut with *Stone In The Water*, recorded in 2008 and featuring bassist Jesper Bodilsen and drummer Morten Lund. But for this new release [see HD Downloads review pages, *HFN* Dec '14] Bollani's Danish trio became a transatlantic quintet with the addition of US saxophonist Mark Turner and guitarist Bill Frisell. Turner is superb, deep and commanding on 'Las Hortensias' as well as more sprightly pieces, while Frisell is arresting and intense in the piano/guitar duet 'Teddy', as well as the melodically-captivating 'Ismene'. A great-sounding album and as joyful as you could hope. *SH*

Sound Quality: 85%



### THE COOKERS

#### Time And Time Again

Motéma 233883

An all-star septet that puts over a timeless brand of high-energy post-bop, The Cookers are heard here on their fourth album, and their second for this label. Since 2012's *Believe*, Donald Harrison has taken over alto sax duties from Craig Handy, joining Eddie Henderson and David Weiss on trumpets, and Billy Harper on tenor sax. Pianist George Cables, bassist Cecil McBee and drummer Billy Hart, who'd all also served with Henderson and Harper in their earlier group, The Leaders, all contribute here as composers too. It's an album of absorbing, intricate originals, music that seems to have somehow mellowed with age yet without losing its punch and direction. *SH*

Sound Quality: 85%



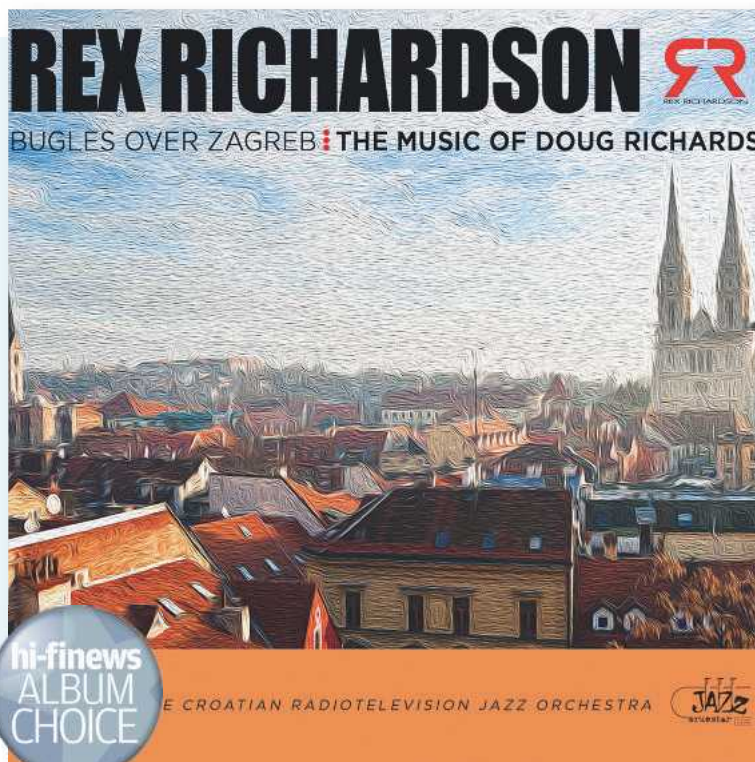
### REX RICHARDSON

#### Bugles Over Zagreb

RRP 88829519081

By accident or design, the barnstorming trumpeter had two albums released on the same day. This one, of music by fellow VCU educator Doug Richards, was recorded with the distinctive Croatian RTV Jazz Orchestra in 2013. 'Intercontinental Concerto' builds on themes from six continents and requires Richardson to play five different instruments, from slide trumpet to piccolo trumpet to flugelhorn. Then comes 'Dukal Bugles', paying tribute to five Ellington trumpet stars. With 'It Don't Mean A Thing' as a homage to Cat Anderson, this really ends on a high note. And the other album? *Blue Shift* [Summit Records SMT 641] has Richardson with his own quintet, featuring saxophonist Steve Wilson, and that's great too. *SH*

Sound Quality: 90%



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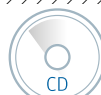
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### SCHUMANN

#### Symphonies 1-4

Scottish Chamber Orchestra/Robin Ticciati

Linn Records CKD450 (two SACDs; downloads up to 192kHz/24-bit resolution)

Those familiar with the full orchestra cycles of, say Karajan, Kubelík, Sawallisch or Szell, might resist the current trend for chamber-orchestra recordings. It would be a huge mistake to forgo Ticciati's very individual interpretations, which rank as among the most insightful to be had (far superior, to my mind, to the recent hard-driven Nézet-Séguin/DG series which others seem to like). Every detail of Schumann's scoring is clear and there's no sense of wanting more in, say the Rhine depiction in No.3. Ticciati opts for the revised Fourth and his reading withstands comparisons with the classic Furtwängler/DG – both slow the trio section of (iii) and I find the SCO tempo convincing. Great SQ as well. **CB**

Sound Quality: 95%



### JS BACH/CPE BACH

Double Concerto BWV1060R; Violin Concerto BWV1042; Violin Sonata BWV1003, etc/ Trio Sonata Wq143

Lisa Batiashvili, François Leleux, Emmanuel Pahud, Sebastian Klinger et al/Bavarian Radio CO

DG 479 2479

The A minor Sonata is centrepiece in this Bavarian Radio co-production disc of modern-instrument Bach. Batiashvili is partnered by her husband François Leleux, playing oboe and in a transcribed excerpt from the *St Matthew Passion* oboe d'amore, and Emmanuel Pahud in the CPE trio sonata. These are all hugely enjoyable performances bathed in a warm acoustic – this is no hair-shirt Bach. It's a shame that current downloads are limited to CD-resolution, but buy anyway. **CB**

Sound Quality: 90%



### BEETHOVEN

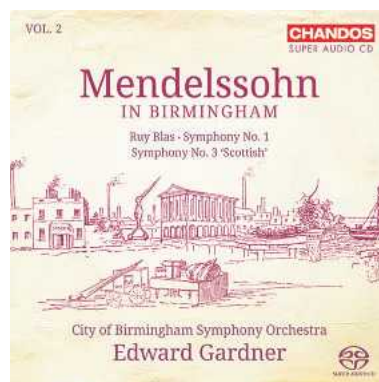
Piano Concerto 5, 'Emperor'; Piano Sonata Op.111

Nelson Freire, Leipzig Gewandhaus Orch/Riccardo Chailly

Decca 478 6771 (downloads up to 96kHz/24-bit resolution)

No 'new clothes' for this *Emperor*, unless you count the prominence of timpani – which is perhaps a surprise after Chailly's stark Beethoven symphony cycle. His rather staccato approach to the first movement contrasts with a certain 'amiability' in Freire's playing. It's all very efficient but in no way revelatory. Nor, alas, is the last sonata (recorded at Teldex) although the sounds Freire makes are enjoyable enough. There's a tougher fibre in the 'jazzy' variation in the second movement but no transcendence in the final pages. Freire promises more Beethoven concertos but not for a long time yet. **CB**

Sound Quality: 75%



### MENDELSSOHN

Overture Ruy Blas; Symphonies 1 and 3

CBSO/Edward Gardner

Chandos CHSA 50139 (SACD; downloads up to 96kHz/24-bit res.)

The second volume in this Birmingham Town Hall series has the same musical and sonic excellence as its predecessor: a fine, cutting brass sound at the start of *Ruy Blas* and precisely located answering strings (although I wish Gardner had opted for antiphonal violins). Mendelssohn was only 15 when he orchestrated, as 'Symphony 1', the 13th of his early string symphonies. We had a fine Cleveland LP recording from Louis Lane, many years ago, and it doesn't deserve its neglect. Edward Gardner takes a spacious view of the 'Scottish' yet, speeding the final coda, avoids the old criticism of 'Victorianism' there. **CB**

Sound Quality: 85%



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## 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

# Show business

The Hi-Fi Show *Live*, held at Windsor's Beaumont Estate, provided audiophiles with a unique one-stop opportunity to savour the finest sounds on the planet. **Paul Miller** shares his dream

Those enthusiasts who braved the uncertain November weather to spend a day with us at the Windsor Hi-Fi Show – the high-end Hi-Fi Show *Live* as we prefer to call it – were treated to some spectacular sights and sounds. From the outset I had a clear vision of what this show was to achieve: if you were an avid *Hi-Fi News* reader, keen to absorb the latest news and exclusive reviews of the world's cutting-edge hi-fi, then this was to be your chance to see, touch and hear this glorious gear in action.

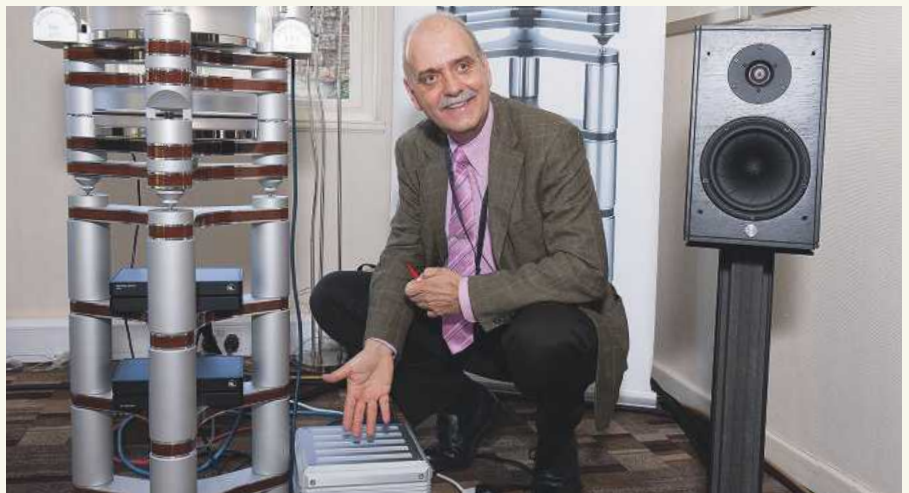
Unlike general event promoters, I've no interest in organising sporting goods shows or beauty pageants in the meantime. The Hi-Fi Show *Live* is *Hi-Fi News* brought vividly to life by people that care about music and the very best audio equipment, and have a lifetime's experience to prove it. And it only happens once a year...

### GROWING FAST

Although the show is only in its second year, we had over 150% more exhibitors and brands attending than last year, requiring an entirely new wing of the venue to accommodate this added influx of big systems. We also opened another satellite building to cater for the best in cables and other accessories.

Such was the demand from the industry's premier brands, this year's Hi-Fi Show *Live* extended over no fewer than five separate zones. I could make the show more compact, and offer a little less legwork on the part of visitors, but few enthusiasts would thank me for squeezing out their particular, favourite soundsmiths. Popular chatter on the hi-fi forums would tend to be in agreement and, if these opinion formers are any

'I was delighted by the sheer number of turntables in active use'



**ABOVE:** Workshops hosted by Matthias Böde from Germany's *Stereo* magazine were a huge hit

guide, clearly the Hi-Fi Show *Live* is the must-visit event on the UK enthusiast's calendar for 2015.

I'll take this opportunity to thank those contributors, and fellow editors, that took the time and trouble to plan and host our *Hi-Fi News* Workshops. We've all attended those 'meet the experts' Q&A sessions at shows but these are often uninspiring and unimaginative. I thought a series of interactive demos hosted by independent commentators allowing visitors to hear the

difference between cables, between MP3 and hi-res music, between old and new releases (*etc*) would be more entertaining. Our exit poll certainly indicated you thought so too, and we already have more of these planned for next year.

### VINYL REVIVAL

Though I'm tempted to reveal what I thought were the best sounding rooms at our show, political expedience forces me to demur. Nevertheless I'm bound to

say that I was delighted by the sheer number of turntables in active use over the weekend. Hawk-eyed visitors will have detected Vertere's acrylic RG-1 in the PMC suite while Ming Da borrowed Funk Firm's top of the range deck with new arm (about £4800 as a package). Townshend was spinning discs on the Rock 7/Excalibur 2 while Pure Sound featured Germany's STST Motus II [*HFN* Jan '14]. And who could have missed the massive J.C. Verdier La Platine taking pride of place in BD Audio's suite?

Another deck that caught my eye was Clearaudio's Master Innovation [*HFN* Apr '14], fitted here with the linear tracking Statement TT1 arm and Goldfinger MC [see p50]. Three decks that premiered at our show and will appear in the pages of *Hi-Fi News* very soon included the sleek C-Sharp from EAT, the spectacular contra-rotating Kronos Sparta and the truly massive Air Force 2 from TechDAS.

### MAKE A DATE

If you missed this year's event then it's never too early to plan ahead for 2015 and reserve the weekend of 24th-25th October for a unique audiophile treat. ↻

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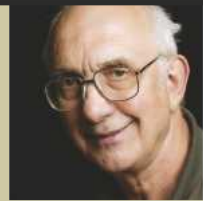
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## Barry Fox Technology journalist

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

# Object of desire?

It has been used in video games for years, but object-based audio is now being trumpeted as the next big thing in cinema sound and could easily be used for music. **Barry Fox** takes a look...

The AV and home cinema world is wetting itself over two new innovations: HDR (High Dynamic Range) and object-based audio. The first has nothing to do with audio. It is a way of increasing the contrast between extreme light and dark areas of a picture. The second innovation does. Instead of using speakers to create an enveloping soundfield, each sound in the field is treated as a separate object, and positioned around and over the listener.

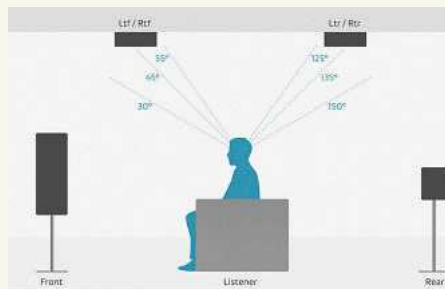
All the demos I have heard so far remind me of the demos of quadraphonic sound in the 1970s and 1980s. Very impressive if you want to bond with Tom Cruise in a spacecraft and zap other spacecraft, or crouch in the jungle during a tropical storm, or sit in the middle of an orchestra.

But this does not mean that object-basing can't and won't be sensitively used for music. The enabling technology is interesting, too. And there's a format war on object-based audio brewing, which should be fun. So I keep going to both the demos and the briefings.

The most interesting recently was given by French high-end audio company Trinnov, which specialises in room correction and

home cinema systems. Arnaud Destinay, Trinnov's International Sales Manager, warns that the two main object-based audio contenders so far, Auro3D and Dolby Atmos, are very different and require completely different speaker layouts. Atmos needs speakers in the ceiling over the listener's head; Auro spreads the speaker positions upwards.

DTS is expected to announce its own system soon. Doubtless this will be different again, and sound even louder. 'It is very expensive for manufacturers



ABOVE: Side view of Dolby Atmos 7.1.4 speaker set-up and (above) the Auro 3D concept

to develop hardware for these systems,' said Arnaud Destinay, 'so at Trinnov we have used our early work on High Order Ambisonics, as the basis for a new approach that creates virtual speaker positions from the physical speakers in a Dolby Atmos layout. We re-shape the soundfield. That way we can get round the Auro, Atmos, DTS issue.'

### BRIDGING THE GAP

There is glorious irony in the fact that Trinnov has gone back to the now largely forgotten UK Ambisonics surround system to bridge the gap between the different object-based systems. Ambisonics was designed to create a seamless soundfield round the listener,

by tailoring the speaker signals to the number of speakers available. At least as so far demonstrated, the object-based demos seem to rejoice in seamy sound-separation.

Trinnov started out in 2003, by designing a surround-with-height system, based on Ambisonics and using 24 speakers. Not surprisingly it was not a commercial success. So the company moved into room correction.

Trinnov's new preamp processors use room correction either for stereo or surround decoding. The demo I saw was

of surround in a high-end cinema. A £250,000 system including a SIM2 3-chip DLP projector, a 16-channel Trinnov Altitude processor (£18,000) and JBL speakers arranged as seven horizontal surrounds, four overhead, and four corner subwoofers, played Atmos material from a Dolby demo disc. The ground shook while spacecraft crashed and burned.

Later, back in the real world, I bypassed three quarters of my 7.1 system and listened to music in stereo, then watched TV with the new sound box I have just bought (yes bought, because I don't want to have to give it back). The Canton DM 50 is a £400 stereo slab that sits unobtrusively under a TV. It doesn't do Atmos or Auro. It just improves the poxy sound that most flat screen sets pee out.

What makes the Canton slab special, apart from the surprisingly gutsy sound, is the clever way it learns the essential audio control signals from the TV's own remote. So once the slab has been connected to the TV by S/PDIF (or analogue cable) and the TV speakers muted, the TV remote controls the slab audio. You just forget it is there.

I recently tried to explain the huge practical advantage of this learning ability to the maker of a rival high-end slab. He just didn't get it.

And I am sure the people who drool over object-based surround will think I am mad to prefer music in stereo. ☹

'The glorious irony is that Trinnov has gone back to the Ambisonics system'

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## 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

# Cost benefit ratio

Once a fixture in every town, the local hi-fi dealer is fast disappearing with the result that shows are often the only way to hear new products. But the cost, says **Barry Willis**, is being borne by us all

**A** subject of continual commentary in the editorial pages of *HFN* is audio's changing retail environment. One does not need a Master's degree in business to recognise that independent hi-fi dealers are a vanishing species.

The situation is particularly acute in the US, where the electronics field is dominated by big-box chains such as Best Buy, and by online giant Amazon.

Ken Kessler has mentioned that the decline of brick-and-mortar dealers has raised the importance of regional hi-fi shows – not merely for hobbyists and shoppers, but for manufacturers.

The annual International CES in Las Vegas is the mother of them all, but there are other substantial large-scale events every month somewhere in the world – which is why our 'Show Blog' sometimes includes coverage of two.

### REACHING THE PUBLIC

Smaller audio-only or combined home-theatre exhibitions are frequent occurrences. Apart from exposure gained via press reviews, manufacturers' only opportunity to reach the public is through these exhibits. A big regional show is a theoretical advantage for both manufacturer and potential buyer.

At a well-attended hi-fi or AV show, an exhibitor may entertain hundreds (or even thousands) of visitors, get some much-desired press coverage, and maybe even sell some gear.

Visitors likewise get to examine and audition products they may have only read about. In fact, regional shows are increasingly the only places where enthusiasts can experience products – dozens more than they could ever find even in the most overstocked hi-fi store.

**RIGHT: The Sony booth at last year's CES in Las Vegas. Sony allocates enormous sums for CES, with a budget that exceeds the annual operating costs of many a small audio company**



This all sounds like a mutually beneficial economic system, until one figures in manufacturers' cost to attend these shows. Huge companies such as Samsung and Sony allocate enormous sums for CES, with stadium-size displays at the Las Vegas Convention Center.

Their budgets for CES alone exceed the annual operating costs of many small audio companies, who if they can't afford a space at the CES-approved Specialty Audio Exhibit at the Venetian, opt for the lower-cost 'outboard' T.H.E. Show nearby, which generates almost as much traffic, and offers the advantage of being open to the general public.

But even T.H.E. Show is an undertaking that can consume a small company's total promotional budget. Like any form of advertising, a trade show is a calculated risk with no guarantee of return. Visitors may or may not become paying customers. Likely they will look for better deals online, or try to buy demo gear below cost on the last day of the show.

This is why some manufacturers have confessed to discouragement about

continuing to attend such gatherings. Four years ago, one American loudspeaker maker debuted his line with a big two-room display at Rocky Mountain Audio Fest, only to find that his startup company elicited minimal interest from the press. Worse, he sold nothing despite four days of excellent demonstrations to crowds of eager listeners.

### THOUSANDS IN THE HOLE

The same year, an Atlanta-based startup reserved a ground-floor ballroom at the AXPONA show in that city's downtown Sheraton. They got unanimous praise from a continual stream of visitors, but made not one sale.

The exhibitor saved money on travel and hotel because the show was in his hometown, but the company still went several thousand in the hole. The hole could have grown to inescapable proportions had he exhibited at any of the half-dozen big shows scheduled that year in North America alone.

It's the kind of hole that looms large for audio companies of all sizes. The combination of trade show expense and audiophile reluctance to embrace new brands is a root cause of the price inflation that's plagued this industry since the dawn of the commercial internet. ☹

'A regional show is an advantage for manufacturers and potential buyers'

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Naim NAC42/NAP110 combo, boxed great	used	549
Naim NAIT 5, excellent remote boxed	used	599
Naim NAC62S/NAP140 chrome bumper, vgc+	used	349
Naim NAC90/NAP92, vgc	dem	2499
Naim Super Uniti, vgc boxed	used	399
Naim NAC 102, vgc boxed	used	399
Neutonia Salis Integrated, dassy Restek built	used	399
Onix OA32 Integrated, excellent	used	299
Onix OA25 Integrated, excellent	used	399
Pathos Logos Integrated	dem	1999
Placette Audio Passive Linestage	dem	599
Prima Luna Prologue 3 Preamplifier vgc+	used	649
Prima Luna Prologue 2 Integrated, good shape	dem	749
Prima Luna Prologue 3 Preamplifier, REDUCED	dem	749
Prima Luna Prologue Premium Preamplifier	used	1199
Puresound L300 valve preamp	dem	3599
Puresound L10 preamp	dem	1399
Quad 66 Preamp, excellent remote	used	349
Quad 99 Pre/Power, excellent, remote, Quadlink	used	649
Quad 405, from	used	199
Quad 33/303, vgc, excellent	used	299
Quad 34/306 late grey versions	used	299
Rega Brio 3, excellent boxed	used	399
Resolution Audio Opus 21 S80 Integrated	dem	499
Roksan Kandy K2 Power, nr mint boxed	dem	499
Roksan Kandy K2 Integrated, nr mint boxed	dem	499
Rogden Masterclass Monoblocks, in titanium	used	3999
Sugden A21a line Integrated	used	999
Sugden A48mk2 line reasonable condition	used	149
Sugden Masterclass Pre/Monos in Graphite	used	6499
Sugden Masterclass Pre/Monos in Titanium	used	6499
Sugden Masterclass Integrated in Titanium	dem	2749
Sugden A21SE in Titanium, boxed, excellent	used	1399
TagMcLaren 60iRV, excellent boxed	used	299
TEAC Distinction A1000 Integrated, ex demo	dem	599
Unison Research Simply Italy Integrated	dem	999
Unison Research Simply Italy Integrated	dem	999
Yamaha A-S3000, nr mint boxed	dem	499

## Digital

Arcam CD72, excellent remote boxed	used	99
Arcam Alpha 8, excellent	dem	1999
Arcam CD17, as new boxed	dem	899
Arcam Alpha 7, remote, excellent	used	499
Arcam Alpha 8se, excellent boxed	used	129
Arcam CD127, excellent remote	used	3999
Arcam CD73, excellent boxed	dem	3999
Arcam CD37, excellent	dem	7499
Arcam Alpha Plus, excellent	dem	379
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Audio Analogue Maestro SE CD	dem	14299
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Bryston DAC/Streamer	dem	1999
Chapter Audio Sonnet CD & Nevo remote	dem	499
CED TL51XR, lovely belt drive unit	used	849
Chord 'One' CD player	used	1749
Chord Qute EX DAC, excellent boxed	used	2499
Consonance CD120 Linear	dem	1999
Consonance CD2.2 Linear MK11	new	1299
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Naim CD5, remote, SNAIC excellent	used	499
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Naim CDI, excellent boxed	used	1199
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Prima Luna Prologue 8, ex demo boxed	used	499
Quad 99CDP, excellent REDUCED	used	549
Rega Planet 2000, excellent	used	599
Rega Apollo R, excellent	used	349
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Rotel RCD02, vgc	used	399
Sugden Masterclass CD original version	used	399
TAG McLaren DAC 20, excellent	dem	1999
TEAC VRDS7, excellent remote	dem	599
Technics SL-PS900, remote manual	used	649
Tube Technology Fulcrum CD transport	dem	749
Tube Technology Fulcrum DAC (inc DAC64 chip)	dem	749
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YBA GC-10, ex boxed, £1600 new, BARGAIN	dem	1399

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Audeze LCDXC excellent	dem	899
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Call Totem Mitt in mahogany, excellent	dem	249
Call Totem Staff	dem	999
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Elemental Audio speaker stands	dem	799
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B&W 804s, excellent boxed in cherry	used	1999
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Castle Harlech, excellent boxed	used	399
Diapason Ares	dem	999
Elac BS243, excellent boxed monitor	dem	699
Eminent Technology LFT8, some marks	used	499
Epos M22 in Cherry	dem	549
Final 400 Electrostatics with ES400 Sub	dem	999
Focal Electra 1008, mint boxed	dem	2249
Focal Electra 1028, mint boxed	dem	2749
Focal Electra 1038, mint boxed	dem	3999
Gradient Intro, excellent condition, bargain	used	249
Hecc Celan 500 in Silver	dem	499
Hecc Celan 300 in Mahogany	dem	399
Hecc Statement in gloss black, E3k new	dem	1499
KeF Q100, brand new, sealed box	new	249
Kudos C10, boxed vgc and cheap	used	999
Kudos X2, vgc boxed	dem	799
Leema Xandia Mk1 in black	new	2499
Leema Acoustics Xero, vgc+ boxed, REDUCED	used	299
Leema Xero in Mahogany	dem	349
Linn Kar, boxed, fair	used	199
Linn Sara in cherry with stands/grills	used	349
Linn Index with KuStone stands, vgc+	used	99
Living Voice IBX R2 in stunning Zebano, excellent	used	2249
Magneplanar MC1.6, superb, boxed	used	999
Mark & Daniel Maximus with trble extenders E2500sh	dem	999
Mark and Daniel Topaz in White inc, Marble cabinets	dem	749
Mark and Daniel Mini in Grey inc, Marble cabinets	dem	699
Martin Logan Mosaic, excellent boxed	used	699
Martin Logan Quests, superb sound, reduced	used	1299
Martin Logan Source SE real wood veneer, ex boxed	dem	999
Martin Logan Prodigy, excellent	used	3499
Monitor Audio PL300, near mint	dem	3999
Monitor Audio GX50, near mint boxed	used	599
Monitor Audio GX300, near mint boxed	dem	1999
Monopulse Model S	new	699
Monopulse Model A speakers	new	1499
Monopulse Model C	new	399
Naim Ovator S400, excellent	dem	3499
Naim Credo, excellent	used	399
Naim SBL, vgc+	used	699</



## 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

# Mesmerised by mono

The arrival of a Beatles box set of mono LPs has **Jim Lesurf** comparing the discs with his memories of the originals and investigating a quirk or two when it comes to the quality of the pressings

**B**ack in July 2014, I was told that the BBC would be running some experimental live four-channel surround sound internet streams of that year's Proms. My plan was to listen to them and analyse their technical quality. However, I found myself engrossed in something rather different: mono LPs! Not four channels, just one.

One reason for this was that I had been buying quite a few secondhand mono LPs. But these were joined by a newcomer, *The Beatles In Mono* box set of LPs [see *HFN* Dec '14].

I still have copies of the original Beatles LPs from the 1960s. However these have suffered from repeated playings on a Dansette 'spiral lathe'. The stereo copies I bought later on have survived in better condition. So in practice I've tended to play these.

When the CDs were initially released I was quite happy that the first four were in mono. However, when the CDs were re-released I bought the new stereo versions of the first four out of curiosity.

### ONE MORE TIME

Until recently, that was it. I didn't intend to buy any more 'new versions'. But I weakened when the box set of the Beatles US albums appeared on CD. These are fascinating because of all the ways Capitol dropped tracks and changed their running orders.

When the new mono LPs were announced with the promise of an 'all analogue production chain from masters to cutter' I decided to lighten my wallet one more time...

Unlike some reviewers, I didn't receive the box set as a special pre-release handout. It wasn't delivered to my door by any industry big-wig, so there was no

**RIGHT:** Newly mastered from the analogue master tapes, the 14LP *Beatles In Mono* box set released on the 8th of September 2014. The LPs are 180g vinyl and are accompanied by a 108-page hardbound book



chance that I'd be given versions that had been made or checked with more care than the ones the rest of us buy, retail.

At the time of writing I've not played them all. However I'm certainly enjoying them. How much of that is nostalgia re-visited, I don't know. But I now at least have a set of the mono LPs un-touched by a Dansette! And so far the discs I have played sound pretty good indeed.

The pressing quality seems rather better than my recollections of the EMI 1960s versions. Alas, despite the 180g vinyl

'Despite all the public relations puffery, the discs I have aren't perfect'

and all the public relations puffery about the care with which they've been made, the discs I have aren't perfect. They are reasonably flat, but some sides have noticeable ripples or are pressed sufficiently off-centre to cause the arm on my deck to move in and out – even though the resulting 'wow' isn't particularly noticeable when listening.

One particular quirk I've noticed occurs on Side 4 of my copy of the 3LP 'Mono Masters' set, which provides mono versions of songs that aren't on the original LPs. When playing this, the arm jumps sideways

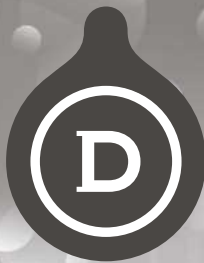
about twice per revolution during a large part of the side. It's a bit like the effect of abrupt ripples, but causing movements in the radial – ie, horizontal – direction, not up and down.

Looking at this I wondered if the cutter head hadn't been moving smoothly inwards to the centre of the disc. It's as if it was repeatedly 'jerking' inwards. I examined the audio produced and the period between jumps isn't actually twice per revolution. And other LPs' sides don't have this quirk when played. So my turntable is not at fault.

### TRUSTY SHURE

Fortunately, the behaviour is inaudible as it only produces waveform effects well below 10Hz at a low level. And as usual, my trusty old Shure V15/III cartridge tracks without complaint, even though the modulation levels cut on the Mono Masters sides is distinctly higher than those on the other LPs I've tried so far.

Do these LPs sound better than other versions? I can't answer that because I suspect it depends on what you like and what you're used to. I'm enjoying the LPs, and I can't say I'm bothered by my having failed to check out the Proms in surround sound. For now, Beatlemania and monomania rule. ☺



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## Christopher Breunig Music Journalist

Christopher Breunig trained as an architect but became won over by music and collecting classical recordings. He was *Hi-Fi News*' Music Editor from 1986-2000

# All in a spin?

Record companies and orchestras are seeking different ways to market classical music – although the silver disc is still there as the alternative, and hasn't disappeared yet, says **Christopher Breunig**

A few months ago, two classical labels started uploading new releases (at 44.1kHz/16-bit resolution) to a reviewers' MPE Player so we had instant access rather than having to wait for the companies' press officers to forward orders to the warehouse, which were then processed and CDs sent out by courier.

Apart from the cost-saving, and the fact that it was 'greener', it also meant we might try music we'd not normally think of reviewing – with me it was the lively *El Maestro Farinelli* album reviewed in *HFN* November.

And guess what? Other writers didn't care for the scheme and it's probably about to fizzle out... For readers, however, there have been welcome changes in marketing 'green' music and at better-than-CD resolution.

### BUT SHOP AROUND FIRST...

Whereas Decca and DG licensed downloads used to be of older material only, now we can find most new classical releases listed at 96kHz/24-bit quality – albeit with a few territorial restrictions imposed on UK purchases. But you do need to check on prices before plumping, say, for either Highresaudio

or HDtracks downloads: the latter company is significantly cheaper in some cases.

Even more welcome news is that Hyperion has reached an agreement to sell LSO Live material – and the price is currently much lower than via The Classical Shop (typically £9.75 vs. £13.99). Again, it's the more recent releases that have the higher resolution; but you can check the full listings at <http://www.hyperion-records.co.uk>.

Another record label now selling downloads is the German company Audite, with interesting archive material (eg, from the Lucerne Festivals) and new productions. These are 48kHz/24-bit FLAC.

With Hyperion, Linn (which now only sells its own recordings), Channel Classics, eClassical, and The Classical Shop, you can buy single tracks. One hopes that Highresaudio will also 'see the light', as it's frustrating there to be unable to select just one work from a coupling, or set.

You might like, for example, to pick and choose Schubert piano sonatas from the new Barenboim box (11 works). And, as I wrote in my Karajan Classical Companion [*HFN* Dec '14], there's a recently discovered stereo Beethoven Ninth Symphony in the 1950s Philharmonia cycle, now on Warner Classics, that really ought to come separately for those who have long owned the EMI LPs/CDs.

The Berliner Philharmoniker launched its first release a few months ago, taking a scatter-gun approach with its Schumann symphonies – Rattle opting for the original Fourth scoring rather than its revision – with two CDs, a Blu-ray audio disc and a



PHOTO: MONIKA RITTERSHALIS/DCG

**ABOVE: Barenboim conducts his Berlin Staatskapelle: new DG recordings are available at 96kHz/24-bit resolution**

download provision via its website – both of these are at 96kHz/24-bit resolution [BPHR 140011, €49/90]. And now there's a 180g vinyl edition too, at €139.

### A 'FUTILE GESTURE'?

The London Philharmonic has also reacted to the idea that there's still a demand for *vinyl*. The four Brahms symphonies, under principal conductor Vladimir Jurowski, are in a limited edition 4LP boxed set [LPO-LP906].

We also have from Chandos a 180g transfer of

one its most important Richard Hickox recordings: the original 1913 score for Vaughan Williams' 'London' Symphony (No.2), sanctioned by his widow as a 'one off' and recorded with the LSO in Dec 2000 [ABRD 9902]. And from Linn, Ingrid Fliter's new Chopin *Préludes* [CKH 575].

Whether these are a portent or merely – in the words of the immortal Peter Cook/Jonathan Miller RAF sketch – a 'futile gesture', only time will tell. ☺

'The LPO has also reacted to the idea that there's still a demand for vinyl'



**ABOVE: This Dec 2000 recording has been reissued by Chandos as a 180g vinyl disc**

# NO YELLOW POLKA DOTS



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## 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

# Tales from the Vault

It seems there's little to touch Concert Vault as a source for live music videos, says **Steve Harris**, especially as it has now released a wealth of iconic performances on its YouTube channel for free

**W**e don't have to go to record shops any more, we just search the internet. Or, a lot of the time, we don't even have to search, because the providers contact us. We do still have to go out if we want live music, but the temptation to stay at home becomes ever greater...

In July 2014, the web-based Concert Vault operation released an astonishing 17,000-plus live-gig music videos from its archive on its YouTube channel. These were single-number performances but now whole concerts have been added, ranging from Crosby, Stills & Nash in fuzzy 1973 black and white to the colourful Stones in 1981, or Neil Young from 1989. You can see Bruce Springsteen doing 'Santa Claus Is Coming To Town' during a show in 1978 or even, jaw-droppingly, sit through a whole hour of Slade from 1975.

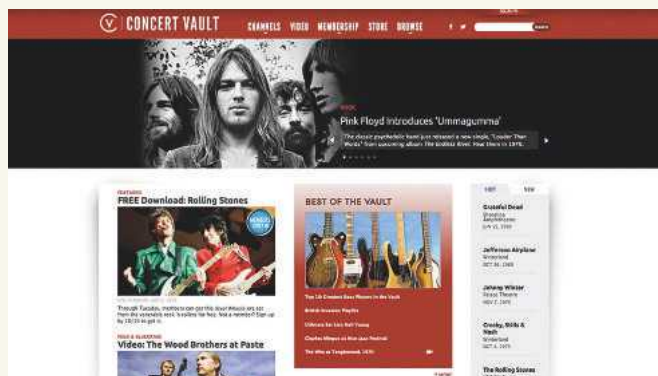
### STAGGERING RANGE

If you just want the music, you can already download thousands of complete concerts by signing up as a Concert Vault member. And the range of material now on offer is staggering.

Concert Vault grew out of [www.wolfgangsvault.com](http://www.wolfgangsvault.com), which was set up in 2003 by Minnesota businessman Bill Sagan, and named to honour the late impresario and promoter Bill Graham, whose organisation had provided the material.

Born in Germany in 1931, Bill Graham's given name was Wulf Grajonca, but he was nicknamed Wolfgang. As an orphan child refugee, fleeing from the Nazis in 1941, he was fostered and educated in New York from the age of ten, and anglicised his name at 18. He completed a business degree, and served in the Korean war.

**RIGHT: The Concert Vault website can be found at [www.concertvault.com](http://www.concertvault.com) and splits its content into eight channels ranging from Rock to Bluegrass to Comedy. Paypal is accepted and the site offers a three-day free trial**



Moving to San Francisco in 1965, Graham first managed a theatre troupe but soon became a successful concert promoter, associated early on with artists like The Grateful Dead, Jefferson Airplane and Janis Joplin, and later with countless others who performed at his Fillmore and Winterland venues.

Graham recorded thousands of concerts and stored the tapes in the basement of his office building. Also stored were vast quantities of concert posters and promotional items. But in 1991 he was

killed in a helicopter crash. After Graham's death, the archive changed ownership several times, but nothing was done with the material until 2003. Then it was bought, reportedly for around \$5 million, by

Sagan, who was a successful entrepreneur in the healthcare field, through his company Norton LLC.

He set to work digitising the tapes and launched the Wolfgang's Vault website. As well as downloads from the 'Concert Vault', it offered an incredible range of vintage posters from the hippie era along with T-shirts and other memorabilia stocked in its warehouse.

Sagan went on to acquire other live-recording archives for the 'vault',

adding material from the Newport Jazz and Folk Festival in 2010, and more recently a country music archive.

With its membership-based business model now established, Concert Vault became a separate website in 2012, though it's still linked to Wolfgang's. For a modest \$39.99 a year, or \$3.99 a month, you can listen to concerts free and download them for, usually, \$5.

Even so, as Sagan told CBS News in a 2013 interview, the website still only offers between 10 and 15% of the recordings the company owns, so there are plenty more to come.

### EMERGING ARTISTS

Sagan is clearly passionate about live music. In 2008 he also acquired another website, Daytrotter, 'the source for new music discovery'. Here, once you've paid your membership, you get free music and video downloads of tracks from emerging artists, 'recorded live, that capture the heart of their music at that moment in time – dirty and alive.'

No-one can guess what might have happened to the thousands of tapes in 'Wolfgang's' incredible archive if Graham himself had lived long enough to see the internet take off. He'd surely have exploited them the best way he could.

But would he have the, er, sagacity of Sagan? Or would he be trying to do it all in hi-res, rather than 320kbps MP3? ☺

'Graham stored tapes of thousands of concerts in his office basement'

## 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.

## STRANGE SIDE EFFECTS CHANNELS TRANSPOSED BETWEEN LP AND CD

A puzzle and an irritation. I recently bought a re-issue CD of three Thelonious Monk albums. On one of these – an album I already have on vinyl – I realised in just minutes that the left/right balance on the CD was opposite to that of the LP! I double-checked, and there it was: what was coming from the left channel was now coming from the right, and vice versa.

I then decided to compare some other LPs that I also have on CD. I also triple-checked using my old Shure *Audio Obstacle Course* LP, which contains a channel orientation test.

After this, I'm convinced that my system is correctly set-up and not out of phase, at least when it comes to the phono playback. And given the near-impossibility of running two separate CD cables to the wrong connectors on the amp, the issue can hardly lie there.

Can it be that digital remastering of LPs sometimes leads to the inadvertent switching of left and right channels? Is this possible? If not, what other explanation is there of this exasperating phenomenon?

*A T Winterbourne, via email*



**ABOVE:** Thelonious Monk at the keys in 1947 at Minton's Playhouse in New York



**ABOVE:** The *HFN* test LP costs £24.99 from [amazon.co.uk](http://amazon.co.uk) and other vendors

Steve Harris replies: It's entirely possible that the tracks got switched somewhere in the dubbing process. Or maybe they were the wrong way round on the LP in the first place. Stranger things have happened. You can find, for example, CDs with incorrect tracks or tracks in the wrong order. If there's any doubt about your CD wiring, you can find channel identification tracks on many CD test discs, including the ones produced by *Hi-Fi News* many years ago. And readers shouldn't forget the *HFN* test LP for checking vinyl set-ups.

On a more general level, channel switching (left and right) shouldn't be confused with 'in phase' and 'out of phase'. Out of phase means that the 'plus' and 'minus' connections of one channel are the wrong way round, so that when the speaker cones vibrate back and forth to produce sound waves, one cone is moving backwards while the other moves forwards, instead of both pushing together.

The Shure *Audio Obstacle Course* LP has a great phasing test, and on this you should easily hear that when the channels are out of phase, there isn't a clear central sound image, but sound is diffuse and vaguely spread behind and around the speakers.

## New MC for GyroDec/SME

CARTRIDGE SUGGESTIONS SOUGHT WITH £500 TO SPEND

I have a Michell GyroDec equipped with an SME V tonearm and am now looking for a new cartridge to replace a Denon DL-304 moving coil, which I find to be lacking in bass.

I much prefer the sound of MC cartridges and I enjoyed a Goldbug Briar for many years, until the suspension collapsed and a 'specialist' informed me that it wasn't a good cartridge in any case (though it appeared to be good enough once I'd sold it to one of his pals who, having repaired it, then resold it for four times what I had originally paid for it). I also had a Coral MC82 with a VdH stylus and that was a real surprise. It had a lovely rich yet detailed sound, but unfortunately it was later damaged.

I listen to all types of music, but powerful over-produced '70s rock and pop, and romantic classical complete with organ, are my real



**ABOVE:** Ortofon Quintet Bronze MC – bang on budget

favourites. I need a cartridge with a solid bottom end, even a bit of 'bloom', but it isn't exactly easy to get demonstrations.

Can you recommend a cartridge to suit? I'd love a Koetsu Red, as it appears to fit the bill perfectly, but it's far beyond my £500 budget.

*Michael Merry, via email*

Adam Smith replies: Michael, £500 will buy you a very fine MC indeed. The Ortofon Quintet Bronze comes in bang on budget at £499 and is a cartridge with a solid bottom end. Another favourite at around the same price is the Audio-Technica AT-OC9/III. It can rock with the best of them, but is a little more forthright in the treble than the Quintet, which is something to bear in mind.

Finally, does it absolutely have to be a moving coil? I ask because, if it were my £500 I would be seriously considering the Ortofon 2M Black. It may lack the cachet of an MC but it shares a stylus with the £1200 MC Jubilee and sounds sublime.

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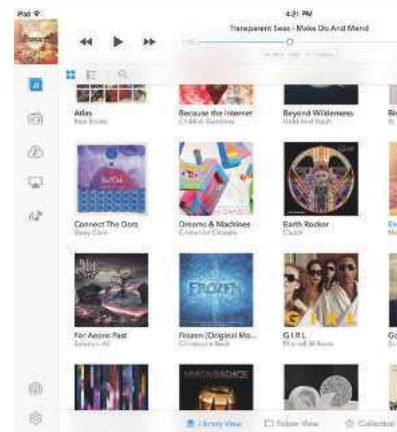
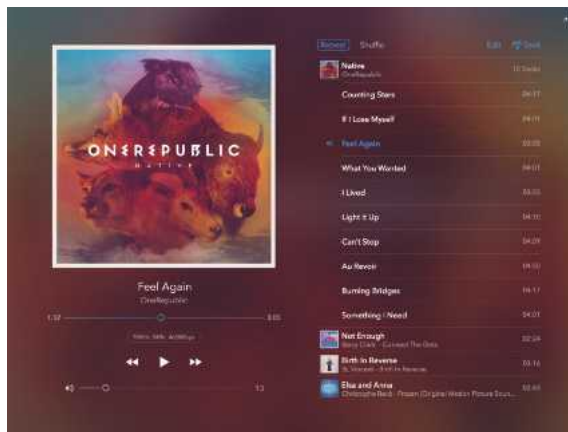
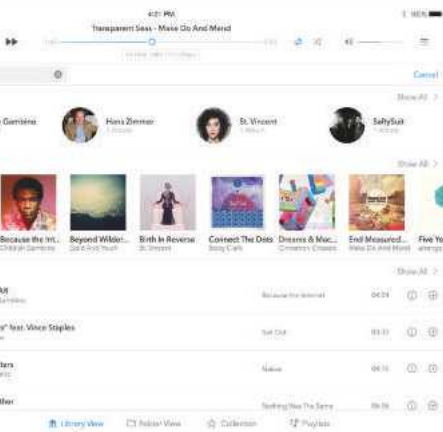
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The ARIES serves as a "bridge" between music files on network storage or high quality online streaming services and your DAC — enabling DACs for the first time to stream high-resolution music quickly and wirelessly in virtually any sampling rate, including DSD, Double-Rate DSD and DXD. It is powered by AURALiC's proprietary Tesla hardware platform that includes a Quad-Core ARM Coretex-A9 processor running at 1GHz, 1GB DDR3 onboard memory and 4GB internal storage. The Tesla platform has a calculation ability of 25,000 MIPS, more than enough to decode a vast spectrum of audio formats, including AAC, AIFF, ALAC, APE, DIFF, DSF, FLAC, MP3, OGG, WAV, WV and WMA. ARIES as well as all other Lightning based products support several advanced functions such as on-device playlist that allows control software to turn off during play and complete supporting of multi-room, multiple control points.

## LIGHTNING DS

Multi-Room Streaming Control Software



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# audioemotion



# Pinch wheel plea

READER SEEKS REPLACEMENT PART FOR TANDBERG REEL-TO-REEL

I remember reading of the problems Jim Lesurf had with his Tandberg 3041X tape deck [see *HFV* Apr '13]. I have a Tandberg 3641 and, like Jim's deck, this now has a pinch wheel that is disintegrating. I bought the machine in 1976, so it has done well.

Does Jim know of anyone able to fix this problem? I also have a lot of tapes I still enjoy.

*James B Beaumont, Berks*



**ABOVE:** Tandberg's 3000-series reel-to-reels were available through the 1970s

Jim Lesurf replies: Your best bet is to contact Mike Solomons of London Sound (see [www.londonsound.org/repairs.htm](http://www.londonsound.org/repairs.htm)). Having talked to Mike about the state of my machine I came to the conclusion that it probably needed a lot more work than just a new pinch wheel. Seeing that the cost was going to be high I haven't been able to decide if it makes sense to spend hundreds of pounds on a full 'restoration' so have shelved the decision.

I also have a later model Tandberg, which needs other work. So as things stand I'm wondering if I could use parts from one of them to get the other into working condition myself! Alas, the main part I have been unable to put my hands on so far is the vital 'round tuit'...

# Vintage vinyl

HAVE YOU TESTED THIS COMBO OF CLASSICS?

Has *Hi-Fi News* ever reviewed the Garrard 401 turntable, SME 3009 Improved arm and Shure V15 III cartridge combination as a 'Vintage' feature? I ask because I have recently hooked up this front-end to my Krell KSA 100 amp after taking my Sony PS-B80 Biotracer turntable out of service to recalibrate it. The Sony was an ex-demo deck that came with two XL-55 Pro MC cartridges and a HA-55 step-up amp.

I was very impressed with the 401/SME/Shure combo as the PS-B80 was itself a revelation and a tough act to follow. Both vinyl set-ups are so good that I've stopped listening to digital, even though I have a North Star Essensio DAC! My phono stage is a Graham Slee Era Gold and speakers are Wilmslow Audio Allegro Platinum.

*Mark Kelsall, via email*



**ABOVE:** The Garrard 401 in our July '10 issue and Shure V15 series in July '12

Adam Smith replies: We have indeed covered the Garrard 401. Haden Boardman examined it thoroughly in the July 2010 issue and I'm delighted that you are one of the many people who have been converted to the charms of this

magnificent machine. We also covered the V15 III cartridge. This was part of an overview of the Shure V15 series published in our July 2012 issue. I am a fellow 401 owner and mine is currently awaiting a new plinth before it is pressed back into service. Fortunately, I also have a 301 for when I need my idler fix!

As to the Sony, it's another very fine turntable and I also have one in the Smith turntable collection. I'm very envious that you have the full set-up including cartridge and head amplifier, though, as I'm still searching for an XL-55 for mine!

# Lanes On Your Entertainment Superhighway



RJ/E Forest



RJ/E Cinnamon



RJ/E Vodka



RJ/E Diamond



Cat 600 Pearl



Cat 700 Pearl



Cat 700 Forest



Cat 700 Carbon

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.

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## The first transistor amp

WHICH WAS THE FIRST COMMERCIALY AVAILABLE MODEL ON THE MARKET IN THE UK?

Firstly, thanks for an excellent magazine. In your reprint of R Hindle's 1970 article entitled *Choosing An Amplifier* [see *HFV* Dec '13] the Richard Allan A21 is said to have been the first transistor amp 'launched onto the UK market'.

My father was a great lover of music and had a transistor amplifier branded as a 'High Definition Sound' amplifier. He died in May 1967 so this certainly predates the April 1968 launch of the A21. His brother even took one to Malaysia with him.

Of course, it may have been an amplifier that was not commercially available, but he must have bought it in 1966 or early 1967. Maybe you have more information?

*Ian McPherson, via email*

John Howes replies: You are quite correct with the timeline of your father's early stereo transistorised amplifier.

The first commercially available fully transistorised stereo amplifier was manufactured by Radon in 1962. This integrated 10W per channel amplifier utilised Mullard AD140 germanium power transistors in its output stages.

Harold Leak introduced his first fully transistorised integrated stereo model in December 1963, the landmark Stereo 30, which started the solid state revolution in the hi-fi industry. The confusion with the Richard Allan A21 amplifier has arisen because this was the first transistorised Class A design, which appeared on the UK market in 1968.

Tim Jarman replies: Transistor amplifiers for hi-fi stereo applications started to appear in quantity from respectable manufacturers in the 1963-1964

season. Class A designs were far less common due to the thermal instability of germanium power transistors, which were the only type available to begin with. Too much heat often led to a disastrous situation called 'thermal runaway' which would see temperature increase in such a way that it would change the conditions in the amp with the result that the temperature would rise even further.

As for the A21, it was first unveiled to the public at the 1968 Audio Fair, which was held at the Russell Square Hotel in London in April that year. The April-dated issue of *Hi-Fi News* ran a show preview, which stated that Richard Allan was to offer 'one of the show's most interesting departures by entering the amplifier field with two Class A transistor systems. The designer behind this project is James Sugden, known to readers through his various articles on the subject.'

The two systems were the A21, which was priced at £52 without a wooden sleeve, and the more powerful C41/A41 pre/power amplifier duo.

The issue of *Hi-Fi News* cover-dated June 1968 carried a report on the April show. This included the following: 'The A21 and A41 Class A transistor amplifiers caused a considerable – and perhaps predictable – flurry of technical interest; in fact this comprised one of the few genuine new developments of the festival. The sounds produced were certainly extremely clean and easy...'

On a historical note it should be remembered that the hybrid car radios of the late 1950s, which used valves in their receiving sections and a transistor for the final power amplifier stage, were frequently single-ended Class A in design. This was to save on transistors, which were very expensive at the time.



ABOVE: The Richard Allan A21 was the first Class A transistorised amp on the UK market

## 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.

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# Computer audio conflicts

WHY UPGRADING PC HARDWARE HAS MEANT HEADACHES FOR THIS MUSIC LOVER

After the problems I described in my letter published in the August 2014 issue of *HFN* I now have my Raspberry Pi working with a 24-bit/192kHz Wolfson Audio Card. This is thanks to the updated Raspbian operating system now available for download at <http://downloads.element14.com/wolfson/...master.zip>. After installation of the OS the default music player is ready to play and even comes with some hi-res samples from HDtracks.

The sound quality exceeds that of my M2Tech HiFace Two S/PDIF USB adapter, which is twice the price of the whole Raspberry Pi combination. The downside of the Pi is that 24-bit/192kHz digital replay takes most of its processing power and it can stutter the moment you ask it to do anything else.

After being so negative about this set-up I'm pleased to be able to reassure other readers who might be thinking of taking this route to digital music replay that it does in fact work well. But, as I have said before, only if you know how.

And that is my point. My frustrations with computer audio always come down to the failure of devices to work together. For example, I recently changed my main music computer to a new low power 'Quiet PC'. The result? My HiFace Two USB adapter wouldn't work with it. After updating drivers on the PC and searching online forums for advice, I was none the wiser. I then emailed the

Italian manufacturer and was directed to a firmware upgrade that I was able to download online. Problem solved. But only after much 'Googling' and time wasted seeking other owners of the HiFace who might have found a solution to the problem and posted it online.

Meanwhile, my Quiet PC has a Blu-ray player, the first I've owned. I have three Blu-ray movies in the house but the Blu-ray player won't play any of them. Why? Because they are copy protected. I only want to play my paid-for discs but someone somewhere has assumed I will copy them.

There are 'fixes' out there, but I won't be diving in. I'll just abandon Blu-ray, which means no revenue for the makers of those discs, in favour of DRM-free downloads where I have already spent hundreds of pounds and am not owned, controlled or assumed guilty of the intention to infringe copyright.

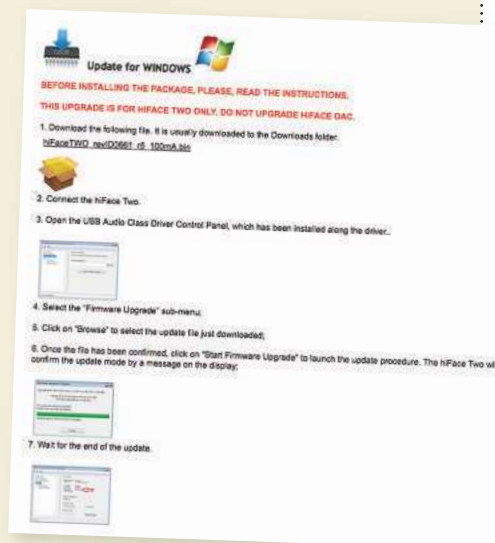
I'm confused about how much a simple music lover is expected to put up with, or know about, when it comes to all these ever-changing twists and turns.

*Paul Williamson, via email*

Jim Lesurf replies: I'm pleased to hear that Paul's frustrations with the Raspberry Pi and Wolfson card have been resolved. As for ancillaries not working with new or replacement components, this can occur when hardware manufacturers don't support openly agreed standards for protocols such



ABOVE: The M2Tech HiFace Two USB converter costs £140 from [www.russandrews.com](http://www.russandrews.com)



ABOVE: For HiFace Two firmware upgrades navigate to [www.m2tech.biz/it/hiface2.html](http://www.m2tech.biz/it/hiface2.html)

as USB Audio. As I've said before, this can catch out anyone as soon as they make a simple change or update.

However, I have some sympathy for the makers of 'add on' equipment because of Microsoft's failure to support Class 2 transfers by default. There's blame on both sides here and the problems will endure until both parties get their act together.

For Windows users the problem shows up as drivers. For Linux/RO users the problem shows itself as devices that don't bother with the standards and just aim at the then-current Windows system. This is all compounded by companies treating the details of how their device works as 'secret'. Hence making it hard for anyone else to fix.

The exception is the RPi and Wolfson. The RPi is primarily produced for people to experiment and learn. The makers of the RPi didn't expect Wolfson to come along with its soundcard, but once it came onto the market the developers of Raspbian updated their OS to help. They were able to do this because interface details of the Wolfson were made available. Everyone involved wanted to make its use easier. So sometimes the user is caught out because things change for good reasons. Other times it's down to 'secrecy' on the part of manufacturers and their failure to follow relevant standards, which would avoid problems arising in the first place.

By the way, I also share Paul's dislike of the approach the big media companies have taken to protecting intellectual property, and not just when it comes to Blu-ray. I also resent the way the makers of DVDs assume me to be criminally-minded and force 'scare and nag screens' on me before I can watch a film that I've paid good money for!

# The 'lost' Quad power amp

WHY SO LITTLE IN PRINT ABOUT THE DESIGN AND EVOLUTION OF THE COMPANY'S 606?

I really enjoy reading the superb retro pieces in *Hi-Fi News*. There appears to be very little in print regarding the design of the Quad 66 series, in particular the development of the 606 amp from the 405, and its further evolution into the 707 and 909.

Designer Jan Ertner seems to be very backwards in coming forward about his involvement with Quad but his huge contributions over the last 27 years have been overlooked.

*Richard Clewes, via email*

Tim Jarman replies: While the Quad II, 303 and 405 were dominant products in their particular sector, the company's later series never repeated this feat. This means that examples of the 606 of the required quality on which to base a *HFN* Vintage Review are very much more difficult to find than the 405 and its predecessors. This is the reason for its non-appearance so far.

Steve Harris replies: Perhaps it's not surprising that there isn't much in print about the progression from 606 to 707, because this happened at a time when the company's energies were still focused on the completion of a new system range, the ill-starred 77 Series.

By the early 1990s, Quad still had a unique reputation and a niche in the market, but long since had lost its once-unassailable position as a dominant force in British hi-fi. So the 77 Series was conceived as a leap forward into the brave new world of the CD era. It was to be a complete integrated system, with CD player and tuner under full remote control. It was intended to be idiot-proof, a high-quality system for non-techy music lovers rather than for finicky audiophiles. But the

project was perhaps too ambitious for a small, old-school British hi-fi manufacturer to complete successfully.

The first model in the series, appearing in 1994, was also Quad's first integrated amp, and it looked very different from any previous Quad unit, even the remote-control 66 preamplifier, because the fascia now sported a display window and row of seven buttons. All controls were to be duplicated on the large system remote, which, as a concession to tradition, would in fact have a rotary volume knob. The circuit design, by Jan Ertner, did not use a current-dumping power stage, but relied on new-generation devices to give very low distortion while working in Class B.

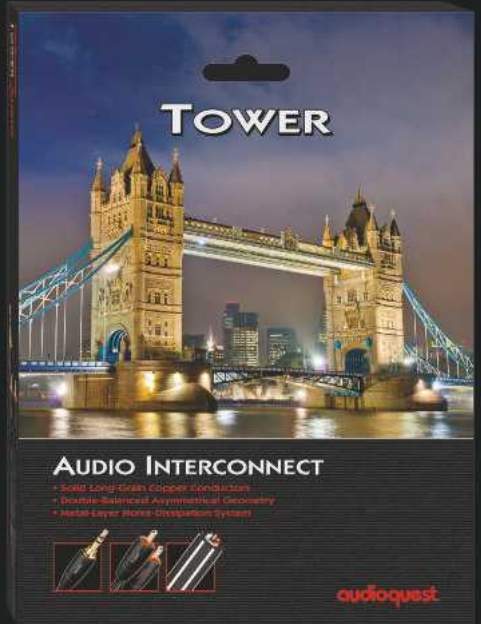
The system should have been quickly completed by the appearance of the matching CD player, tuner and remote, all to be connected and controlled via the Quadlink bus. But there were long delays, particularly in the software development, which undermined both the 77 Series and the company of that era.

The old 66 Series products were out of production, but the new CD player and revised remote weren't available yet either. So essentially, there was a period in which the company had little to sell, impacting its financial results. By the autumn of 1995, Quad had been acquired by the Verity group.

Later, Quad's fortunes were revived when it was acquired from Verity by IAG. Jan Ertner, who had indeed been the chief designer of the 77 electronics but had later left the company, was brought back in by IAG to work on the 99 series electronics. While his 77 Series may not have been a commercial hit, it was the direct predecessor of the successful 99 range and even of the current Elite series.



ABOVE: Launched in 1986, the Quad 606 was revised in 1993 then withdrawn in 1997

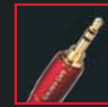


## We've Got Your Back ...

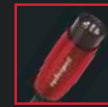
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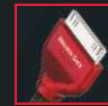
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# Hitachi HMA-6500 amplifier

One of the Japanese company's more compact models to pioneer the use of MOSFETs, this late '70s power amp certainly packed a punch. But how does it shape up today?

Review: **Tim Jarman** Lab: **Paul Miller**

**W**hen it comes to consumer electronics, Hitachi is recognised for one thing above all else: reliability. Over the decades the company's products have proven themselves to be tough, work well and rarely fail. As the old slogan goes: 'You'll never regret buying Hitachi'.

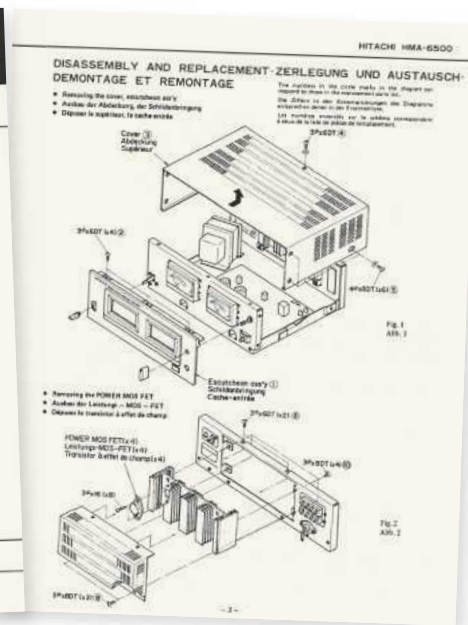
It should be remembered that, while not regarded as an innovator, during the 1970s Hitachi was the first Japanese company to obtain a licence to build full specification colour TV sets for the European market and that it popularised an amplifier technology which is still in use today: the MOSFET.

## LESS MEANS MORE

The acronym MOSFET stands for Metal Oxide Silicon Field Effect Transistor – a bit of a mouthful, but to amplifier designers of the day this new device was a godsend. Ordinary transistors work by allowing a small flow of current to control a larger one but in a MOSFET it is a voltage that does the controlling. The advantage is that very little energy is needed to regulate the device. This in turn means that massive power gains are possible, which in amplifier terms means that lots of watts can be produced by simple circuits.

Simplicity also has other benefits in that it can bring low noise and low distortion, two key goals in amplifier design. As an example, the Hitachi HMA-6500 reviewed here requires just eight transistors in each of its two channels to reach a claimed 55W at <0.02% THD midband. And that is quite some achievement [see Lab Report, p129].

Hitachi's MOSFET amplifiers began to appear towards the end of the 1970s. As



**ABOVE:** Hitachi supplied highly detailed, informative and well produced service manuals for all its components, but thanks to the reliability of the designs these manuals were seldom needed

well as being powerful, their measured performance was remarkable, giving excellent figures for distortion, noise and damping factor. These factors were important in the context of the hi-fi culture of the day. Double-page full colour advertisements in the hi-fi press often included technical specifications in banner headlines so it was important to be 'the best' in at least one key area.

Hitachi frequently packaged its new amplifiers as pre/power combinations, the HCA-7500/HMA-7500 being perhaps the best known. The HMA-6500 power amplifier was part of a later pairing, which

along with the HCA-6500 preamp was the company's most compact two-piece offering for the 1980 season.

Those wanting more power could opt for the 80W-per-channel HCA/HMA-7500 Mk II or the extremely large and heavy HMA-9500 Mk II – a dual mono design said to be capable of 120W and which was somewhat industrial in appearance.

To cover all bases, an integrated MOSFET model was offered as well – the 70W HA-7700. In 1980, the HMA-6500 cost around £120 and the HCA-6500 around £70. Neither was cheap but both offered good value given the quality and robustness of their design.

## HITACHI ORIGINALS

A company the size of Hitachi during this period was not only able to design and make its own amplifiers but was also able to manufacture the components that went inside them. The 2SK133 and 2SJ48 power

**LEFT:** Hitachi's complementary 2SK133 (and 2SJ48) MOSFET power transistors were used in the HMA-6500 and numerous other amplifiers





MOSFETs at the heart of the HMA-6500 are Hitachi originals, but the company didn't keep the technology all to themselves.

Both the devices and the technical literature necessary to use them in working circuits were made available to the rest of the industry, so it shouldn't come as a surprise when one looks inside many an early '80s British amplifier to find a set of Hitachi MOSFETs and a circuit taken straight out of the Hitachi applications book. Suddenly adding a 100W model to your company's range of amps became a relatively straightforward task and many smaller manufacturers took advantage of Hitachi's generosity in this area.

*'I became aware of a subsonic landscape other amplifiers miss'*

Despite all the imitators, Hitachi's amplifiers remained the most reliable. This was due in part to the high quality materials and construction methods used but was also thanks to features aimed

at preventing minor mishaps turning into major catastrophes.

The HMA-6500, for example, contains a special integrated circuit that monitors the amp's functioning, signalling a relay to disconnect the loudspeakers if it looks as if anything is about to go wrong. The same relay is used to ensure quiet and clean operation at switch-on and switch-off.

The MOSFETs themselves are mounted on a large heatsink at the back of the

**ABOVE:** New model or 35-year-old classic? It's hard to tell now that Hitachi's late '70s styling is back in vogue. Finish is immaculate and it's good to see a headphone socket, so often omitted

chassis due to the high standing current that is necessary to eliminate crossover distortion. Nearly 30W is dissipated here alone, even when no music is playing.

**JOY TO USE**

As a styling exercise, the HMA-6500 could easily be dismissed as generic and bland. The fascia is dominated by two oversized moving-coil meters which nominally show output power into 8ohm.

The value of power meters on amplifiers is dubious, but they do serve to break up what would otherwise be an uninviting slab of plain metal. The two controls, one for power and one to select which of two possible pairs of speakers are connected, are solid and feel like they will last forever.

It is nice to see a headphone socket on the front panel, although one has to remember to mute the speakers using the switch if private listening is required.

A few years ago this amplifier would have looked dated but since silver panels and big meters are making a comeback it could today easily be mistaken for a new model. Only the fact that Hitachi now makes trains and not hi-fi serves as a clue to the amplifier's true age.

The HMA-6500 is a joy to use. Though a separate power amplifier would have been considered to be a piece of equipment aimed at 'expert' audiophiles, it is no more daunting to operate than a portable radio. There are no clicks, pops and bangs when

**HITACHI**

**HI-FI '79**

Amplifiers		Amplifiers/Tuners	
<b>HMA 7500</b>	<b>HA 7700</b>	<b>HA 5300</b>	<b>FT 4400</b>
<b>HMA 6500</b>	<b>HA 4500</b>	<b>HA 3000</b>	<b>FT 3000</b>
<b>HMA 5500</b>	<b>HA 3500</b>	<b>HA 2000</b>	<b>FT 2000</b>
<b>HMA 4500</b>	<b>HA 2500</b>	<b>HA 1500</b>	<b>FT 1500</b>
<b>HMA 3500</b>	<b>HA 1500</b>	<b>HA 1000</b>	<b>FT 1000</b>
<b>HMA 2500</b>	<b>HA 1000</b>	<b>HA 500</b>	<b>FT 500</b>
<b>HMA 1500</b>	<b>HA 500</b>	<b>HA 250</b>	<b>FT 250</b>
<b>HMA 1000</b>	<b>HA 250</b>	<b>HA 100</b>	<b>FT 100</b>
<b>HMA 500</b>	<b>HA 100</b>	<b>HA 50</b>	<b>FT 50</b>

**LEFT:** This leaflet from 1979 provides specs for both the HCA/HMA-6500 and larger HCA/HMA-7500 pre/power amplifier combinations



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## VINTAGE HI-FI

**RIGHT:** An interior view of our very clean example. The components used are of fine quality without being extravagant – a typical example of Japanese common sense

you switch it on and off, regardless of how the controls may be mishandled. Compare this with some of the less sophisticated equipment of the period which produce loudspeaker-shredding screeches and howls if the correct sequence of switching on and off isn't followed to the letter.

Inputs are standard RCA types while the loudspeaker terminals are screw clamps. The latter are nicely designed so that the conductors enter neatly and don't spread out to produce strands of stray wire that could possibly cause malfunction.

For my tests I had to make 4mm socket adapters with short pigtailed on the ends of them in order to connect my Chord Odyssey II cables. If the amplifier is being used in a permanent installation, the best idea is to cut the connectors off the cables and insert the bare ends straight into the terminals. The fewer metallic interfaces that there are, the better.

### TIM LISTENS

When it comes to inputs there is a choice of either AC or DC coupling, selectable via a small slide switch on the back of the unit. DC coupling means that the amplifier has no lower frequency limit.

In theory it has the same gain at 0Hz (DC) as it does in the centre of the audio band. Is this a good thing? Not necessarily. DC at the output of an amplifier can harm both the amp itself and the loudspeakers, so to use the DC coupling option you must be sure that there is no offset present at the output of the source component.

The real value of this option is to avoid needlessly compounding AC coupling networks, so if you are sure that your preamplifier is AC coupled (as the matching Hitachi HCA-6500 is) then it is a good idea to choose the DC option. Otherwise it is safest to go for AC. In any case, trying the switch in both positions brought about no audible change that I could hear, backing up Hitachi's claim that the AC coupling has little effect above 5Hz.

'This was real bass and not some sort of low-end kick-up'

In lieu of an HCA-6500 or other dedicated preamplifier I used the preamp outputs of my trusty Cyrus 6A to control the HMA-6500. The source fed into this was again my standard Cyrus CD8 SE 2 CD player with Chord Calypso interconnects. Monitor Audio PL100 loudspeakers completed the set-up.

Hitachi's early MOSFET amplifiers were criticised for measuring almost perfectly but sounding somewhat odd. This brought about a discussion as to whether perfect measured performance was even a desirable goal. Due to the absence of practical, affordable equipment that reached the required standard, the matter had been all but a theoretical issue up to

this point. Listening to the HMA-6500 today, it is possible to appreciate this debate as the amplifier does indeed sound quite different to the bulk of late 1970s transistor rivals.

### TRULY EXTENDED

Suzanne Vega's 'Ironbound' from the album *Solitude Standing* [A&M CD395136-2] helped reveal the HMA-6500's strengths and weakness. The first thing that struck me was the lack of warmth, especially when it came to the guitars, though the percussion sounded brisk and detailed.

However, the bass sounded somewhat mechanical in nature and weak for a model in the 50-75W class. This, of course, brought out the midband, giving the impression of a 'grey' tonality and glare around the vocals. Indeed, Vega's voice sounded coarse around the edges, though fine detail resolution was also noted. Was this a limitation of the recording process?

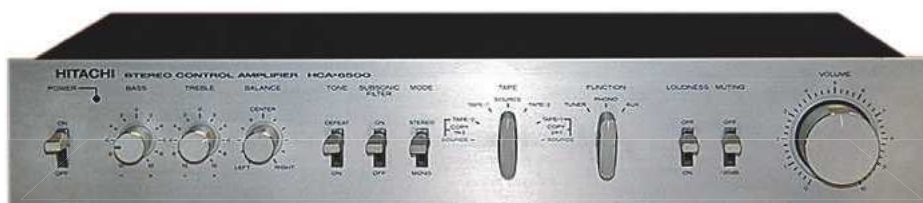
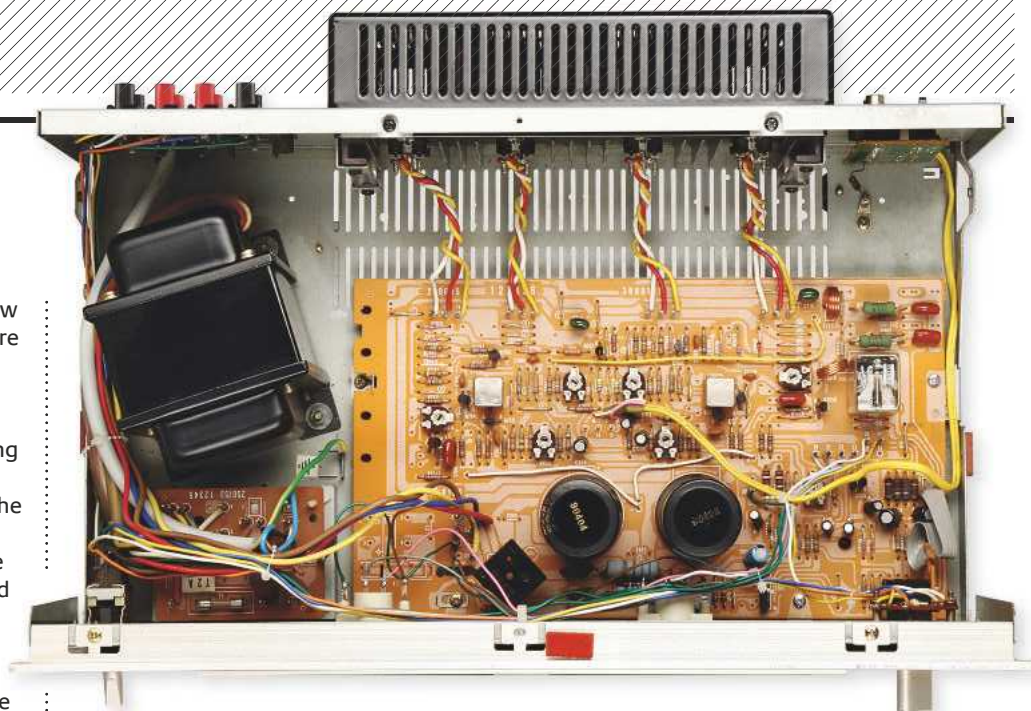
On the plus side, treble was neutral and well controlled there being a good balance struck between dullness and excessive sparkle. Still, my initial impressions of the amp overall were not positive ones.

As the track progressed my opinion began to change. Whereas I first found the bass line to sound flat I slowly became aware of a subsonic landscape that other amplifiers either miss completely or smother with thicker bass from further up the frequency scale.

Time spent studying the bass with a succession of further discs revealed that, far from being clipped, it is actually properly extended. Maybe you don't hear as much detail as you do through other amplifiers but you can certainly feel the low frequencies, both through the air and through the surfaces in the room. This is real bass, not the sort of low-end kick-up that makes you think that low frequencies are being dealt with correctly.

Other plus points began to reveal themselves. For a start, the sound is exceptionally tidy and well ordered. All elements are in pin-sharp focus and remain that way from almost inaudible softness to volumes loud enough to almost bang

**LEFT:** The matching HCC-6500 preamplifier, designed to partner the HMA-6500. This is more obviously 'vintage', modern designs being less generous with the knobs, switches and rotaries



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## VINTAGE HI-FI



**ABOVE:** A rear view showing the boxed heatsinking for the hard-working MOSFETs. If using preamps from other brands, use the DC coupling switch (top left) with care

the fascia meters off their end stops. Many amplifiers change their character as more power is called for, but not this one.

I next switched to some acoustic material. 'Magical Ring', the opening track on Clannad's *Theme From Harry's Game* [RCA ND71 473], is usually underpinned by a series of deep drones but the greater part of these seem to disappear down the HMA-6500's mid-bass hole. Nevertheless, the vocals retained a haunting quality and sounded startlingly transparent when played at an extended volume.

The rest of the album continued in a similar manner but the odd thing was that as the tracks passed I found it easier to forgive the amplifier's foibles as its obvious strengths began to outweigh them.

### BUYING SECONDHAND

Buying a used HMA-6500 is easy because they either work or they don't. This may sound trite but as

**The world's fastest power amplifier**

More Fair Comparison of Output Triangles in Power MOSFET

Hitachi Power MOSFET

Hitachi's HMA-6500 Series Power Amplifier with the incredible Power MOSFET offers ultra high switching speed to dramatically reduce output and frequency distortions. At 50 watts output from 20 Hz to 20 kHz, there's no more than 0.002% total harmonic distortion. And the HMA-6500 has such wide linearity that it refuses to distort even when confronted with the most intense dynamic peaks. Frequency response is flat from DC to 100 kHz, with no crossover distortion. Add the performance matched HCA-6500 Series Control Amplifier and the PE 6000 Digital Synthesizer Tuner. Both are stock and ready to perform. The HCA-6500 gives you total control without adding any audible noise or distortion. The PE 6000 is a shining example of an electronic miracle, with digital frequency tracking, all electronic, break-over, lock-in circuit, and its massive memory.

The HMA-6500, HCA-6500 and PE 6000 - are 120V and the HMA-6500 is 240V.

**HITACHI**

Circle No. 42 On Reader Service Card

**ABOVE:** Hitachi trumpets its technical prowess in this typical '70s hi-fi ad

mentioned before, Hitachi products are among the most reliable available and the only real problem area with this particular design is that the bulbs inside the meters fail with age. Miniature 12V 60mA wire-ended lamps are widely available as replacements, however.

All the components used are of top quality and, since there are no capacitors in the signal path, there is nothing in a typical used example that will require routine replacement. There are three critical adjustments in each channel that should ideally be checked before using the amplifier seriously. The procedure is a simple one but should be performed exactly as stated in the service manual.

Also make sure that the protection system works and has not been bypassed or disabled. There should be no sound when the amplifier is first turned on. Next you should hear a click from inside the amp. Play a track and sound should move. Be suspicious of any example where this doesn't happen. ☹

### HI-FI NEWS VERDICT

A true classic and representative of the early MOSFET vanguard, Hitachi's HMA-6500 is clearly a powerful and capable amplifier even if its distinctive sound will not be to all tastes. As ever, audiophiles will continue to debate the 'Marmite' effect of MOSFETs – especially the early designs – but if you like a tangy taste to your hi-fi then you'll love this inherently reliable and beautifully made model.

Sound Quality: 75%

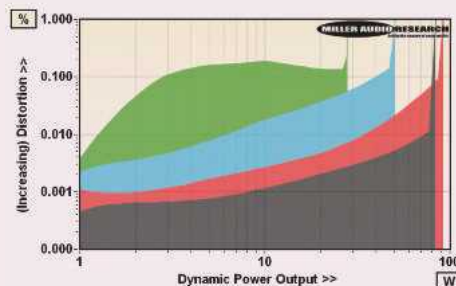


## LAB REPORT

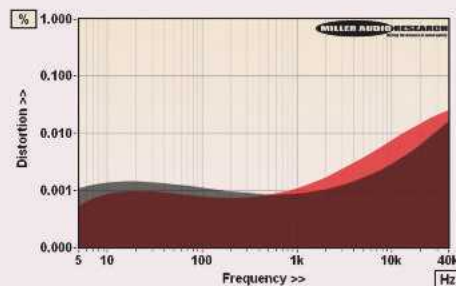
### HITACHI HMA-6500 (Vintage)

This pristine sample of Hitachi's HMA-6500 power amp is an object lesson in the durability of both the MOSFET circuit and these early devices themselves. Moreover, and unlike so many modern amplifiers, Hitachi's meters are bang-on accurate with the 0.1W, 1W and 10W calibrations true to within the width of the needle itself into 80hm! In its day the amp was rated at 2x50W/80hm which accords well with the 2x68W/80hm and 2x74W/40hm measured here today. The power supply is obviously limited in capacity, however, because the dynamic output amounts to 84W/80hm and 93W/40hm with a restricted 51W and 28W available into 2/1ohm loads [see Graph 1, below]. With a mere 5.3A maximum current at its disposal, the HMA-6500 was – and still is – best suited for use with moderate-to-high sensitivity loudspeakers.

Distortion increases gently with level from 0.0005% at 1W/80hm to 0.002% at 10W and 0.007% at the rated 50W but, once again, more obviously with decreasing load impedance (0.02% at 10W/20hm). Nevertheless THD could never be described as 'high' and is also well managed versus frequency, reaching just 0.0085% at 20kHz/10W [see Graph 2, below]. The HMA-6500 also boasts a very wide bandwidth, far wider than could be accommodated by any source from the era, with its response flat to -0.05dB/20kHz and -0.8dB/100kHz. In AC-coupled mode the LF end extends to 2Hz (-3dB re. 1kHz). The A-wtd S/N ratio is also very wide at 98dB (re. 0dBW). Readers may view a full QC Suite test report for this Hitachi HMA-6500 power amplifier by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'Download' button. PM



**ABOVE:** Dynamic power output versus distortion into 80hm up to 1% (black trace), 40hm (red), 20hm (blue) and 1ohm (green) speaker loads



**ABOVE:** Distortion vs. frequency from 5Hz-40kHz at 10W/80hm (left channel, black; right channel, red)

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4/2ohm)	68W / 74W
Dynamic power (<1-2% THD, 8/4/2/1ohm)	84W / 93W / 51W / 28W
Output impedance (20Hz-20kHz)	0.25-0.30ohm
Frequency resp. (20Hz-100kHz, 0dBW)	-0.05dB to -0.8dB
Input sensitivity (for 0dBW/50W)	138mV / 1000mV
A-wtd S/N ratio (re. 0dBW/50W)	98.0dB / 115.0dB
Distortion (20Hz-20kHz, 10W/80hm)	0.0008-0.0062%
Power consumption (Idle/rated output)	43W/216W
Dimensions (WHD) / Weight	435x153x306mm / 9.4kg

# Audio Accessories

Donald Aldous looks at devices for the care and cleaning of records



*Hi-Fi News*  
Dec  
1977

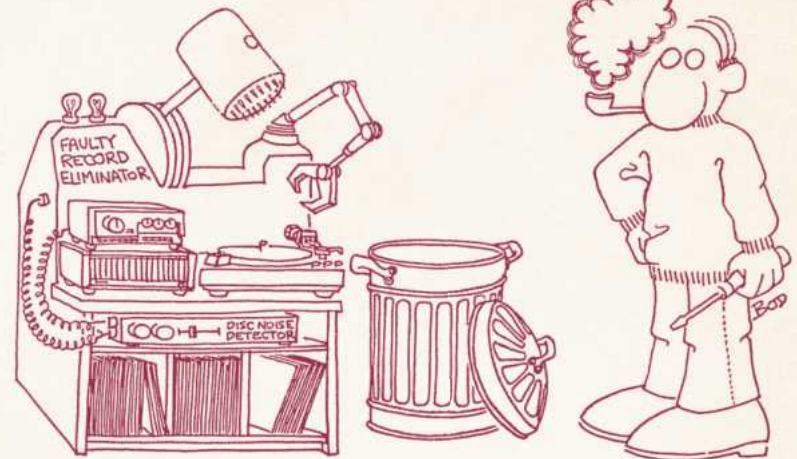
Each month *HFN* will bring you an article from our vast archive of features and reviews from yesteryear

Since my survey of record care and cleaning devices which appeared in the *HFN* 1975 Annual, research and developments in this area have continued apace. Dr D W Swan of 3M Products has been investigating static charge on record surfaces to find out how a conducting turntable mat would reduce them. He has now listed the properties of the ideal turntable mat as: (1) be of the highest conductivity, (2) washable, (3) non-fibrous, and (4) be soft and pliable for good surface contact.

## CHOICES OF MAT

The Scotch 'Dustguard' mat is made of conductive polyethylene, and by contacting the surface of a normally charged record on the turntable it reduces the external electrostatic field, resulting in negligible attraction of dust. A two-speed stroboscope is attached to the centre of the mat.

Certainly the 'Dustguard' mat is the most effective turntable



mat that I have experimented with; it must be placed directly on the turntable with good earthing contact to the spindle. The mat is made of Velostat conductive plastic and costs £2.99, including VAT.

Another recent mat is the Stat-O-Disc, made by Edward W Andrew Ltd of Bury. This is made from special felt and contains a superfine stainless steel mesh to give an evenly distributed conductive matrix. It must be added here that trying to leak away static charges via a turntable mat has its limitations, and the most effective method is to fit an 'ioniser' on the motor board.

An electronic cleaning device of this type that really does do the job is marketed in UK by Roy Martin Freeman, of Camberley, Surrey. Having its origins in medical science, this device incorporates a negative ion emitter which releases dust particles by giving them a negative potential. In static terms, it seems that most dust is positively charged.

Tests have shown that even after cleaning a new LP with conventional brush/pad methods, the Nion removed considerably more dust and, at the same time, took away the polishing powder from the disc surface. This results in a potentially longer life and better sound quality from the record. As an experiment we left the unit working for a time with the plastic lid of the turntable unit closed. It was found that dust particles did not settle on the

section of the lid forward of the area where the Nion strikes it on its upward angle.

The Nion operates from the mains supply and is mounted on the turntable base by a magnetic or adhesive stand supplied, which is adjustable. The recommended price for the Nion is £19.90, incl VAT.

## RECORD CLEANING

The choice of a record cleaning device or cleaning procedure must to a large extent be a function of the state of the discs themselves. Some collectors are faced, for one reason or another over a period of time, with dirty or neglected records, or discs that have been mishandled by the application of some kind of viscous substance or fluid, probably deposited by a so-called 'anti-static' pad or cloth.

Such records require radical treatment and the only process which, to my knowledge, has proved effective is treatment by a properly operated KMAL machine, which employs an alcohol cleaning solution. The cost is usually around 12p to 15p per disc, and Keith Monks (Audio) Ltd in Hants will supply a list of firms throughout the UK offering this service.

A 'washing by hand' technique, followed by careful drying, is detailed in the Watts 'Guide'. Incidentally, the Watts Professional Parastat has now been redesigned. This Parastat record cleaning

machine was originally created by Cecil Watts in 1956 and, in addition to removing dust particles from the grooves, applies a molecular trace of New Formula Parostatik Antistatic Fluid to the disc surface to control the attraction of static.

It must be made clear that any technique involving 'wet' cleaning demands immediate and complete drying before the disc is played. Some proponents of 'wet' anti-static methods suggest playing the discs while wet, and certainly this process can give decreased background, but the practice must be continued for all subsequent replays to avoid a build-up of 'sludge'.

When a disc has been played wet a few times, dry playing usually produces a considerable increase in noise unless, and until, it is subjected to one of the dramatic cleaning treatments already mentioned.

Additionally it is essential, but by no means easy, to ensure that the grooves are absolutely dry before the disc is reinserted into the inner sleeve. Where proper care is given to handling and storage of records, 'wet' playing of discs seems neither necessary nor desirable.

The whole question of applying any kind of fluid to record surfaces is very controversial. In any case it must be regarded as a last resort, other than with the devices already mentioned. Perhaps the safest fluid is distilled water, with the addition of a couple of drops per pint of photographic wetting

agent. Household detergents such as washing-up liquids are not safe additives, while high-grade alcohol, even when diluted 50/50 with distilled water, can affect some plastics from which records are pressed – unless employed rarely and fully removed from the surface.

### DISCWASHER FLUID

Now available in this country is the Discwasher DII fluid which, on the basis of tests performed in the US is considered to be safe, particularly when diluted and used with the Discwasher pad.

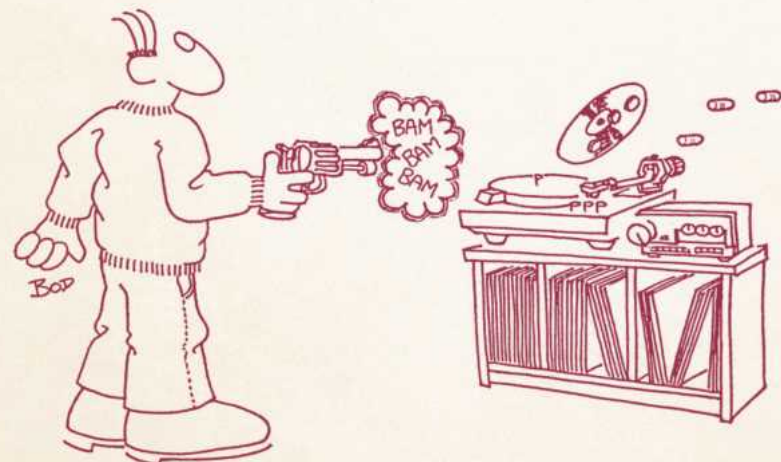
This latter device can be looked upon as a kind of de-luxe Preener, with backing made of long fibre, highly absorbent cotton, and the slanting cleaning fibres are made of fine nylon. The Discwasher has a wooden handle hollowed out to house a

bottle of the DII fluid. Like the Watts Preener, the pad must not be used completely dry and DII liquid or distilled water can be applied (from a Watts Mop, say) to humidify the tool before use.

The Discwasher is more expensive than the Preener, but we have reports from several American friends who claim to have achieved better results on grubby records with this device than from any other similar cleaning tool.

Yet another record preservation system is called 'Sound Guard'. Created by the Ball Corporation in the US, it is derived from dry lubricants employed for aerospace

*'The question of applying fluid to record surfaces is very controversial'*



An anti-static pistol may be useful to remove those annoying clicks



**ABOVE:** Frictional contact with a record sleeve liner can cause a charge to be deposited on the record itself. Today companies like Nagaoka offer anti-static inner sleeves, which are available on Amazon UK in packs of 50 for around £20

applications. The method is to spray a fine film of the Sound Guard preservative on the record surface, then buff it dry and shiny with a felt pad supplied. The results, the manufacturers claim, are an extended life for the disc and reduced dust attraction. We are still conducting tests with this kit.

It is said that this fluid can be applied safely to shellac 78s, but we would add a word of caution for vintage record collectors wishing to polish old records. Shellac is soluble in alcohol, and so any strength of real alcohol may cause damage to the disc surface.

### ANTI-STATIC GUNS

Experience has shown that whether or not one has a recognisable static problem on discs, the release of static charges from the surface vastly increases the effectiveness of any cleaning device used. For this function, the Zerostat pistol is remarkably effective.

On pressing the trigger, a high-energy piezo-electric element produces a corona discharge at the barrel of the gun. The ions produced are attracted to oppositely charged surfaces until the charge is neutralised. Similar devices are the Zeepa Static Eliminator and the Metrostat from MetroSound.

It is worthwhile investing in one of these devices, even if static ☺

**LEFT:** The cartoons which accompanied the words in this 1977 feature were all from the pen of BOD. In fact, BOD was Geoff Jeanes – HFN music reviews editor at the time

## FROM THE VAULT

charges are causing no trouble. Discs are best 'destatted' and cleaned away from the turntable on any convenient flat surface, and this procedure applies particularly to one of the modern cleaning instruments, the Pixall roller.

Using a specially formulated adhesive tape on a drum rolled across the grooves, this is a most effective device when used in conjunction with a static neutraliser, applied before and after cleaning.

The Pixall must be stored away from heat, and the exposed length of tape should be discarded as soon as it becomes slightly dirty in appearance. The Pixall will not remove greasy finger marks, which ought not to be on the surface anyway, so it is a good idea to remove apparent surface dust with a humid Preener or similar pad after relaxation of static, before applying the Pixall. Price is £2.97, incl. VAT.

### FROM JAPAN...

Kelsonics of Hemel Hempstead is a new company formed to handle exclusive audio accessories, most of which will be imported.

The first item is the Nagaoka Rolling Record Cleaner from Japan. This device uses a special grade of rubber elastomer which never loses its original surface tackiness. Rolling it over the record surface detaches dust and dirt from the grooves; no stickiness is deposited and it will not damage the record label. A novel feature of this device is that



Make sure that your record cleaning spray is record cleaning spray



**ABOVE:** Made of ribbed rubber, this anti-static mat from the mid '70s comes in a sleeve whose graphics neatly illustrate how positive and negative charges neutralise each other to rid a record of static. The use of ribbed rubber would keep particles and hairs from the disc surface

**ABOVE RIGHT:** According to the author, the release of static from the surface of a record vastly increases the effectiveness of any cleaning device used and he recommends the Zerostat pistol as a way to achieve this. It's still available today, selling on Amazon UK as the Zerostat 3 though for a somewhat sobering £50

**LEFT:** More wise words from BOD, and collectors of vintage records wanting to clean their treasures should remember that Shellac is soluble in alcohol

as soon as the roller is grubby it can be detached from the handle and washed in water with detergent.

This washing restores the adhesive on the surface and it can be washed repeatedly without deterioration. This Nagaoka roller costs £7.40, incl VAT.

Cleaning machines coming into the semi-automatic category are the Groovac Mk III vacuum record cleaner, the new Vac-O-Rec Mk II vacuum disc cleaner, and the similar unit known as the Disc-a-Vac.

The Groovac device is a refined instrument: not designed to clear discs of finger marks, sticky deposits or any obvious coating of surface dirt, all of which demand more dramatic treatment. Its purpose is to prepare relatively clean discs for playback by means of high quality cartridges tracking at low weights.

The most important feature of the latest Groovac model is its fitment of an anti-static earthed brush made of carbon fibre that tracks the grooves immediately in front of the suction nozzle bristles.

The efficiency of the instrument is thus markedly increased, as the carbon fibre brush not only helps to discharge static build-up, but collects any surface dust that might clog the vacuum nozzle brush.

The kit is supplied with a group of height adjustment rings to arrive at the correct vacuum arm height, according to turntable platter, from zero to 50mm. The fine-speed control on the turntable may need to be adjusted to get the record

speed correct, and the pump mains lead has no earth. But provided the discs are free of gross pollution the Groovac is a useful device at £19.50 including VAT.

Both the Vac-O-Rec and Disc-a-Vac machines employ the same vacuum cleaning principles, but in the case of the original Vac-O-Rec design, a Mk II version is now being manufactured using the same principles, but totally restyled on updated cosmetic lines. These units suck air in through the top vent and blow out the dust particles through a rear vent. As the record revolves,

pads clean the grooves while carbon fibre bristles help to destroy some of the static.

It must be mentioned that these machines

will not deal effectively with heavily contaminated discs, and they are not good static neutralisers, but they are excellent 'finishers' or polishers of records that are new or have been kept in clean condition.

### AFFORDABLE CHOICES

Coming down the price scale, there is a multiplicity of simple cleaning brushes and arms. Bib's Groove-Kleen designs (Models 2000 and 42) are widely known, as is the company's Model 60 chrome-finished cleaner, with armrest and counterweight. The plastic version (Model 50) retails at £1.36.

Meanwhile, the Metro care M43 Super Groove master is a brush-and-roller free-standing disc cleaner, and the M55 is an autochanger model, both from Metrosound. The Bib ↻



## 'Semi-automatic machines are the Vac-O-Rec and Disc-a-Vac'



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# Power

# FROM THE VAULT

Anti-Stat Record Care kit (Ref106) is particularly useful, containing static reducer, tester (electroscope) and a Bib dustoff.

Novel parallel-tracking groove cleaning units are made by Bib (Model101 Groove-Kleen at £3.97), while Metrocare's M95 Super Lin-Track has an independently pivoted brush that tracks the whole disc groove width and moves the felt pad across to remove airborne dust particles. Price is £3.24, and the kit is complete with long runners, base, pillar, spare roller and adhesive pad. The moving parts are very light, and the arm can be swung clear of the record after use.

Metrocare has put together a most useful group of cleaning devices for disc and tape cassette systems in their new Music Centre Kit, all fitted in a neat plastic storage case. This retails at £4.98, plus VAT.

## DE LUXE KIT

Other cleaning arms and brushes include: Audio-Technica's AT6001 and 6002, the latter having a conducting arm and brush with earthing wire; the Decca Record Brush (with a million or so conductive bristles) and the Decca electrically conducting arm, with 20,000 man-made bristles on its tip; and QAS's Dusta-Disc counterbalance arm.

**'The impregnated cloths or pads on sale, rarely do anything useful'**



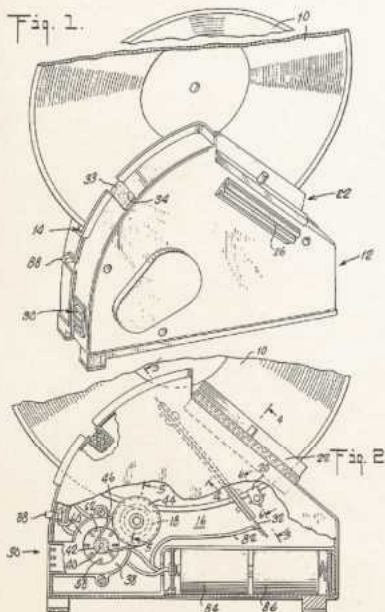
Last year BASF introduced its Checkpoint cassette and tape accessories, and this year has seen the release of a range of disc record cleaning cloths, pads, stylus cleaning outfit, and a record cleaning arm. This last item is priced at £3.24, incl VAT. A group of complete record

and tape care kits has also just been marketed by BASF under the Checkpoint brand name, including a comprehensive De Luxe Record Care kit at £7.25, and a complete kit for tape/disc owners (Pack No. 38) selling at £7.94, incl VAT.

What may be called 'basic cleaning' products are the impregnated cloths or pads. Other than removing serious dust deposits, these devices rarely do anything useful, although sold under many names and often with a bottle of cleaning fluid. ☺

**ABOVE:** The feature by Donald Aldous was part of a supplement in the December 1977 issue of *Hi-Fi News* that also looked at audio accessories such as tape-care kits, aerials and hi-fi furniture

**BELOW:** Another stalwart of the record cleaning scene was the battery-operated Vac-O-Rac, which was patented in 1977 (left). Today, manually operated variants such as the Disco-Antistat keep the concept alive and cost from £50



Also in *HFN* this month in 1977

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Report from Jean Hiraga.

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Leonard Hibbs visits a fascinating French museum.

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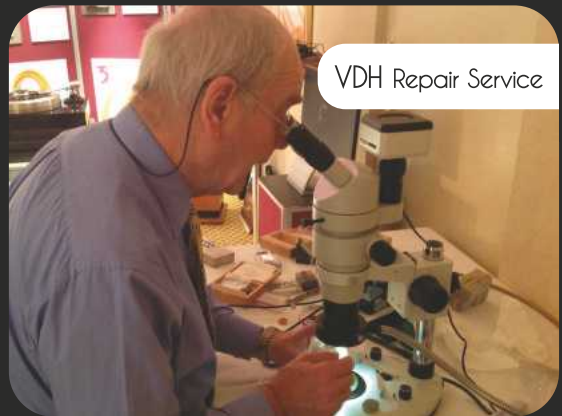
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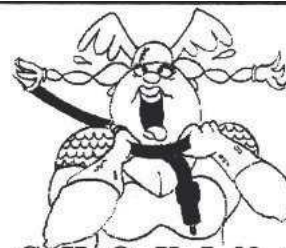
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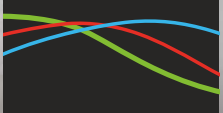
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# OFF THE LEASH!

KEN KESSLER TELLS IT LIKE IT IS...

Uploading past articles to his new website finds Ken Kessler wondering where to start – and stop



It had to happen: I have entered the 1990s, if not the Noughties. I am learning a lot about weird stuff like 'SEOs', hash tags and social media. Not that they existed in the 1990s, but the internet certainly did. So, pray excuse this utterly self-indulgent 'Off The Leash' as I plug my own fledgling website. But it does serve two purposes, which is why this month's column has more than self-aggrandising promotion as its purpose.

## MAMMOTH UNDERTAKING

First, it means that my archives will eventually be accessible to all for free. If I live long enough, I will upload every article I have written. They will appear in text form only – you'll need to acquire *HFN/RR* back issues if you want to see the actual visual spreads, save for the odd small pic I might have on my hard drive. Alternatively, the original reviews with pictures and lab reports will also be freely accessible via [www.hifinews.co.uk](http://www.hifinews.co.uk).

Reformatting my earliest reviews also proved to be a welcome wander down Memory Lane. Brand after vanished brand, long-forgotten gems like the Valfet and Audio Alchemy (recently revived) and Beam Echo and AudioValve's prescient high-end headphone amplifier. The progression of Wilson loudspeakers, Audio Research's 'REF' models, the evolution

of Sonus faber from Minima to Extrema to Olympica, Musical Fidelity's first Nuvista and SME's move from arms to turntables. So much hardware...

## MEMORABLE MOMENTS

Please don't assume that I believe my small role in audio is anything like a representative overview of hi-fi since 1983. Indeed, I've hardly been prolific compared to Paul Miller, John Bamford or quite a few others. But this look over my shoulder does recall some memorable moments.

So far, I've only uploaded a hundred or so articles and reviews, and I've yet to uncover any terrible gaffes of the did-I-really-predict-that? sort. On the other hand, some articles that many of you will read for the first time, written for trade magazines, did manage to foresee a change in the way luxury items are

considered, marketed and appreciated. Yes, I did warn of the need for high-end audio to clean up its act more than a decade ago. Too bad only Devialet and B&W seem to 'get it'.

As far as consistency goes, my aversion to cables remains unshaken, I still prefer valves to solid-state, and I've been banging on about Howard Tate, Lou Rawls and Willy Deville for what must seem an eternity to many of you. A love for vintage gear remains constant, while I'm glad to see that a wave of much younger

writers seems to share this love. Bully for them: I would never have had the absence of snobbery needed to write a paean to B&O, for example.

Hi-fi show reports are, of course, the best visual record we have of annual proceedings. Although I have no idea how many I attended before 2000, I can tell you (thanks to the images stored in my computer), that I have attended over 120 since the turn of the century. A guesstimate would produce a figure of close to 300 shows since my first in 1983.

Those digital images – though disparaged by film addicts – allow me to chart my hi-fi past with ease. Prior to 2000, everything was shot as 35mm transparencies and submitted to the *Hi-Fi News* office. All I can remember is that a typical CES ate up 15-20 rolls of 36-exposure slide film.

Many of these images exist in the original print magazines. Which is really the point. As necessity forces all of us to shed the baggage of life, to rid our homes of detritus, I look at the many thousands of magazines I have on shelves and in storage. A few dozen extensive runs of hi-fi magazines, rock magazines and books, a hundred boxes filled with press releases – what percentage of these will ever be uploaded?

## ENOUGH ENTHUSIASTS

I certainly have no intention of scanning all of the catalogues or press hand-outs that preceded the CD-R, or – latterly – the USB stick. But I hope that some day, long after I've reached whatever level of Hell is reserved for audio journalists, there will still be people who want to know the dimensions of an IMF TLS80, the driver complement of a Radford TriStar 90 or the valve line-up in a Kerr-McCosh preamp.

A quick dip into Google locates all three. Fortunately, enough enthusiasts out there, dedicated to individual brands, are prepared to scan and upload the printed matter that still exists, or who are inspired to compile data. But I've learned, just through sorting out my own archives, that what's needed is more than a swift mouse-click. But someone's gotta do it.

You never know when you might want to read a review of the Oak turntable. ☺

'Hi-fi show reports are the best visual records of annual proceedings'

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