

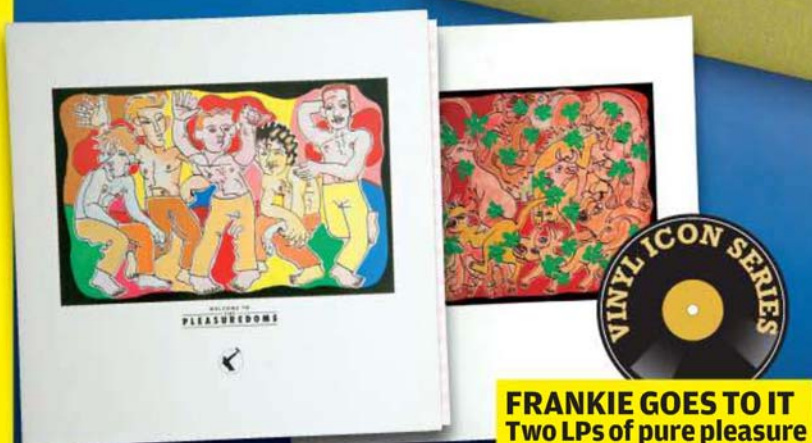
hi-fi news

& Record Review

CLASSIC VALVES

Exclusive: Quad's first integrated amp

'Our top £100 hi-fi upgrades'
Group Test, p41



FRANKIE GOES TO IT
Two LPs of pure pleasure



Boost your downloads
Prism Sound Orpheus Firewire DAC

Lumen White
Silver Flame speakers

Goldring
Legacy MC pick-up

Audio Research
New REF 5 preamp

Amazon 2 deck
With Mørch DP-6 arm



• **PLUS** 11 pages of music • **HI-FI @ HOME** Vinyl sounds with a Teutonic twist
• **MOVERS & SHAKERS** Tim de Paravicini • **VINYL RELEASE** Duran Duran's *Rio*
• **AUDIO MILESTONES** Stax Earspeakers • **INVESTIGATION** We visit The Vinyl Factory

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MUSICAL FIDELITY

PRIMO Pure Class A Tube Preamplifier

New from Musical Fidelity. 14 tubes. Triode. Class A.
Fully balanced. Zero feedback. Mega technical performance.





ABOVE: Amazing Amazon 2 turntable with Mørch DP-6 tonearm. See p30



ABOVE: Reference redefined: Audio Research REF5 valve preamp, p56



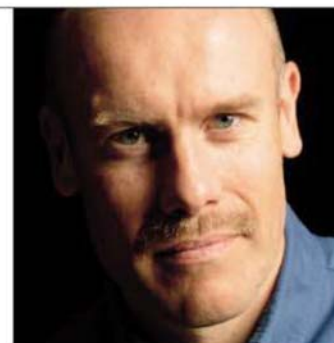
VINYL: Duran Duran re-released on 180g (p74) and Frankie's *Welcome to the Pleasuredome* is this month's Vinyl Icon (p76)

Cables are the most necessary of accessories, they are the lifelines that bind our systems together but are also the subject of more conjecture and hyperbole than any other quarter of the hi-fi scene. Designers used to talk of the ideal amplifier as a 'straight wire with gain' but the last 30 or so years has taught us that there's nothing particularly straightforward about an analogue interconnect or speaker cable.

Pioneers of 'cable sound' included the famous Jean Hiraga (Editor of the French hi-fi title *Nouvelle Revue du Son* until 2007) who shocked the audiophile establishment with his treatise entitled 'Can we hear audio connecting wires', subsequently translated in our very own *Hi-Fi News & Record Review* back in August 1977.

This was not the first foray into cable performance. Siemens, for example, apparently developed an advanced Litz-based cable as part of the German war effort in the 1940s. Was this the inspiration for some early audiophile cables or are similarities in their design mere coincidence?

Whatever its heritage, the modern audio interconnect takes many forms, employing a diverse range of conductor



geometries, insulating dielectrics and proprietary phono plugs. We've collected a dozen of the best £100 interconnects for our group test this month. Turn to p41 for advice on what might turn out to be your first upgrade of the New Year!

While we are on the subject of our hi-fi heritage, this month sees the beginning of a

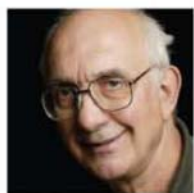
'There's nothing so straightforward about a length of straight wire'

collaboration between the two greatest authorities on vintage hi-fi, our very own John Howes and Ken Kessler. Each month we'll be re-visiting an historical marque – the Williamson valve amp features on p120 – with thoughts from yesteryear combined with listening notes and lab tests from today. Just how will these landmark amps, speakers and turntables fare against modern counterparts?

Happy New Decade!

PAUL MILLER EDITOR

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



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



JOHN BAMFORD
HFN's Features Editor has a penchant for massive speakers and hi-res audio. JB travels the globe for our On Location specials



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



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



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



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



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

pass

Pass Labs *by the numbers:*

125	reviews
76	awards
47	products
43	articles/projects
35	countries
18	years
7	patents
1	Nelson Pass

.....and counting



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ABOVE: From Canada, the mighty Anthem Integrated 225 amplifier, p66

NAD's digital drive

GENUINELY 'DIGITAL' CLASS D AMPLIFIER ANNOUNCED BY NAD ELECTRONICS

First revealed in *Hi-Fi News* [March '09] and only now formally launched by NAD Electronics, the £5000 Class D M2 integrated amplifier represents the first fruits of its collaboration with Zetex Semiconductors. Class D amplifiers represent the audio waveform as a very high frequency Pulse Width Modulated (PWM) signal and enjoy very high levels of efficiency but have been almost universally *analogue* in execution. Despite often being mistakenly described as 'digital amplifiers', Class D designs have

excellent green credentials despite often failing to grab the enthusiasm of audiophiles.

NAD intends to dispel any such prejudices with its flagship M2 which is not only Class D but a truly *digital* Class D amplifier – the first since the TACT Millennium launched over 10 years ago. Zetex's Direct Digital Feedback Amplifier (DDFA) modules are available in 25W to 200W/8ohm guises, a customised version of the latter finding its way into NAD's M2. Key to the high performance of these modules is Zetex's use of a proprietary

feedback that compensates for distortions inherent in the high power FET output switching stages and the substantial filters that follow.

With digital Class D amplifiers the PWM switching frequency is synchronised to the incoming sample rate of the digital audio. Look around the back of the M2 and you'll discover two optical and two coaxial S/PDIF digital inputs alongside an AES/EBU (XLR) digital input. The amplifier is capable of receiving digital inputs up to a 192kHz sample rate, enabling it to be driven directly from the S/PDIF output of a DVD or BD player or PC card with the highest resolution digital audio. Should

you wish to use the analogue output of a legacy source, the M2 also includes sets of balanced (XLR) and single-ended (RCA) inputs.

Zetex has been developing its DDFA amplifier modules for over a decade and NAD has taken three years to fine-tune its implementation here.

Expectations are running high!

Armour Home Electronics,
01279 501111

www.nadelectronics.com



Bijou B&W

B&W DEBUT HEADPHONES AND DESKTOP HI-FI QUALITY SPEAKERS

Following on from its Zeppelin iPod dock range, B&W continues to embrace the digital music revolution with its first ever desktop PC speakers and 'Made for iPod' headphones.

Developed by the engineering team behind the 800 Series speakers, the noise-isolating P5 headphones feature Ultra-linear neodymium magnets and mylar diaphragms for a 'mobile hi-fi' sound. Price to be confirmed.

In a bid to deliver hi-fi quality audio to PC-stored music collections, the two-way MM-1 speakers boast Nautilus Tube Loaded tweeter technology from

the company's high-end 800 series while B&W's proprietary Dynamic EQ bolsters the low end frequencies to obviate the need for a subwoofer. The MM-1 speakers will set you back £379.

B&W, 01903 221 500

www.bowers-wilkins.com



Linn abandons CD

PREMIER SCOTTISH HI-FI MANUFACTURER HALTS PRODUCTION OF CD PLAYERS IN 2010

In the light of falling CD sales and the growing success of its on-line hi-res downloads, Linn Products has taken the decision to axe CD player production from 2010. Justifying this evolution in its business model, Linn has declared a decrease of some 40% in the volume of its CD player sales over the last two years. Over the same period, sales of its DS (Digital Streaming) players have increased by 40%, accounting for almost 30% of its entire sales across the company.

Linn says it will still be producing CD and SACD discs although these media have recently been outstripped by Linn's on-line sales of downloadable DRM-free music. Encouragingly, Linn says that over 70% of downloads are of its highest resolution 'Studio Master' quality FLAC and WMA files, a resolution available to some 118 of its 300-strong on-line album titles. Much of the lower resolution

MP3 take-up, it seems, is by customers who want to familiarise themselves with a recording before deciding whether to buy it, at higher cost, in a higher resolution form.

Linn's DS range of digital music streamers extends from its entry-level, fully-integrated £975 Sneaky Music DS to its £11,400 flagship Klimax DS [see picture, below]. By choosing to make network audio players rather than servers, it keeps hard disk technology out of the box, concentrating on what it knows best. All Linn's DS players operate across a standard network infrastructure, UPnP being employed to provide seamless device compatibility. Its open software architecture allows easy customisation and integration into a wide variety of home automation systems.

Linn Products Ltd, 0141 307 7777
www.linn.co.uk; www.linnrecords.com



KEF limited edition

KEF'S NEW ALL WHITE HOME CINEMA SYSTEM

KEF is releasing a limited edition version of its KHT3000SE home cinema speaker package. Finished in a new home-interior friendly high gloss white veneer, only 50 systems will be made available in the UK. Such exclusivity will cost £1500, although you will receive two pairs of matching white lacquered stands as part of the deal.

The stylish and elliptically shaped 5.1 surround sound set up is made up of four compact HTS3001SE satellites, the HTC3001SE centre speaker and a 250W HTB2SE subwoofer to handle low frequencies.

KEF, 01622 672261
www.kef.com



Cambridge recall

CRACKS APPEAR IN DACMAGIC POWER SUPPLY

British hi-fi company Cambridge Audio is recalling the power supply units from its DacMagic outboard converter after discovering cracks in the casework of some of its 'wall warts'. A small number of UK three-pin and European two-pin types are believed to be affected but all owners who return the original power supplies will be sent a replacement free of charge. For more information, please visit www.cambridgeaudio.com/dmpsu.

Coincidentally, Russ Andrews Accessories has just introduced the AC-12 power-supply upgrade for the DacMagic. Using a precision wound transformer and 1m of woven Kimber Kable, the AC-12 costs £99.

Russ Andrews Accessories Ltd
0845 345 1550
www.russandrews.com



HI-FI NEWS' NUGGETS

PANASONIC TO BUY SANYO?

Having acquired Pioneer's KURO plasma technology and patents, Panasonic is poised to make a tender offer for Sanyo Electric valued at 403 billion yen, subject to regulatory reviews. The Japanese company is a leading player in developing green technologies.

RARE RECORDS

Can't find that hard to find pink Japanese pressing of Cheeky Girls? Then head straight to www.991.com. With over 500,000 mint condition pieces by everyone from ABBA to Zappa, this online store is a veritable treasure trove of music memorabilia.

OLIVE 4HD

Music server manufacturer Olive Media Inc. has announced the introduction of its first HD Hi-Fi Music Server for home stereo systems. Creating the HD category for digitally recorded music, the Olive 4HD is compatible with 'golden standard' 24-bit/192kHz digital audio, offering listeners music at the highest resolution. The Olive 4HD Hi-Fi Music Server is available directly from Olive (www.olive.us) at \$1,999 in 2TB guise. It includes 12 of Chesky Records' best 24-bit/96kHz tracks for free.

FOLK REISSUES

New record label, Three Black Feathers, is reissuing classic folk albums on limited edition 180 and 200 gram vinyl. The first wave of releases include records by Eliza Carthy and Nic Jones. 01684 899 457
www.threeblackfeathers.com

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HI-FI NEWS

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HI-FI CHOICE

"Not all mains conditioners are created equal... IsoTek has built itself a reputation as a purveyor of mains conditioners that actually improve (as opposed to just alter) the sound"

HI-FI WORLD

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www.soundfoundations.co.uk www.isoteksystems.com

"The whole auditioning process took about 30 seconds. Play a piece of music on GII Mini Sub. Play it again on Aquarius and wonder why you were so attached to the GII Mini Sub." "Very highly recommended"

HI-FI PLUS. ISSUE 68,



SIRIUS



ACCESSORIES



ORION



VISION



SIGMAS



TITAN

Aspara Acoustics Horn

NEW SUPER-SENSITIVE HORN LOUDSPEAKER MAKES MUSIC

Aspara Acoustics has announced a revised version of its 1.2m-tall HL1 horn loudspeaker, flagship of a range that includes the HL2 and HL6. Re-engineered with a titanium compression driver housed in a separate top-mounted cabinet, the latest HL1 also incorporates a 12in paper-pulp bass driver and Clarity Caps 'MR range' capacitors in its elegantly simple crossover network. The crossover frequency is specified at 800Hz.

Sensitivity is claimed to be a high 100dB/1W, making the HL1 an ideal partner for low powered valve amplifiers such as the Quad II Classic Integrated and Williamson designs featured in this very issue [see p22 and p120]. Available for order in a range of



piano lacquer and natural wood finishes, including Ferrari Red and Classic Oak, prices for the 52kg HL1 start at £7999.

Aspara Acoustics Ltd,
www.asparaacoustics.co.uk

Furutech Evo II Cables

BIG IN JAPAN, FURUTECH CABLES SETS SIGHTS ON THE UK

Furutech, a leading Japanese manufacturer of high performance audio cables and accessories, will soon be available in the UK. Its core technology is the 'Alpha Conductor' composed of fine OCC strands that have been subject to Furutech's cryogenic cooling and demagnetizing process. Its latest Evolution II Audio interconnects are available in both single-ended (RCA) and balanced (XLR) configurations, the connectors fashioned from a 'beautifully

engineered copper alloy', gold-plated and benefiting from a Teflon inner dielectric.

Furutech's partnering Evolution Power II mains cable [see picture, below] features a patented ground/earth jumper and 'W' wire-clamping mechanism in the IEC plug for what it describes as 'the industry's firmest contact'.

Furutech's Evolution II audio and power cables will feature in the next issue of *Hi-Fi News*.

Furutech Co Ltd
www.furutech.com



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Visit Hi-Fi News at Bristol

HI-FI NEWS STAGES UNIQUE AUDIO EVENT AT BRISTOL SHOW

Following our packed demonstrations at last year's Bristol Sound and Vision Show, *Hi-Fi News* will be returning with a new audio event for 2010. This year's show is a week later, from Friday 26th to Sunday 28th, but the Bristol Marriott Hotel venue remains unchanged.

Opening times for the show are 10am-5pm each day with entrance fees of £8 for adults and £4 for students/senior citizens.

Accompanied children under 16 may enter for free.

Once inside the show, the *Hi-Fi News* event will be free to enter for music enthusiasts of all ages. Our interactive demonstrations will start on the hour from 11pm to 4pm, with tickets available on the day from our booth on the ground floor where back issues and special subscription offers will also be available. We look forward to welcoming you!

SOUND & VISION
THE BRISTOL SHOW

Upcoming Events

IMPORTANT DATES FOR YOUR HI-FI DIARY

- | | |
|------------------|---|
| 7-10 JAN | 2010 International CES, Las Vegas, Nevada
www.cesweb.org |
| 14 FEB | Audiojumble, The Angel Leisure Centre, Tonbridge, Kent
01892 540022; www.audiojumble.co.uk |
| 26-28 FEB | Sound & Vision, Marriott City Centre Hotel,
Lower Castle Street, Bristol
www.bristolshow.co.uk |

Rocky Mountain Show '09

Words and pictures: Andy Rye



The sixth Rocky Mountain Audio Fest was held in Denver between the 2nd and 4th October 2009. No fewer than 470 companies exhibited in over 150 rooms at the Tech Center Marriott. Attendance was up again this year to 3700, making the Audio Fest the largest consumer audio show in the US. With many show visitors travelling long distances, a high proportion stayed at the venue, giving the show a relaxed, informal feel. Most exhibitors demonstrated in spacious bedrooms and seminar rooms, more conducive to better sound than those we are used to in the UK. Larger meeting areas were dedicated to the ever-popular market place where vendors offered new and used vinyl, audiophile CDs and SACDs.



This year the show spilled out into the car park where Harman International used Mark Levinson amps and JBL speakers to rock out two demo areas housed inside a 53ft trailer. See www.harman.com.



Nola Loudspeakers demonstrated both its Baby Grand Reference (pictured) and Micro Grand Reference speakers using Audio Research electronics, open-reel tape by United Home Audio, Nordost Odin cables and Quantum Resonant Technology noise filters. See www.nolaspeakers.com.



The i-Fi chair boasts Class D amplification, an iPod dock, wireless streaming connectivity and a frame-mounted vibrating unit for low frequency effects. Price is \$4000 (£2440). See www.i-ficompany.com.



Monarchy Audio demoed its NM24 valve DAC/line amp with a modest DVD player to impressive effect. The NM24 offers both solid state and valve outputs, either as a sub connection as a 'point of reference for tube rollers.' Price is \$1590 (£970). See www.monarchyaudio.com.



Denver's Focal and MBL retailer impressed with Focal's Maestro Utopia and Grande Utopia EM speakers, set up in an appropriately large room. Amplification comprised MBL's 6010D preamp and MBL 9011 mono power amps. Sources were a Clearaudio Innovation turntable with Performance arm along with an MBL 1621 CD transport with MBL 1611 USB DAC. See www.focal-fr.com/www.mbl-germany.de/en.



Karan Acoustics made a memorable first impression on its Rocky Mountain debut. The room featured the KA Line Mk II balanced line preamplifier and KA S 180 balanced stereo power amp. Also shown for the first time in the US was Zanden's Model 2500 CD player. The speakers – Indra three-way floorstanders – were from nearby Colorado manufacturer, Avalon. See www.karanacoustics.com and www.avalonacoustics.com.



The Tape Project has evolved as part of a recent revival of interest in analogue recordings. It is a series of selected analogue recordings, licensed from the copyright holders and carefully duplicated from the original masters to open-reel tape at 15ips. The tapes are sold direct by subscription to audiophiles looking to enjoy the better dynamic range and low frequency extension claimed for tape over vinyl. Several exhibitors featured open reel machines in their demos yet none was more impressive visually than J-Corder's. Its refurbished Technics and Sony machines had been fully restored, with all painted parts stripped back to bare metal and repainted to a high standard by an aerospace subcontractor. Prices range from £2450 to £15,300 depending on spec and model. See www.tapeproject.com and www.shop.j-corder.com.



Galibier Design showed its battery-powered Gavia turntable in polished aluminium. Arms fitted were a Triplanar VII and Talea (front) by Joel Durand. Both arms carried Artisan Cadenza MC cartridges. The record weight/speed strobe is the UFO by Hagerman. See www.galibierdesign.com.



Jolida showed its modestly priced electronics range, including the new 12W/ch FX 10 integrated amplifier at £275. Its acrylic case gives a clear view of the attractive blue glowing valves. The standmount speakers are the new Boxers by Nola. See www.jolida.com and www.nolaspeakers.com.

SHOWBLOG First sight of new products & technology



TTWeights Audio of Ontario, Canada is a sideline of an aerospace machinist. It exhibited a comprehensive range of beautifully finished turntable accessories, including replacement feet, platter mats and centre clamps and weights [see *HFN* July '09]. The platter mats are available in various combinations and thicknesses of copper, carbon fibre and polypropylene laminations. See www.ttweights.com.



Nelson Pass's First Watt company was showing its new 25W/ch J2 power amp. A Class A design, it employs a newly available JFET, developed for switching applications in electric vehicles and said to offer ideal power and distortion characteristics. The open baffle speakers are by Lowther America. These use Lowther PM5A drivers with Great Plains Audio's 416-8C – a contemporary version of Altec's 416B driver. See www.firstwatt.com.



High Water Sound demonstrated an impressive system showcasing TW-Acoustic's Black Night turntable with its 40mm-deep copper/composite platter, three-motor belt drive and battery power supply. It was fitted with a Graham B44 Phantom tonearm and Dynavector XV1-t MC cartridge. Amplification was from British valve specialist Tron Electric with its Syren Reference full function preamp and zero-feedback 12W/ch Telstar 211 power amp. Speakers were the three-way Horning Eufrodite Mk III design featuring horn tweeters and modified Lowther midrange drivers. See www.highwatersound.com.



Artemis Labs showed two SA-1 turntables, designed by Frank Schröder and fitted with Schröder arms. Cartridges were a Miyajima Labs Shilabe MC and a new Artemis Labs moving-iron. Amplification was Artemis Labs' PH-2 phono stage and SP-1 300B power amp. See www.artemislabs.com.



The popularity of personal MP3 players has stimulated the introduction of a wide range of headphones. German manufacturer Ultrasone had all of its models available for evaluation. The top model, the £900 Edition 8 (right on table) features titanium-plated mylar drivers, ruthenium outer ear cups and is supplied with a goatskin bag. See www.ultrasone.com.

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M430 Micro Component System



MCS-1330 Mini Component System

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professional audio equipment, but never lost sight of our original driving force -
the creation and delivery of beautiful, natural sound.

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Discover more at www.hifi.yamaha-europe.com

av·hi-fi

Powered by music



SHOWBLOG First sight of new products & technology



The Hanss Acoustics T60 turntable, designed in Germany with parts made in China. It features a magnetically suspended 200mm-deep aluminium platter driven by two AC motors via six silicone rubber belts. The solid base is of sandwiched aluminium and acrylic. The tonearm is the Triplanar VII with a Soundsmith Sussurro low output cartridge. See www.hanssacoustics.com.



Listeners were blown off their chairs by PMC's MB2 XBDi tower speakers! Developed from an active studio monitor, the design features two 310mm woofers and external crossovers. Source was a Bryston BCD-1 CD player, feeding a Bryston BP26 preamp and two 7B SST monoblocks. See www.pmc-speakers.com.



Rocky Mountain's reputation for inclusiveness was maintained by the smaller stands. Experience Music and Intact Audio's booth showed the former's custom horn speaker work with Intact's autoformer volume controls and custom transformers. See www.experienceaudio.com and www.intactaudio.com.



Ayre Audio showed its new DX-5 universal player, capable of playing all optical formats, including Blu-ray, with video output. A USB input means PCs and music servers can play via its asynchronous DAC. See www.ayre.com.



German Physics showed its omni-directional Borderland IV speakers with the DDD wide-band driver mounted on top. Electronics were by Vitus Audio: SCF-010 disc player, SL-010 line stage and SM-010 monoblocks. See www.german-physiks.com.

Next month

Ken Kessler reports from
TOP Audio Milan

SHARP TECHNOLOGY.



SHARP FULL SCREEN LED.



Other LED TVs have a single row of LEDs along the edge that are reflected onto the screen. Sharp LED TVs have hundreds of LEDs arranged in rows that cover the entire screen, from corner to corner. The blacks are richer and deeper. The colours are brighter and more vibrant. It uses up to 40% less energy than traditional LCDs and is mercury free. Sharp Full Screen LED defies the laws of physics - it gives you hundreds of brighter lights, massive improvements in performance and picture quality yet with huge energy savings and a reduced environmental impact.

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sharptechnology.co.uk

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SHARP  PROSTATE
WORKING TOWARDS PROGRESS
www.sharp4prostate.org

A Most Pressing Affair

We take a tour of The Vinyl Factory, saviour of EMI's old pressing plant

Once a mammoth manufacturing industry on a truly global scale, pressing plants for vinyl records have disappeared over the years, leaving only a handful of specialist vinyl manufacturers remaining around the world.

One such is the former EMI pressing plant in Blythe Road, Hayes, Middlesex, near to Heathrow airport. By the 1990s EMI had all but ceased manufacturing vinyl records. Not all of the machinery was destroyed, however. At the turn of the century the pressing plant was saved from extinction thanks to the expertise of former EMI engineers and the entrepreneurial spirit of Mark Wadhwa and Tim Robinson, the people behind The Vinyl Factory

BEEN THERE, DONE THAT

'I joined EMI as an engineering apprentice after leaving school in 1952,' recalls Roy Matthews, general manager of the revived pressing plant in Hayes. Along with his colleague Bob Bailey, who worked for EMI for more than 35 years and is now commercial manager at The Vinyl Factory, Roy was brought out of retirement to manage the new venture.

'Bob is only a youngster and still learning on the job,' Roy chuckles.



RIGHT: Roy Matthews (left) and 'junior' Bob Bailey, former EMI veterans who manage the vinyl pressing plant saved from extinction by The Vinyl Factory in 2001. The factory site in Hayes, Middlesex is steeped in history, dating back to the days of 78rpm shellac discs on the HMV label



'He joined EMI 20 years after me, back in 1972...'

In their youth Roy and Bob trained as mechanical and electrical engineers. Both are eminently qualified to maintain the priceless machinery – the dozen or so remaining EMI Type 400 vinyl presses – having been largely responsible for building the equipment in the first place. They know every nut and bolt, every pipe, and every gasket.

'These presses date back to the 1960s,' they tell us with the sort of affection that parents might reserve for offspring. In vinyl's heyday EMI's factories in Hayes had 120 presses and employed 14,000 people.

'We used to run the factories around the clock and were typically churning out 250,000 records per day,' the ex-EMI veterans remember.

As I drove down Blythe Road I'd

noticed the rows of terraced houses facing the factory gates. 'I'd have loved to have lived in one of those houses when I was a youngster,' I told the pair. 'I'd have been banging on your door every weekend, begging for any sub-standard Pink Floyd LPs going cheap. All my pocket money was spent on records when I was a teenager.'

'Actually those houses used to be owned by EMI,' replied Roy. And all the industrial buildings as far as the eye can see were taken up by EMI's record manufacturing, not to mention other Thorn-EMI operations. I expect that half the residents of the entire borough were employed by one division or another of the Thorn group. Don't forget, as well as pressing vinyl records EMI was making radiograms and music centres, not to mention research and development for the Ministry of

BELOW: A store of centre labels for LPs and singles. Printed on special heat-resistant paper, the labels go into the vinyl pressing machines. And you thought the labels were stuck on afterwards...



Defence. I can remember there was a gigantic timber yard at the end of this road, with a cabinet factory adjacent to it.'

Bob remembers escorting property developer Mark Wadhwa around the current facility sometime around the end of 1999.

'I knew he was looking to acquire the site, but when he saw that we were pressing records here I recall noticing a glint in his eye. Subsequently he invested in the building *and* the manufacturing plant, so today we are one of a group of businesses that comprise The Vinyl Factory Ltd, established in 2001 as a music and arts enterprise.'

CREATIVE SERVICES

With offices in central London the company provides a range of creative services to artists and



musicians [see www.thevinylfactory.com]. In addition to the manufacturing of records it offers packaging design, publishing and marketing services. The company curates and promotes exhibitions and events, owns a shop in Soho called Phonica Records, and acts as a record label – both independently as The Vinyl Factory and in joint ventures. Recent collaborations include projects with Damon Albarn (of Gorillaz and Blur), Primal Scream and the Pet Shop Boys. The resulting art/music products are sold through The Vinyl Factory's London galleries, commercial events and directly through an on-line shop dubbed Vinyl Factory Editions.

Bob Bailey shows us a 'cut' lacquer that had just arrived by courier from a mastering studio [see picture, above]. Lacquers are aluminium discs coated with

ABOVE: Rows of nickel plating baths for 'growing' masters, mothers and stampers. PVC granules (top right) are formed into a 'shot', with labels top and bottom before pressing to form the record (below)

nitro-cellulose. They're single-sided and shipped in specially designed boxes to avoid damage. They are also over-sized so that they can be handled at the edges without touching the delicate groove area.

To manufacture records, black PVC granules are heated and formed into a doughnut-sized 'shot' (sometimes referred to as a biscuit), the press applying a disc's A-side and B-side labels to the top and bottom of the vinyl shot before being heated and squashed under enormous



'Black PVC granules are heated and formed into a doughnut-sized "shot"'

ABOVE LEFT: Bob unpacks a lacquer delivered from a mastering studio. Discs are over-sized to allow safe handling around the edges

pressure. One hundred tonnes of pressure, to be precise. But we're jumping several stages ahead, as the stampers (with protruding ridges) that impress the groove into the molten vinyl first have to be created.

Think of records, containing v-shaped grooves, as 'negatives'. Forming 'positive' stampers to press discs is a three-step process. From the cut lacquer (negative) delivered fresh from the mastering studio is made a 'master' (positive), then a 'mother' (negative), and finally a 'stamper' (positive).

To begin, a silver nitrate solution is applied to the lacquer to make

INVESTIGATION

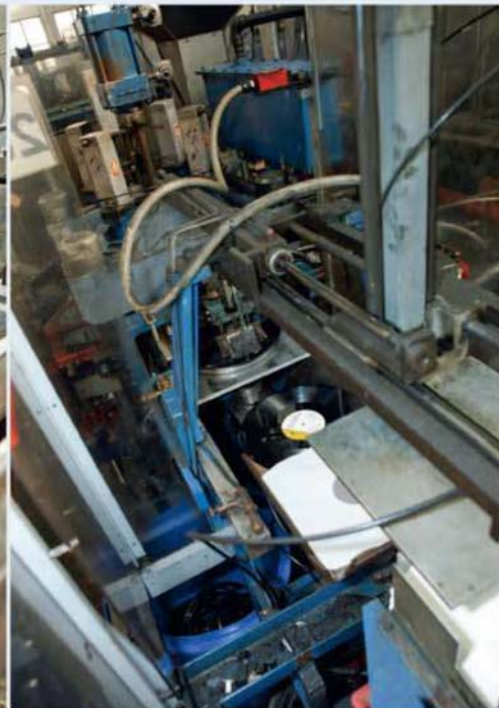
the disc electrically conductive. Once the black lacquer disc has been silvered, it enters an electroplating bath and nickel forms on the surface, a process that takes 4.5 hours. After this, the newly formed silver-coloured 'master' (now a positive) is carefully peeled away from the silvered (original) lacquer. From this point the studio lacquer is pretty much good for nothing, hence the name 'master' being given to the resultant positive disc because this is now the only 'perfect master' from which records can be pressed. It *could* be used to stamp a limited production run, of course, but once it has pressed a couple of thousand records it will be worn out, leaving nothing to revert to other than the recording studio's original master recording of the music.

To press more records subsequently would incur the significant time and expense of having an engineer cut a fresh lacquer on a mastering studio's cutting lathe.

So the positive 'master' is handled with extreme care before being covered in conductive film and returned to the electroplating



ABOVE: EMI Type 400 press is 1960s vintage; stamped records are inserted into inner sleeves (right)



BELOW: Master is peeled from silvered lacquer and covered in conductive film. Centring the hole is critical

'The 1970s saw a move to reduce costs by reducing the thickness of vinyl used'



bath for another few hours to 'grow' a negative mother. The application of the film allows the nickel mother to be peeled apart from the master. Finally the plating process is repeated once more time to create a nickel record stamper.

MAKING MILLIONS

Ten or more mothers can be grown from a single master before the master deteriorates to a point at which it is unuseable. In turn, each mother can grow many stampers before it is deemed no longer fit for purpose. In this way several million vinyl discs could be pressed in factories all over the world from a single original lacquer 'cut', though today, with limited production runs, a couple of stamper pairs (one for each side of a record) are typically all that's required.

The quality and durability of records is highly dependent on the quality of the vinyl. During the 1970s there was a move to reduce costs by reducing the thickness of vinyl used in mass manufacturing [who remembers RCA Victor's 125g Dynaflex pressings?], and its quality, with increasing amounts of substandard recycled vinyl used. Manufacturing time per disc was also reduced.

'Commercial demands once dictated a pressing cycle time as short as 12 seconds, but these days our cycle time is around 24 seconds per disc,' explains Bob as we watch one of the presses automatically heat the PVC shot with hot steam at a pressure of 160psi. Once heated the shot is rammed against the stampers with a force of 100 tonnes before being rapidly cooled by pressurised water. 'Standard LPs

use 140g of vinyl, but increasingly we are pressing 180g and 200g LPs,' Bob continues.

The Vinyl Factory buys its PVC-Acetate co-polymer granules from a production plant in Reims, France, belonging to the Arkema conglomerate that manufactures all manner of plastics products for various industries. Naturally the material would be clear in colour but is blackened by the inclusion of carbon. Also within the compound is a wax lubricant, along with a small amount of barium that acts as a stabiliser as the PVC endures its rapid heating and cooling during record pressing. Roy explains later:

'The quality of the co-polymer today is far better than it used to be, as the manufacturers of the raw material are no longer producing vast quantities.'

The granules are delivered in 1.1tonne sacks each costing around £1200 and estimated to be sufficient for producing approximately 7000 LPs.

'We're sometimes offered huge quantities of old records as it's assumed we'd like to re-cycle them, but we decline politely. We only recycle the virgin vinyl that we've trimmed from the edges of our own pressings, so we are fully in control of our materials within our factory.'

HISTORIC ROOTS

While the building might look unremarkable, the site is steeped in history. Madame (later Dame) Nellie Melba laid a foundation stone for the Hayes factory in May 1907. Record manufacturing began in June the following year and within a few months Nipper, the 'Gramophone Dog', made his first

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INNOVATORS IN SOUND

INVESTIGATION

appearance on British His Master's Voice record labels. It was in 1931, not long after electrical recording had been introduced using the Western Electric system, that The Gramophone Company and The Columbia Gramophone Company merged and registered a holding company called 'Electric and Musical Industries' – eventually abbreviated to EMI. In that same year (1931) Sir Edward Elgar ceremoniously opened EMI's new recording studio – the now legendary Abbey Road – and Alan Blumlein, an EMI employee, produced his master patent for binaural (stereo) recording.

'When I joined EMI as an apprentice I witnessed the launch of the microgroove LP, but they were still mono,' remembers Roy.

'We didn't press stereo records until 1958 and, in fact, manufacturing of 78s didn't cease until 1960. Of course, Bob here won't remember any of this; he was barely out of nappies. When he joined EMI the record manufacturing division had already outgrown this building and was a couple of miles away, on the other side of Hayes. The building that we now occupy was simply the record packing and shipping department.'

MAKE DO AND MEND

In addition to the 11 presses currently operating there are areas of the building reminiscent of a car breaker's yard and engineering repair shop.

'The parts for around 20 of EMI's presses were salvaged from various buildings, some of them brought back to Hayes from other EMI manufacturing facilities in Greece and Spain. Most had been scrapped over the years as EMI ceased pressing records,' Roy laments. 'By 1990 there wasn't much left of



ABOVE: Sleeved discs are shrink-wrapped prior to packing and shipping

ABOVE RIGHT: An ultra secure area stores precious masters, mothers and stampers

RIGHT: Labels are preloaded in the press

BELOW: You'd swear time had stood still... built into a desk, a 1960s turntable with SME arm is used for listening to nickel masters through a pair of vintage Tannoy monitors. It's the studio mastering engineers' job to check the sound quality of 'test' pressings; here they check for obvious flaws such as a locked groove



EMI's record manufacturing in Hayes as CD had pretty much taken over the music industry. I'd already left, but the dance music craze created a minor renaissance for vinyl during the 1990s and I was invited to return. Bob and I salvaged what we could and reinstalled these presses in this building. We have to maintain everything ourselves and make parts as necessary.'

So thanks to DJs and the dance music market, some vinyl production remained at Hayes. And then just when it looked like vinyl manufacturing might cease for ever, The Vinyl Factory saved the factory from extinction. Today, Roy Matthews considers the CD to be in greater peril than the LP.

'CDs are just a digital carrier and they don't have enough advantage over newer digital formats to survive in the long run,' he believes.

'LPs and 45rpm singles are such attractive, physical things compared with a file downloaded to a computer. Vinyl is a niche product, of course; but I think it will be here long after the CD has gone.'

'Since we revived this pressing plant I've really been enjoying listening to records again and appreciating the natural, warm

sound. When I was younger, managing the massive EMI pressing facility, I'm afraid I rarely had time to enjoy listening to music. I was only ever listening for faults. Now that we're no longer under pressure to

'Today, Roy Matthews considers the CD to be in greater peril than the LP'

manufacture huge volumes we can make much better records, which is highly rewarding.'

THE NEXT GENERATION

Today a priority for Roy Matthews and Bob Bailey is to pass on their knowledge and skill set for a future generation. Roy confides in us:

'We had a teenage boy here recently from a local school for a few weeks' work experience. We put him in the sound booth to check an initial pressing.

'We hadn't seen the youngster for what seemed like ages, so we went to check that everything was OK. He was still sitting there, staring at the record revolving on the turntable. It transpired he'd never seen a record before. He didn't know how to play it.' ☺





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QUAD

Quad II Classic Integrated (£4500)

Quad's first integrated valve amp does what Peter Walker should have done 50 years ago: marry a Quad 2 preamplifier and a pair of Quad II amps – for a dream result

Review: **Ken Kessler** Lab: **Paul Miller**

As far as expressions go, a novelist would describe it as 'eyes agog': that's the look that crossed my face in January 2009, at the Consumer Electronics Show in Las Vegas. It wasn't even an actual piece of hardware that grabbed me. It was a preliminary product sheet, a flyer for the forthcoming Quad II Classic Integrated. Talk about a well-kept secret: even the normally voluble Tim de Paravicini, who designed it, let out nary a peep [see p110].

You didn't have to see the real thing to know that this would be a product worth waiting for, eliciting anticipation such as a jaded old audiophile might not have experienced in a decade. Any familiarity either with vintage Quads or recent models in the Classic range would tell you that they got it as 'right' as Fiat did with the new 500. It was so unmistakably 'Quad', and so clearly an integrated amp, that you'd like to think it grew organically. I implored, begged, cajoled: could I please, please, please have one to review. And ten months later, it arrived.

It is what it is, just what the product sheet promised: a pair of Quad II Classics merged with a preamplifier. Tim de Paravicini managed not only to fit it all into a compact box, a stylish package owing its looks to nothing else on the planet, he also upped the power.

Tim told me that 'the amp section had to more powerful,' his eyes and ears aware of like-priced all-valve competition, 'and it had to be compact enough and user-friendly enough to attract new customers.'

'So, the output valves are run more conservatively, yet it produces a genuine 25W/ch. It goes loud without going to pieces. It had to kick arse. The HT is increased but the critical voltage-to-screen-grid is lowered to enhance

reliability.' Tim has had enough of amplifiers (and valves) made in China that suffer poor reliability. He wanted this to be unbreakable.

AFTER A WARM UP

Given that the amp oozed robustness, I had no qualms about connecting it to the sort of speakers not normally attached to a mere £4500's worth of amplification: Wilson Sophia 2s. With Kimber alternating with Yter wires in-between, and with Musical Fidelity's kW DM25 CD transport/converter and the SME 30 with Series V arm and Ortofon 2M Blue, the system was up-and-running in ten minutes, exactly as Quad (and Tim) wanted. But – being a man with astonishing willpower when needed – I left it playing for an entire day before listening to it.

If patience is a virtue, I learned it doubly with the Quad II Classic

Integrated. The initial burst, the remastered soundtrack to *The King and I*, was chosen for a huge dose of orchestral majesty, followed by some broad stereo, and a feast of massed voices. You'll have to forgive my current obsession with Broadway musicals, but I just read George Gershwin's 1956 biography by David Ewen, and I'm in thrall of him, Cole Porter, Jerome Kern, Rodgers and

Hammerstein, Lerner and Loewe, *et al.* And from an audiophile standpoint, goodness me, did those 1950s soundtracks enjoy the best recording technology of the day.

But this is 2010, and the Quad is

emphatically *not* an exercise in retro, whatever the styling and the origins of the circuits suggest. While this may provoke many of you to cries of 'Heretic!', you have to approach this product not as a mutated Quad 2-plus-IIs, even though you want to in your

'Like his personality, Tim's designs tend to grab you by the collar'



RIGHT: Aside from some solid-state circuitry in the phono section, for quietness, this baby is all-tube: maintaining its purity, the new Quad uses four KT66s, fed by four ECC88s and two ECC83s



Quad-loving heart. Rather, for the sake of sanity and blood pressure, you have to do what all those Mini purists had to do when BMW 're-imagined' Issigonis' masterpiece... and believe me, the parallel is absolutely perfect.

Exactly as with the new Mini the Quad II Classic Integrated is more powerful, more cleanly styled, better-assembled and more 'grown up' than the products that inspired it. You soon learn that you need to approach it without any reservations based on nostalgia or prejudice: you are not nursing a 50-year-old amp, nor a near-replica like the Quad II Classic monoblock. What you are interacting with is a thoroughly modern product that happens to look like something Doc Savage would have had in his 86th floor, New York lair in 1939.

Having waited to hear what the Quad would do, but already knowing that the Wilsons presented no problems, I dug out some treasured vinyl, including the

primordial alt.country of Great Speckled Bird. The group was composed of the astonishing Ian and Sylvia, plus rock journeyman N D Smart II, and it featured the kind of music that, four decades on, would power the likes of Wilco.

Here the Quad showed not so much what it could do for sheer gutsiness, but for finesse, dealing with those country-ham-honey-hominy harmonies with a coherence that reminded me of... yup, the original Quad ESL57.

POP TO POMP

How on earth Tim de Paravicini has managed to voice this amplifier to deliver such silkiness I cannot imagine. It's as if he wanted an amp to sound like a speaker I know he regards as one of the best of all time. To my ears, Tim's own amplifiers have a signature sound, the largest part of it being hyper-detail and rock-solid, robust lower registers. Like his personality, Tim's designs tend

to grab you by the collar, an Amarone to everyone else's Beaujolais.

Not so the sound Tim has dialled into the Quad Integrated: if Tim has a Jekyll side to his Hyde, then he reached down deep in his psyche to portray, in the sound of this integrated amplifier, his alter ego. But that quality, that poise, contradicts what will invariably turn out to be the Quad's biggest selling point as regards its performance (rather than its intrinsic form as a cool-looking amp regardless of how it sounds). This amplifier is so deceptively powerful that – psychologically rather than through the loudspeakers – it almost counters its own delicacy, sophistication and poise.

It's as if Fred Astaire and a sumo wrestler inhabited the same body. In practice, it means that this amplifier is blissfully free from the constraints of favouring a single genre. It rocks, it glides. It shimmies, it pounds...

Does it not excite you to think that you can feed an amplifier, first, a CD of remastered Led Zeppelin, followed by an LP of vintage Streisand, then a glossy C&W epic from George Strait, and all will sound delightful? One minute the Foo Fighters, the next, Leonard Cohen. Quad (and Tim) may have only planned for this unit to be abnormally versatile in operational terms – hence three line inputs, full tape monitoring and a proper phono section – but the Classic Integrated certainly has no problems whatsoever in optimising the playback of everything from pop to pomp. It was the vinyl reproduction, though, ☺

1950 MEETS 2010

While developing Quad's first-ever integrated, the overall priority was to produce a practical, commercially-sensible, user-friendly integrated amp that did everything a Quad 2/II combination might have done had it been combined before. The trick would be to eschew anything that might limit its appeal solely to hardcore audiophiles, while attracting newcomers. Hence, the unit is handsome, its valves protected under a safety cage, and with a small footprint of only 310x380mm. This unit shouldn't cause any domestic ructions. All that's missing is a remote control for the volume. Equally, it's an all-in-one package aimed at a music lover who wants what every integrated amp buyer wants: separates performance in a single chassis, a decent MM/MC phono stage, useful connectors. And, by George, they did it. PJW would be proud.

that made me sit up and take notice. However much I like the wee Ortofon moving-magnet, I'd never gotten the same *frissons* of sonic ecstasy that I expect on a regular basis from a Koetsu. Tim explained why I was delighting in what surely must have been a relatively humble phono stage, despite it offering switchable MM and MC settings.

'The phono circuit is a sealed box, a simple, discrete transistor circuit obeying my tube principles, not your usual nonsense high-feedback circuit. It was a concession to get the package to fit, to deal with hum, etc.'

Believe me: it's both quiet and widely dynamic, and the Ortofon loved it. The acoustic space of the Cowboy Junkies'

Trinity Sessions was open

and airy in a way I could

not have anticipated,

any more than I would

have demanded such

competence of NAD's

brilliant PP2 phono

stage. You don't expect

the circa-£50 NAD to

perform miracles, so

you approach it realistically and thus it

never lets you down. So, too, the phono

section of the Quad, only it delights in

going the extra mile to surprise you,

especially in terms of dynamic contrasts.

I've heard stand-alone phono stages that

cost more than this Quad which don't

deliver the same joyous result.

GETTING TO THE TRUTH

When comparing the mono and stereo

vinyl copies of Jeff Beck's *Truth*, the

massive percussion and the thuds in

'I Ain't Superstitious' naturally served

as touchstones for the mono vs.

stereo shoot-out. So wide and open

was the sound through the Quad's

phono section, and so detailed the

resolution, that the single vs. two-

channel presentation ceased to be an

issue. I was able to focus solely on the sound quality and ignore the *non-spatial* characteristics, hearing just the sounds and textures with a sense of authority unfettered by worries about positioning, dimensions, *et al*.

Another quality manifested itself vividly with these recordings, while listening to a young Rod Stewart working his magic on 'Ol' Man River'. Voices can challenge a system the way a piano does: the textures, the tics, are paramount in recreating a convincing sonic experience. The Quad caresses everything from the natural sibilance to the amount of desired nasality to the sound of the singer's chest and throat.

Few are the voices as distinctive as

Stewart's. It's only

of late that Rodders

has been recognised

as a worthy stylist

beyond the rock

genre, thanks to his

series of *American*

Songbooks in honour

of the songwriters

I mentioned on

p22. Prior to this, his fiefdom included heavy metal, soul, R&B and a brief (but financially fruitful) foray into disco. Here we find him, *40 years ago*, singing a Kern/Hammerstein masterpiece, dropping into the persona of a weary black man with the skill he would exploit again many decades later. The Quad showcases his voice, including his odd bursts of falsetto, against a churning rhythm section of Mickey Waller and pre-Stones Ron Wood.

As an exercise in proportion, it is masterful. Exploiting the full range of the Sophas, the Quad uses the bass octaves as a support for Stewart, and you can't help picturing him standing on the notes. OK, so that's about as odd an image as one can muster, a bit too of-the-period and its passion for mind-expansion, but it sounded that way – and it reminded me

of an earlier audio experience, in which the music seemed to float above the loudspeakers.

That first taste of truly three-dimensional sound involved the Byrds' *Ballad of Easy Rider* LP. It was the track 'Armstrong, Aldrin and Collins' and the way the spacecraft launch appeared to rise above the speakers and through the ceiling that taught me in an instant about image height. Uncannily, the Quad does that again and again with both vertical information and off-stage sounds, to the outside of the speakers. Returning to the Cowboy Junkies, anyone who knows the sound of a Calrec Soundfield microphone will giggle with delight upon hearing that LP through this amplifier. You wonder where Tim fitted the Ambisonic decoder and the eight channels it demands.

SPOT ON

If peerless soundstage portrayal is among the Quad's most vivid qualities, it follows then that tonal balance must be close to spot-on as well. Another revelation that has stayed with me over the decades was the pronouncement by Arnie Nudell (then of Infinity), that you cannot get one right without the other, for the clues to spatial characteristics are of such refinement and delicacy, and are borne by the tonal nature of the recording, that they *must* co-exist at an equal level.

To test this, one ought to revert to mono, which effectively eliminates any interference, support or confusion caused by spatial characteristics, leaving you just with the innate tonal quality. (I still maintain, however, that one can hear front-to-back layering even without the left-right component, despite the logical argument to the contrary.) The Quad proved itself again and again as I played disc after disc from the two Beatles box sets. ☺

'Peerless
soundstage
portrayal is among
the Quad's most
vivid qualities'

TINIER TIM

Tim de Paravicini is the *de facto* keeper of the flame, his respect for Peter Walker ensuring fidelity to the ethos; one wonders what PJW would make of the mighty Quad II-eighty amp. Downsizing to an integrated, though, was a different sort of challenge for Tim.

'I designed it lock, stock and barrel, including the aesthetic. I saw it as an entry-level product that allows people to trade up. I took the front panel casting of the preamp, to keep the Quad signature look without the valves overshadowing the rest – the input selector is a play on the balance control of the preamp. The output configuration is still PJW's, but it's completely balanced. I needed to get 300mV sensitivity – the Quad II had woefully inadequate sensitivity. I wanted this to accept everything from cassette tapes to CD.' Oh, it does, Tim – magnificently.



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AMPLIFIER



ABOVE: Quad has endowed its Integrated with three line and one MM/MC phono inputs, a tape input and a single set of gold-plated 4mm speaker cable outlets

Of course, some of the mono vs. stereo mixes are so radically dissimilar that the differences are bound to be pronounced. But the tracks known to differ minimally allowed the Quad to demonstrate the way it does not mask subtleties. (Note: You do have to examine the booklets that came with The Beatles CDs to find out which tracks were merely mixed down to mono, and which differ extensively. A mono button on the Quad would have helped!)

IF ONLY...

It must be said that the Quad II Classic Integrated exceeds its specifications and its mission statement, but it is not some sort of magical solution to all your electronic needs. Upon feeding it Koetsu and Transfiguration moving coils, I wished I'd had a phono stage with variable settings – something clearly beyond its price point. The extreme treble was slightly softer than I anticipated, although this may be regarded as a virtue if you are seduced (as I was) by the way this amplifier sounds like its loudspeaker antecedent. I miss a remote. And I would have loved a way to separate preamp from power amp.

But, given that I absolutely adore this product, those are minor, operational concerns. Only slightly more vexing is the price, which places this at £1200 more than, say, the (admittedly prosaic-looking) Audio Research VS160,

while it costs considerably more than the various models from Prima Luna. If this honey of an integrated amplifier were on sale at £3500 or even £3900, it could cause a stampede. At £2900, it could rule the world.

Despite that minor concern, though, I have no qualms over raving about the Classic Integrated. After all, there are some manufacturers out there asking £4500 for a metre of cable. The Quad's looks alone could seduce the credit card from my wallet, while the confident, robust, involving sound would render it inseparable from my listening room.

More than anything, I look upon it as purely, utterly and totally 'Quad', regardless of the place or its date of manufacture. ☺

HI-FI NEWS VERDICT

If there is anything unexpected about Quad's integrated, it's the palpable 'real-world' power: this baby drove Wilson Sophia 2s with aplomb. Tim de Paravicini squeezed out as much grunt as a brace of KT66s-per-side can deliver, without altering the warm, seductive character of a circuit nearly eligible for its bus pass. Truly a Quad for the 21st Century, and in a more convenient package than you can imagine, it's a triumph.

Sound Quality: 86%

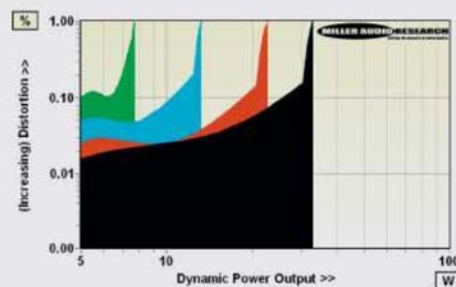


LAB REPORT

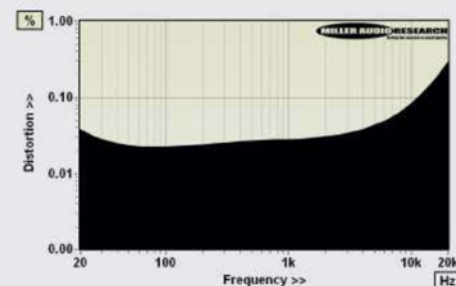
QUAD II CLASSIC INT. (£4500)

While retaining many of the original Quad II hallmarks, including its push-pull KT66 output configuration and single-tap output transformers, this 'integrated' version of the 1950-'70s classic is twice as powerful if Quad's 2x25W rating is any guide. In practice it does better than that, offering 2x32W/8ohm. However, while the transformers in the original design were seemingly optimised for an intermediate 6ohm load, this Classic Integrated model gives off its best into 8ohm, the output falling to 2x21W/4ohm [23W under dynamic conditions – see graph 1, below]. The output impedance is impressively low at ~0.2ohm for a transformer-coupled amp, a figure broadly maintained from 20Hz through to 20kHz. As a result, the amplifier's response holds up very well into 8ohm (–0.8dB/20kHz), 4ohm (–0.95dB/20kHz) and 2ohm (–1.5dB/20kHz) loads, despite the shortfall in power output.

Noise is low, the Classic Integrated achieving an A-wtd S/N ratio of 88.9dB (re. 0dBW) and a residual hum and noise of –76.2dBV (just 0.15mV, unwt'd). Distortion is also carefully judged in this design [see Graph 2, below], falling as low as 0.025% through bass and midrange at 10W/8ohm but rising to 10x this figure at very high (20kHz) treble frequencies. The output transformers also saturate quite quickly below 20Hz where distortion shoots up to 20-30% from 10Hz down to 5Hz at just 5W/8ohm – so beware that infrasonic bass from CD or LP sources does not rob the Classic of its energy! Readers are invited to view a comprehensive QC Suite test report for the Quad II Classic Integrated by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads



ABOVE: Distortion vs. frequency from 20Hz to 20kHz (10W/8ohm). Distortion increases markedly at lower frequencies, reaching >20% from 5-10Hz at just 5W

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	32W / 21W
Dynamic power (<1% THD, 8/4/2/1ohm)	33W / 23W / 13W / 8W
Output impedance (20Hz–20kHz)	0.165–0.265ohm
Frequency response (20Hz–100kHz)	+0.04dB to –18.6dB
Input sensitivity (for 0dBW/25W)	54mV / 273mV
A-wtd S/N ratio (re. 0dBW/25W)	88.9dB / 102.8dB
Distortion (20Hz–20kHz, 10W)	0.023–0.30%
Power consumption (Idle/Rated o/p)	163W/175W
Dimensions (WHD)	310x200x380mm



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0%*

(NEW - HOT PRODUCT)

Eclipse: £1,530

(excluding tonearm)

10% Deposit: £153.00

Term: 12 months

Monthly Payment: £114.75

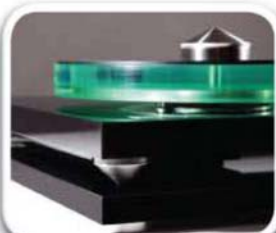
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**HI-FI World
VERDICT**



NEW - The striking Eclipse Turntable

It arguably eclipses all others at the same price and then some...

Don't just take our word for it - take a look at the Eclipse's stats:

- The turntable is supported on three highly machined steel and acrylic cones on which incorporate a new concept in sorbothane shock absorber isolation
- Highly machined bearing and inner bearing shaft manufactured to fit each other individually - not in batches
- Half inch thick machined alloy sub platter
- Individually machined pulley for 33 and 45rpm speeds
- 20mm thick acrylic platter in a sumptuous finish, the likes of which you will have not seen before
- A half inch bolted in arm base to fit the arm of your choice, machined from alloy and to a stunning finish
- Choice of packages available with the Inspire tonearms
- Distinctive and flame polished acrylic 2 plinth configuration, perfectly CNC'd to house all the parts
- Lower plinth designed to 'lock in' the sorbothane isolation system, giving an amazing solidity and impact to the reproduction of the music
- A highly tuned power supply perfected by electronics experts using the best audio parts available, and housed within an acrylic under platform
- Very high quality AC synchronous motor provides smooth and quiet operation, which is further isolated by the use of sorbothane between motor and the acrylic plinth
- Topped with a most desirable and highly engineered record weight.



Inspire Hi-Fi



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The **Deco 8** is one of our favourite models from **ART Loudspeakers**.

Employing in standard form the "Seas Crescendo" tweeter and **Seas 220mm Paper Bass-Mid**, together with **WBT Platinum Terminals** and a **choice of different levels of internal components**, the **Deco 8** will thrill and excite music lovers.

You won't believe just how low this speaker can actually go! It's tight too, and very fast, allowing you to easily follow intricate bass lines and it has the slam to rearrange your insides if you so wish.

Hear your music as it was meant to sound. **While you can hear everything in the recording, the Deco 8 ensures you enjoy the performance as a whole. Please call to arrange your leisurely home evaluation. We've never had a pair back!**

0%*

Deco 8: £6,000

15% Deposit: £900.00

Term: 30 months

Monthly Payment: £170.00

Finance available on all Deco & Moderne ranges:

Deposit: £call

Term: call

Monthly Payment: £call

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artloudspeakers

0%*

PS.30R: £1,799

10% Deposit: £179.00

Term: 12 months

Monthly Payment: £135.00

PS.30RDT: £2,799

15% Deposit: £419.85

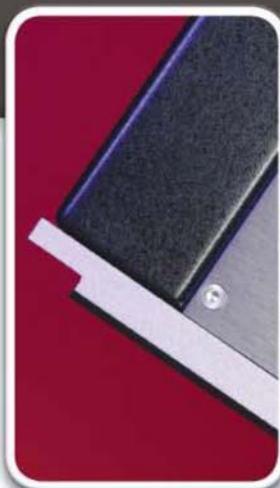
Term: 12 months

Monthly Payment: £198.26

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Facing Whest

The PS.30RDT has been reviewed worldwide and is accepted as the phono stage 'tour-de-force' easily competing with phono stages three times its price...

It's easy to fit into any standard rack or cabinet. It's inherent ultra low noise levels are needed if the user is to use low/very low output moving coil cartridges, an area which value/tube phono stages constantly fail in.

Output impedance is a very low 50ohms at 1Khz, so even if using extremely long output cables, there is no chance of losing that precious signal.

With 6 load and 6 gain settings (user adjustable internally), whatever cartridge is being used, you can be assured a setting is there for the optimum performance.

"A brilliant all round design then, offering most of what anyone would ever need."

(PS.30RDT) David Price, Hi-Fi World July 09

whest

**Hi-Fi World
VERDICT**

Amazon 2/Mørch DP-6 (£3700)

Elegantly armed by a Danish ally, this German turntable has a classy look. But with current exchange rates, can the Amazon find a competitive place in today's TT jungle?

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

Strange as it may seem now, in the early 1990s there was a period when you could go for months without seeing a vinyl-playing product reviewed in *Hi-Fi News*. Here in the UK, at that time, there just weren't any new turntables to review.

In Germany, though, things were different. Every time we visited the High End Show, which was then held every year in Frankfurt, we would see more turntables than you could shake a tonearm wand at, not just new turntable models, but enthusiastic new turntable manufacturers. One of those makers was Amazon, based just up the road at Oberursel.

Founder and designer Hartmut Janssen produced the first Amazon turntable in 1986, introducing the idea of a subchassis decoupled by LRP (low resilience polymer) elements rather than metal springs.

In his original Amazon Reference model, Janssen also pioneered the use of a DC motor powered by a rechargeable battery, which was housed in a separate unit together with its mains power supply and battery management system.

Reviewed here is the simpler Amazon 2, where a neatly-shaped plate at the back corner conceals the built-in motor with its electronic speed control circuit, taking power more conventionally from a plug-top transformer. A small three-position switch gives 45rpm, off and 33.3rpm, and behind the housing are two tiny screws for fine speed adjustment. Although the deck arrived with the speed wrongly set, this was corrected before the listening tests.

So, all that can be seen of the motor from above is the single motor pulley. Drive from this to the platter is by what I'd like to call a piece of very fine knicker elastic, although Amazon describes it as 'a very thin string made from a duplex material'. This stretchy belt is joined by a knot, rather than being 'endless', without audible

ill-effects. But the Amazon 2 does take a fair while to get up to speed. With or without the weight, I found it took nearly 20 seconds to reach 33.3rpm.

Weighing 5kg, the translucent methacrylate platter is slightly larger than an LP record at about 320mm diameter, the rebated edge outside the record contact area forming a sort of safety shelf. A shallow centre recess accommodates the label, while a deep groove cut up into in the underside forms a 'resonance diffuser', which is said by Amazon to eliminate resonances which would otherwise occur between 9 and 13kHz.

Bonded into the centre is the inverted main bearing sleeve, with a flat thrust plate of Teflon-type material inside the top. This transfers the weight of the platter to an 8mm-diameter ceramic ball, held captive in the top of the 16mm-diameter bearing spindle. Using the platter weight enhances the sound slightly.

INTERCHANGEABLE ARMS

In an ever-changing world, it's comforting to know that there are still a few specialist tonearm makers like Hans Henrik Mørch,

in business for more than 25 years and still true to his original concepts. Amazon has collaborated with him for many years now.

The simpler of Mørch's two current arm models is the UP-4, which is a true unipivot, where the arm is carried on a single point that rests in a sapphire cup, with optional fluid damping. As the arm is free to rock in any direction, cartridge azimuth can be set by rotating the eccentric counterweights, shifting their centres of gravity from side to side.

But the more expensive model is the 'double pivot' DP-6, and this came fitted to our Amazon 2. Here, the arm is mounted on a small precision ballrace for lateral movement, but movement in the vertical plane is catered for by a pair of those points-and-cups, placed either side of the arm tube's centre line when seen from the front. Cartridge azimuth can be corrected if necessary by adjusting one of the two points. Again, fluid damping is provided. To sum up, the DP-6 may look like a unipivot, but it doesn't wobble about like one.

A key feature of the Mørch design is the provision of interchangeable arm wands, supplied in a range of four different



RIGHT: Seen here in gold-plated finish but also available in chrome, Mørch's DP-6 tonearm combines ball-bearings for lateral rotation with a double point bearing for vertical movement



weights. A colour code of green, red, yellow or blue dots denotes masses of 3.8, 5.7, 7.4 or 13.1g. The same options are available in 9in and 12in format.

As the tonearm comes with a set of four counterweights of different masses, it is possible to match almost any cartridge. The weights slide on to the carrier rod just easily enough for convenient adjustment. For this review we were given two 9in arm wands, the second-lightest or medium (red) and the extra-heavy (blue), the latter coming with special silver internal wiring. The chosen wand is secured by a knurled nut screwed on to the stud projecting from the arm housing, and the signal is conveyed by four spring-loaded contact pins ranged to the rear of this.

Changing wands couldn't be easier really, and this feature is helpful for those who like to indulge themselves with two or more cartridges rather than staying faithful to one. The bearing assembly remains captive on the pillar, so you can always replace one wand with another without having to disturb the bearings or the damping fluid, if used. But of course, you will still have to reset the tracking force every time you make a switch.

Mørch doesn't give you a conventional headshell, but provides a bridge or saddle piece which holds the cartridge on to the flattened front end of the arm and also forms a finger lift. Anti-skating or bias compensation is applied by a small clock spring, adjustable by a lever. The arm pillar

is held in its mounting by a single hex bolt, which is slackened for height adjustment.

For a low-compliance moving-coil like the Ortofon Kontrapunkt A, the heavy arm wand proved fine, and when balanced by the two heaviest counterweights this put the low-frequency arm resonance just where it should be, at around 10Hz.

GO WITH THE FLOW

Later, when I tried several moving-magnet cartridges in the much lighter 'medium' wand, I was again easily able to get a satisfactory low-frequency resonance frequency even with the ultra-compliant Shure V15/III. But I started listening with the heavy wand and the Kontrapunkt A.

On Jennifer Warnes' 'Ballad Of The Runaway Horse' from *Duets* [GRP 97 121], the voice was appealing with a relaxed and communicative quality. Rob Wasserman's bass seemed very well characterised, with a good sense of 'stringiness' about the sound. The music flowed well.

Changing up a few gears with Eric Clapton and 'Motherless Children' on *461 Ocean Boulevard* [RSO 2479 118] the bass was powerful, though it could have been a little cleaner, but there was a good feeling of energy, and the track moved along excitingly. Clapton's slide guitar had

ABOVE: In Amazon's clean-looking double-deck construction, the top plate carries the motor, main bearing and arm pillar, and is suspended on compliant mounts. There's no lid or cover

real body and the sheer wildness of the sound came over well. The busy drumming was effective.

With *Dire Straits* and 'Sultans Of Swing' [Vertigo 9102 021], once again the track boogied along nicely. The bass guitar here might have been slightly woolly

around the edges, even a little heavy, but despite this the overall effect was of a pleasant lightness of touch, yet with a good feeling of a purposeful driving beat. Vocal and lead guitar seemed

'Vocal and lead guitar seemed to have a naturally strong focus'

to have a naturally strong focus and commanded attention, and although there was no shortage of detail, the ear was not constantly being distracted by little nuances springing out of the mix.

With the direct-cut Harry James band on *The King James Version* [Sheffield Lab LAB-3], the Amazon produced what by now I'd come to regard as a characteristically light and airy sound. Imaging was excellent in terms of width and more than moderately good in depth. Drums sounded fine, if not exactly gutsy, while the bass was tuneful but not especially weighty.

Having got pleasing results on a big jazz band, I turned to classical orchestral music, with Barenboim playing and directing the ECO in Mozart's piano concerto K467 in 1967 [EMI ASD 2465]. Once again, there was a pleasant, sunny balance to the sound, with a general feeling of lightness but with a good pulse to the music.

A SHURE THING OR TWO

Running through the same group of recordings with the Shure V15/III produced intriguing results. This time, the vocal on 'Ballad Of The Runaway Horse' had a slight but pervasive coloration, almost a quacky

A SIMPLER SUBCHASSIS

Construction of the Amazon 2 is slightly less simple than it looks. You'd guess that the polished black parts were cut from standard acrylic, but Amazon says that the chassis is made from 'a special ICI material to ensure virtually no resonance'. The 20mm-thick lower chassis is purely a base, standing on three feet which include damping elements and terminate in quite sharp points. Studs project up from the centres of the feet through the top surface of the base, and on these are screwed the three main suspension units, each one a spring element of low-resilience polymer mounted into a knurled ring. Sitting on these, with the rings giving adjustment for levelling, is the 18mm-thick upper member, to which all the functionally active parts of the turntable, including a detachable arm board, are bolted.

TURNTABLE

LAB REPORT

AMAZON 2 (£2250 w/o arm)

As supplied, this Amazon 2 was running nearly 16% fast which would put the wow & flutter (W&F) spectrogram off the right hand side of the plot and produce a very audible shift in pitch. Perhaps someone got their 50Hz/60Hz strobe patterns confused while setting up the deck for an overseas market? Fortunately with the aid of Amazon's useful speed trimpots [see picture, left] and a spectrum analyser it was possible to pull the platter back to within $\pm 0.2\%$ with ease, producing the W&F plot printed here [see Graph 2, below]. The low 0.03% peak flutter is evidenced by the lack of higher frequency sidebands, although a more significant low-rate wow and very low-rate drift is indicated by the lack of a sharp 3150Hz peak. This is not unusual with decks that employ a heavy platter with a high rotational inertia and a 'decoupled' drive system – any fluctuations in speed are typically 'slow' fluctuations.

The massive bearing assembly is first-rate however, so much so that there's a useful reduction in through-groove noise with the heavy clamp in position (-72dB versus -69dB without the clamp, re. cartridge output at 5cm/sec). This is also visible on the unweighted hum and noise spectrum [see Graph 1, below] as the difference between red (without) and blue (with clamp). Hum is slightly disappointing, the main 50Hz peak probably picked-up through the Mørch tonearm or lead-out wires. The 20sec start-up time is as rapid as expected given the mass of the platter, but quicker still if assisted by an experienced finger! Readers are invited to view a full QC Suite report for Amazon's 2 turntable with Mørch DP-6 tonearm by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: With belt-drive from the single motor pulley, a speed-change switch selects off, 45 or 33.3, while small screws at the rear give fine speed adjustment

quality, which could sometimes make Jennifer Warnes sound like a sweet-voiced, slightly wheedling teenager. Bass was acceptable, but by comparison with the solid-sounding Ortofon MC there was a hint of one-notey resonance.

'Motherless Children' showed good clarity on the voice, yet sounded rather messy, with a sort of papery, chattery quality to the upper midrange. Carl Radle's bass sounded somehow a little recessed, almost as if he were playing behind a wall, while the drums sounded busy enough but lacking in character. After this I listened to Clapton's *Backless*, where the venerable moving-magnet delivered much better results.

SWINGING SOFTLY

With Knopfler's 'Sultans' playing via the Shure, there was a rather rounded and softened quality to the bass, while the vocal again took on a relatively nasal quality. It was not so easy to pick out detail in the accompaniment or to focus on, say, a rhythm guitar when the vocal and lead guitar were strong.

On the Harry James record, there was a feeling of restraint rather than convincing dynamics, and a kind of opacity in the ensemble passages. Finally, on the Mozart, the Amazon combination still seemed able to deliver a very pleasing sense of distance even though with the Shure

cartridge the strings were rather too hard and 'skreeky'. At this point I realised that while the V15/III could be very enjoyable, it really would have repaid some experimentation with loading.

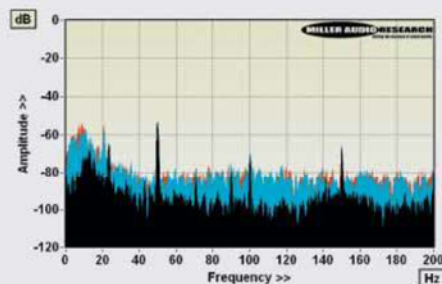
Perhaps I've spent too long here on the long-unobtainable vintage V15, yet it somehow seemed appropriate to the old-school Mørch in its low-mass form. But by now I'd proved to myself that the Mørch was an extremely capable and versatile arm. In any case, all the listening I did seemed to confirm the admirable character of the Amazon 2 itself, which I felt always managed to sound both neutral and inviting. And that is a combination always worth seeking out. ☺

HI-FI NEWS VERDICT

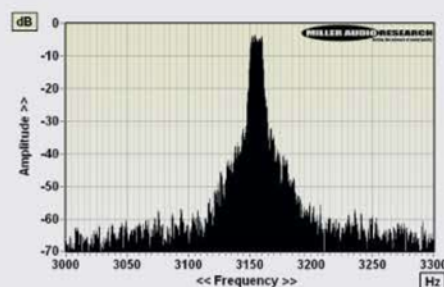
Notably neutral through mid and treble, the Amazon/Mørch gave an airy presentation that was easy on the ear, and the music always moved along well. The arm is idiosyncratic in design, but once set up it works nicely. Sonically pleasing, aesthetically too, this is an attractive combination. Sadly, though, the falling pound has forced a price increase which makes the Amazon less good value for money than it once was.

Sound Quality: 80%

0 - - - - - 100



ABOVE: Unweighted bearing rumble from DC-200Hz (black infill) versus silent LP groove (blue infill with clamp; red infill without clamp) re. 1kHz at 5cm/sec



ABOVE: Wow and flutter re. 3150Hz tone at 5cm/sec (plotted $\pm 150\text{Hz}$, 5Hz per minor division)

HI-FI NEWS SPECIFICATIONS

Turntable speed error at 33.33rpm	33.37rpm (+0.12%)
Time to audible stabilisation	20sec
Peak Wow/Flutter	0.06% / 0.03%
Rumble (silent groove, DIN B wtd)	-69.4dB (-71.6dB with clamp)
Rumble (through bearing, DIN B wtd)	-68.8dB
Hum & Noise (unwtd, rel. to 5cm/sec)	-55.6dB
Power Consumption	2W
Dimensions (WHD)	470x130x370mm

WHAT HI-FI?
SOUND AND VISION

AWARDS 2009

PRODUCT OF THE YEAR

HOME CINEMA AMPLIFIERS

DENON AVR-1910

DENON

surrounded
by success



Denon AVR-1910 High Definition AV Receiver // What Hi-Fi? Sound and Vision selects the new Denon AVR-1910 as its Multichannel Receivers Group Test Winner, describing it as a 'frighteningly good all-rounder'. In its September 2009 edition, the UK's largest home cinema and hi-fi magazine, also says the new Denon sounds 'hugely entertaining' with an 'unbelievable amount of detail'. Part of Denon's new generation of AV Receivers, the AVR-1910 features Dolby's latest ProLogic IIz sound program which supports two additional front-height speakers, enabling an even more lifelike surround sound experience.



*What Hi-Fi? Sound and Vision
Multichannel Receivers Group Test Winner
Denon AVR-1910*

AVR-1610



AVR-2310



DOLBY
PRO LOGIC IIz

Goldring Legacy (£595)

A new, metal-bodied moving-coil with moderate output from a company that's been in business since the 1900s – the technology involved is, of course, up to the minute
 Review: **Steve Harris** Lab: **Paul Miller**

On the phone to the ebullient Steve Reichert of Armour Home Electronics, I started to tell him that I'd had experience with Goldring moving-coils... 'Since 1827!' he interrupted facetiously. Now, I'm not *that* old, though I have to admit I'm no longer a younger-than-average Radio 3 listener. And even Goldring is not that old, although it is one of the most venerable of audio brands. The story begins in 1906, with a small manufacturing business founded by the Scharf Brothers in Berlin. By 1926, they were making their own phonograph. This was called the Juwel Electro Soundbox, but it carried the gold ring logo – the origin of the final trade name.

In 1933 the company moved to the UK and set up business in East London, while the family name was anglicised to Sharp. In 1954 came the first British-made Goldring moving-magnet cartridges, the 500 series. Later, Lenco turntables were imported from Switzerland to create the successful line of Goldring-Lenco record players.

From the late 1960s on, Goldring filled whole generations of headshells with its 800 series moving-magnets, but by the late 1970s, when the company had moved out to the pleasant country town of Bury St Edmunds, these were seriously outmoded by newer induced-magnet designs.

VITAL HERITAGE

All line-contact stylus types owe something to the quadraphonic madness of the early 1970s. With Namiki's Vital profile the lineage is direct, because the Namiki Precision Jewel company worked with JVC to develop and make the Shibata stylus used for JVC's CD-4 quad system. CD-4 failed, but the benefits of a more advanced stylus shape were proven. Later, Namiki launched its own Vital stylus, still popular with cartridge manufacturers today.



ABOVE: The Legacy moving-coil has a magnesium alloy body threaded for hex-drive fixing bolts; generator coil wiring is high purity copper and the stylus profile is Namiki Vital

Goldring responded with the 900 series, using a more modern generator system to give lower moving mass, and using better styli too. Around ten years after that, Goldring ventured into the moving-coil arena, with a design which in essence has lasted until this day. So, before the addition of the new Legacy, Goldring's moving-coil range consisted of three very long-established models, which are still current.

METAL ALLOY BODY

At the top of this trio is the £375 Elite, with a Gyger I stylus and silver wire coils, while the Eroica LX has a Gyger II tip and costs £250. Both of these are moving-coils, although the nominal output is healthily above average for this category, at 5mV. Finally, there is the high-output Eroica H, again with the Gyger II stylus but this time giving a nominal output of 2.5mV, making it fully compatible with moving-magnet phono inputs on amplifiers or phono stages. All these cartridges use the same Pocan moulded body. Pocan is a tough and durable plastic material with high heat resistance, strength and hardness, and good rigidity. For the new Legacy, Goldring moved to a magnesium alloy body, described as 'ultra low resonance'. It is light and very strong, although this cartridge is heavier than the Pocan-bodied models at 8 grams. There are

blind threaded holes to take the hex-drive mounting bolts, which come in two lengths to suit thin or thick headshell platforms.

Inside, the moving-coil generator uses coils of high-purity copper rather than the previous flagship's silver. Mounted on the hard aluminium cantilever is a Namiki Vital stylus. Compared with the Eroica and Elite, the Legacy has a notably lower output, though the quoted 0.25mV is still a perfectly good average figure [see Lab Report]. Recommended tracking force is 1.75g. When the Legacy arrived, I happily went to work, extracting the cartridge from its handsome wood-block packing and installing it in the SME Model 10.

PLENTY OF ATTACK

Warned that the cartridge hadn't been run in, I put as many hours on it as the schedule allowed before listening in earnest. Then, I stomped off with the direct-cut big band sound of Harry James *The King James Version* [Sheffield Lab LAB-3]. Here the Goldring came over as bright and vivacious with strong transients. On the punchy trumpets and trombones, there was a pleasing sense of speed and attack. The soundstage was big,



wide and convincing. With *Tracy Chapman* [Elektra 960 774] I found the singer's 'Fast Car' vocal quite forward, with a good sense of studio ambience, quite warm yet with plenty of attack. The bass was good, quite firm, notes decisively placed. Drums were big and strong when they come in for the dynamically-contrasting chorus.

'Motherless Children' from *461 Ocean Boulevard* by Eric Clapton [RSO 2749 118] can be a good test of a system's rhythmic aplomb. On this performance I'd have given Carl Radle nine and a bit out of ten, though of course his bass is really a perfect ten.

His notes were really clearly pitched and placed to drive the track along well, though I somehow felt the effect could have been even better in this respect.

But the overall effect was exciting enough, with the slide guitar really stinging thanks to a very detailed mid and top and a slightly bright balance. There was a good resolution of the lesser rhythm parts, like the stabbing organ chords.

My beloved Oscar Peterson record, *Action (Vol 1)* [MPS 68.073] revealed a lively piano sound, again giving a good feeling of attack and impetus without going over the top into brashness. The piano was placed as firmly as a rock, the sound conveying precision and attack in a way that allowed you to feel the total command and amazing rhythmic suppleness of Peterson's playing. Ray Brown's bass is captured without artifice and reflects the effects of the room where the recording was made, but here the effect seemed truthful and solid.

In search of a full-bodied orchestral sound I turned to Decca and Istvan Kertesz, with the Dvorak *Scherzo Capriccioso*, recorded in 1963 [SXL 6044]. Here the Goldring cartridge managed to stir the blood with the opening horn calls, and successfully conveyed that wonderful sense of mysterious space within the orchestration.

This was a satisfying performance, with a fine sense of space, solo instruments and sections seeming

to spring up vibrantly out of a hall acoustic that had a life of its own. The effects of contrasting timbres and colours in the orchestra, so sumptuously exploited by Dvorak, were delightful. Once again the balance was subjectively just slightly bright, but not too unpleasantly so. Crucially, I felt that you could always listen through the louder sounds to hear detail in the inner parts.

JUST GETS BETTER...

In the end, this solid-looking UK-made cartridge won me over. For what it's worth, when fine-tuning the alignment, I found that this sample

seemed to benefit, in terms of spatial solidity and smoothness, from lowering the back of the arm very slightly. Straight out of the box, the Legacy had sounded

detailed and briskly dynamic, but with a slightly glazed quality. It was somehow rather 'tight' and I felt that there was a subtle nasal coloration. However, these effects wore off after some hours of use, and the cartridge then presented a much more coherent and inviting musical experience. It was still getting better when I finally had to part with it, and so I was sorry to see it go.

All Goldring's higher-grade cartridges are still hand-built with pride in Bishop's Stortford. 'Legacy' might have a slightly too-final ring about it, but here it signifies a great name that's still alive and kicking. ☺

HI-FI NEWS VERDICT

Goldring's latest moving-coil is a real advance on previous models, yet still relatively affordable. It faces strong competition, but I think Goldring has done enough to keep a place in the sun. It arguably lacks the sheer dynamic power of the lower-range Clearaudios, or the tonal richness of some Ortofons. But it sounds detailed, spacious and quick, with a great sense of lively music-making that'll suit many systems.

Sound Quality: 80%



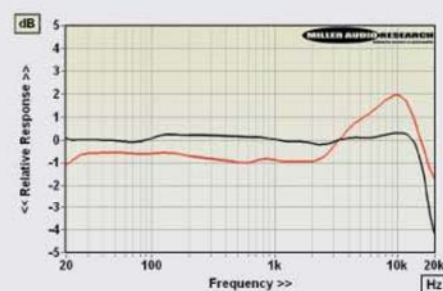
'There was a pleasing sense of speed and attack. The soundstage was big, wide'

GOLDRING LEGACY (£595)

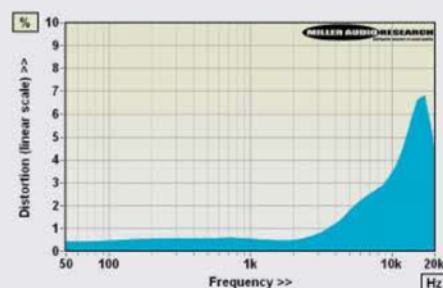
The Legacy's magnesium alloy body shell provides a supremely snug fit with most headshells while contributing to an overall weight of just 8g. The specified 16cu dynamic compliance is met at 15.8cu in both vertical and lateral planes, promising a 10Hz resonance with an 8g effective mass tonearm. The suggested tracking force is on the low side at 17.5mN and, despite its Vital fine line contact stylus profile, the Legacy is a somewhat nervous tracker, showing signs of intermittent mistracking at just +9dB (300Hz lateral cut, re. 11.2µm). At +12dB modulation, distortion jumps to 2% which is below average. I would suggest increasing the tracking weight to 2g.

Output is a little lower than the 0.29mV recorded in this cartridge's personal booklet, emerging as 212µV (left) and 207µV (right) into 100ohm, although the 0.19dB channel imbalance is better than average. The frequency response is very flat through bass and midrange [see Graph 1, below] and shows a hint of brightness through the upper treble before falling away at 20kHz. This response trend is well within Goldring's fairly loose ± 3 dB specification. Distortion is rarely discussed by cartridge manufacturers, but the Legacy performs broadly as expected with <1% up to 3-4kHz (the left channel was slightly poorer here) increasing to 3.5% at 10kHz and 6.5% at 15kHz. Distortion falls away at higher frequencies still as the cartridge is unable to output these ultrasonic harmonics [see Graph 2, below].

Readers are invited to view a QC Suite test report for the Goldring Legacy by navigating to www.hifinews.co.uk and clicking on the red 'Download' button. PM



ABOVE: Left (black) and right (red) freq. response, lateral groove modulation at -8dB re. 5cm/sec



ABOVE: Tracing and generator distortion (2nd-4th harmonics) versus frequency from 50Hz-20kHz (1kHz, -8dB re. 5cm/sec)

HI-FI NEWS SPECIFICATIONS

Generator type/weight	Moving-coil / 8.0g
Recommended tracking force	1.5-2.0mN
Sensitivity/balance (re. 5cm/sec)	212µV / 0.19dB
Compliance (vertical/lateral)	16cu / 16cu
Vertical tracking angle	30 degrees
L/R Tracking ability	60µm / 64µm
L/R Distortion (-8dB, 20Hz-20kHz)	0.75-9.3% / 0.55-6.5%
Frequency resp. (20Hz-20kHz)	+0.7dB to -1.7dB
Stereo separation (1kHz / 20kHz)	26dB / 15dB

Lumen White Silver Flame (£25,000)

The cross-section of this speaker resembles the teardrop you might shed writing out your £25k cheque: but the music it makes ought to be a handsome reward
Review and Lab: **Keith Howard**

The use of ceramic materials in loudspeaker diaphragms can't be described as novel because every anodised aluminium cone or dome has a surface layer of alumina (aluminium oxide), allowing it to be described as a ceramic-metal sandwich or similar – as at least one speaker manufacturer has indeed done. But pure ceramic diaphragms are a rarity, and loudspeakers that use them exclusively, as the Lumen White Silver Flame does, are rarer still. All five drivers in this arresting-looking three-way design have white ceramic diaphragms in the form of everted (concave) domes.

As explained in the box-out, the attraction of a ceramic diaphragm material is that it can be lighter and stiffer than common metal equivalents, which promises higher bending wave velocity and hence higher breakup frequency for a given diaphragm size and shape. The manufacturer of the Silver Flame's drivers (Thiel Accuton in Germany, www.accuton.de) also claims that the material provides high internal damping, to help quell those diaphragm resonances when they occur.

A downside of ceramic diaphragms is that – like a bone china tea service – they are brittle and so prone to accidental damage from even a slight accidental knock. Hence all five of the Silver Flame's drive units (three 178mm bass drivers, one 140mm midrange unit and a 25mm tweeter) are fitted with protective metal grilles; this is something I've been cautious of ever since, many years ago, the late Richard Heyser demonstrated in a review of the Yamaha NS1000 in *Audio* magazine that they can have a deleterious effect on a speaker's energy storage. Indeed, the grille covering the Silver Flame's midrange driver rings very clearly if

you flick it with a finger, and the bass unit grilles ring too, albeit less clearly. In a speaker where so much effort and expense has been devoted to controlling cabinet and diaphragm resonance, this seems – at the very least – incongruous.

EYE-CATCHING

Apart from its pure white driver diaphragms the Silver Flame's most eye-catching feature is its large, curvaceous 'instrument grade' cabinet. All of 1.15m tall, it's heavy too at 52kg. A 'plywood compound construction' with no MDF content and no damping of the enclosed air, in horizontal cross-section it is almost teardrop-shaped, albeit truncated at the thin end to form a narrow rear panel and again at the thick end to form a flat front baffle. This welcome departure from the familiar rectangular box cabinet should provide numerous benefits: increased side panel stiffness, suppression of internal air resonance modes and reduced diffraction effects from the front baffle edges.

The review pair were finished in a metallic silver paint which, while eye-catching and appropriate, is only likely to suit the sort of modern, minimalist decors beloved of product brochure art directors. No matter: the Silver Flame is also available in ivory or piano black finishes. There is no additional grille with which to hide the drivers from view.

You might expect a three-way speaker of this class to have a fully split crossover, with three pairs of input terminals at the rear, allowing separate access to the low-pass, bandpass and high-pass sections of the network. But any chance of bi-wiring/amping or tri-wiring/amping the Silver Flame is removed by it having a single set of terminals, albeit classy WBT items. This is clearly a very deliberate choice by the Lumen White design team, but one which some potential owners will surely find frustrating.

The shape of the cabinet effectively dictates that three spikes be fitted to



RIGHT: All five drive units have white ceramic diaphragms, protected by metal grilles. The midrange driver is positioned at ear level, with the tweeter above, to ensure time alignment

BEND IT SHAKE IT

A prime requirement of any diaphragm material for moving-coil drive units is that it should have a high ratio of elastic (Young's) modulus to density, in order to push the first diaphragm 'breakup' resonance as high as possible in frequency. But a high ratio, which gives the material a high longitudinal speed of sound, is not

sufficient to ensure superior bending wave performance. If materials are compared on an equal mass basis, as they should be, then those with low densities have an advantage, since they allow a thicker diaphragm to be used, which has a significant effect on bending stiffness. As Don Barlow, British inventor of the Leak Sandwich cone,

showed 50 years ago, the correct factor to compare – the 'figure of merit' for diaphragm materials – is more complex than this, to take diaphragm thickness into account. On this basis the alumina diaphragms of the Silver Flame are superior to aluminium, but not as good as magnesium and well short of the 'super metals' such as beryllium.



the base rather than four but, as every old-school milkmaid knows, that's the optimum number anyway. Metal cone 'feet' house the spikes at either side of the front baffle, while a single plain but larger diameter spike is used at the rear. As this is shorter than the front spikes, the cabinet is tilted backwards slightly, presumably to fine-tune time-alignment between the midrange driver (positioned at about seated ear height) and the tweeter (which is above it).

By the way: although it is far from immediately obvious, the Silver Flame is reflex-loaded in the bass, the port not being the familiar tube that exhausts the front or rear panel but two narrow slits in the sculpted rear of the cabinet, above the input terminals.

SEAMLESS

If I had to choose just one word to express what makes the Silver Flames special, it would be seamless.

Get them set up correctly (I toed them out slightly from pointing straight at the listening position) and they do a remarkable job of disguising the fact that each has five drivers operating over three frequency ranges – even though, at a listening distance of about 3m, I was aware that I was listening to physically dispersed sources rather than point sources of sound.

Although Lumen White says little about the crossover design save that it is minimalist and takes account of resonance and field-coupling effects within the network, it is unusually effective at melding the output of the multiple

drivers into a coherent whole. Nowhere is this more obvious than in the Silver Flame's majestic reproduction of the dynamic scale and timbral subtlety of a large symphony orchestra. One of my favourite orchestral recordings – the 24/96 DVD version of Rachmaninov's *Symphonic Dances* performed by the Dallas Symphony under the baton of Donald Johanos [Classic Records DAD 1004] – was rendered better than I have ever heard it before, combining riveting dynamic snap and punch with the delicate touch necessary to do full justice to the tone colours of the spot-lit woodwind. This is a compelling performance in any case but through the Silver Flames it was utterly unputdownable.

While we're talking big and (a little) brash, they also did an unusually fine job of recreating the buzz of live performance that does more than compensate for the rough edges of 'Double

'They also did an unusually fine job of recreating the buzz of live performance'

Trouble' from Eric Clapton's *Just One Night* (Polydor 531 827-2). You know within seconds of this track starting – while the Budokan Theatre audience shouts and whistles and the band shapes up to play – whether a speaker is going to do it justice or not. The soundstage should be big, the bass line well controlled, Clapton's guitar sound authentically rough-edged, and his voice – well, his skilful vocal delivery should impress as much as his guitar playing (it was this track that first alerted me to the fact that Slowhand really can sing). The Silver Flames did ☺

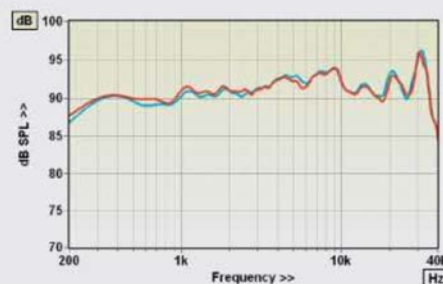
LOUDSPEAKER

LAB REPORT

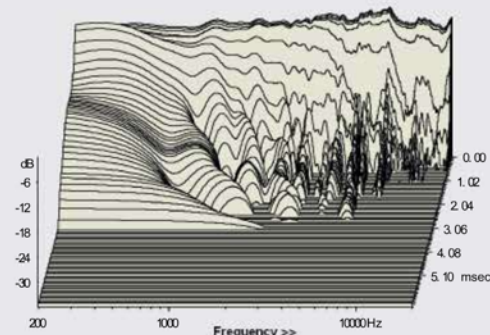
LUMEN WHITE SILVER FLAME (£25k)

Our recorded sensitivity for the Silver Flame is exactly as claimed by the manufacturer at 91.5dB. Although this drops a little to 91.1dB for pink noise input, the Silver Flame has an unusually high sensitivity for a direct radiating moving-coil loudspeaker. Response errors are low at ± 2.3 and ± 2.4 dB respectively (300Hz-20kHz) and while pair matching over the same frequency range is not quite in the top league, ± 1.1 dB is still a good result. Disregard the roll-off below 300Hz [see Graph 1, below] as this is caused by the use of a shorter measurement time window than usual as the Silver Flame – too heavy to lift on to a stand – had to be measured on the floor. Note that the on-axis response trend is not entirely flat, there being a gradual 4dB lift between 1kHz and 10kHz.

In part the high sensitivity is bought through low impedance, the minimum modulus of 3.6ohm indicating that a 4ohm nominal rating is more appropriate than the stated 5ohm. Impedance phase angles are quite high so the EPDR (equivalent peak dissipation resistance) falls to a low of 1.7ohm at 85Hz, making the Silver Flame a moderately challenging load. A distinct glitch in both the modulus and phase versus frequency graphs indicates a significant internal air resonance at about 150Hz. Near-field measurement of bass extension was precluded by the drivers' protective grilles which also hampered our distortion tests, although the 0.1% obtained through mid and treble is impressively low. While the cumulative spectral decay waterfall [Graph 2, below] reveals some resonant ridges, some of which may be associated with the protective grilles, these are all at low level. KH



ABOVE: The forward response shows a gentle increase (a 'brightening') in output from 1kHz-10kHz



ABOVE: Cabinet resonant behaviour is very well controlled, the minor ridges possibly linked to its grille

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	91.5dB / 91.1dB / 91.2dB
Impedance modulus min/max (20Hz–20kHz)	3.6ohm @ 3.3kHz 17.2ohm @ 53Hz
Impedance phase min/max (20Hz–20kHz)	–56° @ 67Hz 35° @ 19.7kHz
Pair matching (300Hz–20kHz)	± 1.1 dB
HF extension (–6dB ref 10kHz)	39kHz / 39kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.4% / 0.1% / 0.1%
Dimensions (HWD)	1150x290x640mm



ABOVE: Although it's a three-way design, the Silver Flame precludes bi-wiring/amping or tri-wiring/amping by providing only a single pair of WBT input terminals

all these things and, importantly, wrapped them up into a credible, satisfying whole where hi-fi was subservient to the music.

LESS CAN BE MORE

Smaller-scale music fared just as well. A sentimentally important recording for me, *Popular Music from the Time of Henry VIII* was originally released as an LP by Saga Records and, like rather too much of that company's output, my pressing – bought post-concert at the back of a Bayswater church – was crappy. But the fine performance of the Hilliard Ensemble, before anyone had heard of them, turned me on to the delights of early music, while John Shuttleworth's recording – almost certainly made using a crossed-pair mic technique – was an excellent demonstration of how, in the hands of the right recording engineer, less is more.

I dearly wish that somebody would transcribe the analogue master to hi-res PCM but for the moment the now-deleted CD release serves as a good reminder of why the original LP so excited me. The excellent singing of the Hilliards, the exotic tone colours of the instrumental pieces, the spacious, naturally dimensioned recording and the intriguing variety of songs, from the wistful miniature of 'O My Heart is Sore' to the lusty agricultural parts catalogue that is 'The Plough

Song', were all marvellously evoked by the Silver Flames.

You'll have gathered from the foregoing that this is an unusually fine loudspeaker, one which I have thoroughly enjoyed having in my home for its too brief stay. Which brings us to the one thorny issue: price. Can a loudspeaker like this ever be worth £25k a pair? Discuss. Of course, the answer is highly subjective, and probably not uncorrelated with the depth of one's pockets. I will just say this: were the asking price half the current figure I'd be cupping my hands round my mouth to shout to the audiophile world, 'This you have to hear'. As it is, the high cost of joining the Silver Flame owner's club tempers my enthusiasm a little. ☹

HI-FI NEWS VERDICT

This large, heavy, costly speaker is intriguing to look at and a delight to listen to. The unusual cabinet form clearly does a fine job of suppressing structural and enclosed air resonances, while the five ceramic-diaphragm drive units are seamlessly integrated to deliver high resolution, dynamic sound that always serves the music, whether large-scale or small-scale. All told: a pricey but classy product.

Sound Quality: 89%





R I G A



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CHORD

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hi-fine GROUP TEST

This month we put no fewer than a dozen sub-£125 interconnects through their paces as we compare designs from many of the pedigree names in cable manufacture

INTERCONNECTS £65-£125

TESTED THIS MONTH

ATLAS HYPER £120	QED SIGNATURE AUDIO £110
BLACK RHODIUM PRELUDE £90	SUPRA EFF-IX £78
CHORD CHAMELEON SILVER £125	TCI VIPER SE £80
DNM STEREO SOLID CORE £88	TOWNSHEND DCT 100 £100
IXOS XHA616 £70	VDH THE WELL HYBRID £120
MERLIN CHOPIN MKIII £120	WIREWORLD SOLSTICE 6 £66



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



The pinnacle of sound quality within its peer group



Great sound, great value and a cut above its rivals

• CD PLAYERS • TURNTABLES • CARTRIDGES • INTERCONNECTS • AMPLIFIERS • HEADPHONES • SPEAKERS •

A good cable shouldn't really sound of anything. Indeed, there are some electronics engineers who maintain to this day that purveyors of cables are selling 'voodoo'. Talk to hi-fi enthusiasts, however, and they'll attest that cables certainly do alter the subjective sound quality of a playback system, and that in one's quest for sonic bliss it pays dividends to choose carefully.

For this month's group test we've chosen a selection of analogue interconnects. None is outrageously expensive, yet each is good enough for use even with fairly esoteric, high-end components.

CHOOSING AND USING

So, assuming you've assembled a pretty good system of separate components, good quality cables provide the icing on the cake. But what should you be looking for? And how do you choose?

To begin with, it's impossible to select a cable simply by looking at it in a catalogue. The manner in which it might alter the perceived sound quality of your system is impossible to determine until you hear it!

Perhaps your system has a tendency to sound coarse and fatiguing, in which case you'll want an interconnect with a smooth, gentle sonic character to tame the sound. If your system sounds lean and 'thin' a cable that delivers a subjectively strong, powerful bass performance could be just the tonic. Specialist dealers should be keen to allow you to try a cable in your system at home to see how it suits. And pretty much all manufacturers selling cables online offer money-back home trials as well.

So if it's a while since you last attended to any system 'housekeeping', and there's something about the sound of your system that continues to niggle, one of these cables could prove to be the best £100 you've ever spent.

The system used for auditioning comprised a Wadia W381i CD player, Mark Levinson No. 383 integrated amplifier and Townshend Sir Galahad speakers – a massive window through which to observe subtle changes in audio presentation. High resolution digital audio was played on a Pioneer DV-868AVi, each interconnect being

used between the disc player and the Levinson amplifier.

MUSICAL CHALLENGES

Three music tracks were used during the listening tests, each with unique qualities used to describe the subtle ways in which each interconnect altered the perceived presentation in the 'reference' system. Dire Straits' hugely dynamic 'Private Investigations' from 1982's *Love Over Gold* [Vertigo 6359109] continues to prove a challenging test for any audio system, while the simple recording of acoustic bass and voice in Diana Krall's 'My Love Is' from her *Love Scenes* album [Impulse IMP12342] has plenty of atmosphere and subtlety.

Also used was the wonderful 1967 analogue recording of Rachmaninoff's *Symphonic Dances For Orchestra* by the Dallas Symphony Orchestra under Donald Johanos, originally on the Vox/Turnabout record label and remastered as a 24/96 DVD by Classic Records [Classic DAD 1004].

REVIEWS BY JOHN BAMFORD
LAB TESTS BY PAUL MILLER

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GROUP TEST

Atlas Hyper

Available as a stereo pair or as a single cable for hooking up subwoofers, Atlas's Hyper is an asymmetrical (unbalanced) design with a 1.03mm diameter central signal core made from 80x0.1mm strands of 5N (99.9997% pure) single crystallised copper. This is formed using the more costly Ohno Continuous Cast (OCC) method. This multi-strand signal conductor is insulated with a foamed polyethylene dielectric. A double-layered outer braid forms the return, which is made from 272 strands of ultra-pure oxygen free copper (UPOFC). The two layers of screen braid form a tightly woven wire mesh which, the company says, will ensure good rejection of RFI.

Looking exceedingly smart, the 8.5mm diameter cable is finished with a gloss black soft PVC sleeve and crimp terminated with Atlas's proprietary RCA plugs made in the Far East to its own design. Made from OFC copper with a high gloss silver finish the plugs are non-compressing with long, narrow barrels to complete a modern look.

HALO EFFECT

The bass intro to Diana Krall's 'My Love Is' leaped from the speakers, the staccato click track sounding particularly fast and clear. While the alto voice was a little less rich than usual it was all the better for it as the halo of reverberation around it was gorgeous and sibilants were well controlled. The resonance of the acoustic

guitar was also a little less plush, enhancing the sense of openness and aiding overall clarity. Coupled with the deep, fast-sounding bass and refined treble it made for intoxicating listening.

As for the 24-bit/96kHz remaster of 'Symphonic Dances' on DVD, this appeared spectacularly holographic, as if a foggy 'bloom' had been removed and one could hear right into the recording venue. Bases and cellos sounded lean and vigorous, though with less subjective opulence in the lower midrange strings and high frequency percussive instruments could sound exposed. The resolution proved fabulous, but clearly it won't flatter systems with any tendency to hardness.



HFN SPECIFICATIONS

Series Inductance	0.58µH
Parallel Capacitance	80pF
Resistance	85mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£120

Sound Quality: 84%



Black Rhodium Prelude

Having developed a low-microphonic cable specifically for musicians' electric instruments, Black Rhodium introduced this Prelude audio interconnect with similar design characteristics. Prelude is a coaxial cable whose 2.5mm cross section signal conductor is made of multiple strands of silver-plated OFC with PTFE insulation. The coaxial screen, braided closely to aid RFI rejection, is also silver-plated OFC.

An electrostatic shield of conductive carbon/graphite compound between the inner insulation and the coaxial screen is claimed to minimise microphony.

With a bright green PVC outer sheath, the left and right channel cables are

twisted lightly together and collared 12cm from each end by a band of shrink tubing upon which directional arrows are printed. The twisting is said to improve musicality; certainly it can help to reduce hum pickup in 'noisy' environments. The Prelude is solder terminated with gold-plated phono plugs with a split centre pin.

IMMEDIATE GAIN

The string bass beginning of Diana's Krall's 'My Love Is' sounded strong, clear and tuneful with a velvet texture while a less forceful 'snap-of-the-fingers' helped create a pleasing sense of three-dimensionality. The tonality of Diana's voice appeared a little less creamy, almost as if there was a minor lift

in the presence region. As a result the song sounded more immediate and intimate, as if being performed in a less reverberant acoustic.

The highly processed electronic production of Dire Straits' 'Telegraph Road' worked in the test system's favour, the slightly 'dry' tonality of the Prelude taming the track's sometimes shrill tendencies. With its strong bass delivery the dramatic drum 'thwacks' were truly explosive while the fervent and unrestrained resonance of the piano was agreeably rounded. Increased subjective presence further highlighted the acoustic guitar that lacked some 'attack' to the plucked strings but demonstrated clear and natural decay.



HFN SPECIFICATIONS

Series Inductance	0.28µH
Parallel Capacitance	453pF
Resistance	65mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£90

Sound Quality: 78%



Chord Chameleon Silver Plus

The Chord Company's Chameleon Silver Plus is a symmetrical design utilising multistrand conductors comprising 19x0.09mm fine strands of silver-plated oxygen-free copper (OFC) with PTFE insulation. One conductor is used for the signal and two conductors are used for the return. A fourth conductor (redundant in single-ended interconnects) is ready to be used for making up fully balanced cables with XLR connectors.

Surrounding the signal and return conductors is a lapped braid shield of silver-plated OFC, these hand assembled cables being silver soldered to RCA plugs formed of silver-plated brass. The outer sheath – which the company

claims offers good damping of vibrations – is made of PVC.



RICH SOUNDS

Sounding up-tempo and 'bouncy', the acoustic bass on the Diana Krall track was sumptuous and powerful. Perhaps a little over-rich, her vocal possessed an uncommonly dark, rounded tonality that came from deep within the body, while the sibilant 'esses' of her delivery of consonants were gently suppressed. Not that the overall sound was soft; far from it, the click track sounded quick and clear with commensurate air and speed.

Perhaps the Chameleon might be described as being just on the sweet and warm side of neutral, as the plucked strings of the acoustic guitar

lacked 'bite'. Yet the silky nature of high frequencies proved wholly beneficial when Mark Knopfler's scorching electric guitar power chords crashed forth. Cymbal crashes benefitted too, sounding pure with plenty of shimmering detail, while bass and drums sounded deep and exceedingly muscular.

None of the energy was missing from the Dallas Symphony Orchestra's 'Symphonic Dances', the gusty performance being highly infectious. Again, the muscular bass added majesty to the sound, while the roasting brass and percussion were never jarring. Layering of the image was commendably deep, allowing relaxed observation of the orchestra's instruments.



£ 125/1m

HFN SPECIFICATIONS

Series Inductance	0.64µH
Parallel Capacitance	99pF
Resistance	195mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£125

Sound Quality: 76%



DNM Stereo Solid Core

Designer Denis Morecroft of DNM maintains that conductors with a large cross-sectional area cause 'significant' magnetic fields to be generated by the circulating eddy currents created during the transmission of an electrical signal. Smaller wires deliver greater clarity, he insists.

As with DNM's speaker cables its stereo interconnect comprises a flat ribbon of low density polyethylene (LDPE) containing four equally spaced conductors. Here the ribbon is 15mm wide, with solid copper conductors of 0.4mm diameter. Rather than being fully encapsulated in the LDPE, the plane of the conductors and the ribbon insulation is offset to reduce

cable capacitance. As the cable is designed specifically to minimise magnetic interactions, having chunky metal plugs on the end would be self-defeating. Consequently the RCA phonos are plastic bodied 'bullet' plugs made by Eichmann that employ a 'single point of contact' for the earth connection, said to minimise eddy currents further.



LUCID DOES IT

If a little polite and safe sounding, Diana Krall's vocal was nevertheless presented with uncommonly clear diction and focus, even if sibilants sounded rather smoothed over and the tails of reverberation around her voice were muted. The string bass was similarly lucid and

the pitch of the notes easy to follow, although in texture it lacked a degree of bottom end weight.

The heavily processed production of Dire Strait's 'Private Investigations' appeared well ordered, making the music easy to follow and Knopfler's slurred vocal particularly easy to decipher. However the plucked strings of the acoustic guitar lacked some 'zing' and the overall sound lacked sparkle. Similarly, the orchestral symphony appeared tidy and coherent with good dimensionality but reduced in ultimate scale, with the dynamic swings crushed. As with the drums of Dire Straits, the Dallas Symphony Orchestra tympani lacked power and resonance.



£ 88/1m

HFN SPECIFICATIONS

Series Inductance	1.71µH
Parallel Capacitance	13pF
Resistance	293mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£88

Sound Quality: 70%



MUSICAL FIDELITY

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IXOS Xen XHA616

IXOS's XHA616 is a symmetrical design employing the company's 'Gamma Geometry' whereby the signal and return conductors are twisted in a weave with a third dielectric core. IXOS claims this geometry reduces proximity effect while maintaining good noise rejection as the conductors remain physically close to each other but without the continuous contact of a conventional twisted-pair design.

Very fine silver-plated OFC strands are employed, polyethylene is used as the dielectric, and the interwoven conductors are screened by an aluminium/mylar foil before being sheathed in a PVC jacket and covered in a woven nylon outer braid. While the

left and right channel cables are separate at each end, this is a stereo interconnect (not two mono cables). For the majority of its length the left and right channel cables are sealed together within a second PVC jacket before being covered in the outer braid. The gold-plated RCAs feature split centre pins for a secure fit.

SPIRITED AWAY

The tonality of the Diana Krall track came across as fresh and immediate. As with the Atlas cable, Krall's voice sounded a little less full and rounded than usual, making the sound more open and wonderfully three-dimensional – and more brightly lit. Treble detail really sparkled and the reverberation tails

disappeared into silence, while the click track and plucked bass sounded both snappy and up-beat.

There was no lack of vitality in the presentation of 'Symphonic Dances', the orchestra sounding particularly spirited. However, the crashing power chords of Mark Knopfler's electric guitar during 'Private Investigations' took on a harder edge, one that verged on the uncomfortable due to the brighter tonality. There was no softening of transients as piano and cymbal crashes exploded with full force. The booming bass notes in the recording, along with the massive drum wallops, lacked little in weight and extension, but while the acoustic guitar was crisp it had less body.



£ 70/1m

HFN SPECIFICATIONS

Series Inductance	0.92µH
Parallel Capacitance	125pF
Resistance	346mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£70

Sound Quality: 72%



Merlin Chopin MkIII

Hand assembled, Merlin's cables all employ 6N (99.9999% pure) solid core copper conductors and low temperature polyethylene dielectrics, with each core individually coated in an inert resin as soon as the wire is drawn during the manufacturing process.

The company cites two reasons for coating the copper: less likelihood of any oxidation of the conductors over time and a reduction of skin-effect caused by direct contact between conductors and the dielectric.

The Chopin MkIII employs six individually insulated 0.56mm conductors wound in a helical spiral and arranged in an alternating signal-and-return configuration

that is said to offer good RF and EM rejection. Chopin's polyethylene dielectric is then surrounded by a 6N OFC foil screen, encased in a rubberised, flexible PVC outer dielectric all shrouded in an outer fabric braid. The soldered plugs are gold-plated and the cables come fitted with ferrite noise absorbers 'designed to be frequency specific', says Merlin.

SILKY 'N' SWEET

Delivering a well-balanced sound with just a hint of added warmth to Diana Krall's voice and richness to the plucked string bass, there was a pleasing openness to the soundstage here. So, while the bass might have sounded a little full, the acoustic of the room in which it was

played was readily apparent. Similarly, you could hear 'all the way into the mixing desk' as the reverberation tails on the vocal decayed. Sibilants were nicely controlled, too.

However, the fast, vibrant quality of the Dallas Symphony Orchestra recording appeared a little 'slow' via the Chopin, the added warmth subjectively robbing the musical performance of some gusto. But strings and percussion were delightfully silky and sweet, as were the high frequency crashes of Dire Straits' dynamic assaults during 'Telegraph Road'. Here, the piano sound was entirely convincing, while the rocket fire of the drum assaults were colossal thanks to the weighty bass on offer.



£ 120/1m

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HFN SPECIFICATIONS

Series Inductance	0.57µH
Parallel Capacitance	291pF
Resistance	50mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£120

Sound Quality: 82%





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QED Signature Audio

Also referred to as Silver Spiral in QED's portfolio, the Signature Audio cable uses a symmetrical twisted pair geometry with independent dual-layer screening of the signal and return conductors. Each conductor comprises 13x0.2mm strands of silver-plated 5N (99.9997% pure) oxygen-free copper (OFC) with a dielectric of foamed polyethylene, the cable itself being housed in a translucent outer sheath which is also foamed polyethylene. The conductors' two foil screens are also silver-plated OFC.

QED's smart-looking Silver Signature RCA plugs are gold-plated with bonded aluminium outer shells. The plugs have an eight-leaf

ground ring, split centre-pin and PTFE insulation. Silver solder is used throughout.

JUST RIGHT

Sounding nimble, rhythmic, tight and extended, the double bass on 'My Love Is' boasted a woody timbre that was ripe in texture. The click track was crisp and fast while the sibilants in Diana Krall's vocal delivery were controlled without ever sounding over-smoothed.

Everything seemed to be balanced 'just right' with the Dire Straits track. The powerful bass notes resonated without excessive overhang and the colossal drum whacks hit the pit of the stomach with mighty force. Individual strands of the dense production

were laid bare as the piano reverberated in its own acoustic and the acoustic guitar leaped from the speakers with immense clarity. Even as power chords thrashed forth, the system took everything in its stride.

Meanwhile, the energetic playing of the Dallas Symphony Orchestra was clearly evident as the basses and cellos bustled along with fervour, the power of the tympani and percussion proving especially dynamic. Crescendos grew in intensity without a hint of strain or dynamic compression. The system felt as if it was cruising. With an expansive three-dimensional sound image it now showed why this recording has long been an audiophile favourite.

£ 110/1m



HFN SPECIFICATIONS

Series Inductance	0.46µH
Parallel Capacitance	273pF
Resistance	48mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£110

Sound Quality: 88%



Supra EFF-IX

Concerned about the phenomenon known as 'skin effect' where signal current density varies through the thickness of a conductor with frequency, Jenving Technology's Supra EFF cable boasts an elaborate construction that it calls Equalized Frequency Flow (hence 'EFF'). It's a symmetrical cable with each conductor comprising a weave of 12 very fine silver-plated OFC strands that are wound around a PVC core.

The signal and return conductors are insulated with polyethylene and screened with an aluminium foil. This makes for a three-conductor cable that can be employed in balanced (with XLR connectors) or – as here –

semi-balanced configuration with the screen earthed only at the source end of the cable. The whole is jacketed in PVC of a pale blue colour with directional markers highlighted in yellow. The cable is solder terminated with the company's PPS plugs, chunky affairs with 24K gold-plating and PTFE insulation between the signal pin and outer clamp.

HIGH OCTANE

'Rich' and 'fast' were adjectives that sprang to mind as the bass introduction and staccato clicks of 'My Love Is' led into the opening phrase of Diana Krall's luxurious vocal. Sounding focused and explicit, the halo of reverb around her alto voice was vividly portrayed

with delicious detail while the plucked bass sounded resonant and plummy without being too fulsome. The sound was 'full range' and particularly fresh and open, a potential downside being that excessive expression of sibilants might not flatter loudspeaker systems possessed of 'hot' tweeters.

Similarly, the raw edge of the immoderate guitar chords on Dire Straits' 'Private Investigations' were to the fore, bursting with energy as the majestic piano chords rang out in unison. There was little smoothing over of Knopfler's gruff vocal, or the angry crashes of the drummer's cymbals, while the explosive drum dynamics were thrilling. All in all a high-octane experience.

£ 78/1m



HFN SPECIFICATIONS

Series Inductance	0.94µH
Parallel Capacitance	147pF
Resistance	89mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£78

Sound Quality: 80%



New products and revised classics

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- Esoteric D-07 digital to analogue converter
- Stax SR-404 and SRM-600 limited edition earspeaker system
- Brinkmann Bardo magnetic direct drive turntable
- Esoteric E-03 phono preamplifier
- Sumiko Palo Santos Presentation moving coil cartridge

TCI Viper SE

There are a few versions available of True Colours Industries' Viper interconnect. This SE model sports the luxurious touch of single-piece gold-plated-over-copper RCA phono plugs which are silver soldered, with twisting barrels to lock them in situ. As it's a symmetrical cable employing a twisted pair construction with a Mylar foil wrap covered by a braided screen, the screen can be connected at both ends in a fully balanced configuration using XLR connectors. For single-ended applications as here with RCAs the screen is connected at one end only.

Each of the Viper's conductors comprises 7x0.3mm strands of silver-plated OFC with PTFE

used as the dielectric, while the braided screen is tin-plated OFC. Viper's red coloured outer sheath is made of PVC.

COOL CUSTOMER

The TCI Viper sounded cool and measured. While the ambience of the reverberation was clearly delineated and Diana Krall's voice was explicit within the soundstage, the playing of the string bass appeared lethargic. Compared with a lively cable like the Chord Chameleon Silver Plus, with its powerful and energetic bass, the Viper's more deliberate presentation could seem rather tame. On the other hand, by the time the overwhelming bass notes of Dire Straits' 'Private

Investigations' are at full throttle the more calculated, 'safer' balance of the Viper might be appreciated.

In this instance guitars and piano were precisely portrayed despite the maelstrom of the track's production, but the seemingly lazy vocal delivery of Mark Knopfler added a curiously sinister demeanour.

In its painting of the orchestral canvas the Viper SE proved highly descriptive. The space of the auditorium could be imagined as the image extended beyond the speakers, while the bass was subtle yet adequately weighty. Yet the bubbling enthusiasm of the orchestra was disappointingly dampened, despite the open and capacious image.



£ 80/1m

HFN SPECIFICATIONS

Series Inductance	0.93µH
Parallel Capacitance	165pF
Resistance	68mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£80

Sound Quality: 70%



Townshend Isolda DCT 100

Employing a symmetrical geometry but one executed in a manner unlike any other interconnect cable in this group, the DCT 100 comprises two thin copper strip conductors measuring 3mm wide and 0.2mm thick.

Townshend considers PTFE to be a good material to use as a dielectric, although not as good as air, so the company threads the signal and return copper strips through loose-fitting tubes of PTFE to prevent the conductors from making a short circuit. It then sheathes the pair in a polyester outer braid. The conductors are soldered to gold-on-nickel Neutrik RCA plugs sporting black chromium shells.

Designer Max Townshend maintains that deep cryogenic treatment (DCT) improves the sound of conductors. The 'enhanced' treatment the company employs sees the copper strip cooled to -190°C before being gradually returned to ambient temperature.

CRUISE CONTROL

Sounding neither too sharp nor excessively bright, the click track and string bass on the Diana Krall track nevertheless sounded crisp and fast, with clear resolution of the changes in timbre as the bass player changed from hard string plucking to a deliberately softer, more lazy slurring of the notes. Sibilants on Krall's vocals were evident yet never over 'spitty'

or harsh-sounding. Overall the sound was open and 'fresh' yet smooth and refined, too.

Mark Knopfler's grumbling vocal delivery remained easy to decipher within the processed production of 'Private Investigations', the tonal balance of the sound again treading a fine line between refinement and aggression. The thrashing electric guitar chords still thrashed and the crashing cymbals still crashed, but without sounding grainy or harsh. Similar characteristics were observed with 'Symphonic Dances', the intense tonal colours of the orchestra in full flight being brightly illuminated yet enjoying refined highs. Even when the tympani thundered the system cruised.



£ 100/1m

HFN SPECIFICATIONS

Series Inductance	0.88µH
Parallel Capacitance	45pF
Resistance	57mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£100

Sound Quality: 88%



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VdH The Well Hybrid

For almost two decades designer A J van den Hul has been eschewing PVC in favour of a more environmentally friendly material dubbed Hulliflex, which is free of halogens and is claimed to be far more resistant to invasive pollutants over time. The Well Hybrid is no different. Under the pearl white Hulliflex outer jacket is a coaxial cable comprising a signal conductor formed of 42x0.12mm silver-plated OFC copper strands with a coating of the Linear Structured Carbon (LSC) material that's used as a conductor in vdH's esoteric high-end cables.

The core insulation is made of foamed polyethylene, employed to maintain a low dielectric constant.

Two braided screens are used for the return, each containing 192 silver-coated OFC copper strands, with a foil layer in between. This is said to further improve the cable's screening. VdH's 24K gold-plated RCA plugs feature Teflon insulators and split centre-pins.

EASY ON THE EAR

Even before Diana Krall's vocal came in it was evident this cable majors on refinement. The bass and click track sounded luxurious yet 'thick', having plenty of weight but lacking in 'snap'. Conversely there was no dulling of ambience, with good retrieval of reverberation detail. It simply sounded as if the recording had been made in a heavily soundproofed studio.

With the full-on rock production of Dire Straits' 'Private Investigations' there was not a hint of stridency. When Knopfler let rip with open guitar chords the balance remained sweet and easy on the ear, while the track's abundant bass and monumental drums sounded sumptuous. But the overall balance was judged to be too opulent, lacking in some 'air'. As a result, Knopfler's gruff vocal delivery was cloying and difficult to decipher.

It sounded better with the bright and breezy recording of 'Symphonic Dances', with wide imaging and good dynamic impact. But some of the vibrancy and startling realism of the event was sanitised by the smooth opulence of the presentation.

£ 120/1m



HFN SPECIFICATIONS

Series Inductance	0.64µH
Parallel Capacitance	140pF
Resistance	49mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£120

Sound Quality: 68%



Wireworld Solstice 6

Wireworld calls its particular cable geometry DNA Helix. Wire strands are laid parallel within its proprietary dielectric to form a 'ribbon', designer David Saltz claiming that he can 'dial in' the electrical characteristics he desires for individual models by determining the spacing between the wires and the twist of the weaved ribbons.

Solstice 6 is a symmetrical design employing silver-plated OFC wires, each of the twisted pair of ribbons comprising a 3.5mm square conductor. Wireworld makes its own nickel-free OFC connectors too, Solstice 6 featuring the company's 'Gold Tube' RCAs with gold-over-silver plating which are claimed to offer

superior conductivity to gold-plated brass plugs. Silver soldered and with a silicone rubber tension band, the plugs have hollow centre-pins and distinctive outer shells of machined aluminium.

DEEP AND TAUT

Auditioned immediately after van den Hul's The Well, the immediacy of the image was initially startling. Subjectively the volume appeared louder while transients sounded fast and abrupt as the sharp clicks on the Diana Krall track leaped incisively out of the soundstage. The double bass was both deep and taut, while Diana Krall's voice sounded considerably less 'bloomy' and better delineated.

This sharper, more nimble sound worked wonders

with the Dallas Symphony Orchestra's hoary rendition of 'Symphonic Dances'. The performance was brimming with enthusiasm and full of dynamic contrast. The tympani may have lacked body but it was crystal clear.

There was no smooth sheen here, the sound of the Dire Straits track displaying a more electronic 'edge'. Mark Knopfler's vocal delivery was easier to decipher thanks to the open sound quality and the acoustic guitar sounded clear and snappy. Yet the crashing crescendos of electric guitar and cymbals became shrill. And while the reverberant bass notes and drums had their customary power and depth, with reduced overhang, they sounded less weighty.

£ 66/1m



HFN SPECIFICATIONS

Series Inductance	0.67µH
Parallel Capacitance	244pF
Resistance	207mohm
Leakage (DC, 1m)	>100Mohm
Price (1m pair)	£66

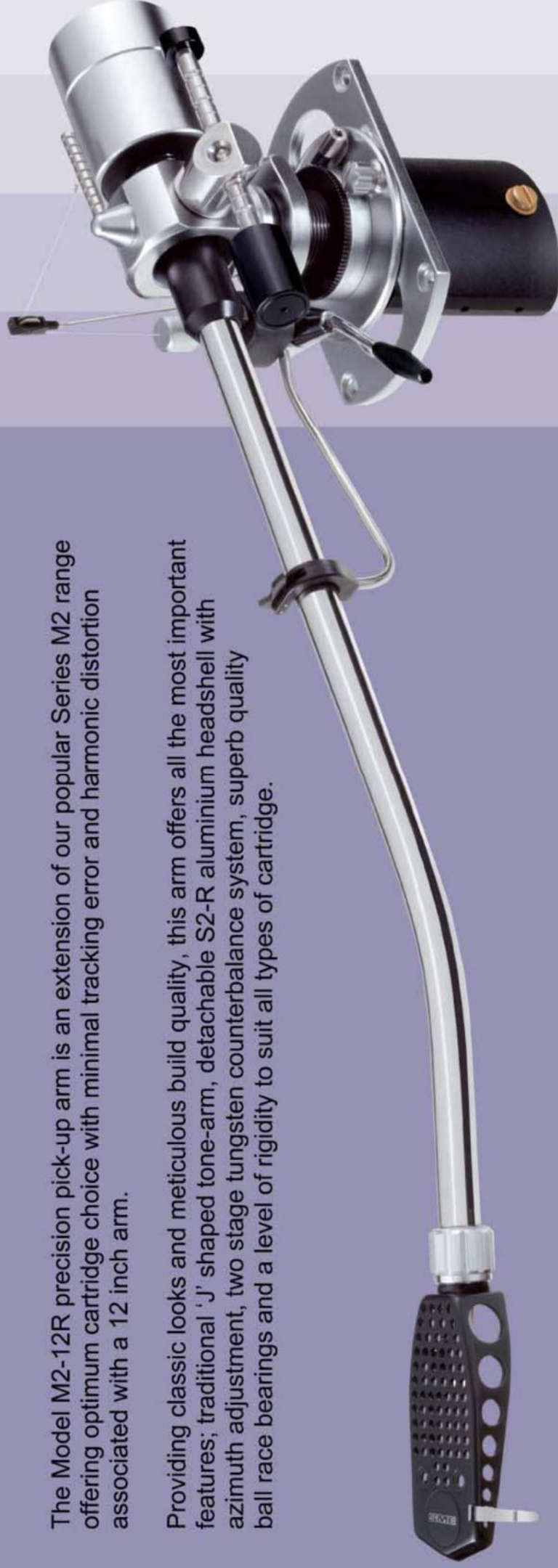
Sound Quality: 74%



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GROUP TEST VERDICT

• CD PLAYERS • TURNTABLES • CARTRIDGES • INTERCONNECTS • AMPLIFIERS • HEADPHONES • SPEAKERS •

As discussed in our introduction, you can fine tune the sound of your system using cables. The trick, of course, is to choose the cables which best deliver the presentation you seek. If your system is nominally 'perfect' you'll want a perfectly neutral cable, one that doesn't stamp its character on the sound. But few systems are perfect in-room, and precious few of us have ideal rooms anyway. Personal preference will play a big part too.

The least successful interconnects in this test were van den Hul's The Well Hybrid and TCI's Viper SE. The former sounded overly smooth and lush used in our reference system while the latter gave a sound that was somewhat staid and 'sat on'. Neither did the DNM Stereo Solid Core or IXOS XHA616 elicit the best performance out of the system. While the DNM certainly sounded 'tidy' and clear it failed to enthrall. The IXOS, on the other hand, lacked bass energy and also sounded a tad edgy on occasions.

Wireworld's Solstice 6 didn't deliver a particular fruity bass either, but it was highly detailed and worked well with evenly-balanced recordings. It's certainly worth trying bearing in mind its keen price.

BASS IN THE PLACE

Conversely, The Chord Company's Chameleon Silver Plus and Black Rhodium's Prelude both delivered strong, powerful bass and should add gravitas to lean-sounding systems.

The more costly Chameleon Silver Plus had a sweeter, more open treble while the Prelude clearly offers good value with its immediacy and excellent presence.

Talking of good value, Supra's EFF-IX is a beautifully made cable for less than £80 and it delivered a potent, thrilling performance. But high frequencies might prove too

energetic for systems that already sound a little fatiguing.

Meanwhile, Merlin's more expensive Chopin should prove better under such circumstances. It boasts a particularly smooth, refined top end and an easygoing nature that should be ideal for prolonged, relaxed listening.

TRIUMPHANT TRIO

The three cables that performed the best were Townshend Audio's DCT 100, QED's Signature Audio and the Atlas Hyper. While something of an audiophile bargain at £100, do bear in mind that the Townshend cable is not shielded, so it might not prove suitable for all system installations. The company highlights this on its website, saying that shielded cables with a copper braid screen can be made to order for situations in which hum fields and/or RFI interference prove problematic. As we heard it, the cable sounds extraordinarily refined and detailed having a smooth balance from top to bottom.

More expensive but beautifully made, the Atlas Hyper sounded

fabulously crisp and detailed. But beware: this is not a cable to flatter. Our well-balanced system took its incisive, unforgiving nature in its stride, but it might prove too 'hot' and explicit if your set-up leans towards hardness at all. It certainly provides a thrilling musical ride.

QED's fabulous Signature Audio interconnect is undoubtedly good value and should prove a good choice for systems that can't handle the exuberance of the Atlas. While not quite as relaxed-sounding as the Townshend in the upper frequencies, it nevertheless sounds well-balanced, delivering assured bass and incisive detail without sounding too analytical. ☺

At £100 it's something of an audiophile bargain'



CLOCKWISE: Outstanding all – QED Signature Audio; Atlas Hyper; Townshend DCT 100



• CD PLAYERS • TURNTABLES • CARTRIDGES • INTERCONNECTS • AMPLIFIERS • HEADPHONES • SPEAKERS •

Audio Research REF 5 (£10,498)

Reference 5 is the name of the new line-level, balanced-and-single-ended flagship preamplifier from Audio Research – and they've even upped the valve quotient

Review: **Ken Kessler** Lab: **Paul Miller**

Preconceptions are dangerous. One might assume that one's powers of even-handed assessment, when approaching the latest in a series of *tours de forces* for the first time, will be compromised by positive expectation. Fortunately, my initial exposure to Audio Research's latest preamplifier to bear the 'Reference' name was at a hi-fi show not conducive to close listening, let alone opinion formation. But even with it playing in the background, it was clear that something almost magical was afoot.

A few months later at Milan's TOP Audio, sitting in the 'hot seat' at one of Peter McGrath's legendary demonstrations, I hear it through Wilson's new Sasha loudspeaker. Peter makes his own recordings, this time a breathtakingly lifelike performance of the Mariinsky Orchestra with Valery Gergiev conducting. What piece it was, I do not know, but I experienced more than one the frissons of realism that make you forget about hardware. To use an unjustly maligned term, there was a 'presence' that was both 'vivid' and 'realistic'.

But forget semantics: the performers, the instruments entered the room. The bottom octaves were rich yet airy, the upper registers enjoyed a sheen so natural and free of nasties, I could have sworn that I was listening to mint Quad 57s that had suddenly gained 12dB in power handling. Believe me: the dynamic capabilities seemed limitless, with crescendos as free to soar as the eagles saving Frodo and Sam.

STAGGERING OPENNESS

But the most overwhelming, nay, staggering component of the sound was the openness. That it was a valve preamplifier achieving this utter freedom from haze would surely antagonise a transistor sister who would listen in disbelief. Mind racing, I could not stop thinking about another pending product:

RIGHT: Retained – despite displays available with near-HD resolution – is the drab LCD of earlier REF models; buttons are recessed, knobs are twist-and-hold rather than rotary

Audio Research's first-ever solid-state integrated amp. Would I uncover a case of schizophrenia three or four months hence?

It was tough tempering a favourable predisposition toward the REF 5, especially as I had adored all three of its predecessors. Tougher still was reconciling the sound with other systems in the immediate vicinity, many driven by solid-state preamps. Somehow, Audio Research had closed the gap between tubes and transistors without sacrificing one degree of the warmth that 're-humanises' recordings – especially archly digital ones – a trait intrinsic to the valve experience. It was a near-replay of the REF 3, but the sound was somehow more involving. Perhaps 're-humanising' is the quality that sums up the '5's allure.

As the latest to wear the name, the Reference 5 *had* to improve upon a unit so blindingly competent and coherent that, in the review of the REF 3 back in 2004, I raved about it despite a fluorescent display so grotesque that it detracted mightily from the listening experience. I delivered a seemingly infantile rant about the panel, suggesting that it was enough to kill sales,

but I wasn't being hyperbolic, let alone childish: people make or decline purchases for the slightest of reasons. I maintain that position about the display with the REF 5, only now it's harder to let a mere display panel intrude.

Either way, the REF 3 has enjoyed five years of supremacy, universal acclaim ranking it with the best. The visual differences between the '3 and '5 are minimal, the changes discreet. So, too, the ergonomics, though the '5 is as much a joy to use as its forebear: most welcome is the press of a button on the remote that reduces the display to only nine pixels staying lit in the centre to indicate that the unit is, indeed, active. And those unashamed to be deemed 'audio-neurotics' (myself among them) will savour the facility that shows tube usage by the hour.

As all-valve line level preamplifiers go, the REF 5 adheres to a formula aimed at two-channel purists. Its back is filled with both balanced and single-ended inputs, so owners will never run out of the right connectors. And you do need plenty of both these days: my fave phono stage – the Audio Research PH5 – has only





single-ended outputs, while the Marantz CD-12/DA-12 has balanced, and the steady flow of review products can be either or both. But in every case, where possible, balanced sounded better to these ears: slightly cleaner, with a shade more control over transients' decay.

But sound is why we're here, and it is hard to believe that replacing the REF 3's 6L6GC in the power supply with a 6550C (to partner the 6H30P) was enough to ring in the changes. Maybe the superior quietude should be attributed both to that, the horizontal main board layout and transformers relocated to the sides of the chassis. For the most part, it is a 're-imagined' REF 3, still with a quartet of 6H30P dual triodes in the analogue stage, but enhanced with knowledge gleaned from the new Reference Phono 2.

Once in my system, the REF 5 just slipping into the rack, it was like welcoming back an old friend. My one permanent piece of ARC gear, the PH5 I bought a few years ago, fed an input marked 'phono' – confusing in a line-level device, but indicating that ARC expects its customers to approve of vinyl. Easy to understand why: with LPs as the source, the sound of the REF 5 'blossoms'. I could get all gag-making, telling you the sound opens like a chrysanthemum, but – as

former staff member Ivor Humphreys used to say – 'Steady on, old boy'.



THE MUSIC'S SERVANT

It's sufficient to know that whatever the source, it was heard in 'naked' form, which laterally led me to the Beatles' *Let It Be ... Naked*, the barely-remembered release from 2003 that offered the Beatles' swansong in its original, pre-Spector form. Although not in the recent box sets, it possesses a clarity through the REF 5 that lifts it above the sound of normal CDs, though it's hard to separate the role of 21st Century mastering from the sound of the primarily unfamiliar mix itself. (Prior to this release, outside of Abbey Road, the pre-Spector performances existed only on bootlegs.) Regardless of the cause of the sonic shampoo, the REF 5 acts as the music's servant, accomplishing precisely what the release was intended to do prior to the 2009 remastering: get you closer to the sound of the Beatles at work.

If any instrument benefited more than others, it was the piano, an increase in naturalness showing how Billy Preston

ABOVE: Beefy handles, massive display, tidy row of buttons, two primary knobs just where they should be: the REF 5 shares the aesthetic of its predecessors, unmistakably Audio Research

added so much musical value to what was already the greatest band of all time that he became an honorary fifth member.

While the 'humanising' and transparency of the REF 5 are nearly epic in proportion,

one must be careful in likening the gains to those of the 2009 Beatles CDs over the 1987s.

The gains are not of that magnitude. But neither are they so subtle as to prevent one from rushing to upgrade.

'Somehow, Audio Research had closed the gap between tubes and trannies'

THE GRUNGY SOUNDS OF ROOTS

Although my first serious exposure to the REF 5 was classical, I couldn't wait to hear what would happen with the sparse, gritty, grungy sound of Seasick Steve, roots music's latest cult figure. His new disc, *Man From Another Time*, is slightly more polished than its indie label antecedents, but this is the sound of your dream busker, with a beaten-to-bits guitar and overworked practice amp. However much the REF 5's refinement had made me swoon at TOP Audio, it was the sheer force that the system conveyed, magnifying Seasick Steve's ability to make a lone bottleneck guitar (on occasion with the lean accompaniment of trashy drumming) sound like a heavy metal onslaught.

Above it is a gravelly voice oozing texture, one rendered familiar by numerous TV and radio appearances. Considering how little material the CD provides the system, compared especially with a full orchestra, the sound is room-filling and majestic in direct contrast to ➤

HIGH FIVE

Calling something 'Reference' works only if the product lives up to its name. All of us know that a 'reference' is an arbitrary point by which to judge performance or quality, either better or worse. Here, however, ARC chose it for another common usage: an upper limit against which others are rated, not a mere median point. Blessedly, from the moment ARC launched the Reference range, it has achieved global approval and a perennial place in all of audio's 'A-lists' without reverting to obscene prices – not that the REF 5 is a bargain. But it is only £1000 more than the outgoing REF 3. And what about a REF 4? Simple: '4' is the numerological equivalent of death in many Asian cultures. Like Nokia, Canon and others, ARC has eschewed gracing a model with a '4', for wise commercial reasons. A pity: four has always been my lucky number.

PREAMPLIFIER

LAB REPORT

AUDIO RESEARCH REF 5 (£10,498)



ABOVE: Single-ended and balanced connections are available for all inputs and outputs; the remote duplicates every function

expectation. And the mass that the system recreates is the air and space surrounding the performer. It was repeatable again and again, with unplugged solo artists, small ensembles and on live recordings where the hall's contribution hasn't been ignored.

Whether cavernous indoor venues or outdoor concerts augmented with massive PA systems, the REF 5 excels in reproducing three dimensions – still an amazing party trick for two channels. As spoiled as we are by live DTS 5.1 Blu-rays or SACDs, the REF 5 waves the flag for stereo; labelling one of its line inputs 'Phono' is no mere conceit, no simple sop to the hardcore. I even dug out recordings I made of a blues band in a local wine bar, recalling the arched-ceiling cellar I worked in for so many shifts.

Reproducing subtleties of an echo *beneath* the full-on sound of a too-loud band in a crowded, narrow basement is resolution of no mean measure. More impressive still is keeping all of those sounds in proportion, attesting to peerless skill at keeping the dynamic contrasts true to the performance, the reflections retained because they are part of the deal.

But extreme cases only test extremes. I wanted to wallow in AOR, British invasion smashes, 1970s studio treasures. James Taylor's *Sweet Baby James* provided sensational pedal steel and a distinctive voice that both paired and juxtaposed two contrasting textures – one liquid, one velvety. The relationship was preserved with utter coherence. Mono Herman's Hermits reminded the listener, 45 years on, that London possessed some of the most polished studio

musicians outside of the USA, the '5 uncannily layering the sound with vocals to the front.

THE CARS... AND CARS

As for the Cars' eponymous debut, well, that's almost cheating, so punchy, so clever, so totally-crafted is the entire set. It makes a typical Queen recording seem sloppy. Transients stopped with irrefutable finality, bass rolled and twanged all at once, the piercing guitar work, swirling synths and weird vocals worthy of a David Lynch character forming a whole that could sound of disembodied parts in lesser set-ups.

The experience has forced me to rethink my entire system. To wit... Some 25 years ago, *HFN/RR's* then-editor John Atkinson decided to forgo the purchase of a sorely-needed car to replace his ageing vehicle, in order to acquire an Audio Research SP-10 preamplifier. I now fully understand his resolve: my 12-year-old estate will need to soldier on for a few more years, for I *must* own a Reference 5. ☺

HI-FI NEWS VERDICT

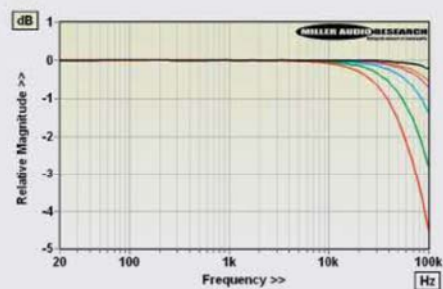
Having heard this preamp in five systems, witnessed how it transcended hostile settings, how it transformed even set-ups with which I was intimately familiar, I have but one observation to make: it is the best valve preamplifier I have ever used. In balanced mode, in an all-valve system, it *is* as the name says: the 'Reference'. But I will still be fashioning a fitted plate to hide that dreadful, Shrek-ish display.

Sound Quality: 89%

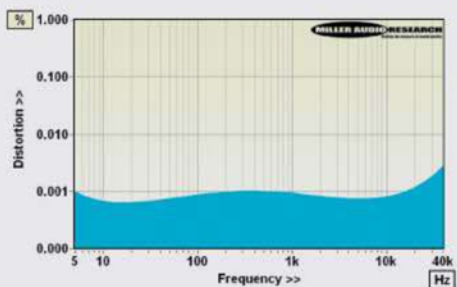


The launch of a new flagship preamp from Audio Research is an important event in any audiophile's calendar, and I'm glad to report that the REF 5 lives up to expectations. The balanced output is capable of delivering over 20Vrms from a 300ohm source impedance with distortion at less than 0.03%. While both channels were well within ARC's specification, the matching of the 6H30P Sovtech double triodes was better on the right here, distortion falling to ~0.0005% at an idealised 500mV output (0.0016% on the left) at 1kHz. Distortion is almost entirely 2nd harmonic in nature with very low 3rd/4th harmonics apparent. The right channel was uniformly lower in distortion versus either level or frequency, achieving 0.0006-0.0028% from 5Hz-40kHz [see graph 2, below] compared with 0.0016-0.0028% on the left. Either result is extremely impressive for a valve preamp and the differences will be swamped by distortion and noise elsewhere in the system.

The REF 5's response was perfectly matched between channels but does vary with volume setting, achieving its flattest -0.23dB/100kHz result at full (+12dB) volume and most rolled-off -4.9dB/100kHz between +6dB and 0dB gain settings (91 to 78 on the display). Graph 1, below, illustrates a variety of responses between +12dB and -24dB overall gain (103 to 31 on the volume display). Channel balance is good to 0.1dB and separation varies from a wide 100dB through bass to 66dB at 20kHz. The A-wtd S/N ratio (balanced in/out, re. 0dBV) of 97dB is well above average for the breed. Readers are invited to view a full QC Suite report for the Audio Research REF 5 preamplifier by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Frequency response vs. volume. Vol 103 = +12dB (black); 91/78 = +6dB/0dB (red); 66 = -6dB (green); 55 = -12dB (blue); 44 = -18dB (purple); 31 = -24dB (orange)



ABOVE: Distortion versus frequency over extended 5Hz-40kHz range (1V output, balanced in/out)

HI-FI NEWS SPECIFICATIONS

Maximum output/Impedance	>20Vrms / 300-550ohm
Input sensitivity (for 0dBV)	224mV
A-wtd S/N ratio (re. 0dBV)	97.0dB
Frequency response (20Hz-100kHz)	+0.0dB to -4.5dB (0dB gain)
Distortion vs. freq. (20Hz-20kHz)	0.00058-0.0012%
Dist. vs. output (1kHz, 100mV-20V)	0.0007-0.021%
Power consumption	124W
Dimensions (WHD)	480x178x394mm

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[Virgo V]

Better than ever



Prism Sound Orpheus (£3495)

Squeezed into a two-inch slim casing and necessitating quarter-inch rear jack plug connections, this advanced DAC may be costly but its performance is outstanding

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

If you agree with me that optical disc replay – whatever the colour of laser it uses – is yesterday's audio technology, there are numerous different ways to replay music from hard disk instead, some of which don't even involve having a computer in the listening room. But if you insist on being able to play both stereo and multichannel files in hi-res then the options begin to dry up.

If you're content to use a desktop computer as your audio source then you can, of course, fit a multichannel sound card to one of its expansion slots. But if you insist on a computer that's more compact and pleasing to the eye – something like the Mac mini, which is less aesthetically challenged than even a laptop – then you'll need an external audio interface. USB-connected DACs abound but none that I know of reaches out to 24-bit/192kHz and most if not all are stereo. So they're no use. Instead you have to look to multichannel FireWire interfaces, the best of which support 24/192 on eight or more channels.

A FEW DRAWBACKS...

Fine, but these devices are intended for professional use, which has a number of more or less undesirable consequences for the audiophile. First: they rarely feature in hi-fi magazines so they are mostly an unknown quantity. Second: they usually feature analogue inputs as well as outputs, i.e. they are recording as well as playback devices, which means, for most of us, that half of their capability is redundant. Third: because they are intended for use in a studio context they typically look functional to the point of ugliness in a domestic audio system. And fourth: they often don't incorporate a global software volume control; and what control they do provide is via on-screen sliders. Which means, in effect, that you have to have a multichannel preamp downstream. In my

case I've built an eight-channel passive pre-based on a DACT eight-gang stepped attenuator, but it still involves extra cabling and connections I'd prefer to be without.

You can imagine, then, that my eyes lit up when someone first alerted me to the Prism Sound Orpheus. First point in its favour: Prism has an excellent reputation for its professional converters, engineer/producer George Massenburg being but one of its big-time advocates. Second: someone has actually *styled* the Orpheus fascia rather than just closing their eyes and throwing knobs at it. With the optional rack-mount 'ears' removed, it is handsome enough to blend into any domestic audio system and not call the wrong sort of attention to itself – except, perhaps, for its excess of front panel LED indicators and hopeless level meters, although the latter can at least be disabled. And third: yes, your eyes do not deceive you, that's a volume control knob on the front panel. And not just a crude potentiometer, instead a shaft encoder which controls volume in the digital domain.

Still, there are flies in the ointment when the Orpheus is used away from its intended studio environment – and so to yet another list! First: the Orpheus incorporates eight channels of input as well as eight channels of output, which most audiophiles won't need. Second: the outputs are on balanced quarter-inch jacks – not exactly a common domestic audio connection standard, but one that's demanded in this case by pro requirements and the limited amount of real estate on the back panel. Taking an

unbalanced output using a mono jack plug or adaptor is accommodated, though.

Third and more seriously: there are issues re FireWire connection, although to be fair these affect other FireWire audio interfaces too. In the first place, many of today's computers don't incorporate a FireWire interface as standard, in which case one will have to be added. With a laptop this will usually be via an ExpressCard adaptor; in a desktop computer a PCI or PCIe expansion card can be used instead and is often cheaper.

Whichever type of adaptor is chosen, it should use a TI (Texas Instruments) FireWire chip since this is the one recommended by most audio interface manufacturers. Other chips may not work correctly. I tried running the Orpheus from a Toshiba laptop using both its internal FireWire chip (TI) via 4-pin (iLink) output socket and a Sonnet FireWire 800 Pro ExpressCard adaptor (also with a TI chip) and it worked fine in both instances under Windows Vista. Likewise when I tried my Dell Inspiron measurement computer as the signal source via an HP Adaptec FireConnect 2100 PCI card, which is also TI-toting. This computer dual-boots Vista and XP Pro SP3, both of which I used successfully, in all cases with Foobar2000 as the audio player.

AND PROBLEMS WITH MACS

Where I ran into problems – as users of other FireWire audio interfaces have done too – was using the latest-generation Mac mini which serves as my usual hard-disk audio source. And it's not just that a

RIGHT: Although the Orpheus has rather too many LED indicators for minimalist audiophile tastes, at least the bar-chart level meters – hopelessly vague in any case – can be disabled





FireWire 400 to 800 adaptor is needed to connect the Orpheus to the mini. Rather, Current Apple computers use an LSI (formerly Agere) FireWire chip which can give problems if your Mac runs Windows, as mine does by preference (XP Pro). Apple claims that this is a Windows bug, which may be true but does nothing to alleviate the frustration of Mac owners having difficulty accessing their audio interface when running a Microsoft OS.

I had already experienced problems with an RME Fireface 800, which wouldn't play 24/192 files, but this was fixed – as described in RME's online forum – by adding a Lindy FireWire extension cable. Mysterious but true.

Any hope that this *deus ex machina* might also enable bug-free conversation between the Mac mini and Orpheus proved, unfortunately, to be wishful thinking. With or without the Lindy extension, the Orpheus would crash Windows boot-up if connected and would occasionally initiate a blue screen episode when, after boot-up, it was connected and configured using its software utility.

Most of the time, though, it worked OK when used in this way, and so this is how I conducted the review listening – having first satisfied myself that nothing untoward was happening to sound quality by comparing results with those obtained via the Dell. Nevertheless, the Mac mini/Orpheus combination is not a happy one: I know someone with a later version of XP Pro installed on his mini (SP3 as opposed to my SP2 with the hotfix for FireWire speed)

who just cannot get his Orpheus to work with it. He uses Mac OS X instead.

Compare the Orpheus's price to that of many other FireWire audio interfaces and you'll see that it occupies the premium end of the market. The RME Fireface 800, with which I compared it, is similarly equipped but can be bought for less than a third of the price online. So the Orpheus needs to provide cut-above sound quality to match its cut-above entry fee – and this it most certainly does.

No initial driver comparison was required because, although the Orpheus is supplied with an ASIO driver, Foobar2000 doesn't see it for some reason, nor does the Orpheus support the Kernel Streaming option (which bypasses XP's much-vilified Kernel Mixer). So the only functional output mode from Foobar is Direct Sound.

EYE-WATERING

Hard-disk audio – particularly when computer-driven – changes the way you listen to music, and not necessarily for the better as it becomes so easy to listen to individual tracks rather than complete albums. As a means of assembling a pot-pourri of music for review listening, though, it's wonderful. No searching through racks of CDs trying to remember what the spine design looks like; no triumphant opening of a caddy only to find that the disc itself is skulking in a player tray somewhere else.

'The Orpheus did a fine job of removing some of the orchestral obfuscation'

ABOVE: Fitted with its optional rack-mount 'ears', the Orpheus's studio ancestry is clear. But remove them and, unusually for this type of product, it looks at home in a domestic setting

One of the first tracks I selected, with last month's review of the Naim Audio HDX still fresh in my mind, was 'Annie's Yellow Bag' from Gwyneth Herbert's *All the Ghosts* [naimcd135]. As I explained in that review, the bass and drum opening of this track should hit you smack between the eyes, otherwise something vital is lacking in your system's DNA.

No question, the Orpheus made my eyes water in a way the RME could not – whether Direct Sound or ASIO drivers were used with it. It wasn't just that the Orpheus had the greater weight of punch: rhythmically it was more assured, and its vocal clarity and tight control of elements within the soundstage

were superior too. So did the Orpheus match the HDX here? I wouldn't trust my audio memory sufficiently to call it either way, but there's no question it was there or thereabouts.

VIOLIN WITH ORCHESTRA

Intriguingly, one of the clearest demonstrations of the Orpheus's superiority came while I still had the Sennheiser HD 800 headphones on review, and was driving them with the sublime Lehmann Black Cube headphone amplifier [HFN Oct '09]. For some reason I was inspired to play (from the CD layer of DG 474 8732) Hilary Hahn's fine performance of Vaughan Williams's elegiac *The Lark Ascending* with the LSO under Sir Colin Davis, with which the Orpheus and Fireface 800 were chalk and cheese. As well as conjuring up a larger soundstage and an ideal balance of warmth and clarity in the orchestral contribution, the Orpheus had a profound effect on the sound of Hahn's violin, in particular the character and believability of its body sound as the bow

FIREWIRE

It looked at one time as if FireWire – more properly known as IEEE 1394 – would become the *de facto* standard for conveying hi-res audio between devices. But USB usurped FireWire for many other interface duties, while HDMI was developed specifically for the hi-res AV role. Only among professional audio interfaces like the Orpheus does FireWire continue to enjoy hegemony, offering multichannel capability at high sampling rates and the ability to daisy-chain devices if more channels are required – although maximum sampling rate may then reduce. Like USB, FireWire is restricted to quite short cable runs – 4.5m maximum for FireWire, 5.0m maximum for USB 2.0 – but inexpensive extension cables are available to increase cable length in 4.5m increments. Or for much longer runs, up to hundreds of metres, optical fibre interfaces are available.



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FIREWIRE DAC



ABOVE: Packing eight balanced analogue inputs and the same number of balanced analogue outputs into a small back panel has meant that quarter-inch jack connectors are used. Optical and coaxial S/PDIF in and out are also provided

was drawn over the strings. It was a captivating rendition of a moving performance, one which the RME fell significantly short of matching.

At this juncture, rather than continuing to diss the cheaper Fireface 800 – which is a remarkable value product in its own right – let me just record that the Orpheus's clear sonic superiority was maintained throughout my listening. Which took me next, on a whim, to something I haven't listened to for many months: Andrzej Panufnik's Violin Concerto, recorded in 1990.

I've liked and admired this piece ever since I heard it performed in the related concert but – perhaps because it was (supposedly) recorded on Technics DAT machines – I've always found the recording [Conifer, now deleted] a little lacklustre. I doubt that anything short of a minor miracle could make it sound great, but the Orpheus did a fine job of removing some of the orchestral obfuscation in the first movement and shoring up the rhythmical drive of the third. And as for the hauntingly beautiful but restless second movement: I have never heard it imbued with such an unsettling undertone before; I really must play this more often, I thought.

ON TO ELP

Bombastic rock music fared well via the Orpheus too. Seeing JB's mention of 'Karn Evil 9' in the December issue set me looking out some real ELP, which to my mind means anything before lost-the-plot 'Brain Salad Surgery'. I recall a *Melody Maker* journalist (I think it was) describing how in an Irish pub after a gig with the Bonzo Dog Band, Keith Emerson beat the incumbent upright piano black and blue while Legs Larry Smith sang bawdy songs. I wish that performance were on tape but, failing that, you can do a lot worse than relive the first 'side' of *Tarkus* if you want to revel

in Emerson's ability to contrive a deceptively simple solo theme and develop it in a way that every other rock keyboardist has found inimitable. (Don't even mention Rick Wakeman in this household.)

Yes, some of the lyrics are fatuous, and no, I don't pray for a return of the pomp rock era. But I don't mind admitting that, with the able assistance of the Orpheus, I thoroughly enjoyed re-immersing myself in the *Tarkus* epic and the relentless virtuosic invention that drives it. 'Stones Of Years' with its patiently constructed Hammond solo; 'Mass' with its wicked bass synth riff; and the *Bolero*-like 'Aquatarkus' with its martial drumming underpinning and then overwhelming the machine-like synth sounds in either channel: a harmonically challenging ground on the left and increasingly frenetic improvisation on the right. All were rendered as well as I've ever heard them. My only regret: that I could never make it sound like this in the early 1970s (but then what could you expect of a BSR McDonald MP60?). I think you know the rest. When the Orpheus returns home to Prism Sound HQ in Cambridgeshire, I will mourn its departure. ☺

HI-FI NEWS VERDICT

Although never intended to be a domestic audio product, the Prism Sound Orpheus makes a better job than most professional FireWire audio interfaces of blending into a home audio system. If you demand multichannel capability from hard disk at up to 24/192, this is the way to get it – and the Orpheus delivers sound quality to justify its price premium. In audiophile terms, it's great value for money.

Sound Quality: 85%



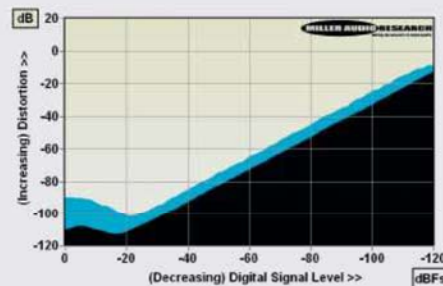
LAB REPORT

PRISM SOUND ORPHEUS (£3495)

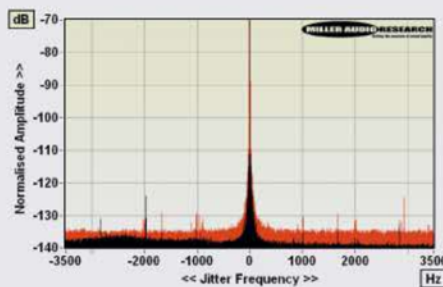
If you intend to address the Orpheus with mixed sample rate media from a DVD or BD player, you'll need to set the desired digital input to 'PC DAW' which then synchronises to the incoming sample rate. Otherwise the sample rate (44.1kHz–192kHz) must be set manually. It's also worth experimenting with the SRC option for, while this has little impact on jitter (already a fabulously low 60psec at 48kHz and 15psec at 96kHz – see Graph 2, below) or distortion (ranging from a low 0.00015% through bass and midrange to 0.006% at 40kHz at the peak 5.9V output), it does appear to add some slight in-band ripple to the DAC's frequency response.

The jitter plots show very little in the way of correlated sidebands but the slight broadening below –110dB is a minuscule noise-like jitter linked to Prism's choice of Crystal CS4398 DACs, seen with CD players using the same chips. Also, while distortion is low it does extend from 2nd–5th harmonics, with odd-order components strongest. Nevertheless, figures below 0.001% over the top 30dB of its dynamic range are mighty impressive [see black trace, Graph 1 below].

The responses meet Prism's specification: flat to –0.04dB at 20kHz with 44.1kHz media, –0.03dB/20kHz with 48kHz media, –0.44dB/45kHz with 96kHz media and –4.9dB/90kHz with the highest resolution 192kHz sources. Channel balance is within 0.004dB and separation >120dB through the midrange. Readers are invited to view a full QC Suite report for the Prism Sound Orpheus DAC by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Distortion versus digital signal level over a 120dB dynamic range using 24-bit data at 1kHz (black) and 20kHz (blue)



ABOVE: High resolution jitter plots (SRC on); 48kHz/24-bit data (black spectrum) versus 96kHz/24-bit data (red spectrum).

HI-FI NEWS SPECIFICATIONS

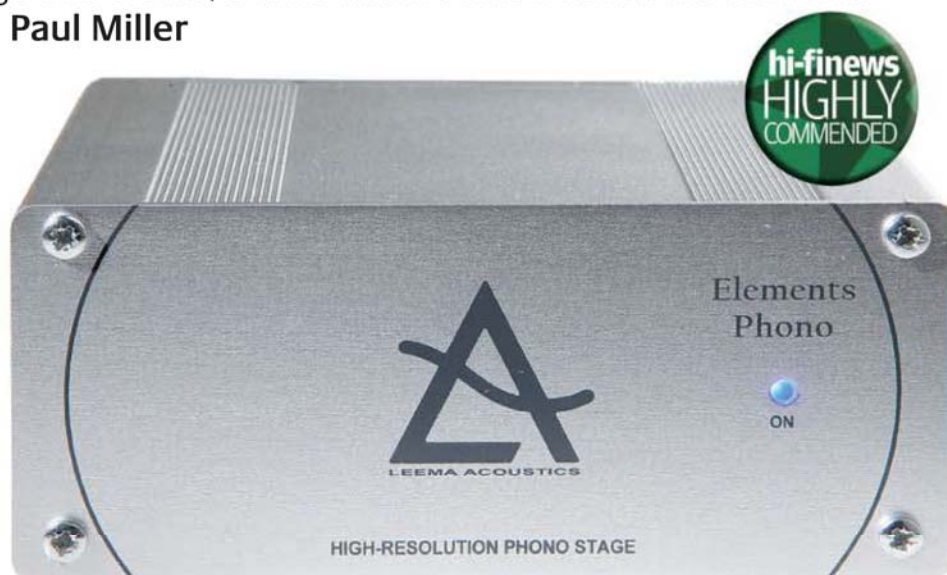
Maximum Output Level/Impedance	5.94Vrms / 50ohm
A-wtd S/N Ratio	105.3dB
Distortion (1kHz, 0/–30dBFS)	0.00016% / 0.00079%
Distortion (20kHz, 0dBFS)	0.0034%
Frequency resp. (20Hz–20kHz)	+0.0dB to –0.03dB (48kHz Fs)
Digital jitter (24-bit; 48kHz/96kHz)	61psec / 17psec
Resolution @ –100dB	±0.1dB
Power consumption	19W
Dimensions (WHD)	440x50x290mm

Leema Elements Phono (£495)

Famed for its massive Altair amplifiers, Leema has also spent several years developing a cost-no-object phono stage and a cute, trickle-down version called the Elements
 Review: **John Bamford** Lab: **Paul Miller**

They tend not to do things by halves at Leema Acoustics in Welshpool, mid Wales. In its Reference Series it makes the mother of all phono amplifiers featuring comprehensive cartridge matching and, most thoughtfully, S/PDIF and USB outputs for 'broadcast quality' archival of vinyl records to computer hard drive. It's called the Agena and costs the princely sum of £2995.

Subsequent to the Agena's introduction, Leema has now produced this considerably more affordable Elements model that claims to have circuitry based closely on that of the Agena but, of course, with minimal facilities. It's switchable for use with both moving-coil and moving-magnet cartridges via a rear panel selector, plus there's a switchable low frequency filter to eliminate problems caused by warped records. Given its diminutive dimensions the Elements seems expensive, but as Mallory Nicholls, designer at Leema Acoustics is at pains to point out, 'You can get external add-on phono stages in small boxes looking not dissimilar to our little Elements for less than £100 these days, but they'll be based on inexpensive off-the-shelf op-amps. And while they'll



do a job they won't sound particularly spectacular...

ATTENTION TO DETAIL

Obviously the tiny Elements doesn't offer the comprehensive facilities and no-expense-spared construction of Leema's flagship Agena, nevertheless the attention to detail is impressive. And the reason that it's so small is because it mostly uses surface mount components on its tiny printed circuit board. The two-layer PCB has two ground planes, while the casework is made entirely of non-magnetic aluminium. There is only one operational amplifier employed in the design, an Analog Devices OP275 used for the MM gain stage and the first part of the Elements' two-stage RIAA equalisation circuit. The second stage of RIAA EQ and the buffer stage employ discrete components.

Meanwhile the Elements' totally separate MC stage is based entirely around discrete components, in contrast with many phono amplifiers whose MC input will be based on the MM stage with additional gain. Both the MM and MC stages in the Elements have individual power supply regulation – again using discrete components

throughout. Power comes from a plug-top 'wall wart' supply.

NO SMOOCHING

I've recently been enjoying using Grado's Reference Master 1 high output cartridge in my Townshend Rock Reference deck with Excalibur arm. With its drooping response it's rather smoochy-sounding and a bit too characterful which, connected to the Elements' MM input, was barely disguised. In short order I replaced the Grado with Ortofon's honest-sounding MC A90 flagship cartridge, if only to assess the absolute quality of the Elements' MC input.

Listening to Joe Jackson's 'Right and Wrong' from his 1986 *Big World* album [A&M JWA 3] the sound from the Grado was clearly resolved by the Elements' MM input, the slap and punch of the bass melody alongside the urgent drum playing proving highly articulate. This recording has always sounded 'tight' with a dry, over-damped quality – and this is precisely what the Elements portrayed, with bass grip that sounded fast and bouncy. Louder passages during the song's refrain can sound metallic but, as already experienced with the

THE ART OF ZEN

Founded a decade ago by two ex-BBC engineers, Leema's top-of-the-line Reference Series components include the Pyxis preamp and Altair monoblocks that graced our front cover earlier this year [HFN Apr '09]. Designer Mallory Nicholls has been making 5.1 monitoring electronics for recording and mastering studios for 20 years, founding Leema Acoustics with Lee Taylor initially to develop a small studio monitor loudspeaker called Xen. Today the company's range of high-end audio components is renowned for its nonsense, solid engineering.

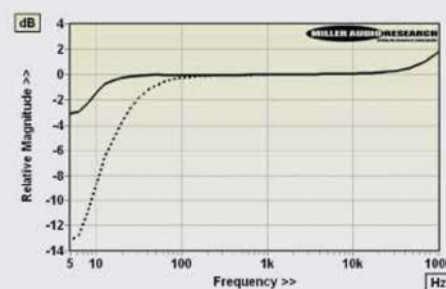
LAB REPORT

LEEMA ELEMENTS PHONO (£495)

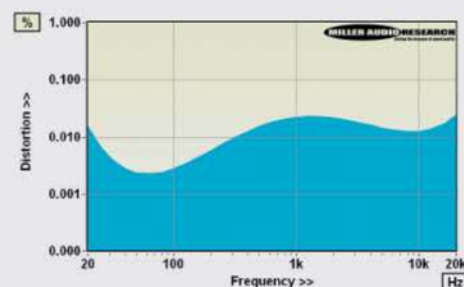
While the Elements Phono preamp may not offer the flexibility of variable input loading or fine gain control, it does provide a very solid performance for MM and MC cartridges that meet its idealised input sensitivity. Leema rates the MM input at +36dB gain, requiring 4mV for a 250mV output. I measured a gain of +35.7dB with 16.4mV required for a standard 1V output, which is near enough exactly the same thing and suggests high output MM's will suit the Leema perfectly (there's some 95mV of input overload margin). The MC input has a proportionally higher +62dB gain, requiring just 0.8mV to achieve a 1V output from its 50ohm source impedance.

The equalised frequency response is very extended (-0.24dB at 20Hz to +1.8dB at 100kHz) but the LF 'cut' option rolls away the bass rather more obviously than Leema suggests. Instead of acting 'below 20Hz' the filter rolls off below 100Hz, reaching -3.7dB/20Hz and a full -13.2dB/5Hz, suppressing the worst excesses of a warped record to useful effect [see Graph 1, below]. Channel separation is better than any MM/MC cartridge at >60dB, as is the <0.05dB channel balance (20Hz-20kHz) although the 77dB/64dB A-wtd S/N ratio (re. 0dBV, MM/MC) is good rather than exceptional.

Distortion is well controlled, a pre-equalised input realising between 0.0024-0.023% across the 20Hz-20kHz range [see Graph 2, below] and gently increasing with level, from 0.004% at 100mV/1kHz to 0.07% at 4V/1kHz. Readers are invited to view a QC Suite test report for Leema's Elements MM/MC phono amp by navigating to www.hifinews.co.uk and clicking on the red 'Download' button. PM



ABOVE: RIAA corrected frequency response from 5Hz-100kHz (dashed trace = LF 'cut' option)



ABOVE: Distortion versus frequency (MM sensitivity, 47kohm loading), at 1V output

HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm/100pF / 90ohm
Input sensitivity (MM/MC re. 0dBV)	16.4mV / 0.79mV
Input overload (MM/MC)	95mV / 4.8mV
Maximum output (re. 1% THD)	4.1V
A-wtd S/N ratio (re. 5mV/500pV in)	77.3dB / 63.9dB
Frequency response (20Hz-20kHz)	-0.24dB (-3.7dB) to +0.2dB
Distortion (20Hz-20kHz, re. 0dBV)	0.0024-0.023%
Power consumption	2W
Dimensions (WHD)	110x48x100mm



ABOVE: No variable input loading options, just one set of input and output RCAs. Leema has included a 'cut' filter to remove excessive bass from warped LPs

Grado Reference Master 1 pick-up, its easy-going nature ensures that LPs such as this (an early digital recording) are portrayed without so much as a hint of edge or brightness.

Leema's little Elements box had replaced the considerably more expensive RCM Sensor Prelude phono amplifier in my system. Unless I'd told visitors that my phono stage was now £1000 cheaper than before, nobody would have noticed. Swapping between the two in quick succession revealed no discernable difference in resolution of fine details. With one of my treasured audiophile LPs of orchestral music with which I am so familiar, the London Philharmonic's *Arnold Overtures* [Reference Recordings RR-48], the more costly Sensor Prelude was observed to sound just a little warmer. There was a subtle cosmetic change in the timbre of strings when the two phono stages were A/B-d in quick succession, the Elements sounding just a little cooler and, perhaps, less euphonic.

The Leema can be admired for its lack of artificial 'colour', a quality reinforced by Ortofon's neutral-sounding MC A90 cartridge. Due to the Ortofon's natural timbre and almost genteel presentation the aforementioned Joe Jackson record sounded quite different now, with less enthusiasm and drive. Again, I was impressed by the Elements' transparency to the source at it clearly resolved the Ortofon's authenticity of tone and

reduced euphony, which in this instance more readily revealed shortcomings in the recording.

AIR AND SPACE

Neither is the *Arnold Overtures* a lush and romantic sounding recording, the brass and percussion having a tendency to sound strident when your analogue replay system isn't 'just so'. But the air and space of this musical event captured live in Watford Town Hall was entrancing.

With the Elements there is no hyping of leading edge and treble frequencies to offer a feeling of greater detail retrieval, and no juicing up of the midrange for a relaxed and more romantic sound. The nature of recordings, the sound of the venue in which recordings have been made and the soundstage dimensionality, is all exposed in delectable fashion. 🎧

HI-FI NEWS VERDICT

Pleasingly lucid, dynamics are preserved and clarity is excellent. It might not look posh, and appear expensive compared with typical add-on phono stage accessories, but the sound justifies the price. Spending more on a phono stage brings flexible loading adjustments – handy if you're regularly swapping cartridges – nevertheless the transparency of the Elements makes it good enough to use in esoteric high-end systems.

Sound Quality: 82%



Anthem Integrated 225 (£1500)

This affordable Canadian 225W integrated comes complete with a built-in phono stage, while its backlit remote allows control of other units in the listening system

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

In its marketing literature Anthem describes the Integrated 225 as a phono stage, preamplifier and power amplifier integrated together. Yeah, right. Talk about stating the glaringly obvious. But I do think the company is trying to make a point here.

While many of us are tempted to mix and match preamps and separate power amps, there's a strong case to be made for choosing an integrated unit instead. Cost savings can be considerable, especially when trying to build a very high quality music system worthy of 'audiophile' status, with concomitantly good sources and top-notch monitoring speakers. As with satellite-and-subwoofer speaker systems, in some audio circles there's a certain stigma implying that integrated amplifiers aren't really 'proper' hi-fi. But such prejudices are unreasonable. While there's no denying that separating the components of an amplifier affords flexibility when upgrading, keeping everything on a single chassis does make sense. Now it's my turn to state the obvious: you're only paying for one box!

Solid fascias crafted from aluminium, rear panels, wrap-over bonnets, isolating feet: they all cost money. And importantly, when weighing up the overall budget for a system, gone is the necessity for top quality interconnect cables that are oh-so-critical between any pre- and power amp. Better still if the amplifier includes a useable phono stage as well.

INSIDE THE BOX

This is where the Integrated 225 comes in. With enough grunt under its bonnet to ensure that it's cruising comfortably even when you're hosting a party, never mind relaxing in your favourite chair and listening to music, it's an eminently sensible proposition. Its cosmetic design is purposeful and workmanlike rather than luxurious or particularly inspired.

RIGHT: As well as a headphone output socket, the Integrated 225's fascia sports a convenient line input (Aux 4) on a mini jack for temporary connection of portable media players

Built in Taiwan, with a wrap-over bonnet finished in textured black paint and plastic speaker terminals (which are nevertheless adequately fit for purpose) it has clearly been built to a price. But with a pair of XLRs to provide a balanced input for your main source, six further line inputs, a record output and the sensible inclusion of a preamp output as well, it covers pretty well all requirements.

With a nod to the custom installation market, the 225 can be controlled via RS232. Rear panel sockets also provide a 12V trigger and in/output for an external infra-red sensor should you wish to hide the amplifier from sight. The fact that the phono input only caters for MM or high output MC cartridges is the sole disappointment here.

A substantial toroidal transformer and large heatsinks account for much of the '225's hefty 19.4kg weight, the output stage employing three pairs of bipolar devices for each channel in a complementary layout. With the exception of the bass/treble controls which must be

adjusted manually, all functions – including tone defeat on/off – can be operated by the amplifier's remote control handset. Anthem eschews an electronic volume control in favour of a 'more analogue' motorised potentiometer. It works smoothly enough and allows moderately fine adjustment of gain from one's armchair without annoying overshoot, but there's no indication on the volume knob of where you are on the dial other than a discreet dimple which is impossible to see unless your nose is pressed up to the fascia.

REMOTE FEATURES

The remote controller deserves an honourable mention. Formed of a rubbery plastic material that is far more pleasing, and bound to prove more hard-wearing, than most shiny plastic affairs, it's the sort of controller that more commonly accompanies fully-featured AV receivers. It's a fine example of the breed with clear, sensible layout and – joy of joys – backlit illumination of its translucent keys. As well as being loaded with preset codes for a





plethora of brands, it's a learning remote too, with major function keys to provide day-to-day control of the CD player, DVD player and TV set in your system (including Info and Guide buttons). I noted, however, that DVD-Audio is not fully catered for: the DVD player controls include a Menu button, but no Top Menu button. And it's not surprising that there's no layer-change button for CD/SACD players.

AMPLE RESOLUTION

Feeding the Integrated 225 a balanced signal from Wadia's W381 CD player, and with the amp driving my monolithic Townshend Audio Sir Galahad loudspeakers, the power and refinement of the amplifier was apparent from the outset. A 24-bit remastered CD reissue of Scott Walker's *Scott 4* album [Fontana 510 882-2] had me mentally dissecting the cavernous sound production as Walker's distinctive voice reverberated over the lush string and horn arrangements.

While the bass appeared somewhat indistinct on this old recording, the presentation of the audio picture showed refinement and considerable finesse. The continuo Spanish guitar remained coherent within the dense mix of the opening 'The Seventh Seal', along with the snap and jangle of tambourine and resonant tubular bells. Even the mock choir remained intelligible, despite the surreal electronic treatment to the vocal assembly. Later, the loose skins of the drums on 'Hero Of

The War' showed immense resonance and pleasing timbre; these were experimental days in popular music culture and the recording engineers' creative juices were flowing with abandon. It's far from the world of audio purism, but in this instance the drum kit sounded utterly believable.

Staying in a similar era I pressed my Pioneer DV-868AVi universal player into service to spin up the DVD-Audio issue of Neil Young's 1971 classic *Harvest* album [Reprise 9362-48100-9]. Here the Anthem proved it was adequately transparent to reveal clearly the difference in sound quality between the 24-bit/96kHz multi-channel and 24-bit/192kHz stereo audio streams on the disc. As I remember discovering with some surprise when I first acquired the disc a few years ago, it's the 96kHz version that sounds sharper and more pristine (even when played out in stereo), presumably because the source was the original multi-track master tape, one generation back from the 'original stereo master' used for the vinyl cut in 1971 and subsequently encoded at 192kHz for the DVD-A release. The Anthem was more than capable of revealing the difference in resolution.

Bass delivery was a touch fulsome and over-exuberant when playing Peter

ABOVE: Logic-controlled input selection is joined by motorised volume control and manual bass/treble tone adjustment. Tone defeat is provided but the balance control stays in-circuit

Gabriel's 'Rhythm Of The Heat' from his fourth album [Virgin/Charisma PGCD4]. While Jerry Marotta's drums sounded fast and crisp, the featured African drums of the Ekome Dance Company displayed a confusing bloom that caused the image to become hollow and indistinct. Nevertheless the Anthem was again clearly resolving the dark, 'clipped' nature of this

early digital recording from 1982 – where sounds appear from eerily black silences yet somehow fail to rejoice. The over-damped, stark nature of the sound becomes most apparent on the compressed and heavily-gated 'I

Have The Touch'. Again, the character and texture of recordings was laid bare by the Anthem in glorious fashion.

A BIT TOO MUCH BASS

As a self-confessed bass junkie I was shocked to find that the Integrated 225 actually produced *too much* bass in my system when I took Dire Straits' 'Private Investigations' for a spin [Love Over Gold, Vertigo 6359109] on my Rock Reference turntable, fitted with a high output Grado cartridge in place of my usual low output moving-coil. I'd already been listening to the Grado for a couple of days, using RCM Audio's excellent Sensor Prelude phono amplifier (itself costing more than the Anthem!) into a high-end Mark Levinson No 383 amplifier. Yes, the Grado is far from lean in the bass department, but at this point all I'd done was replace the Levinson with the Anthem.

This very powerful bass character of the Integrated 225 suggested bringing my loudspeakers a metre forward into the room to reduce reinforcement from the

'I was shocked to find the Integrated 225 actually produced *too much* bass in my system'

SOUNDING THE ANTHEM

Based in Toronto, Paradigm has become Canada's largest loudspeaker manufacturer since its formation in 1982. It has earned a reputation in the North American market for producing speakers that represent extraordinarily good value, thanks to the economies of in-house design and large-scale manufacturing. Just over a decade ago, Paradigm bought Sonic Frontiers, an electronics manufacturer that has assisted in the development of its Anthem brand of amplifiers. Once again, these have been designed to offer good performance at real-world prices. In addition, it markets a more expensive line of electronics, the Anthem Statement range, that currently comprises a series of high-end multichannel AV components [HFN June '09]. Its D2V/P2/P5 combination won the EISA 2009/2010 Award for 'Best Home Theatre High End'.

AMPLIFIER



ABOVE: Anthem provides six unbalanced and one balanced (XLR) line input, one MM phono input, a preamp output and single 4mm speaker cable posts

rear wall. With hindsight I should have left things as they were and simply tweaked the Anthem's tone controls, as later I found myself returning the speakers to their normal position when playing Joe Jackson's 'Right And Wrong' from his *Big World* album of 1986 [A&M JWA 3]. While it's a rather 'dry' digital recording with fast, taut bass – produced live, but with an audience who were asked to remain silent during the direct-to-two-track taping – it sprang to life thanks to the Anthem's powerful and energetic bass delivery.

INBUILT PHONO STAGE

Removing the expensive outboard RCM phono amplifier from the system and going straight into the Integrated's phono input showed that the in-built phono stage is far from an afterthought. Deliciously quiet and with an open and airy quality, it has been designed using a split active/passive topology, with active equalisation employed for the RIAA curve's 50Hz and 500Hz roll-off points, while high frequency equalisation remains passive.

Listening to an audiophile favourite, Reference Recording's Malcolm Arnold Overtures with the London Philharmonic [RR-48, a 2LP set], the brightly-lit brass showed not a hint of brittleness while strings were lush and sweet in tonality. Given that this is a £1500 amp and the fact that I was *not* using an esoteric separate phono stage, to criticise the performance of the Anthem with my high-end source components and loudspeakers would be churlish.

So precisely how good is the Integrated 225? How does it compare it with my costly Levinson No 383? Going back to the balanced output of the Wadia CD player and listening critically to the classic LSO/ Antal Dorati recording of Stravinsky's

The Firebird [Mercury 'Living Presence', now a hybrid SACD, 470 643-2] showed that the Levinson sounds a tad more spacious and relaxed, the Anthem having a thicker and darker tonal balance that fails to quite describe the texture of sounds at high frequencies. And the bass is a little fat – although for some users this might provide a benefit.

Familiar 'reference' tracks with hard-to-control bass lines such as Leonard Cohen's 'By The Rivers Dark' from *Ten New Songs* [Sony 5012022] and Diana Krall's 'My Love Is' from *Love Scenes* [Impulse IMP12342] proved a little cloying. Perhaps the Cohen track might have been better titled 'In The Rivers Of Bass' as the deep, swooping bass synthesiser notes can commonly confuse proceedings and rob the recording of clarity – especially Cohen's gruff, rasping vocal intonation which can be difficult to decipher. And that's precisely what happened with the Integrated 225. Where some amps allow you hear through the dense production, here the bass was rather overwhelming.

But now I'm nit-picking again, as clearly this Anthem integrated offers a lot of amplifier for the money. ⚡

HI-FI NEWS VERDICT

Given that the price of the '225 is far below that of high-end esoterica, it's fair to say that it punches way above its weight. Spending considerably more on an amplifier might bring more finesse to female vocals and delicate percussive details in the very finest recordings, but such subtle improvements will only be apparent when your loudspeakers are adequately revealing. With power a-plenty, this is a bargain.

Sound Quality: 75%

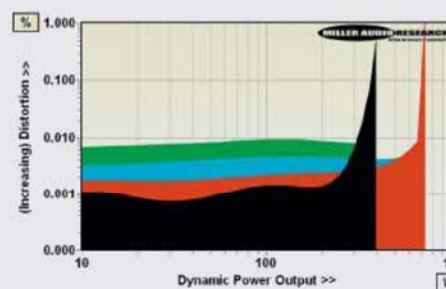


LAB REPORT

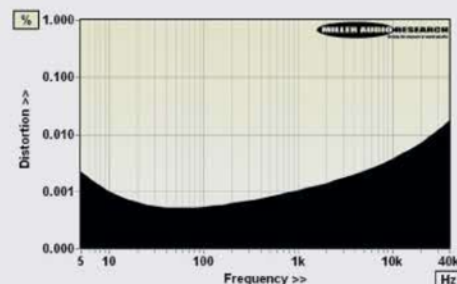
ANTHEM INT. 225 (£1500)

High gain, high power output and high levels of compensation (feedback) are the lynchpins of the 225's performance. The sensitive preamp section means just 286mV is required via the (balanced) line input to raise the amplifier's rated 225W/8ohm output – an overall gain of +43.4dB. This does mean that its volume control is not wholly optimised (there's a 0.25dB channel error at 1W/8ohm with 500mV in) and the 88dB A-wtd S/N (re. 0dBW) might have been wider still. Nevertheless, the 225 will deliver closer to 2x275W/8ohm and 2x430W/4ohm before clipping, these figures increasing to 395W/8ohm and 730W/4ohm under dynamic conditions. This represents a useful dynamic headroom of +1.6dB. The amplifier's maximum output is limited by electronic protection into even lower impedances, registering 710W/2ohm and 390W/1ohm before switching off [see Graph 1, below]. With a maximum current of 19.8A at its disposal, and despite the protection, the 225 should still drive the vast majority of speakers with ease.

Neither is this an amplifier whose distortion 'character' suddenly changes through upper midrange and treble frequencies. Instead, the impressively low 0.0005% recorded through bass and lower midrange increases gently to 0.004% at 10kHz, 0.0075% at 20kHz and 0.017% at an ultrasonic 40kHz [see Graph 2, below]. The amp also has a very wide bandwidth (just -1.5dB at 100kHz) and a low 0.03ohm output impedance up to around 10kHz. Readers are invited to view a comprehensive QC Suite test report for Anthem's Integrated 225 by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



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



ABOVE: Distortion vs. frequency from 5Hz to 40kHz (10W/8ohm). Gradual increase in distortion at HF from gradual reduction in compensation (feedback)

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	276W / 430W
Dynamic power (<1% THD, 8/4/2/1ohm)	395W / 730W / 710W / 387W
Output impedance (20Hz–20kHz)	0.029–0.047ohm
Frequency response (20Hz–100kHz)	–0.1dB to –1.5dB
Input sensitivity (for 0dBW/225W)	19mV / 286mV
A-wtd S/N ratio (re. 0dBW/225W)	88.2dB / 111.7dB
Distortion (20Hz–20kHz)	0.0005–0.0075%
Power consumption (Idle/Rated o/p)	34W/810W
Dimensions (WHD)	438x149x457mm



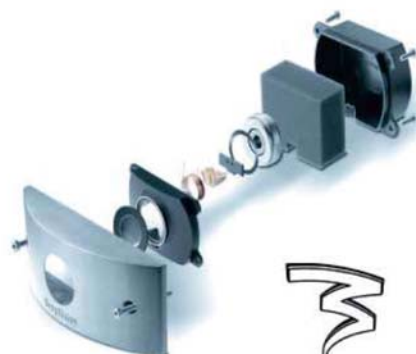
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Vinyl Release

BEHIND THE MUSIC WITH HI-FI NEWS

Duran Duran: *Rio* (Limited Edition)

Released in 1982, Duran Duran's *Rio* offered a welcome escape from a 'Not-So-Great Britain'. Now the LP is on 180g vinyl, **Steve Sutherland** puts it all into context...

It's brilliant,' says the lad in the crumpled lavender satin suit, laughing hysterically. '... I've made so many good friends... Been out every night. Ligger. Last night we went to Liza Minelli's birthday party – she's in a show just over the road. We sang her happy birthday and she started crying and hugged us all. She's just like she is in the movies. She really likes us. We're the only new group she likes.

'I met Ronnie Wood too... and he knows all our names! I mean, imagine! One of the Rolling Stones knowing all our names... And after Liza's we went to Eddie Murphy's party at the Hard Rock and I met Al Pacino... I mean... it's just... brilliant...'

The guitarist pauses for breath. I drop my bags. I've just stepped out of a taxi and squeaked past security through the swing doors into the marbled lobby of the swanky Berkshire House Hotel in uptown Manhattan. I haven't even checked in but our hero – who has, incidentally, just grabbed the manager of the establishment firmly by the ear and insisted that, no matter what state his room was left in after his guests staggered out into dawn's early light, the maid *will* clean it up – is off and running again.



➔ Early '80s Duran Duran (l-r) – Nick Rhodes, Andy Taylor, Simon Le Bon, Roger Taylor and John Taylor

'Oh yeah, and I met Carly Simon yesterday. She's writing a song for us. And Francis Ford Coppola's coming to our show at the Garden. Oh, and by the way, did I tell you? Out accountants rang earlier. I've just become a millionaire!'

NEW YORK TALES

The year is 1984, the guitarist is Andy Taylor and his band, Duran Duran, are about to become my passport to having the greatest good time imaginable in an era which grumpy old music historians will tell you was an absolute load of no good times at all. Yep, thanks to the Double D, in the first 24 hours of my very first visit to New York I will:

a) Be introduced to Andy Warhol who will be sporting a particularly frightful snow white wig. Andy will proffer me a handshake like wet lettuce, grin inanely and, in a voice of which Mickey Mouse would be proud, confuse me with a member of the band and declare he is very pleased to meet me.

b) Be smuggled out through the hotel kitchens and physically thrown into the back of a stretch limo parked out back by a burly bouncer as a phalanx of screaming girls à la *A Hard Day's Night* stampede towards us down a piss-stained alley. When the limo pulls away, the girls will chase it all the way down E52nd Street until, one by one, they will sink to their knees defeated, sobbing with exhaustion.

c) Play pinball backstage at Madison Square Garden with an upcoming pop starlet called Madonna.

d) Attend a party in an art gallery in honour of Nile Rodgers.

e) Bump into Billy Idol in the Limelight Club... and so on and so on... a blur of events that Old Father Time and too much bad living have erased from my memory.

Whatever, none of this would have happened if it hadn't been for an album

'Oh, and by the way,
did I tell you? I've just
become a millionaire!'

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...



called *Rio*. Released two years prior to the *annus miserabilis* of George Orwell's brooding prediction and my mass partying, *Rio* was the tumescent result of the adolescent wet dreams born in the bedrooms of a bunch of young Brummies with Bowie posters plastered to their walls. They fantasised of a place where James Bond and the Pearl & Dean Bacardi ads collude; a lifestyle which would materially elevate them above the rank and file of Thatcher's mass unemployed.

And in a stroke of the serendipitous rock 'n' roll fairy's magic wand, their ardent wishes all came true. After an eponymous debut album which flashily announced their intent, *Rio* Thomas Cook-ed into the Caribbean sunset, deliberately kissing off Maggie's dreary, rainswept No Future, Not-So-Great Britain. Sex-aided by a slew of soft-porn *Playboy* videos shot in a variety of exotic locations like Sri Lanka and Antigua and gobbled up by this new phenom called MTV, it was an album which provided the hedonistic soundtrack for a generation of clubbers also seeking better times, hotter climes and likewise unwilling to be written off as social chaff.

Of course, not everyone was buying the escapism-as-protest schtick that

underpinned the glamorous hem of New Romanticism. On the contrary, the sight of blokes dressing up to the nines – often in their mums' blouses and pearls – and sipping lurid cocktails while the miners' strike struck sent the *NME* into a rabid frenzy of loathing.

In fact, despite Duran Duran being indisputably the biggest band in Britain from 1982-1985, I can't recall them ever appearing on the magazine's cover. They were discarded as 'mere entertainment' and a 'celebration of superficiality'. Indeed, one article ended on a parody of the famous phrase that was reputed to



➔ Priced £16.99, the 2009 180g re-release of Duran Duran's *Rio* is available from www.991.com

have kick-started the French revolution: 'Let them eat smoked salmon.'

The *Melody Maker* had a more relaxed relationship with the hard line Left and in my review of *Rio*, published in the May 15 edition, I bigged it up massively, making the claim that it, 'shoved a good half decade of squat mentality back in the closet.' Whatever that meant.

I also called it, 'energetic, proud, enthusiastic and joyous... something to escape *fully* into,' which makes a bit more sense, and saw fit to mention Thin Lizzy, funk and Roxy Music along the way for good measure.

I avoided name-checking Chic and The Sex Pistols, which were the two influences that hunky bassist John Taylor was most fond of chucking willy-nilly into interviews, but there was no mistaking the sheer scope of the band's ambition.

COMPLETE PACKAGE

The title track, 'Rio', boasted one of the decade's most uplifting choruses, 'My Own Way' was the closest they were ever likely to come to a philosophy and was, again, buoyed up on a belter of a chorus. 'Hungry Like The Wolf' was prime cut huff 'n' puffin' skirt-chasing pop, especially successful when aligned to its *Raiders Of The Lost Ark* rip-off video, and 'Save A Prayer' was the prize gem among the crown jewels – a swooning, scarves aloft ballad, light as gossamer afloat on Nick Rhodes' lovely bit of wibbly synthesiser.

This was music designed, along with the visuals and the wardrobe, to be a completely satisfying commercial package – pop, but with a sure knowledge of rock and dancefloor dynamics. Aspirational, I guess you could call it. And, it must be said, lyrically kind of nonsensical. Singer Simon Le Bon, who was a bit on the chubby side incidentally and danced



like yer dad, was no poet laureate that's for sure. The title track famously begins 'Moving on the floor now baby you're a bird of paradise/Cherry ice-cream smile I suppose it's very nice,' and I can't honestly say it gets much better.

But this is pop, right? And there's hardly ever been a better band for wrapping you completely up in the celebration of the moment, your moment, this uniquely *now* moment, than Duran Duran.

Listening to *Rio* today, I guess you could say the album is 50% Take That and 50% The Strokes, a combination of the crass and the cool that finds contemporary recognition in the work of current critical darlings the Arctic Monkeys who reference the album's title track in their 'I Bet You Look Good On The Dancefloor', and quote 'Save A Prayer' on their 'Teddy Picker'.

When the *NME* visited the Arctic's Alex Turner and his chums in New York recently while they were polishing up their most recent long playing offering, they were discovered cranking out *Rio* at top volume. One might humbly suggest that a little more attention to Mr Simon Le Bon's grasp of a catchy melody and a little less roughing it with that mentor of mayhem Josh Homme might have rendered *Humbug* a tad more listenable.

But I digress. The last paragraph of my original review read: 'If there's a catch, it's that – honest to God – *Rio* is so good and

defines such an exuberant majesty, where the hell do they go from here?'

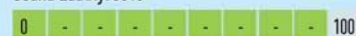
Well, where they went was: a bit of a mess called *Seven And The Ragged Tiger*, a bloated live affair called *Arena* and, 13 unlucky years down the road, an album of cover versions called *Thank You*, one of the most ridiculous records ever made, on which the boys in their powder-brained wisdom, took on Sly & The Family Stone, Bob Dylan, Led Zeppelin, Grandmaster Flash and Public Enemy among others.

If you want a laugh, check it out. If you want real fun, return to *Rio*. ☺

RE-RELEASE VERDICT

A double LP, this package comprises the May 1982 UK release [EMC-34-11] with the November 1982 US album remixes [ST-12211] on the second disc. With the grooves now given a home in heavier vinyl than that of our near-perfect original copy, the set bristles with energy, enjoying far greater presence in the listening room. Burbling synths, overdubbed electronic drums, intricate bass played directly into the mixing desk, double-tracked vocals... all is now laid bare. But it rocks! It's a limited-edition release, so be quick. **HFN**

Sound Quality: 85%





WELCOME TO
THE
PLEASUREDOME



Frankie's *Pleasuredome* LP

Take Trevor Horn, a 60-piece orchestra, one Fairlight computer and a band with the unlikely name of Frankie Goes To Hollywood and the result is a string of hits culminating in a double LP called *Welcome To The Pleasuredome*. Sonically? It's revolutionary...

Words: Johnny Black

VINYL ICONS

PRODUCTION NOTES

Based in a deconsecrated church in Notting Hill, West London, Trevor Horn's SARM West studio was perhaps the world's most advanced recording facility when he started working with The Frankies in 1983. It was filled with futuristic gadgets, including an Oberheim DMX drum machine, DSX Digital Polyphonic Sequencer, Synclavier and a Fairlight.

'Relax' was probably the pinnacle of all that stuff,' Horn told Ian Peel of *Sound On Sound* in 2005. 'It was a combination of Page R and the Conductor (two electronic recording applications) and locking it to a Linn drum machine. So the basic track was eights running in a Fairlight ('eh eh eh eh eh eh eh'), fours on a bass ('ee ee ee ee') and a set of Linn drum machine patterns locked to Page R played on top of each other. It was an amazing feel.'

Horn also employed the latest digital recording gear. 'I had one of the very first 24-track Sonys. And "Two Tribes", I think, was the first number one single on a Sony 24-track digi. "Two Tribes" was completely digital.'

If all this sounds a bit clinical and antiseptic, Horn is quick to point out that there were many lighter, more human moments.

'For "Pleasuredome...", we got the two girls from Propaganda (another ZTT band), Claudia Brucken and Suzanne Freytag, to climb into a bath of water, to make noises for the sound collage at the beginning. They were in their underwear but we weren't allowed into the room while they were in the bath.'



three people in the UK who owned a Fairlight computer synthesiser.

At that time, the Fairlight was state of the art when it came to audio sampling. 'I remember playing Holly and Paul a sample on my Fairlight,' remembers Horn, 'where I'd synced the bass together with a Linn drum beat, and I could see they were very interested in that.'

Many bands would have been outraged at the level of control Horn was taking, but The Frankies were huge fans of New York dance music and understood the potential of the Fairlight in that context.

Once the backing track was nailed, Holly Johnson stepped up to the mic. 'By the time he sang the vocal, at 4am, he was so hyped up, he was crazy, like a Doberman with a rabbit in its teeth,' remembers Horn. At the end of the take, Horn felt the vocal was slightly out of tune, but Johnson put him straight.

'It was not out of tune,' he says. 'I was doing little slurs with my voice, using microtones. It was quite deliberate. That "Owl" which I do, is my Marc Bolan affectation, plus a bit of James Brown.'

BANNED BY THE BBC

Released on October 24, 1983, 'Relax' languished in the lower reaches of the chart for six weeks before the band secured a *Top Of The Pops* slot at the start of the new year. The following day 'Relax' shifted 54,000 copies, at which point Radio 1 Breakfast Show DJ Mike Read suddenly realised the lyric was virtually an audio guide to the finer techniques of oral intercourse. Deeply offended, he stopped playing it halfway through and declared it obscene.

Days later the BBC banned it and before the end of the month

'Relax' was at No 1, en route to an estimated 13m sales worldwide.

ZTT now needed an album to capitalise on their runaway first hit and, fortunately, the band had no shortage of songs.

'As well as "Relax",' explains Rutherford, 'we'd already written "Two Tribes", "Welcome To The Pleasuredome", "The Only Star In Heaven" and "Krisco Kisses".'

"War" was something we decided to do in the studio, but we were doing most of it live.'

Horn's first priority was to complete a follow-up to 'Relax',

and the obvious candidate was 'Two Tribes'.

'The backbone of the track was a Linn 2 bass drum with a sample of a slapped bass

guitar E string going across it,' remembers Horn. 'Bottom E is very sympathetic to a bass drum and it sounded huge on the radio.'

Augmenting the Frankies this time around was arranger Anne Dudley, who would later find chart success as a member of Art Of Noise. 'I orchestrated the opening of "Two Tribes". Fairly straightforward,' she says. 'Trevor asked, "How many players would you like?" I said,

The band line-up

– Brian Nash (guitar), Paul Rutherford (vocals and keyboards), Mark O'Toole (bass), singer Holly Johnson and Peter Gill (drums)

Photos of the band on the LP's inner sleeves; the top image was used for the cover of the first CD release in 1985 [see opposite]

Producer Trevor Horn

– his SARM West studio boasted an illustrious history, as Basing Street Studios. Everyone from Cat Stevens to Bob Marley and Iron Maiden had recorded there

Never a band to miss a merchandising opportunity, one of the inner sleeves offers clothing for sale

'Offended, Read stopped playing it and declared it obscene...'



Alternate Format Discography



"About 20". He said, "Right, we'll have 40 or 50 or 60. We want to spend lots of money here,""

YES AND PINK FLOYD...

With work moving ahead on the album, 'Two Tribes' followed 'Relax' into the UK's No 1 single slot, aided and abetted by a string of carefully timed re-mixes, a barrage of slogan-bearing T-shirts and an eye-popping Godley & Crème-directed video.

The album's centre-piece, however, was its astonishing title track, with a lyric based on the Coleridge poem 'Kubla Khan'.

'It started out as three and a half minutes,' says Horn, 'but we kept extending it until it was over 16 minutes long.'

Featuring Yes's Steve Howe on guitar, it became an audio epic which Rutherford accurately sums up as, 'a Pink Floyd kind of thing but with a modern dance feel to it.'

The album also included the band's third No 1, the big ballad 'The Power Of Love', plus a muscular cover of Bruce Springsteen's 'Born To Run', not to mention Holly Johnson's Sinatra-like re-take of Dionne Warwick's 'Do You Know The Way To San Jose'.

Welcome To The Pleasuredome, a double album, was released on October 28, 1984, and entered the chart at No 1. It quickly went triple-platinum, eventually racking up an extraordinary 66 weeks on the chart, so that by the end of 1984 Frankie Goes To Hollywood was the most successful act in all of Europe. ☺



ORIGINAL STANDARD DOUBLE LP (1984)

Beaming down from Planet Frankie to your friendly neighbourhood vinyl emporium on October 29, 1984, this double album [ZTTIQ 1] enjoyed a built-in platinum guarantee because its two massive hit singles, 'Relax' and 'Two Tribes', had spurred advance sales of over one million.

If you're prepared to take the trouble to visit a secondhand record store it's not too hard to track a copy down. It's harder to find a copy still in decent nick but, if you can, you've got your mitts on a vinyl slab that was pretty damn revolutionary in its day. In terms of the spatial relationships of instruments and voices it was on another plane.

DOUBLE PICTURE DISC (1984)

Clad in a transparent PVC sleeve, the picture disc version of the LP [NEAT 1] arrived a month after the regular edition. To these eyes it's a mess to look at but, if you're still tempted to own it for the sake of completeness, just don't expect it to sound remotely as good as its black vinyl counterpart.

CASSETTE (1984)

The first cassette version [ZCIQ1] featured the same track listing as the album, but with slightly amended titles, on a grey cassette with red text. It sold well enough to merit two more releases in the same year, of which the third switched to a black cassette with white text.

ORIGINAL SINGLE CD (1985)

The first CD version [CID 101] featured a different track listing than the double album. It added 'Happy Hi' and 'The Last Voice', and substituted a remix of 'Two Tribes' which is almost indistinguishable from the

groundbreaking 'Annihilation' mix, and radically different from the original album version.

The US edition [90232] boasted on the cover of its full digital recording, and drew attention to its sampling rate of 44.1kHz with 'pre-emphasis off, max peak +18dB and continuous SMPTE'. So confident of its excellence was this edition that the cover even lists four unwanted clicks which 'should not give cause for concern'.

A 1988 re-issue, under the same catalogue number, came closer to the original LP release track listing



but had other minor sequencing and overdub changes.

ENHANCED CD (1998)

This one [UMD-53 199] I haven't actually seen or heard but it's listed on Amazon and elsewhere. As far as I can make out, it originated from Canada and featured different mixes of 'Relax', 'Two Tribes' and 'War'. Amazon customer comments include the observation that the, 'sonic quality of this recording is so high that it would make an excellent CD sampler for high-end audio equipment', and the following, automatically translated from the original Japanese which describes it as an 'illustrated sound at tropical plants, beautiful sound of birds, reminiscent of ancient earth. But something is different. Yes, there is past, future, life, death, desire, love, everything was swirling space.' Is that absolutely clear then? Seriously, if anyone out there owns a copy of this, please write and fill us in.

CD RE-ISSUE (2000)

Courtesy of German specialist re-issue label Repertoire [REP 4896], this is memorable only for including two bonus B-side tracks 'One September Monday' and 'One February Friday', both of which are interviews with band members.

CD RE-ISSUE (2000)

Rather more enticing was this French re-issue from independent distributor Wagram [3052922] which presented the album as a 22-bit Digital Remaster, sounding better than ever before.

CD/DVD 20th Anniversary Edition (2003)

Repertoire again [REP 5002] with new artwork and the bonus of a four-track DVD (all the No 1s plus 'Welcome To The Pleasuredome') but no noticeable improvement when it comes to sound quality.

JAPANESE DOUBLE CD (2009)

The latest entrant in the field [XECZ-1037-1038], this attractive item from the land of the rising sun, remastered at Tokyo's Think Sync Studio, is in mini-LP format from Third Ear Music, with a snazzy full-colour booklet. The first CD presents the original album, sounding better than ever, while the second disc offers nine bonus tracks including two stated to be new to CD: 'Welcome To The Pleasure Dome' (The Soundtrack From Bernard Rose's Video) and 'Relax (International/Live)'.

With ZTT founder Jill Sinclair tragically out of action following a mishap with an airgun, the label's catalogue is now being handled by Universal. Despite its superb track record with DeLuxe re-issues, the word is that there's currently no plan to put *Welcome To the Pleasuredome* out in that format.



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COMPACT DISC



SUPRAAUDIO



DVD



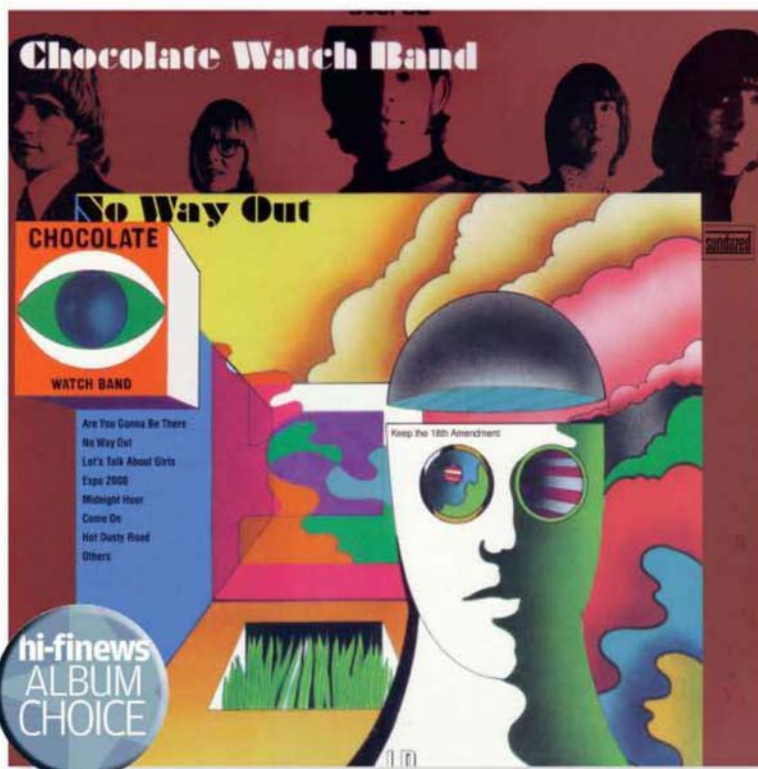
BLU-RAY



VINYL



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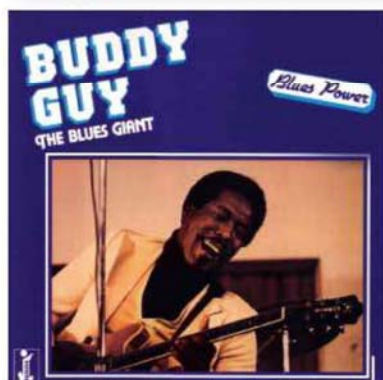
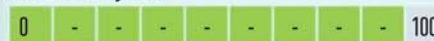
CHOCOLATE WATCHBAND

No Way Out

Sundazed LP5306 180g vinyl

Best known for a spot in the exploitation flick *Riot On Sunset Strip* and a track on the *Nuggets* compilation, the Chocolate Watch Band is the definitive 'garage' band because they adhered to, and deserve much credit for the genre's blueprint: blending post-Kinks grunge and nascent psychedelia in perfect proportions. Cover tracks from Chuck Berry (via the Rolling Stones), Wilson Pickett and Buffalo Springfield show the egalitarianism of the age before elitist hipness; the result is a blinding melange of raw punkishness. Like its sequel [*HFN* Dec '09], it's a mish-mash assembled from a variety of line-ups, with lots of studio tampering, but still a worthy snapshot of 1967. Originals fetch \$100 plus. *KK*

Sound Quality: 84%



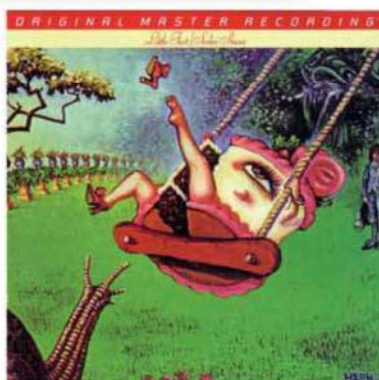
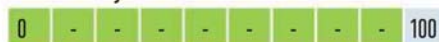
BUDDY GUY

The Blues Giant

Pure Pleasure PPA010 180g vinyl

Released as *Stone Crazy!* on Alligator in the USA after its 1979 debut in France, this album will drive traditionalists nuts because it's not a little self-indulgent: only six tracks, averaging around seven minutes per song is not a recipe for classic electric blues sets. Nothing to do with the audience's attention span – it's just that overly long solos seem to belong in the rock milieu. Be that as it may, this is an incredibly intense session, which illustrates why Guy is one of the reigning kings of the blues – at 73, he bridges the pre-war giants and the post-war Chicago-based hard-cases. The sound is punchy and clean, which best showcases his supreme axemanhip. *KK*

Sound Quality: 82%



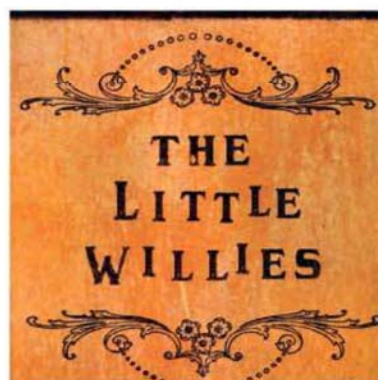
LITTLE FEAT

Sailin' Shoes

Mobile Fidelity MFSL 1-307 180G vinyl

If last year's gold CD from MoFi didn't float your boat then this superb pressing should make amends. Like *Godfather II*, this is a rare case of a sequel surpassing its predecessor. A feverish attempt to counter the critically-acclaimed but poor-selling eponymous debut, this astonishing *bouillabaisse* of American roots styles, sort of like the Band's soft underbelly, contained a handful of classics, including a second stab at 'Willin' and the deliriously languid title track. While the band was cursed by arriving during the age of glam, the dawn of disco and the peak of prog-rock, this LP provided respite for those with taste in 1972. It's still delicious. *KK*

Sound Quality: 88%



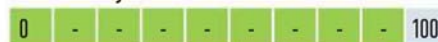
THE LITTLE WILLIES

The Little Willies

Classic Records/Blue Note 60170402019-1 200g vinyl

Norah Jones carved out a career as a cross between 1950s jazz-based chanteuses and 1960s singer-songwriters, so this treasure from 2006 was a total surprise: Jones, along with her bassist and three other New York musicians, started out to play a one-off gig, which turned into regular showings. Inspired to release this lone album, now enjoying its first time on vinyl courtesy of Classic, it came across as a low-key Travelling Wilburys. They delivered a mix of country swing, C&W and AOR rock, mixing smart originals and an array of tunes from the likes of Bob Wills, Kris Kristofferson and Willie Nelson. The result? Laidback, swampy bliss. Oh, for a sequel... *KK*

Sound Quality: 87%





COMPACT DISC



SUPRAAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



BOB DYLAN

Highway 61 Revisited

Sony Music Japan SICP 20024 Blu-Spec CD

One of Dylan's early masterpieces and an ideal sequel to its electrified precursor, *Bringing It All Back Home*, has been re-released so many times that even Dylanoids must be fed up with the exploitation. But a Blu-spec CD just might be the temporary boost that the dying format needs to see its way out with some grace; this mix of acoustic and electric gems, performed by the oddest voice this side of Neil Young is a perfect test-bed for comparisons. If you were impressed by SHM-CD, which offered a more optically 'clean' protective layer, then expect a similar result from Blu-spec: no great shakes, but certainly an audible gain on the 'regular' CD. **KK**

Sound Quality: 90%



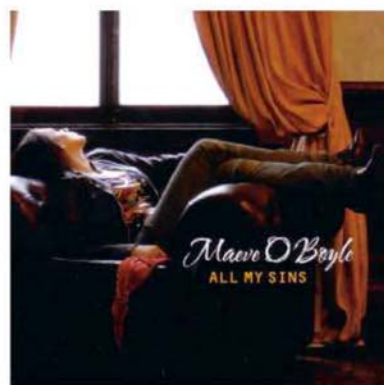
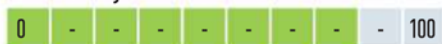
CADILLAC RECORDS

Various

Sony Pictures SBR60331 Blu-ray

As much as you will want to hate this – and anyone who knows anything about Chess Records, Chuck Berry, Willie Dixon, Muddy Waters, *et al* might contemplate burning to the ground the studio that made it – *Cadillac Records* boasts such wonderful music and stellar actors that you have to forgive how it plays loose with the facts. Hell, it makes even the laughable/risible *Buddy Holly Story* and *Jolson Sings Again* look like programmes from 'The History Channel'. While watching this is a bit like eyeing a train wreck, you can't take your eyes off it; for Beyonce's Etta James, it's a must-see. Here's hoping that audiences take it for fiction rather than fact. **KK**

Sound Quality: 75%



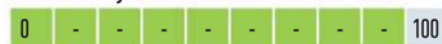
MAEVE O'BOYLE

All My Sins

Linn Records AKD 318 multichannel SACD

O'Boyle is part of a rock tradition that embraces any distaff singer who isn't afraid to add a dose of majesty to ostensibly, intrinsically personal songs. And while this means that you may recall everything from Heart to Eva Cassidy to Nicks/McVie-period Fleetwood Mac, O'Boyle has an inherently fragile wispsiness to her otherwise liquid voice that provides an exquisite contrast to the punchy backing. Her material oozes class, too, so Eleanor McEvoy fans who tire of waiting between releases will find much to entice them. Linn proudly proclaims this as its first 24-bit rock/pop; since it's as slickly satisfying as their jazz efforts, let's hope it's a sign of things to come. **KK**

Sound Quality: 85%



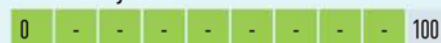
RICKIE LEE JONES

Pirates

Mobile Fidelity UDSACD 2040 stereo SACD

Ever the audiophile fave, Jones appeals to us for three reasons: her music is 1) involving, 2) intelligent and 3) the recordings always seem to reflect this. Given that her standard releases are so good, and the vinyl edition of *Pirates* is a monster, what does SACD bring to the party? It simply narrows the gap between analogue and digital, and does it so well that you might shed a tear for the Format That Almost Made It And Certainly Deserved To. As this set was a showcase for rich piano, sharp percussion and some punchy brass, it exposes SACD's strengths to the fullest extent; the opening bars of 'Woody and Dutch On the Slow Train To Peking' are mesmerising. As this set *doesn't* include the tedious 'Easy Money', you gotta love it. **KK**

Sound Quality: 88%



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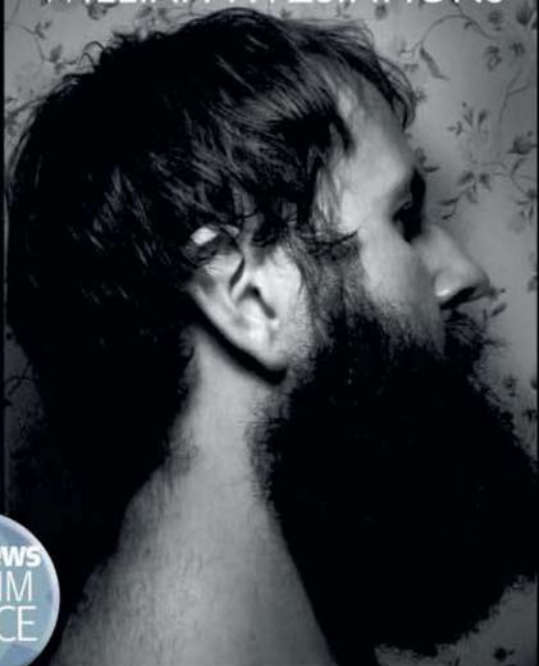


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THE SPARROW AND THE CROW WILLIAM FITZSIMMONS



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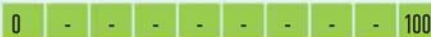
WILLIAM FITZSIMMONS

The Sparrow And The Crow

Naim Edge Naimcd141 CD

How this Pennsylvania-based singer-songwriter has managed to release two albums before this astonishing piece of work without me noticing, I'll never know. His songs have already appeared on *Gray's Anatomy* and *General Hospital* so you may have heard him without realising, and critics have been falling over themselves to compare him with Elliott Smith, Bon Iver and Suffjan Stevens. I'd say that, on this gorgeously understated album at least, he's more single-minded than any of those. He has the most delicate and engaging voice I've heard in ages, capable of pulling you into his stripped-down songs from the first note you hear. This is the distilled essence of heartbreak. Don't say I didn't warn you. *JB*

Sound Quality: 95%



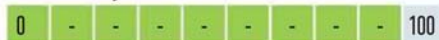
DAVID GRAY

Draw The Line

Lht/Polydor 271 229-8 CD

Gray seems to have cleared all the hurdles. His incendiary, neck-hair tingling early albums were followed by the mainstream lurch of *White Ladder* and the inevitable mid-career creative block, but at last he seems to have transcended all the rites of passage and become a solid, dependable creator of quality singer-songwriter rock. If that makes him sound a bit stodgy, take my word that he's not. Aided by a sturdy band, *Draw The Line* displays more twitchy aggression than Gray's had of late and his songs are well up to par. Cuts like 'Nemesis' are evocatively subdued, 'Stella The Artist' finds him cutting loose, and the Annie Lennox duet 'Full Steam' is powerful. *JB*

Sound Quality: 90%



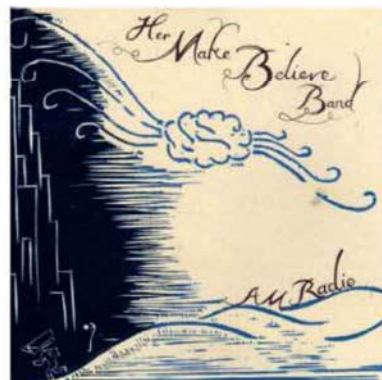
MPHO

Pop Art

Wall Of Sound/Parlophone 964 3342 CD

A former backing vocalist for Natasha Bedingfield, Ms Dynamite and more, South Africa-born MPHO may outperform them all in the long run with her perfect grasp of cross-genre pop. She has no need to apologise for her shameless homages to Outkast because her songs are so fly and her voice so distinctive that it hardly matters. 'Box N Locks', with its prominent Martha & The Muffins guitar sample, powers along in a sassy south London kind of way, managing to be chirpy but hypnotic at the same time. 'Fix Ya Face' is a hoot, 'Morning After' shows off her singing voice, and the super-chilled reggae groove of 'Last Supper' works a treat. *JB*

Sound Quality: 90%



HER MAKE BELIEVE BAND

AM Radio

Old Oak OOM001 CD

Cy Winstanley, the leader of this folksy quartet, sounds like Paul Simon might have done if he'd come to prominence in the mid-1950s. By that I mean he writes the kind of deliciously old-fashioned melodies that '50s doo-wop bands would have loved to wrap their tonsils around, but he sings them in a voice that frequently recalls Paul Simon from the time of his classic *Still Crazy After All these Years* LP. Instead of Art Garfunkel he has Vanessa McGowan sharing vocals with him, and their harmonies are an exquisite treasure, perfectly suited to his songs. Best of all is the fact that this is HMBB's first album; I'm willing to lay odds that they're going to get better yet. *JB*

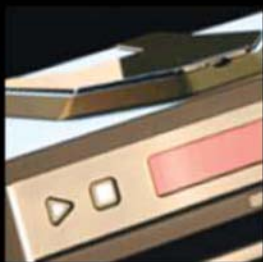
Sound Quality: 85%



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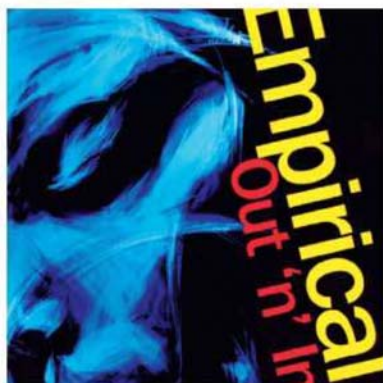
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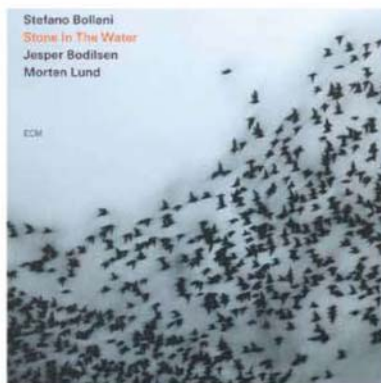
EMPIRICAL

Out 'n' In

Naim Jazz naimcd139 CD

This isn't quite the same Empirical that burst on the scene with a debut album in 2007. Trumpeter Jay Phelps and pianist Kit Downes have gone their own ways, so the classic hard-bop quintet line-up, with suits and haircuts to match, is no more. But brilliant young altoist Nathaniel Facey is still ably supported by Tom Farmer on bass and Shaney Forbes on drums, in a piano-less group now completed by the gently-efficient Lewis Wright on vibes. Julian Siegel guests empathetically on clarinet in a set that tributes Eric Dolphy and includes two Dolphy tunes. But ultimately it's Facey's technique, intensity and conviction that make this a compelling listen. *SH*

Sound Quality: 85%



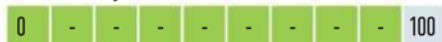
STEFANO BOLLANI TRIO

Stone In The Water

ECM 179 4161 CD

Overshadowed by the label's three-CD autumn blockbuster of Keith Jarrett's Paris and London solo concerts, this is a quintessential ECM trio recording. The Italian pianist has been working with bassist Jesper Bodilsen and drummer Morten Lund for around six years now, although this is their first appearance on ECM. Illuminating everything with his soft-edged piano sound, Bollani offers varied and attractive originals, plus a jazz-trio take on Poulenc's *Improvisation No 13*. He also brings the subtlest of lilting rhythms to a couple of Brazilian themes, Veloso's 'Dom de Iludir' and Jobim's 'Brigas Nunca Mais'. Reflective, even nostalgic, and a real delight. *SH*

Sound Quality: 85%



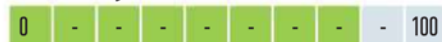
COUNT BASIE ORCHESTRA

Swinging, Singing, Playing

Mack Avenue MAC1048 CD

The CBO offers 11 guest artists in 11 tracks here, though that doesn't mean one per track. What can you say about a funky, album-closing blues which has Curtis Fuller on trombone, Jon Hendricks clucking like Rufus Thomas, and a piano solo by Jamie Cullum? He also sings, fittingly, 'Blame It On My Youth', while the senior guest vocalists are Nnenna Freelon and Janis Siegel. All the instrumentals were written and arranged by Dennis Wilson except Quincy Jones' 'Jessica's Day', here with the great Frank Wess on flute, and Wilson's elegy for Basie, 'Dark Morning', included this time as trumpeter Scotty Barnhart's tribute to Freddie Hubbard, is a graceful touch. *SH*

Sound Quality: 80%



THE MONTEREY QUARTET

Live At the 2007 Monterey Jazz Festival

Concord Jazz/MJF Records 7231244 CD

Assembled for the Monterey event, this all-star group has since mutated into the Overtone Quartet, but with Juban Moran replacing pianist Gonzalo Rubalcaba. Apparently, the Festival label's manager Jason Olaine had been trying to bring pianist and bassist together for years, and then, with saxophonist Potter and drummer Harland, it all finally gelled for a truly one-of-a-kind performance. Potter steams in on the fast opener, 'Treachery' and is brilliantly fluid throughout, while Rubalcaba stretches out to great effect on 'Otra Miranda' and the funky '50'. Holland is in commanding form, with rock-like authority and relentless swing. You can feel the energy all the way through, and the live sound is excellent too. *SH*

Sound Quality: 90%



DAVE HOLLAND
GONZALO RUBALCABA
CHRIS POTTER
ERIC HARLAND



THE MONTEREY
QUARTET:
LIVE AT THE 2007
MONTEREY
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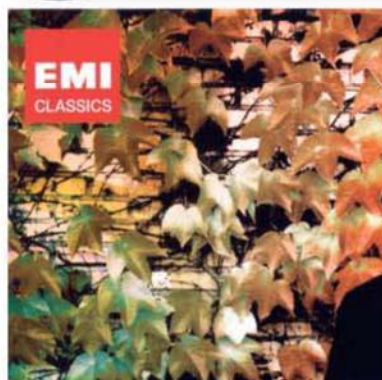
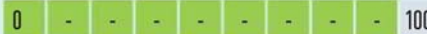
BEETHOVEN

Violin Sonatas
Isabelle Faust/Alexander Melnikov

Harmonia Mundi HMC 902025.27 (four discs) CD

It's a good sign when you think about the music rather than the performers, and I was particularly struck by the profundity of the last sonata, Op.96, which Beethoven achieves with the most basic of musical elements. Its opening movement is duplicated on the DVD layer backing CD4 (with the 'Kreutzer' Sonata). Sadly, a music overlay obscures some of what Faust and Melnikov have to say but you can sense the atmosphere and see the Teldex studio setup – Faust's podium movements reminded me of Gidon Kremer. Never for a moment is there any self-promotion, the violinist mostly allowing the pianist to lead. Great sensitivity: a top recommendation. **CB**

Sound Quality: 90%



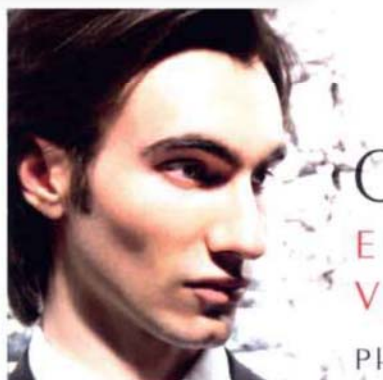
BRAHMS

Symphonies 1–4
BPO/Sir Simon Rattle

EMI 2 67254 2 (three discs) CD

Furtwängler, Karajan, Abbado and guest conductors Jochum and Kempe. Quite some Brahmsian credentials for Simon Rattle to deal with. He's opted for live recordings (Philharmonie Oct-Nov 2008) and, unaccountably, the sound isn't as good as with their Ravel CD. Also, we don't have exposition repeats in 1(i) and 2(i). The orchestral sound seems to have restored some of its old warmth and depth – these are flexible, indeed sensuous performances, if not as insightful as Kempe's Berlin readings [Testament]. At times details struck me as exposed to no purposeful effect, but still an impressive set. **CB**

Sound Quality: 75%



ELGAR/SCHNITTKE

Viola Concertos
David Carpenter, Philharmonia/Eschenbach

Ondine ODE 1153-2 CD

For his debut recording, this phenomenal young New York viola player has adapted the 1930 transcription by Lionel Tertis of Elgar's Cello Concerto. It's expressively indulgent, spanning over 29m, but there's a clarity of line and detail, with excellent accompaniment and a finely balanced Air Studio production. The Schnittke was commissioned in 1985 by Yuri Bashmet, with whom Carpenter has studied. Apart from a moment of 'woodland soft porn', with piano ripples and bird calls, this is quite an aggressive piece, more rawly delivered by the dedicatee on RCA, but no less gripping under Eschenbach. **CB**

Sound Quality: 70%



MOZART

Piano Concertos K488 and K491
Cleveland Orchestra/Mitsuko Uchida

Decca 478 1524 CD

These live performance recordings reflect a greater authority and individualism in Mitsuko Uchida's Mozart than her earlier Philips versions with the ECO/Jeffrey Tate; and a suitably scaled Cleveland Orchestra plays with absolute precision. She is sparing and wholly unobtrusive with applied decoration, and as before has her own cadenza for K491(i) – where the flowing tempo is also beautifully judged. One or two extended pauses may surprise at first; you feel Uchida references her quite encyclopedic knowledge of Mozart and period ambience. The engineers have made a fine job of balance too. **CB**

Sound Quality: 90%



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The award-winning 'Servo Evolution' CD players - **CD6 SE**, **CD8 SE** & **CDX SE/DAC X**



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Music in the concert hall is important to this month's *HFN* reader and his pianist wife. Their system has evolved over many changes – vinyl reproduction coming and going, and finally favoured over digital – with Vertex AQ providing the icing on the cake. Story: **Steve Harris**

Music could hardly be more important than it is for Roger, and for his wife Elizabeth, who is a pianist and piano teacher. They are keen concert-goers and their comfortable sitting-room houses a system that approaches the old ideal of 'concert-hall realism'. Roger enjoys both CD and SACD, but has repeatedly returned to vinyl too, despite some expensive accidents. I asked him for the whole story.

'I've always been interested in music, had piano lessons as a child, and with my younger brother used to play piano duets. We persuaded my parents to invest in an HMV box, a mono thing with an autochange turntable. They joined a record club, and got records sent through the post every month.

'That's when I first heard things like Brahms's Fourth Symphony and *Hungarian Dances*, piano concertos, that sort of thing.

'Then I went off to university, and I had to do something, rather than wait until I got home to my parents in the holidays. So I went to Imhofs in New Oxford Street, with whatever my budget was, which would seem pathetic now. They said, "You want one of these!" It was a thing that looked smart, with a wooden case,

a Perspex lid that you could lift up, and it had two little speakers. I took it back to my digs and I was thrilled with it. Now I was buying stereo records, because I had two speakers.

'What with work and other commitments, it was quite a while before I invested in something a bit more exotic. I bought a pair of KEF Cadenza speakers, a Leak receiver and a Thorens turntable.'

CD: THE BEES' KNEES

Next, the Cadenzas were replaced by some TDL-inspired transmission line speakers, built for Roger by Tony Seaford – a friend who would become well-known as a hi-fi retailer and consultant.

'I still had the Thorens, but then CD came out and I got a Philips player, one of the first tray-loading ones. I had a huge collection of vinyl, but over the next few years I got rid of quite a lot, as it was replaced by the equivalent recordings on CD.

'At that time, I thought that CD was the bees' knees and was inherently better. That was the received wisdom. And then, I didn't have a good enough turntable and cartridge to take advantage of what was inherently available from vinyl.

'Today, with the right kit, playing the same LPs that I've had for



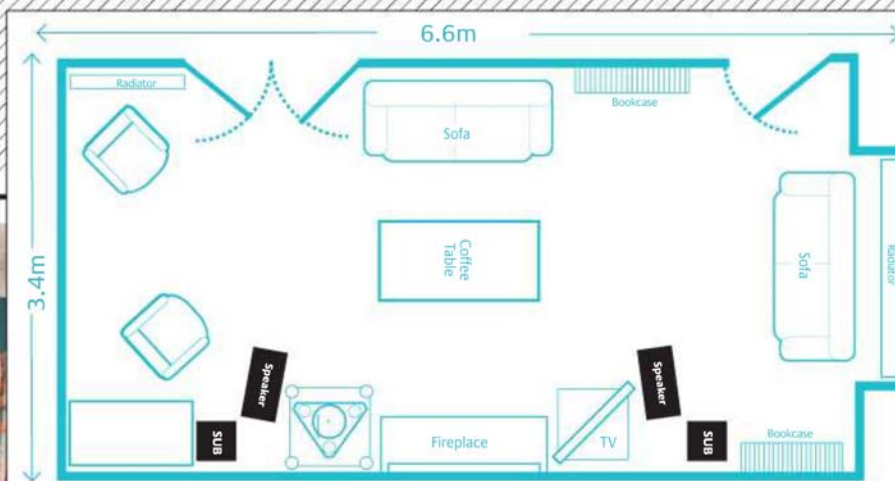
donkey's years, I'm hearing them as if they were something new, something completely fresh.'

Yet it was CD, with those transmission lines, which first made Roger realise that you could actually listen to hi-fi in a living-room at something like realistic levels.

'Maybe it was the kind of equipment Tony was using as a source for his speakers. I got into Marantz, and bought the CD17 player, and the PM17 amplifier – which I still have in my study and is still going strong. Looking back, that Marantz amp and CD player were able to provide the speakers with what they were capable of delivering. You could listen to music at those levels, without it being silly, painful or antisocial, because the quality of the sound was commensurate with the volume.

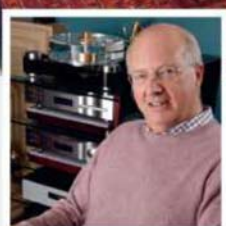
RIGHT:
A serious turntable indeed, the Scheu Laufwerk 2 from Germany, with Clearaudio Unify 12in satinwood tonearm and Lyra Skala cartridge





MUSIC ROOM

Earlier editions of Roger's system used the length of the room, rather than firing across with such a short listening distance. But although the change was mainly for aesthetic and practical reasons, the new layout has been successful sonically. With only a subtle contribution from the subwoofers, the stand-mount speakers produce a beautifully convincing soundstage which really conveys the scale of larger recording venues.



'The way the sitting room was organised, the speakers were closer together than I would have liked, so I didn't get as much definition...'

'Then things moved a bit further, because I thought that my Marantz CD could be improved upon, and I got an Accuphase DP75 player. In fairly short order, a GamuT pre- and power amplifier followed.

'At that stage I still had a pair of Tony Seaford's transmission lines. But then we got to the point – and I'm sure you can see what's coming here – when the speakers weren't quite good enough for the rest of the system. So I invested in a pair of Audio Physic Virgo IIIs, which were really nice.'

At that time, the system was still arranged with the speakers firing

down the length of the room, from the right-hand end, looking at the fireplace.

TAKING A NEW POSITION

'The way the sitting room was organised, the speakers were closer together than I would have liked, so I didn't get as much definition across the soundstage as was ideally possible with that equipment.

'Then my wife and I decided we were going to revamp the sitting room, change things around to better use the light. It made sense for the principal listening position to be on the sofa facing the fireplace,

with speakers on either side. And that worked extremely well. Now, I thought, I can get a bit more out of the system as I've got a wider spacing of the speakers. So I replaced the Audio Physic Virgos with Avantis.

'About that time, dCS, which I'd heard demonstrated by Jeremy Baldwin at The Right Note in Bath, came out with a one-box SACD player. I'd heard SACD, although not surround sound, which had never appealed to me as something I wanted to do in a domestic environment. I invested in the P8i. The P8i integrated was going to be

ABOVE: Widely-spaced GamuT L3 speakers flank the fireplace as well as Roger's hi-fi rack to the right, and the TV and DVD setup on the left

replaced by a two-box transport and DAC combination. That never materialised, but what did eventually appear was the Paganini transport and DAC. I must have been one of dCS's more valued customers, because I received one of the first pairs in the country.

'So now I had a transport and DAC that I was extremely pleased with. And at the same time, I downgraded, if you like, from the GamuT pre- and power amp to the GamuT integrated. Which I think is fabulous. It looks good and it does all the right things without any fuss. I think it actually cost more than the two original boxes, but I'm really, really pleased with it.'

VINYL IN AND OUT

'Along the way, though, I wanted to get back into vinyl. My Thorens had long since bitten the dust, and I'd had a Rega Planar 2 for a long time, and I had a succession of cartridges, including a Dynavector 10x. I've had a problem with cartridges, which I might as well mention now, and that was *damaging* them!

'I gave the Rega away in the end. So then I was without a turntable, but I had an awful lot of records still. Eventually, I got a Michell Gyrodec from Jeremy, with a Sumiko Blue Point Special.

RIGHT: Two of dCS's most elegant products, the Paganini CD/SACD transport and DAC, sit on Vertex AQ Kinabalu platforms

BELOW: As well as the dCS pair, this Stands Unique rack houses an Aesthetix Rhea tube phono stage and GamuT DI 150 integrated amplifier

BELOW RIGHT: One of the two Velodyne SP-800R subs



'I'd only had that cartridge for a short while when I caught my sleeve on it! Fortunately there was a good trade-in deal, so I got a new one at something like half the price, which wasn't quite so damaging.

'Then, we were changing the furniture around and I thought, I'll sell the turntable because I'm not really playing records much. It looked very nice, and people used to enjoy watching the weights go round, but it went.

'But by then I'd got the dCS kit and the GamuT integrated, so I could put it all on three shelves.

And I thought, "I could put a turntable on there again, on the top shelf...".

These decisions are not made rationally! So I got a Clearaudio Champion 2, with a Unify arm and Symphony cartridge. And the Symphony cartridge was a beast, in terms of its vulnerability. Which I duly demonstrated, because I broke that one as well!

'That put me off somewhat. Again, it was replaced, and again at a very advantageous rate, which was fine. But although it had a stylus guard, it was so fiddly that you felt like a nervous wreck by the time you got the guard on.

'Then we'd got into a situation where the speakers were just... well, as I say to people, you actually see hi-fi more than you listen to it. It's always there.

'So I thought, well, something that's not so in-your-face as two huge speakers over a metre high will probably do the trick. Before that, I'd had the feeling that the more drivers the better. But then I thought, well, the Mk1 eardrum is a single diaphragm that is excited and covers all the frequencies. Why not? You can cover the whole range with

just two units, if you've got the right crossover between them.

'So then I got talking to Jeremy again and I ended up with the Gamut L3s, which I think are fabulous. And in the piano black I think they look stunning as well. And on their Partington Dreadnought stands you can't move them, let alone shift them around, they're so heavy. They are really solid.

'With piano sound, where you've got variation in tonal quality from the lowest note on the keyboard right up to the top, and somehow

you've got to integrate all that lot... where you've got the extra units, as with the Audio Physic Avanti, to my ears at least, there was a slight disconnect with the

upper frequencies. Maybe it was the design of the tweeter or something. But I just felt happier with these L3s.

'And they are much more friendly domestically. So they came in, and at the same time, two little Velodyne subwoofers, just to catch those lower frequencies. You're not aware they're there, but if they're *not* there, then you will think something's missing. I think also that they do help integrate the whole sound picture. ➔

'You felt like a nervous wreck by the time you got the guard on'





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'As does the Vertex AQ equipment. Although I would have difficulty articulating it as clearly as Jeremy does, as to which particular aspects of the overall picture are attributable to cleaning up the mains, or stopping spurious vibrations going through the cables and upsetting the signal through unwanted noise.

'All I'm aware of is that the sound is amazingly clean, and you can really appreciate that when listening to a string quartet, particularly one played on period instruments. The purity of the sound is amazing. You shut your eyes and the instruments are in the room with you.

'If you've got the space to put the stuff in, it's worth it. And I can understand the proponents of the Vertex AQ approach, when they say it's like a significant upgrade to your CD player. You don't need to do that upgrade if you make sure that what goes in is as clean as possible and what goes out is as pure as possible. So what goes to the speakers is as clean as you can get it.'

SEEING THE SOUND

'We started with a mains distribution box and filter. When we put the new speakers in, we got the speaker cables. The one thing that has to be said is that these units are bulky and they're not attractive, so I've done my best to hide them.

'Anyway, that's how that side of it came about. And it was done in order to make sure I had a coherent sound picture, where the instruments in the orchestra can be properly identified and pinpointed across the stage. Something like a piano, for example, the richness of the sound and its focus, you are "looking" at it! But again, as I understand it, it will depend on how the piano was



ABOVE: Under the JVC 26 inch LCD flat-screen TV is a Classé CDT-300 DVD player and a Sony RCD-100 CD recorder



ABOVE RIGHT: Vertex AQ power supply components

BELOW: A Gamut L3 speaker on its Partington Dreadnought stand; speaker cable [shown below left] is Vertex AQ Moncayo

recorded. Sometimes, you will hear a preponderance of treble on one side and bass on the other, or you just get a general sense of "it's all there".

Roger finds that the effect is still good when seated far away from the ideal central listening position.

'When you go to a concert, you'd like to sit in about Row H in the stalls, in the centre behind the conductor. Well, how often is that possible? If it's a well-attended concert you might be right over to one side. Then you are aware of being closer to one side of the orchestra than the other, but you can still hear everything. And that's what I get by sitting in the corner in our sitting-room.'

Going back a few steps, I asked Roger how he'd felt about his CD player

upgrades, first from Marantz to Accuphase, then on to dCS.

'I don't think I heard the Accuphase at its best, because I was in transition with the speakers and with the amplifier. I enjoyed it a lot. But that had been such a jump up from the Marantz CD17 that I'd begun to realise that some CDs were better recorded than others. Some sounded brash, strident, harsh, with an edge to them.

BLIND TEST

'And I didn't realise it, but what I was hankering after was the warmth of the LPs. Interestingly, I had, and I still have, the LP of the Royal Marines Band playing Sousa marches, which subsequently appeared on a cheap EMI CD. And we had some friends staying, for whom vinyl would have been old hat – they wouldn't have even considered it, and they weren't particularly musical although they appreciated music. So I gave a blind test, and I told to

my friend that he was going to hear the same music, played by the same people on the same occasion, it's just that one would be the LP and the other would be the CD. I played him *Liberty Bell*.

'I played the CD first, and he was honour-bound not to look at what I was doing. Then I played the LP. I asked him which he preferred, and he said he preferred the second one. I asked him why, and he said "It had more information". And he'd hit it right on the nail. Because the CD smoothed out everything, it was hard and glossy, take it or leave it. With the LP, it was quite different.

'I realised that,

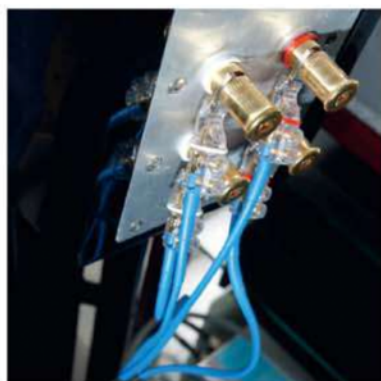
OK, CDs were not last word. LPs, if you play them properly on the right kind of stuff, you're going to get more satisfaction.

'And that's where I am at the moment. The Clearaudio went because it was a bit too intrusive domestically. And I was forever worrying about knocking the stylus. But then I paid a visit to Cool Gales, one thing led to another and I ended up with the Scheu turntable I have now. Which I think visually is stunning, and it's a joy to use.

'Ivan Kursar at Cool Gales has done for my vinyl what Jeremy of the Right Note has done for my CD listening. I am delighted with the way the Aesthetix Rhea phono stage handles the information in the LP groove and makes you "feel" the music. A valve phono stage seems somehow more capable of persuading you to think, "Let's hear just one more LP!". It's like the difference between a superbly-executed line-etching, with everything correct and in its place, and a vibrant oil painting that fills out the meaning behind the lines.

'And the Lyra Skala cartridge has got a guard which is easy to use. So far, it's survived!' ☺

'Some CDs sounded brash, strident, with an edge to them



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Paul Miller Editor

Technician and writer on all things audio for over 25 years, Paul Miller took over the editor's chair in 2006. He invented the QC Suite, used across the audio industry

The Vinyl Compact Disc

Re-released vinyl LPs are increasing almost exponentially and in the rush to satisfy demand some LPs are being cut direct from CD. But have we noticed the difference asks **Paul Miller**

Enthusiasts young and old love the sound of vinyl and as more music fans discover the black stuff, this is grist to the mill of those diehards who steadfastly maintained vinyl was always superior to CD. But hold on a moment. How can a new vinyl LP, mastered and cut from the devilish 5in digital disc itself, possibly be superior to its binary source?

Yes, technicians in the music biz are telling us that some new LPs are being cut from CD. After all, a CD produced from an analogue tape 25 years ago might now be a better representation of the original than the tape itself. Sadly, not all analogue masters have been stored with the care and commercial foresight of The Beatles back catalogue at Abbey Road [*HFN* Yearbook '09]. In the rush to supply reissues of fave albums from the '70s and '80s, and with the original tapes either mislaid or unusable, an early CD copy might be all that remains of their legacy.

ELEPHANT IN THE ROOM

None of this is likely to be discussed inbetween the restored artwork that graces the freshly printed sleeves. The '80s retro culture is in full swing and no-one really wants to spoil the party. But rather than ignore the elephant

dancing under the glitterball, let's embrace it and face the real reasons why we cherish the warm and often viscerally communicative quality of the vinyl LP.

Frankly, I never bought into the argument that information recovered from LP was of a higher resolution and dynamic range than that off CD. Sure enough, it's quite possible for vinyl groove modulations to carry frequencies higher than CD's limit of 22kHz. Indeed, I've just tested an Ortofon Cadenza Blue MC cartridge that's sufficiently well-engineered to replay a response up to 40kHz [full review in next month's *HFN*]. That's the same response available to a 96kHz digital recording. However, once you drag a diamond stylus with a downforce of 20mN (2.0g) through these grooves a few times then most of this ultrasonic information will be permanently erased. And will the LP sound any the poorer for it? Of course not.

It's now 2010, 27 years after the introduction of CD and high time we accepted that more enthusiasts are returning to vinyl simply because they prefer both the sound and experience offered by the 12in format. The sheer physicality of the medium, the

stature of its artwork and sleevenotes combine with the ritual of its unveiling and careful delivery to the turntable, building a sense of anticipation. It's the polar opposite of clicking on an MP3 file downloaded from the Web – an experience that lacks any tangible form and that typically fails to heighten our expectation of the music to come. CD still offers some physical presence, but its aesthetics are antiseptic against the reassuring substance offered by the LP.

ON YOUR MARKS

Before the first note is played, the vinyl disc has an emotional head start. It matters not that the response of even

'Before the first note is played, the vinyl LP has an emotional head start'

the very best pick-up cartridges lacks the flatness of CD or that the vinyl noise floor is typically much higher. We only need look back over the graphs in our lab reports

of MM/MC cartridges and turntables to see they cannot match the dynamic range, linearity, frequency stability, amplitude flatness or, indeed, distortion performance of the CD that may well have been used as the master for the LP spinning on our platter.

We can debate the subjective consequences of CD's increased distortion at low signal levels, but these digital limitations are still copied onto vinyl when that CD is the LP's master. Logically, the LP cannot be a 'bit-perfect' rendering of the digital source. Inevitably, the cutting, pressing and replay of the LP all bring a particular set of distortions and noise to the final experience. This is the reality, but equally real is the fact that we clearly delight in those colorations that enhance our listening pleasure. Evidently, reality is a matter of personal perspective. ☺



ABOVE: Machinery is being recovered and restored to satisfy our passion for vinyl LPs. But do we stop to consider the provenance of the disc's source – is it the original tape or a CD duplicate?

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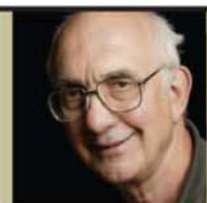
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Barry Fox Technology journalist

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

The ultimate comparison

When Wharfedale's Gilbert Briggs organised a live versus recorded music concert at London's Royal Festival Hall the show was a sell out. **Barry Fox** wonders how the event would fare today

Here is a new audio game. Who can hear the difference between Spotify and Sky, the two websites that are offering all-you-can-eat streamed music with different coding (Sky in AAC+, Spotify in Ogg Vorbis) and at very different bit rates (Sky at 48kbps and Spotify at 160 or 320kbps). The spot-the-difference game brings back memories of those hi-fi panels that compared the sound of transistors with valves, CDs and LPs, and MiniDiscs and DCC. The big difference is that those panel tests were mostly done with listeners who had grown up hearing halfway-to-decent hi-fi. There is a whole generation now that has only ever listened to music in MP3 and iTunes AAC, played from a PC or portable player, through tinny earbuds or in a cinema.

At a recent exhibition Sennheiser was demming high quality headphones with horrid MP3 pop music played from a laptop. When we asked for better source material the young demonstrator just looked blank.

So spare a thought for Gilbert Briggs, who founded Wharfedale, and in 1955 booked the Royal Festival Hall to stage the ultimate comparison, a concert that mixed live and recorded music.

The idea came from a small event Briggs had arranged in Bradford the year before. At the Bradford concert a pianist mimed to the sound of a piano recording reproduced through a Wharfedale corner cabinet. When the audience realised that what they were hearing was a recording rather than the real thing, they applauded.

'You're mad,' his friends and staff said when Briggs told them he planned a bigger and better do in London's then-new Southbank Centre. Even the Royal Festival Hall's manager tried to stop Briggs wasting his money. When the tickets were printed, the RFH box office sent Briggs all but 250 of the nearly 3000 available.



ABOVE: Gilbert Briggs' Royal Festival Hall concert, 9th May 1959; Denis Matthews is at the piano

'We think 250 tickets will be more than enough for us,' they told Briggs snootily, 'because we can't see who on earth will want to pay good money to listen to recorded music at a concert.'

Gilbert Briggs advertised his concert in the musical and hi-fi press and offered tickets by mail order. On the morning tickets went on sale from the Festival Hall booking office, there was a long queue. By 11 o'clock the same manager was on the phone to Briggs, asking for as many of the other 2750 tickets as he could spare.

SOLD-OUT SHOW

The concert was a sell-out. Briggs's family sat in the Royal Box. Peter Walker and John Collinson of Quad sat in another box operating the disc and tape equipment. On stage, Briggs had four corner cabinets, each driven by a 15W Quad valve amplifier. Live musicians played together and in alternation with commercial recordings on disc and specially recorded tapes. EMI, Decca and the BBC all cooperated with the recorded programme material, which was

both in mono and stereo. A collector lent his high quality sound effect recordings, such as the sound of a tug boat.

When I met Briggs towards the end of his life he told how the only real problem arose during the tug boat sequence. The recorded effect was on disc, and the turntable spewed its ball bearings halfway through the effect. The

tug ground to a halt. But Briggs had arranged for every piece of equipment to be backed by a spare with duplicate recording.

The London Mozart Players

all played live. One concert ended with the Halleluriah chorus; the LPO and choir appeared on disc through the corner horns, with Ralph Downes at the organ and the London Mozart Players on stage.

During the hi-fi boom years of the 1970s there was talk of a repeat performance in London, but Briggs died and Wharfedale changed course.

I wonder what would happen if someone tried it today? ☺

'When the audience realised they were hearing a recording they applauded'



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

A return to quality?

Could the very companies that wooed listeners with thousands of songs on one pocket-sized device soon offer quality sound to retain market share? **Barry Willis** reports from AES 2009

Why can't they be like we were – perfect in every way? What's the matter with kids today? This parental lament from the early '60s musical *Bye Bye Birdie* sums up a panel discussion of interest to hi-fi fans at the 137th meeting of the Audio Engineering Society, held in October in New York City. Titled '1080p and MP3: We Got the Picture, What Happened to the Sound?', the discussion was chaired by turntable guru Michael Fremer, and featured *Stereophile* Editor-in-chief John Atkinson, EveAnna Manley of Manley Audio Labs, and some A-list recording and mastering engineers. So, why do so many music lovers accept less-than-mediocre sound?

GOOD ENOUGH?

'Convenience,' said Gateway Mastering's Bob Ludwig. 'And portability,' intoned Steve Berkowitz of Sony/BMG, holding up his iPhone for all to see. This act saw much grave nodding of heads throughout the hall, as if pocket-size playback systems and bit-rate-impaired onboard libraries had slipped an icy dagger into the heart of music.

Engineer Randy Ezratty complained that the professional audio industry is 'the only one in the world that makes a product that people don't buy.'

John Atkinson glumly observed that 'people are happy with "good enough" in every other field,' while praising the recent Beatles reissues as examples of 'music recorded and mixed properly.'

Nostalgia was a strong undercurrent – both for the glory days of the recording industry, and for a time when recorded music was a destination activity rather than a soundtrack for everything else. Fremer movingly recalled introducing a young heathen to well-recorded music beautifully rendered – 'He actually broke down and cried.' Berkowitz wondered if the iPod generation, 'intoxicated on convenience,' felt the same joy he'd had as a child, hearing 'Dancing in the Street' on a little eight-transistor radio.

Several panelists bemoaned the loss of single-minded focus, invoking the now

quaint image of sitting down with a gatefold LP and actually giving it full attention. No one mentioned that recorded music, which once occupied much available volume in our collective entertainment bubble, has retreated like a lifeform threatened by the incursion of rival species. No one acknowledged the iPod and internet as what economists

call 'disruptors' – technologies that forever alter the course of culture. There are many more channels of entertainment, information, and sheer noise competing for our

attention than was the case 30 years ago. In Darwinian terms, music either adapts or dies.

'Only superficialities have changed. Our love of music is as strong as always'

VOICE OF HOPE

Seen another way, only superficialities have changed. Human love of music is as strong as always. It's true that kids with iPods brag about how many thousands of songs they have, not about how good they sound. Ignorant about sound quality, perhaps, but they are wildly enthusiastic about the bands they love. And they have an advantage that older music lovers never had – they can take their libraries to parties and take turns playing DJ and sharing their passions. Try that with an exotic record player and a room full of vinyl some time.

Berkowitz, a voice of hope, believes that the current era's 'orgy of choice' may inevitably give way to a new one of better sound. Again holding aloft his iPhone, he said, 'Companies like Apple have to bring out better boxes with bigger memories and better performance. They need to keep selling boxes. The way to do that is by improving over last year's. The problem of bad sound is temporary and self-correcting.' ☺



ABOVE: The world's biggest Pro Audio Show, the 127th AES Convention was held over three days at New York's Jacob K Javits Convention Centre, playing host to 321 exhibitors and 18,000 visitors



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Effective 1st November 2009, all Roksan electronics and turntables supplied via authorised dealers are to be covered by a 5 year parts and labour warranty.* As a gesture to existing customers, this will also be extended to all current owners of K2 products.

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* terms available upon request



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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

In search of the missing notes

Are newer encoding systems always better? On paper they may offer improvements but factors like compression – or even the lack of it – give different results in practice. **Jim Lesurf** explains...

In the context of serious audio, lossy encoding systems have always seemed to me like an embarrassing uncle. Welcome at a party because they can play the piano, but having a tendency to get drunk and misbehave!

There seems to be a common assumption that a newer audio coding system like MP3 must be 'better' than an older one like MPEG2, and that a 'modern' coding system like AAC/AAC+ will be 'better' than MP3. This is often qualified by saying something like 'at the same bitrate'. But I do wonder how often it is actually true in practice. There is something uncomfortably Orwellian about being told something suspiciously like 'less is more'. The idea is, of course, that modern encoding systems are cleverer at deciding what details to omit without their absence being noticed, and better at minimising the numbers of bits needed to represent what remains.

CLIPPED CDs

Alas, while in theory, theory and practice agree, in practice they often don't. This problem is clearly demonstrated by many audio CDs. In theory CD audio offers a dynamic range well in excess of 90dB. Yet many pop/rock CDs are level compressed and even clipped into a range of just a few dB. But without knowing the technical details the user is

left to decide for themselves the reasons for what they then hear.

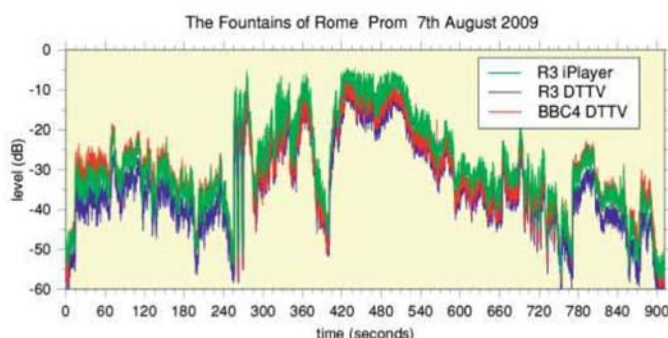
I've become an enthusiastic user of the BBC's 'Listen Again' radio iPlayer. I find it compares well with the Digital Terrestrial TV (DTTV) I generally use for listening to live

broadcasts. So when this year's BBC Proms arrived I decided to use them as a chance to compare DTTV and iPlayer. You can find detailed results at www.audiomisc.co.uk/BBC/iPlayerRulesOK/Page1.html. Overall the DTTV and iPlayer outputs were very similar. Both avoid the level compression applied for FM. They also avoid various other transmission problems that can afflict FM reception.

However, I discovered one or two iPlayer quirks that surprised me. And the results did indicate that MPEG2 can compete with AAC even using much the same bitrates.

I also tend to listen occasionally to non-UK radio stations via internet streams. These are usually in MP3 format. You'd expect stations streaming at 256kbps to sound better than ones at lower rates. But again, in practice you might be surprised in some cases. This is partly because many commercial stations seem to share the same obsession with 'louder is better' that grips pop/rock CD producers. So the sound may be level-compressed to death. But there are other more subtle factors.

For example, I was listening a while ago to one of the AVRO classical music internet stations that streams 256kbps



ABOVE: Comparison of peak levels over time via DTTV and iPlayer

MP3. This was a broadcast of Elgar's Enigma Variations that wasn't being subjected to heavy level compression. However during the quiet passage at the start of the Nimrod variation the sound developed a sort of 'ragged and flickering' behaviour that ruined enjoyment. My impression was that audible frequency components of the

sound were sometimes falling below the hearing threshold levels being applied by the MP3 encoder.

OVERSIGHT

The problem here was, in a sense,

'While in theory,
theory and practice
agree, in practice
they often don't'

the absence of level compression that would otherwise have kept the audible sounds above the threshold set for the encoder. What it exposed was that the people who had designed and set up the MP3 encoder hadn't ensured that its settings were appropriate for the wide dynamic range of the music being played. This isn't simply an inherent problem for MP3 or choosing 256kbps. It was an oversight in the choice of encoder settings.

In the end, it isn't just the choice of the songs you sing, but the way you sing them that matters. ☺



ABOVE: Avro – drop-outs perceived on a 256kbps stream of Elgar's Nimrod Variation?

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The new Reference 600 Series comprises the AG-H600DNT Stereo Internet-Radio Receiver with DAB and the matching PD-H600 CD Player, both finished in superb black aluminium with a cool blue illuminated display. Development input is by TEAC's high-end Esoteric team – responsible for some of the most revered cost-no-object digital replay systems in the world.

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Nigel Smith

Hi-Fi News' European correspondent

Often to be found on the wrong side of La Manche, Nigel combines his passion for photography and hi-fi in bringing you our continental hi-fi @ home features

Try before you buy

You pay your money and you take your choice. Or maybe you don't... **Nigel Smith** looks at the range of internet streaming music services that allow you to listen to virtually any music for free

I have many LPs and CDs gathering dust because they're never listened to. Hard-earned cash has bought an album on the basis of rave reviews, or an interesting cover, but the music simply wasn't to my taste. Other times the purchase has been worthwhile, but the overall process was still inefficient and costly. How then to listen easily and legally to music old and new without spending a fortune? For those not yet in the know, the answer is music streaming.

Music streaming uses the internet and, in most cases, a computer to serve up music on a continual basis rather than offer it as a download. It's analogous to how a programme on the radio is listened to; the listening is continuous with the transmission. The difference with music streaming, and the great advantage compared to radio, is that you can choose

what you want to listen to and when. And there are millions of tracks to choose from! Just make sure you have a broadband connection (one able to deliver a

minimum of 256kb/s is recommended) and that your internet service provider allows 'unlimited' downloads otherwise you run the risk of extra charges.

DIAMOND DEEZER

A year ago I was introduced to Deezer. In more recent months there's been Spotify, and then October saw the launch of a new, legal version of Napster.

Deezer is a web-based service. Go to www.deezer.com and either select one of the featured tracks or type in an artist or title name. Provided your selection is contained in one of the 4.5 million tracks offered by Deezer, that's all there is to it. There's no charge and you don't even need to register to start enjoying



ABOVE: At a PC near you: Napster's paid for music service and Spotify, which offers music for free

the music. Registration allows you to personalise your experience, for example through the building of playlists and lifts restrictions on the maximum number of tracks that you can enjoy per session.

Music from Sony BMG, Universal Music, EMI and Warner Music, plus more than 1000 independent labels, is available. In short, the choice is wide.

Meanwhile, Spotify (see www.spotify.com) offers two services: a free, lower quality

(160kb/s) stream with adverts between some tracks (Deezer and Napster are advert free) or, for £9.99 a month, a higher bit-rate (320kb/s) service with no adverts. However, to use the free service you need to receive an invitation, either from a friend or via the Spotify waiting list. In either case, rather than being web based, Spotify requires the user to download and install a software application which, the company says, gives 'better audio quality'.

Meanwhile, Napster offers only a paid for service at £5 a month – 50% of the official cost of Spotify's Premium service (although there are reports already of targeted reductions by Spotify). The quality offered by Napster is just 128kb/s but, in a nice touch, the £5 subscription



fee also allows you to download five MP3 tracks for free each month at 256kb/s quality. Napster offers the choice of accessing its service directly from the web or by downloading and installing a software application which, like Spotify's, is said to give better quality.

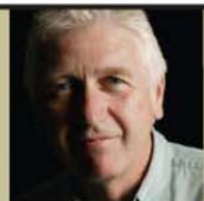
There are other features available such as radio lists, tracklists, recommendation of similar artists, new releases etc.

USEFUL TOOL

I don't find the quality of music streaming to be good enough for serious listening and if music by streaming becomes the norm for most people, they'll be unaware of the depth, complex harmonics and subtleties that a decent hi-fi system can reveal in their music. Nevertheless, the technology can be seen as a useful tool, enabling you to check out new music before buying it on a superior quality medium and enjoying it even more. And when it comes to background music, it's ideal.

It costs little, if anything, to try each of the sites. Also, more sites are coming online each month. There's we7 at www.we7.com and Sky Songs has recently launched a service for £6.49 a month at www.songs.sky.com. There are also murmurings of both BT and Microsoft joining the party too. A new world of musical discovery awaits.

'It costs little, if anything, to try the sites and more come online each month'



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

Bring on the Knight

With the Castle brand re-introduced into the UK and a new turntable from Wilson Benesch, **Steve Harris** looks at the tradition for fine hi-fi that continues to flourish in God's Own County

There was a time when a patriotic Yorkshireman could buy a complete hi-fi system built entirely in his home county. Yorkshire's hi-fi history begins with Wharfedale, founded in 1932 by Gilbert Briggs [see p101]. Another speaker maker, Richard Allan, got started in Batley 1947, moving to Cleckheaton in 1965. There, a couple of years later, James E Sugden came up with his Class A transistor amplifier, which was marketed by Richard Allan Ltd until Sugden launched under his own name in 1969. He was undeterred by the fact that there was already a hi-fi company called A R Sugden, in Brighouse, Yorkshire.

One of audio's true pioneers, Arnold Sugden had developed his own single-groove stereo recording system, using vertical and lateral modulation for the two channels, and demonstrated it at the 1956 BSRA exhibition in London.

The record industry adopted Westrex 45/45 stereo instead, but Sugden continued to produce his Connoisseur turntables, arms and cartridges. In the 1970s, thousands of young enthusiasts would start off with the

most basic possible belt-drive 'motor unit', the Connoisseur BD1 kit.

Arnold Sugden died in 1995, and the A R Sugden & Co Connoisseur brand with him, but J E Sugden & Co is still making amplifiers in Heckmondwike, not far from the town of Cleckheaton.

CASTLE FOR KEEPS?

In 1976, two ex-Wharfedale men started a new loudspeaker company in Skipton. They were John Collinson, who'd been chief engineer at Quad before joining Wharfedale, and Bill Escott. Castle Acoustics built its own cabinets and drive units and gained a reputation for quality and value. In 1991 came the 'quarter-wave' Castle Winchester, designed by Colin Walker, who'd worked at Richard Allan and also manufactured C J Walker turntables. By then, Castle Acoustics was owned by Vic Sapsford, formerly of Mordaunt-Short, though it was later taken over by another ex-Wharfedale executive, Fred Clayton.

But times weren't getting any easier for the remaining UK-owned specialist firms and sadly, the Castle factory finally had to close in 2006. Castle subsequently became a brand of the Hong Kong-based International Audio Group, which has owned Quad and Wharfedale since 1996 and more recently snapped up both Mission and Audiolab.

'We are re-introducing Castle to the UK with both the brand new Knight series and sonically-refined versions of the well-known Classic series,' says Peter Comeau, who joined IAG early in 2009 as director of acoustic design and is now based in China.

'We not only make our own drive units, we make just about everything that goes into our products including voice coils,

cones and baskets, for example. Even the cables. Each brand has its own identity, largely based on historical sonic performance and character, and has its own adherents in the marketplace. For example, a Quad customer often prefers to have a complete Quad system whereas a Mission, Castle or Wharfedale customer will usually just buy speakers made by those brands.

'This affects the way we develop the sonic performance of each product. We keep the eventual customer in mind and match the performance to the traditional character that has become

associated with each brand over the years.'

'We match the performance to the character associated with each brand'

KNIGHT MOVES

Both the Knight 1 and Knight 2 loudspeakers are two-way stand/bookshelf models,

while the Knight 3, 4 and 5 are slim floorstanders using Castle's established 'Twin Pipe' quarter-wave loading.

So, keeping its traditional corner but also moving into a new space, Castle re-enters the game with its new Knights. We've seen a Bishop loudspeaker before, of course, thanks to another Yorkshire company, Wilson Benesch, which celebrated its 20th anniversary in 2009.

Drawing on the expertise of Sheffield's Boeing- and Rolls-Royce-sponsored AMRC technology centre, and with financial support from regional development agency Yorkshire Forward, Wilson Benesch is working on a new 'super resolution source component' said to be 'completely original in concept, execution and function'.

This next-generation Wilson Benesch turntable is sure to be a world away from the simple ingenuity of the old Connoisseur BD1. But 'appen it'll still be made in Yorkshire. ☺



LEFT: Castle's Knight 5 in mahogany (see www.castle.com)

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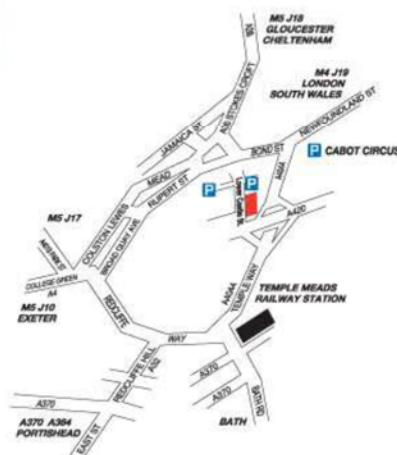
GETTING TO THE SHOW

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For the very latest information please visit www.bristolshow.co.uk

Tim de Paravicini

It may have been a Musical Fidelity A1 integrated in the 1990s, or perhaps a full-on esoteric valve design from EAR itself. Whatever your upgrade history there's a chance you've owned a component from the hand of 'Tim de P'. **John Bamford** meets him...

Regular show-goers can't fail to have bumped into Tim de Paravicini at some time or other during times of audio adventuring at hi-fi exhibitions. 'Tim de P' – as industry veterans tend to refer to him – has long been regarded as something of an audio adventurer himself, making him the lifeblood of high-end shows.

There are plenty of Tims working in the audio industry, but only one Tim de P. Being of an enquiring disposition means he is never content that his designs are fully finished. As a consequence, he's still full of the vibrant, pioneering spirit that has been driving his passion for audio since his pre-adolescent school days, when he first started

RIGHT: Tim de Paravicini dems his Master Disk turntable at Sweden's Malmo audio show in November 2009

BELOW: The start of the 'spec wars' – solid state Luxman C-1000 Control Center from 1972; an 'interesting design that needed sorting out' – Michaelson & Austin's M-200 valve monoblock



building AM radios and constructing amplifiers from articles in hobbyist magazines. Get close and personal and he'll confide: 'I'm never satisfied with any of my designs. That's the whole point. You have to go forward. If you're satisfied, you're finished; you might as well close up shop and go home.'

SHOWTIME

Demonstrating his playback systems at shows he never considers a 'chore'. Naturally showtime necessarily equates

to downtime back at his design and manufacturing base, yet hi-fi shows are the very reason he strives constantly to improve his designs rather than settle into a cosy life of maintaining the status quo. Hi-fi shows, he perceives, are 'gladiatorial shoot-outs; may the best sound win!'

Currently buzzing like an exuberant teenager who seemingly can't afford time to relax, rarely

focusing on just one assignment and multi-tasking throughout his typical working day (and night), it's nigh-on impossible to catch Tim at a quiet moment during which to have a serious heart-to-heart. Nor is reminiscing on his past achievements in audio design

something he particularly cares for. While Tim's confidence could be mistaken for arrogance by strangers, get to know him and his modesty is

humbling. Classic products designed in the past are just that: they're in the past. What matters to Tim is the here and now.

'I'm a better engineer today than I was 30 years ago; I've 30 years of hindsight on which to dwell and improve on past experiences.' As if he doesn't have enough commitments, running his EAR-Yoshino company and

'Hi-fi shows are gladiatorial shoot-outs; let the best sound win!'

being constantly in demand from recording studios the world over due to his unique knowledge of classic studio gear that he adores refurbishing and rebuilding to deliver better-than-new performance, recent times have seen him responsible for the reworking of the late Peter Walker's historically important Quad amplifier designs from the 1950s, reborn as the Quad Classic Series. Quad's newest Quad II Integrated model [see p22] is wholly Tim's design work. When does this man ever find time to sleep?

HISTORICAL ROOTS

Born in Nigeria in 1945 where his father, a geologist, was mining rare metals, Tim was sent to England aged seven to be educated. His infatuation with valves and transistors led him to study electrical engineering at technical college before upping sticks and moving to South Africa at the age of 21.

'I remember thinking it would be romantic to live in a warmer climate – and I was an angry young man dissatisfied with the political climate in the UK during that time.'

A glance through the pages of history books reminds us that this was the time when Harold Wilson's labour government controversially was forced to devalue sterling – and Wilson's (in)famous 'pound in your pocket' speech.

'I went to create a new life for myself in Johannesburg, where I was soon using my knowledge of electronics and acoustics, designing sound systems for musicians and bands that were part of a particularly vibrant crossover music scene there.'

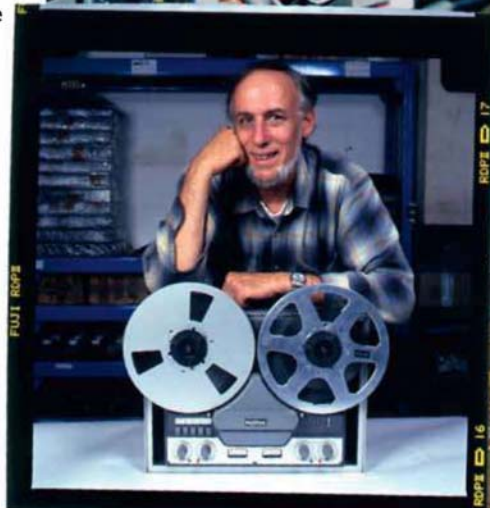
Tim remembers fondly his association with the bands Joburg Hawk and The Flames – and is tickled pink that he can play me tracks from albums he hasn't heard himself in decades courtesy of YouTube. The Flames had formed in 1963 in Durban, featuring multi-instrumentalist Ricky Fataar. Fataar and his fellow Flame band mate Blondie Chaplin were recruited by the Beach Boys, performing on the

TOP RIGHT:

Tim sets up a multitrack studio tape machine prior to recording pianist Yoshiko Katayama playing in a church (see below right). The recording was released on CD [Yoshino YOCD 1]

RIGHT:

Tim pictured in the 1990s when he was building a worldwide reputation both in the pro and home audio arenas



Beach Boys' early 1970s albums *Carl And The Passions: So Tough* and *Holland*, contributing to the 'Sail On Sailor' hit single from *Holland*.

'In the late 1970s Ricky Fataar became famous here in the UK, of course,' Tim concludes in a manner that implies that everyone should know. 'Ricky gained fame as an actor in the television spoof Beatles' documentary *All You Need Is Cash*. He played the part of Stig O'Hara, the band's guitarist.' Ah, yes, of course – The Rutles!

LUXMAN, JAPAN

While some of Tim's musician friends from South Africa were making names for themselves Tim's career had been taking off as well. Already consumed by a desire to perfect the high-fidelity replay of analogue LPs, tapes and FM radio (the only sources available in those days) he had befriended a local audio enthusiast who was the distributor of Luxman products. A fortuitous meeting with some of Luxman's senior personnel when they were visiting their south African distributor – no doubt to support a local audio fair – found the young and wild-eyed Tim de

BELOW:

Musical Fidelity's Digilog from 1989 – a Paravicini design and one that was to become hugely popular when standalone DACs were new to the UK audio scene

Paravicini being invited to take up a position in Luxman's design headquarters in Osaka, Japan.

'It seemed like a great opportunity that I shouldn't resist,' Tim recalls. The fact that he couldn't speak Japanese didn't come into it.

'These were exciting times of growth in the audio industry,' he explains. 'As with the Dynaco brand in the US, Luxman Corporation was marketing a range of Luxkit products for Japanese DIY amplifier builders that I was soon tweaking to improve performance. Lux was already making pretty good transformers but I knew I could make them better, and the circuit designs were staid and unimaginative. I made a difference there, I think. Certainly the engineering management was always receptive to my ideas.'

No doubt Luxman's management had identified earlier that here was indeed a 'bright spark', his involvement in designs such as the Lux 3045 tube amplifier and C-1000/M-6000 pre/power combo now being part of hi-fi folklore, designs that are considered 'classics' by today's collectors of fine, vintage audio esoterica.

'During the early 1970s Japanese preamps, even high-end models, Ⓒ



MOVERS & SHAKERS

couldn't be minimalist. It was still a case of the more knobs and switches the better, however I designed the tone controls to be defeatable. Don't laugh, but in creating the C-1000 I set out to make a preamplifier that measured better than any other on the market at that time, anywhere in the world. Perhaps I could argue that my main claim to fame is that I started the so-called spec wars,' Tim struggles to say between guffaws of laughter.

BACK TO THE UK

Resident at Luxman for four years, Tim gradually became proficient in the Japanese language, his learning no doubt accelerated by having gained a Japanese wife. He returned to the UK in 1976, with new-found confidence and experience, his head buzzing with ideas for proprietary amplifier designs that he could call his own. Working briefly as a design consultant for Alba and Tangent he became acquainted with the Michaelson & Austin partnership, helping to production engineer and 'fix' the designs of their short-lived TVA10 and M200 monoblocks that '...were interesting designs from 1950s textbooks that truly needed sorting out.'

One half of the M&A partnership was Antony Michaelson who in the early 1980s formed his own Musical Fidelity company, launched on the back of an affordable solid-state



ABOVE: Mobile Fidelity Neumann VMS70 mastering lathe with EAR electronics controlling the cutting head

BELOW: Inside of prototype Tim de P-designed Musical Fidelity A1 amp, with the finished product pictured below

preamp called, cheekily, The Preamp. Tim's working relationship with Michaelson continued during the 1980s, as he was responsible for the design of Musical Fidelity's fabulous A1 solid-state Class A integrated amplifier with its warm-as-toast 'waffle iron' top bonnet. The A1 quickly soared to the top of the hit parade in the affordable amplifier market during its heyday.

'MF sold bucket loads of them,' Tim chuckles – although once again it becomes clear that he doesn't care to dwell on past achievements.

Tim designed MF's Digilog D-to-A converter too, another revelatory sounding piece of kit that was extremely popular when separate DACs were a new idea on the UK hi-fi scene.

'I can be more adventurous and creative when using valves'

EAR'S FIRST AMP

Since returning to the UK from Japan in 1976 his 'day job' has been running his own company, crafting his own-brand, hand-made amplifiers sporting Esoteric Audio Research badges, which rejoice in having the glorious acronym – for a maker of hi-fi systems – 'EAR'.

For the company's first product, the EAR 509 100W tube monoblock power amp, a landmark design that remains in production to this day, Tim developed a unique output

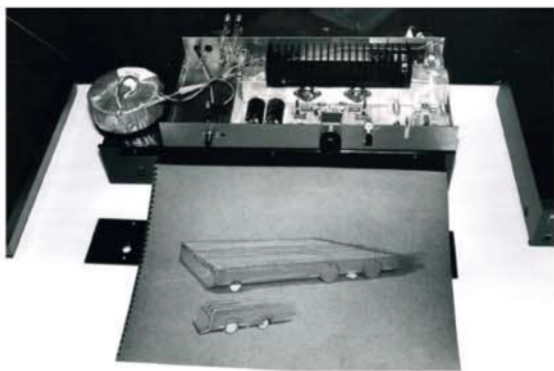
transformer/tube interface circuit called 'balanced bridge mode' in which all the electrodes (except the control grids) have their own separate windings on the 13-section output transformer. In addition, the amplifier had no overall feedback, 'something of a de Paravicini trade mark' states an aptly written description on his company website (see www.ear-yoshino.com).

Designed originally as a 'pro' model for use in studios, the 509 soon caught the attention of well-heeled hi-fi enthusiasts.

Since 1994 he has called his company EAR-Yoshino. He prefers not to dwell on the time and energy wasted during a legal

spat with America's Audio Research Corporation (ARC) over the company's name.

Far removed from the hair-shirt world of perceived sound subjectivism, he maintains nevertheless that our ears are our most valuable assessment devices; his products designed to sound musical and 'pleasing to the ear'. Yes, he makes valve amplifiers, but not because he's a doey eyed romantic who thinks that the thermionic tube is the only device with which to produce an amplifier circuit that sounds good. In fact in



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MOVERS & SHAKERS

1967

Builds PA and recording systems as consultant in South Africa

1972

Joins Luxman in Osaka, Japan. Designs 3045 tube monoblock and C-1000/M-6000 pre/power amps

1976

Returns to UK. Brief time with Tangent; works on Michaelson & Austin valve amps

1977

Forms Esoteric Audio Research. Launch of the EAR 509 valve monoblock

1984

Musical Fidelity's A1 amp; later Digilog DAC, A370, A470 power amps

1985

Custom-designed record cutting system

1994

Changes the Esoteric Audio Research brand name to EAR-Yoshino

2004

First EAR CD player, the Acute

2004

EAR Master Disk turntable with 'no contact' opposing magnet drive system

2005

Primary Drive Loudspeaker system

2009

Quad's first integrated amp

the valve-versus-solid-state debate he is a moderate, a liberal. EAR-Yoshino amplifiers are high-end, bespoke, luxuriously-priced tube designs (predominantly) simply because he considers tubes more appropriate for making the best he can under such circumstances.

'Within small scale, specialist manufacturing I can be more adventurous and creative using valves', maintains Tim. 'But in subjective sound quality there should be little difference between a well-designed transistor amplifier and a valve amp. And vice versa.'

SECRET RECIPE

This is what makes Tim – and his EAR valve amps – such an enigma. Can you think of any other purveyor of tube amps that proudly boasts that his valve amps should sound like transistor amps? It goes without saying that Tim knows a thing or two about how to design and specify an output transformer and valve complement best tuned to a circuit, his proprietary transformer designs being a subject off-limits to those enquiring of design specifics. While he's happy to explain that just as there's no substitute for cubic inches in a car engine, so there's no substitute for iron in an audio transformer, he never discusses his techniques for coil winding.

'I have to keep some of my ideas to myself, as I've noticed many of my designs being mirrored by other companies over the years. Curiously enough the only product



ABOVE: Tim's work for Quad began with the QC-twentyfour preamp's phono stage

that no foreign company ever tried to copy was the Musical Fidelity A1. I have to assume that because the circuit was so unlike anything ever published in traditional textbooks, it was completely off the radar of the world's large electronics corporations.'

More than 30 years have passed since he launched his first EAR 509, his portfolio comprising more products than it's possible to list. And the number of recording studios and famous vinyl mastering suites employing electronics designed and built by 'Tim de P' includes the world's crème de la crème. If you play the LP of

Grace Jones' *Slave to the Rhythm* [ZTT/Island Grace 1] and marvel at the power of the infra-bass coming from the vinyl, remember that the lacquer was cut on a lathe whose cutter head was driven by custom-built electronic circuits based on

EAR's 'classic' 509. That and countless other LP treasures in the collections of audio enthusiasts the world over.

'The only product no foreign company tried to copy was the A1'

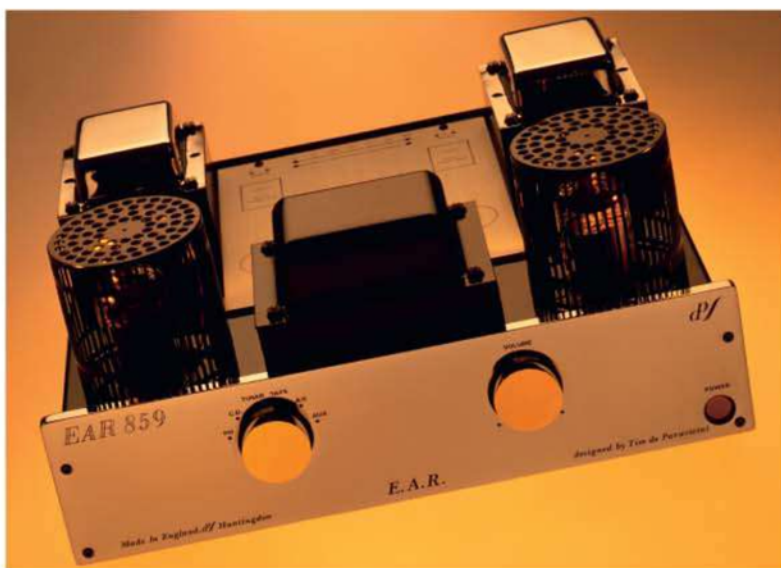
AND NOW QUAD...

Now considered an elder statesman of valve amp design, Tim is held in such high regard on the world stage that the responsibility for maintaining the great Peter Walker's legacy of iconic Quad designs has fallen on his shoulders. Did he know Peter Walker?

'He was a passing acquaintance. I may have met him a couple of times, but we were never friends. However as a young student I'd got under Peter's skin and understood his ideas so intimately that we may as well have been buddies.'

And surely Tim is flattered that, of all the world's amplifier designers, it was he who was commissioned to oversee the design of Quad's Classic Series and maintain Walker's legacy.

'No, I don't think that's the right word,' replies Tim after sombre consideration. 'I'm not flattered... but I don't mind admitting I do feel extremely proud.' As ever, there's an enthusiastic gleam in his eye. ☺



ABOVE: The EAR 859 from the early '90s – originally offered in kit form by Hi-Fi News

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CARRY ON AMPING? ADVICE SOUGHT ON USING AMPS IN PARALLEL

I have heard about a technique called 'parallel bi-amping' in which passive crossovers are situated near to the amplifier and speaker cables are run in parallel to each of the drivers in the speaker cabinet, yielding improved clarity. Apparently *HFN* published one or more articles about this in 1986 [see 'Bi-wiring', June '86 and 'Parallel Bi-amping', October '86] but I don't have these issue in my collection. Could you provide some more information about this technique and whether it is still considered to be a worthwhile approach?

Herman Gordon, via e-mail

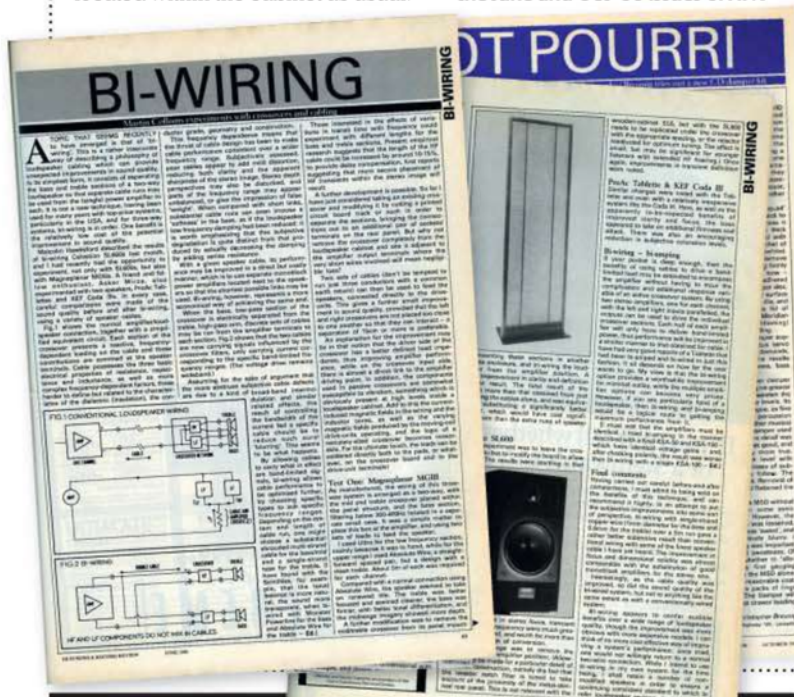
Keith Howard replies: The parallel bi-amping technique outlined in the October 1986 issue of *HFN* (p44) is not quite as Mr Gordon describes. Conventional loudspeakers were used, whose split crossovers were located within the cabinet as usual.

Using a conventional bi-amping arrangement with twin stereo power amplifiers, one amplifier would be fed the left channel signal and the other the right channel signal, the two channels of each amplifier being connected individually to the bass and treble terminals respectively of the associated loudspeaker.

With parallel bi-amping, each amplifier is instead fed both left and right channel signals, with one amplifier driving the treble terminals of either speaker and the other the bass terminals.

This is not an option I've tried myself since my own bi-amping experiments have always been with monoblock amplifiers. However, given the significant improvements that bi-amping can deliver, I'd say that it is certainly worth experimenting with.

BELOW: The two-part look into bi-amping and parallel bi-wiring from the June and Oct '86 issues of *HFN*



Oppo player – a fix

UPDATE ON SACD PERFORMANCE OF BUDGET BLU-RAY PLAYER

I read with interest the views of Barry Willis regarding the Oppo Blu-ray/SACD player in the September '09 issue. His concerns regarding SACD playback interested me as I'm thinking of buying one of these players. As of yet, I have been unable to find anybody else with these concerns.

Would it be possible to get Barry to expand further on his views as they have piqued the interest of many people on the online AV forums I visit?

Terry, via e-mail

Barry Willis replies: Although it was a latecomer, Oppo's September 30th firmware update of seems to have solved the problem with spitting noise on SACD heard via the multichannel analog outputs. I now fully endorse the BDP-83 as a great affordable universal disc player.

I've been very happy with its performance with Blu-ray, DVD, and CD. The list of formats that it handles with aplomb now includes SACD. Owners of Oppo products should heed firmware updates posted on the company's website, www.oppodigital.com.



Marsden Hall...

PLEASE HELP IDENTIFY THESE CUSTOM-BUILT SPEAKERS

I recently purchased a pair of custom-built Marsden Hall loudspeakers. They are 34 years old and I am the second owner. I do not have the model number, but do have the dimensions, which are 80x37x29in (hwd). The speakers also have two tweeters, and two drive units per speaker.

Could you tell me anything of their history, as I have been unable to locate any information on the web regarding these loudspeakers?

I must say they sound fantastic. They have a rich acoustic sound which is clean and crisp without any hint of strain and the delivery is effortless and full.

Any information you can give me regarding these loudspeakers would be much appreciated.

C Watson, via e-mail

John Howes replies: Marsden Hall was based in Daventry, Northants and is only listed in the *Hi-Fi Year Books* between 1974 and 1976. In the 1976 edition, six different models are listed. However, while I don't think the dimensions you have sent us are correct (height 80in, width 37in and depth 29 inches!), I think yours is the model listed in the 1975 *Hi-Fi Year Book*. This is the Annexe 300, which measured 34x15x12in (hwd) and used two 8in drivers and two 2½in tweeters. Frequency response is a claimed 30Hz-20kHz, power handling 30W, and the price in 1975 was £90 per speaker.

Cordless cans

A CHALLENGE TO MANUFACTURERS

The reviews in the December 2009 issue miss one important point: many of us have already invested in decent headphones, but would like to do without the 'tripwire' that links them to the amplifier (I have to use a 3m lead plus a 2m extension lead.) After reading your reviews, I offer the following design specification to any enterprising manufacturer:

1. A charger/digital transmitter that is capable of working from line-level phono outputs as well as headphone sockets, that offers adjustable attenuation of the input.

2. A digital receiver/headphone amplifier, with good quality headphone sockets in both popular sizes, powered by rechargeable batteries. This would sit on top of the transmitter for recharging, have a good quality volume control and adjustment for high/medium/low impedance headphones. Current technology could allow this box to be as small as a mobile telephone or TV remote control.

If under £100 and approved by the *HFN* team, I would buy one immediately, preferably in black.

On another point, the reviews of the Denon and Marantz 'universal' disc players are vague when it comes to multi-region DVD and Blu-ray playback. If they are not multi-region, then they are not 'universal'. This is an old argument, but please don't ignore it.

Chester Willey, via e-mail

Paul Miller replies: Our in-depth review of cordless headphones was inspired by the desire to rid our listening of long interconnects, but this is scant solace to those enthusiasts, like yourself, who have already invested in a set of conventional cans. We don't know of any product that fits your brief, but perhaps this letter will inspire some action from the audiophile wing of the CE industry. Here's hoping!

Regarding the term 'universal' it was first used in *Hi-Fi News* back in 2003 when we reviewed the initial wave of CD/DVD/DVD-A/SACD players. It refers to players that accommodate all disc formats of the day and does not indicate that it is 'regionless'.



VINYL: KEEPING IT CLEAN

A VINYL ADDICT WRITES OF SECONDHAND RECORD CLEANING, AND HIS LOVE OF THE LP12

As a reader who has been delighted with his Linn LP12 turntable ever since purchasing it at the Sound Organisation London back in 1983, I was delighted to see your continuing efforts to boost the vinyl format. In particular, you have spoiled us with an entire feature on the Linn Sondek, which looks to be such a treat that I have kept it aside and will read it on a rainy day to cheer me up. While listening to my Linn, naturally. What a saddo!

Two points. Firstly, purchasers of secondhand vinyl – as many of us are forced to be, particularly those classical music listeners – will not be unaware of the problems of sound quality inherent in such products. It entirely depends on whether the previous owner(s) have treated the record with due respect. I'm sure all *Hi-Fi News* readers are careful, but one discovers from bitter experience that even the most careful secondhand record outlet can inadvertently sell you something so damaged that one can only assume it formerly saw service as an oversized beer mat.

If background noise and general filth is a problem, readers may like to know that the manufacturers of the Keith Monks Record Cleaning Machine publish, on their website, a list of 'Approved KM Cleaning Centres' to which one can take – or possibly send – offending LPs for the full cleaning treatment (see www.keithmonks-rcm.co.uk). The result is a great improvement, though those wishing for the 100% brand-new record experience may be slightly disappointed. From my experience background clicks and bumps are appreciably reduced by the cleaning, but not altogether eliminated. Still, we vinyl addicts are not deterred by the odd wobble; the music is there, and in a live concert one has to be tolerant of much louder coughing and shuffling about.

LEFT: Beyerdynamic's RSX 700, Highly Commended in our December '09 group test of cordless headphones



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The other option is, of course, to buy new. I used to have, but have currently mislaid, a *Hi-Fi News* specially pressed version of the Beatles' *Sergeant Pepper* album, and it sounded fabulous. Why doesn't your magazine give vinyl a further plug by letting us have access to such pressings once again? You devote several pages to the re-mastered Beatles CDs. What about proper records?

Tony Cantlay, via e-mail



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Down the tubes...

READERS PUT US STRAIGHT ON VALVE VOLTAGES...

It seems Janine Elliot was a little off beam in her Opinion piece on p105 of the November 2009 issue. She says that the new TechTube-branded E81-CC valve from British company BMS uses just a third of normal heater voltage at just 6.3V. No Janine, 6.3V was the normal for 'E' series valves, the 'E' signifying 6.3V. This is distinct from the 'U' series, which were constant current heaters for use in series-connected AC/DC radio receivers and most TVs in the valve era.

Yes, I am old enough to have worked on these designs.

These valves could have voltages up to 30V, so perhaps this is where Janine went astray. 6.3V E-types were the natural development from the 2V battery types of the 1920s and the 4V indirect heaters of the 1930s. Other manufacturers used their own codings.

Janine also mentioned the history of the Mullard/Philips organisation. It might be of interest to younger readers to know the following facts. After the War, many smaller brands that went to the wall were bought out by Philips. If a set was badged 'Philips' then all the receiving valves were badged 'Mullard' but the rectifiers were badged 'Philips'. In all other badged versions the rectifier was also 'Mullard'. I believe this was to do with the original trade agreement.

John Collins MIET Retd, Chichester

Dear Sirs,

Upon reading Janine Elliot's piece 'A Glass Act' I was puzzled by the reference to heater voltages of 6.3V as being especially low and being a third less than those of conventional valves. I can't help feeling there must be a mistake here. After all, 6.3V for valve heaters is a virtual standard and has been for years. A heater voltage would have to be about 9.4V to be a third higher than 6.3V and this does sound a bit odd. ECC81, 2, and 3 valves do have centre-tapped heater arrangements, which gives an option of 12.6 or 6.3V and one of the many equivalent set of numbers for this series of valves



ABOVE: HFN readers certainly know their valves – TechTube says its designs consume a third less power than ECC83s tubes, not a driver voltage of a third less as stated in our December issue

is 12AX and 12AT7 and so on. Some rectifier valves have five volt heaters, but these are usually supplied from separate transformer windings.

Actually, as I write this, it occurs to me that perhaps the intent was to say that the heater 'power' was a third less and this would make perfect sense.

Sorry to be nit-picky, but the piece as written doesn't seem quite right.

Nick Willans, via e-mail

Janine Elliot replies: My article referred to the new TechTube valves, which I stated had a driver voltage a third less than that of older ECC83s (and not a third of the voltage as John Collins quotes). Still, you are both right to question this claim as I had incorrectly stated voltage as a third less when I should have quoted the power consumption. I had forgotten my Physics! Basically, according to the manufacturer, as the heater power consumption of the E813-CC is a third lower than that of conventional ECC83s, a higher resistance is needed.

Ken's den...

KK's 'NEW' LISTENING ROOM, NINE YEARS ON...

I have just been re-reading the May 2001 edition of *Hi-Fi News* and a feature on the construction of Ken Kessler's 'perfect listening room'. There's a lot about mains supply provision, but not much information about the dimensions of the room. True, we are told that the room measures 12x18ft, but what is its

height? Did Ken use the 'golden ratio' in designing his listening room and is it still better than Ken dreamed of?

Charles, via e-mail

Ken Kessler replies: Yes, I still love my room! The height is determined by a pitched roof, which runs the 18ft length, not across the 12ft width. The walls are 8ft high, and the peak adds another 4ft. As for satisfying Fibonacci, Pacioli, Maestlin *et al* – well, I'll leave it to you to do the maths!

The secret to the room, though, (and mains aside) is the rock-solid construction: the walls are an 18in-thick sandwich consisting of 9in brick outer walls and 9in cinderblock inner walls, with a damp course in between. The inner walls are plastered. The floor is 1m poured concrete, as the listening room is on ground level, then tiled around the border for 18in, with the centre section carpeted.



ABOVE: KK's room pictured in *HFN*, May 2001

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The Williamson Amplifier

In the first of a new series, we take classic kit from yesteryear and see how it measures up against today's best. We kick off with the granddaddy of all hi-fi amplifiers...

Review: **John Howes & Ken Kessler** Lab: **Paul Miller**

If one product had more influence on the direction taken by the early hi-fi industry than any other it was the Williamson amplifier. Its design, published in the April and May 1947 issues of *Wireless World* magazine, was to become a landmark. The articles, which not only described the circuit but gave details on how to build it, were an instant success, appealing to enthusiasts and home constructors alike. Later the design would go on to become a very successful commercial product, selling in large numbers across the world.

David Theodore Nelson Williamson was born in Edinburgh in 1923 and went on to study mechanical and electrical engineering at the University of Edinburgh. In 1943 he started work as an engineer in the development laboratory of Marconi Osram (MO). He soon moved to the applications laboratory, writing up notes after testing new valve designs and circuitry. Williamson was interested in high quality sound reproduction and in his spare time worked on amplifier design and a lightweight pick-up. His hard work came to fruition in an amplifier with very low harmonic distortion: less than 0.1%, in fact.

'Williamson did not gain financially from the *WW* article'

Williamson was asked to demonstrate his amplifier to the MO valve company board and to write a report on it. After Williamson left MO in 1946 to join Ferranti, a director of parent company GEC took the report to the editor of *Wireless World*, and it was duly published.

Williamson did not gain financially from the *Wireless World* article but found

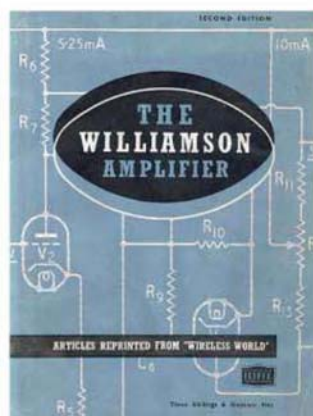
instant fame worldwide. Indeed, it was Osram which profited handsomely as Williamson had specified Osram valves in his design, so creating a huge demand for that company's tubes. Likewise, the publication in 1949 of the 'Williamson Amplifier' booklet must have seen many hundreds of thousands of KT66 tetrode valves sold worldwide while transformer manufacturers like Partridge [see *Retro Roundup*, *HFN* August '09], Woden, Gardners, Gilson and Savage must also have benefitted greatly.

THE PERFECT AMP...

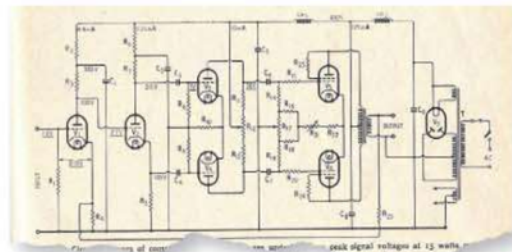
The original *Wireless World* article outlined seven basic requirements for a perfect amplifier. These were negligible non-linear distortion, a linear frequency response from 10Hz-20kHz, a constant power

handling capacity for negligible non-linear distortion at any frequency within the audible frequency spectrum, negligible phase shift over the same bandwidth, good transient response, low output resistance, and adequate power reserve. As for the Williamson amplifier specification, this was a maximum power output of 15W, a frequency response of 10Hz-20kHz ± 0.2 dB, background noise of -85dB below maximum output and an input sensitivity for maximum output that was 1.4Vrms.

The output transformer was given paramount importance. To quote from the original text: 'The output transformer is probably the most critical component in a high fidelity amplifier'. Detailed electrical and mechanical specifications of the output transformer were given in Williamson's article and many keen home



ABOVE: The Williamson Amplifier circuit, reprinted from *Wireless World* and offered separately for sale at a cost of 3s/6d; ad for GW18/C amp from Goodsell of Brighton; GEC promotes Osram valves



ABOVE: Circuit design of the complete amplifier, as published in *Wireless World*; voltages underlined are peak signal voltages



ABOVE: Ad for Partridge transformers; like many companies, Partridge benefitted from the popularity of the DIY Williamson amp kit



constructors wound their own. For those curious to know, the design specification of the output transformer is as follows: primary load impedance 10,000ohms, centre tapped; secondary load impedance 1.7ohms per section with a turns ratio of 76:1; primary inductance 100Henries (minimum), leakage inductance 30milliHenries (maximum).

The cost of a commercially made Williamson output transformer in 1949 was six guineas. The mains transformer cost four guineas while smoothing chokes would set you back a pound apiece. Complete kits were offered for sale in the UK by Stern and Tele-Radio and cost between 19 and 21 guineas, depending on the transformers supplied. Many commercially made Williamson amplifiers were manufactured by Radford, Rogers, Goodsell, Cape and Heathkit – to name but a few.

In America the Williamson design gained huge success with an article in the November 1949 issue of *Audio Engineering*. Entitled the 'Musician's

Amplifier', this used American 807 output valves instead of KT66s in the output stage. Many companies in America sold kits to construct the 'Musician's amplifier' utilising two separate chassis.

A further article appeared in the July 1952 issue of *Audio Engineering*. Written by David Hafler and Herbert Keroes, the article outlined circuit modifications, including changing the values of the coupling capacitors and using an output transformer with ultra linear connections. These modifications gave an increase in output power without sacrificing its

specifications. In this article a choice of three different output valves were given: 807s, 5881s or KT66s.

Williamson stayed at Ferranti until 1960, after which he moved to the Molins Machine Company. In 1973 he worked for, and then joined, Rank Xerox, where he stayed until 1976. During his life he lodged over 100 patent applications concerned with machine tools and cigarette machinery, as sole or joint inventor.

In 1979 the Williamson family moved to Italy. David Williamson passed away on the May 10th, 1992.

SHOOT-OUT

I have been lucky enough to own and build several Williamson amps over the past 40 years. Partnered with efficient speakers, sound quality is superb.

LEFT: Suggested circuit mods from 1952 and 1949 issues of *Audio Engineering*

'Partnered with efficient speakers, sound quality is superb'

ABOVE: Our Williamson amplifier, equipped with four 6J5 triodes, a 53KU rectifier tube, pair of KT66 tetrodes and Partridge transformers

About six months ago I organised an amplifier 'shoot out' at my home with some of my audio enthusiast friends. This saw The Williamson in a blind test against a very respected Japanese single-ended triode design and a single-ended pentode amplifier. We played different types of music through each amp in turn, nine listeners (excluding myself) voting individually on sound quality.

Scoring was close, but the Williamson won, followed by the single-ended triode design. What amazed me was the fact that a 62-year-old design eclipsed some very serious modern contenders. Call me a fan!

KEN KESSLER LISTENS...

Analogies fail me, for no precise illustrations mirror the historical importance of this amplifier nor its



ABOVE: Original advert for 'Williamson Type' amplifier construction kit from Heathkit with instruction manual to suit 'the complete novice'



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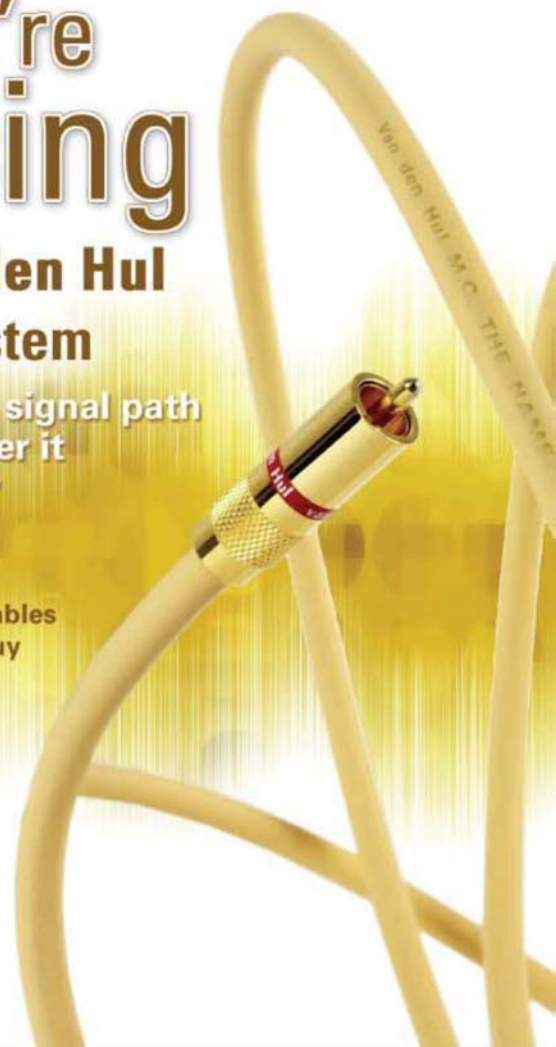
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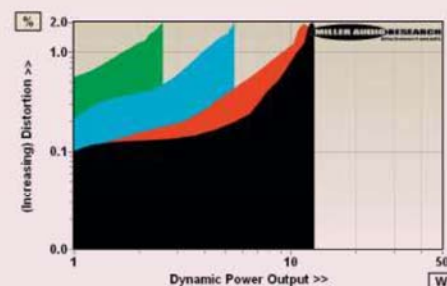
LAB REPORT

VINTAGE HI-FI

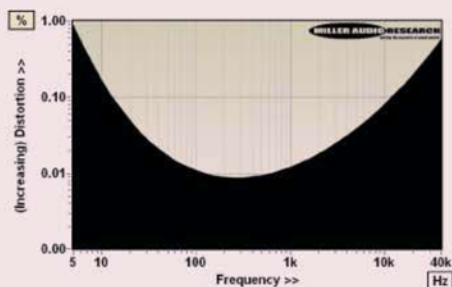
WILLIAMSON AMP (VINTAGE)

What a remarkable amplifier! Sure enough, there is some slight variation in overall gain (between +14.7dB and +15.1dB) depending on operating temperature and power history, but this Williamson's underlying performance is more than a match for some 'new' valve amplifiers that have crossed my lab bench in recent years. The estimated 15W specification was largely met in practice with 14.3W/8ohm and 10.4W/4ohm achieved at 2% distortion, increasing to 15W/8ohm at 4.5%. There's little dynamic headroom, nevertheless the vintage GEC KT66 beam tetrodes robustly deliver some 6W/2ohm and 3W/1ohm via single transformer tap at 1kHz [see Graph 1, below]. It goes without saying that sensitive speakers are a must.

Distortion is largely 2nd and 3rd harmonic in nature and reaches a low of 0.008% through the midrange at 1W/8ohm. Distortion otherwise hovers between 0.1-0.2% up to 6W/8ohm and <1% below 11W/8ohm, increasing to 0.4-0.5% at bass (20Hz) and treble (20kHz) frequencies. Core saturation in the Partridge output transformer causes distortion to rise quickly at subsonic frequencies [see Graph 2, below] but the low 0.2ohm source impedance is remarkably flat across the audio range. Furthermore, the amplifier's response is both flatter and better extended than many modern designs, peaking at +0.6dB/55kHz into 8ohm and +0.5dB/48kHz into 4ohm loads while stretching down to +0.25dB at a subsonic 5Hz (all figures re. 0dB/1kHz). This is a true heavyweight of the vintage class. Readers are invited to view a comprehensive QC Suite test report for this Williamson-inspired amp by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads



ABOVE: Distortion vs. extended frequency from 5Hz to 40kHz (1W/8ohm). Distortion increases rapidly at the frequency extremes at just 5W/8ohm output

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	14W / 10W
Dynamic power (<1% THD, 8/4/2/1ohm)	13W / 13W / 5.5W / 2.6W
Output impedance (20Hz-20kHz)	0.18-0.23ohm
Frequency response (20Hz-100kHz)	+0.0dB to -2.6dB
Input sensitivity (for 0dBW/15W)	497mV / 1970mV
A-wtd S/N ratio (re. 0dBW/15W)	89.0dB / 100.8dB
Distortion (20Hz-20kHz, 5W)	0.068-0.46%
Power consumption (Idle/Rated o/p)	135W/128W
Dimensions (WHD)	Determined by host chassis



ABOVE: The Partridge o/p transformer's 8ohm secondary tap is terminated here in a pair of 4mm speaker posts. Note the three-pin Bulgin-style mains plug!

performance, which still dazzles listeners more than 60 years on. I suppose the initial exposure to a Williamson could be likened to a first drive of a Bugatti Type 35B, or a first sip of Romanée-Conti. Yes, it's in that league.

Appropriately, I auditioned it in mono – no hardship as I adore a number of single-channel recordings. I was warned about low sensitivity, but given free reign with the speakers I used. It sang from the outset, robust and warm and dynamically thrilling, yet with a rosy hue that belied not its age but its heart: pure thermionic valve. Voices benefitted most, exhibiting palpability and authenticity with Doris Day's vocals from the *Love Me Or Leave Me* soundtrack of 1955. The little vocal tics that made her a far more distinctive singer than cloth-eared critics would ever admit shone through; she simply sparkled.

Silk-against-velvet slid from the speakers when I fed it Julie

London's debut LP. Transients met CD's demands when I dug into The Beatles remasters. The Williamson transcended years, formats, recording techniques. It delivered what it was fed, tampering with nothing, interceding between music and listener with only the most gossamer of veils.

A NEW REFERENCE

But a burning question remains: is this antique up to the rigours

'The burning question: is this antique up to the rigours of 2010?'

of 2010? Put it this way: if any valve amp maker had the guts to reissue this exactly according to Williamson's design, with valves worthy of the

circuit and the best transformers Partridge could muster, the result would be a new global reference. Address the details needed to get it past CE requirements, create modern cosmetics and a price of around £5000 per pair – the R&D has been paid for, right? – and the effect would be revolutionary. ☺

HI-FI NEWS VERDICT

Introduced before the vinyl LP and over a decade before stereo, the Williamson amplifier circuit marched in the front rank of high fidelity's vanguard. Over 60 years later its performance still bears favourable comparison with specialised tube amps produced in our modern era, so there's no reason why the Williamson couldn't form the template for new models. The real question is which manufacturer will pick up the gauntlet?

Sound Quality: 80%



ABOVE: Partridge's superlative CFB C-core output transformer was the 'high-end' choice for amps of the day

Stax Earspeaker



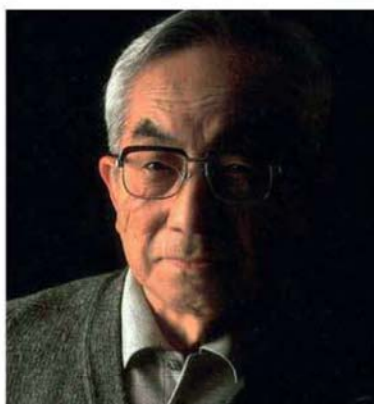
When it comes to private listening, one marque dominates the sector, and has done so for some 70 years. Why, it even delivered an electrostatic driver before Quad!

Ken Kessler on the Stax Earspeaker, a component as iconic for its looks as its sound

Try to name a single hi-fi brand that *owns* a product genre. By that I mean a brand which has such a total command of its sector that it is as omnipotent as the iPod is for portables, or Zippos are amongst cigarette lighters. No single cable, turntable, speaker, amplifier nor CD player manufacturer so thoroughly dominates its category such that it has become a default choice, nor done so for decades. In the entire history of our beloved hobby, I can only think of one product category to which this applies and that is electrostatic headphones.

Or should that be 'earspeakers', the name Stax wisely created exactly 50 years ago and uses to this day, for that is precisely what headphones are: speakers for the ear rather than the room. It was around 1960 that the granddaddy of the genus appeared, the SR-1, a model that would sire the breakout product eight years later, the

RIGHT: Stax founder Naotake Hayashi, who ran the company with his wife Toyoko, and their son, the company president Takeshi Hayashi



BELOW RIGHT: Original catalogue for the design that started it all – the SR-1 Earspeaker, first shown to the world at the 1959 Tokyo Audio Fair

BELOW: The breakout product from 1968 – the SR-3 Earspeaker, pictured here with SRD-5 Energiser



SR-3. From that point onward, Stax has known no opposition. That Stax reigns supreme is not open to debate. It genuinely is the *de facto* high-end headphone.

Yet to understand why this is a rare occasion when being 'Number One in a field of nearly one' is not a back-handed compliment, first you have to decide whether or not headphones *per se* are the best way of listening to music. Then you have to decide whether electrostatic headphones are the best *type* of headphones ever devised.

KING CANS

If you agree with or merely acknowledge both, Stax's achievement becomes all the more impressive, for, along the way, numerous manufacturers have offered their versions of headphones using electrostatic drivers. While some of the challengers, especially the high-end models from Sennheiser, have raised the bar, Stax still reigns supreme.

Purely on a simplistic level, conventional headphones are nothing more than little speakers in enclosures that fit close to the head. They exist for listening in hostile

environments, eg for pilots in noisy aircraft, and to enable one to listen when others are present, without disturbing them. The unintentional benefit, which makes headphones the listening method of choice for truly fastidious audiophiles, even when they don't have to use headphones, is that headphones eliminate the intrusive effects of the listening room on the sound of the system because their 'direct injection' of the sound into the ear bypasses the room entirely.

As I wrote in a review in 1994 of the Lambda Signatures, 'Stax argues that, "...only headphones, which are totally immune to the sonic variations of listening rooms, can serve as a truly universal audio reference standard monitor." You simply cannot fault the thinking, other than to cite the unsociable aspects of headphone use and the somewhat alien nature of hearing sounds inside the head rather than around one's person.'

Theoretically, then, listening to headphones betters listening



STAX electrostatic earspeaker



1 FIXED ELECTRODE
2 DIAPHRAGM
3 FIXED ELECTRODE
4 HUMIDITY PROTECTOR
5 DAMPING MATERIAL

How Electrostatic Earpiece Works

The electrostatic drive system, used in STAX earpieces, employs a diaphragm coated with electrically conductive material suspended between two fixed electrodes with equal gaps on either side. A pulsating DC voltage is applied to the electrodes so that when the audio signal is applied to the electrodes the diaphragm will be pulled forth and pulled back due to the repulsion and attraction of electrostatic charges. As time has passed, the world's first electrostatic headphones more than half a century ago, and since then have been making constant refinements, all of which contribute to the remarkable quality of the SR series earpieces. The high polymer film used for the diaphragm in these earpieces is less than 1/100 the thickness of the human eardrum (1.5 microns in the SR-0PH, SR-0A/03PH, SR-0PH, and 3 microns in other electrostatic earpieces). This ultrathin, ultratight diaphragm is driven with incredible accuracy by electrostatic forces. Therefore there is no transient distortion, no phase distortion, and no reproduction distortion produced regardless of how loud or soft the music is, and throughout the entire audio frequency spectrum. This is in sharp contrast to the multitude of complex distortions available in the conventional dynamic type of headphones with its need for a rigid, and therefore inherently heavy, diaphragm and accompanying magnet and voice coil structure. With STAX electrostatics, there are none of the peaks and dips in frequency response that

accompany other methods of reproduction. Pure sound goes directly to the listener's ears, which is why no one fails to be astounded the very first time they listen to music on electrostatic earpieces. There is quite simply no comparison. And it would be inaccurate to call these ultra-high fidelity music reproduction devices "headphones". "Earspeakers" much better describes their unsurpassing performance.

The SR-0N is the direct descendant of the SR-1, our first-born earpiece. Sound is even more lifelike and immediate, accuracy of tonal balance, and unbelievable detail, accuracy available with even the most sophisticated loudspeakers. It is rated high among audiophiles, broadcast stations and record industries.

The SR-XMK3 was developed in an effort to reproduce more musical information and detail; resolution is excellent. The small cavity-type ear pad design improves low-range response and the entire earpiece has been biomechanically engineered with professional applications in mind. In the construction of all the SR series earpieces we have gone to great lengths to ensure even diaphragm tension and precise electrode gap tolerances. Electrical and insulation characteristics are excellent and materials are carefully chosen for their long-term durability and resistance to physical shock and damage. All units are manufactured under strict quality control.

As its innovative appearance reveals, the Lambda Junior i.e. SR-84 electrostatic earpiece system consisting of the SR-80 earpiece and the SRD-4 adaptor is a direct successor of the SR-X. Like the SR-X, the unique open back type enclosure plays an important role in sound reproduction. For the SR-80 we adopted a permanently polarized electrostatic diaphragm to eliminate power supply for polarizing voltage. All you have to do to enter the final sound from the SR-80, therefore, is to connect the SRD-4 adaptor to your amplifier's speaker terminals. The selector switch on the SRD-4 front panel lets you readily choose between your loudspeaker system and the SR-80. The compact enclosure with soft velveteen and light weighted headband adds more to the real and transparent reproduction of the SR-84.

The SR-34, a combination of the SR-30 electrostatic earpiece and the SRD-4 adaptor, is the first earpiece that has realized an excellent quality versus cost ratio. No other headphones in this price range could offer such clear, detailed, distortion-free sound as the SR-34. The semi-wireless diaphragm as the SR-80 is employed for the SR-30, so that you can simply connect the SRD-4 adaptor to your amplifier's speaker terminals. The SRD-4 front panel selector allows you to easily switch back and forth between your loudspeakers and the SR-30. The soft velveteen along with the biomechanically engineered headband contributes to non-fatiguing listening to music.

SR-X / MK-3 Professional
SR-X / MK-3

SR-5N
SR-5NB

SR-84-Lambda Junior

SR-34

to loudspeakers because one of the worst acoustic nightmares of all – the effect of the room on the sound being played back – has been removed entirely from the equation. The downside is that the majority of headphones create the most unnatural sensation in all of hi-fi playback, despite what may be less-distorted sound. They place the sound 'in the head', which is not the way one hears a performance traditionally taking place in front of the listener.

A TRADE-OFF

Leaving aside the in-the-head effect

for a moment, every headphone immediately has an advantage over loudspeakers because of the above immunity to the listening environment. But everything in life is a trade-off, and another downside affects headphone reproduction, by virtue of the drivers needing to be small to allow the headset to be wearable: bass is severely compromised. Thus Stax, like all other headphone manufacturers, has to juggle the benefits of the aforementioned, controlled environment provided by the earcup and the gap between the driver and the ear, with truncated bass and an in-the-head perspective.

Miniaturising conventional woofers and tweeters involves challenges that face full-scale speakers: low moving mass for determining the quality of the mid and treble, and moving reasonable quantities of air for reproducing bass. The former benefits from downsizing, the latter doesn't. Just about the only good thing one can

posit about designing headphones is that playback level is rarely an issue, because it's simple to make a transducer capable of producing ample SPLs when it is situated mere centimetres from the ear opening.

Electrostatic panels are naturals for headphones because the problems they face in full-range speaker applications do not affect headphones: the aforementioned

proximity to the ear immediately relieves the designer from having to produce the sound pressure levels that bedevil all ESL loudspeakers bar the very largest, eg Sound Labs.

Directivity and beaming cease to be an issue because of the driver location, as does bass extension.

Most designers would argue, too, that the only real hurdle to overcome is the need for high DC polarizing voltage for the diaphragm, which involves the expenditure of an outboard



ABOVE LEFT: Stax brochure detailing the Earspeaker lineage and 'How The Electrostatic Earspeaker works'

ABOVE RIGHT & BELOW: The SR-Lambda Earspeakers from 1979. This model featured an oblong diaphragm – as opposed to the round one used in previous models – in a bid to better mirror the shape of the outer ear and so give better sound



powered box. But even that has been achieved with great success by Stax, which has produced both affordable models, with today's entry-level system of earspeaker and energiser for under £500, and tiny models: the energiser for the portable model runs off batteries and is the size of an iPod Classic.

ENTER STAX

Stax, founded in 1938 by Naotake Hayashi, produced its first condenser microphone as far back as 1950, and the CP-20 RF modulation-type condenser phono pick-up system two years later. Also in 1952, Stax participated in Japan's first audio fair, the beginning of a presence in specialty audio that establishes Stax as a 'veteran' manufacturer by any definition – certainly one of the oldest specialist brands in that country.

Other audio products followed during the post-war years, when Japan was rebuilding its industries, including the LA-24 tonearm for its condenser phono cartridge, and the CSG-1 high frequency and CSP-500 mid/high frequency electrostatic tweeters in 1954.

While all and sundry rightly respect Quad as the god of all things electrostatic, it is worth noting that Stax thus issued its first commercial electrostatic speakers, albeit tweeters and mids, before Quad's immortal ESL appeared in 1956-7. The principle was established decades before: an electrostatic driver employs a thin, electrically charged diaphragm, a material such as Mylar with a special conductive coating, suspended between two perforated metal

AUDIO MILESTONES



plates that act as electrodes. The audio signal is applied to the electrodes, which produces an electrical field, its polarity determining which of the two plates attracts the diaphragm. The attracted and repelled diaphragm then acts as do most other drivers, forcing air through the perforations, at the frequency determined by the source signal.

Electrostatic headphones require the aforementioned energiser to amplify the signal to move the membrane, often in the order of 100V to 1000V. As this adds bulk and weight, the energiser is usually provided in the form of an external unit. Early on, Stax referred to this as an 'adaptor', while the *lingua franca* of audio changed it, more accurately, to 'energiser'. Safety is a concern with such voltages near the listener's head, but I've yet to hear of an electrostatic headphone killing a user in normal conditions.

Because ESL panels, whether for loudspeakers or headphones, are ultra-light, more so than any other type of driver – MartinLogan's are said to be lighter than air – and thin on the order of micrometers, upper frequencies are extended and fast. While this writer loves a number of speakers with conventional dome tweeters, and others with ribbons, it is apparent that the upper registers of electrostatic tweeters are in a class of their own for speed, clarity and detail. Frequency response measurements well into the ultrasonics are not uncommon.

Stax's headphones exploited these virtues, and – more crucially – lower midrange distortion thanks to the panels' speed and transparency across the range. But it was another feature of Stax headphones that provided an almost unique quality which dynamic driver phones would achieve only many years later, and to a less unequivocal degree.

TASTE OF FREEDOM

Possibly the first-ever open-backed headphones, predating Sennheiser HD414s by eight years, the SR-1s

progeny enjoyed unsealed capsules that were effectively miniaturised ESL speakers, acting as bipolar designs. While hardly having any bearing on sound dispersion

in the manner of free-standing speakers, the open-back nature of the Stax headphones gave the impression of sound slightly outside of the head. Even for listeners 40 or more years ago, this taste of freedom from in-the-skull sound added to the Stax's allure. It was a benefit of the sound that Stax would exploit decades later to even greater effect.

While SR-1s are rare and probably did not enjoy the sales that established the brand as the leading purveyor of electrostatic headphones, the SR-3 of 1968, along with

ABOVE: From the SRM Series, which began production in 1993, the SRM-T1W Energiser with SR-Omega Earspeaker on top. To the right is the Lambda Nova Signature Earspeaker while in front is the SR-001 portable and Energiser

ABOVE LEFT: 'Please be cautious!' – with high voltages near the listener's head safety is a concern

BELOW: The SR Sigma from 1977 – these took their feed from an amp's speaker outlets, using some of that signal to power the Energiser

the SRD-5 adaptor, was successful enough to be regarded by most authorities as the 'break-out' model. The timing was impeccable, for the late 1960s were a golden age for headphone listening, prior to the headphone sales-booms inspired by the Walkman in 1979 and later, of course, by the iPod.

It coincided with the market explosion in audio in general, the hunger for headphones being driven primarily by two sectors of the audio community. For those who believed that headphone listening was – as far as absolute purity and neutrality are concerned – the best way to get into the music, Stax electrostatics (and top-quality conventional cans such as Koss Pro 4AAs) were godsend. The second group, which fuelled the growth in audio because it occupied the burgeoning budget sector, consisted of students who wanted to listen in dorm rooms at night and needed to respect others' privacy. By the time the high-end was an established phenomenon, in the early-mid-1970s, Stax was a recognised force, the gold standard for headphone users.

Never standing still, the company continued to refine the technology over dozens of models in the intervening years. Standouts included the SR-Sigma of 1977, which did the most to relieve listeners of the in-the-head experience. This was accomplished by devising what amounted to a pair of angled speaker enclosures strapped to one's head. While nowhere near as uncomfortable as the bulk might suggest, they were absurdly ungainly. The model featured an

'The SR-Sigma did the most to banish in-head listening'



Silence Reigns

Enter the Sasha

In 1984 the legend was born. Dave Wilson, through his mastering of recording, knew he needed a portable and supremely accurate line monitor speaker. Enter the WATT, which became an immediate hit with audiophiles the world over and was soon joined by a dedicated woofer, the Puppy. Over 25 years we witnessed no less than seven generations of technological advances resulting in more than 15,000 sales!

In 2009 we herald the ascension, the proud Sasha. Returning to his first love, recording, David found inspiration after a visit to Vienna Concert Halls. He was immediately drawn to the rich alacrity of the orchestra, which was directly related to the reflection given by the concert halls' ambient signatures.

Capturing the earliest reflections had to be the key. Wilson Audio's task was set. Development of a new generation driver, capable of the speed and detail first dreamed of in Vienna, became a reality. The advances with the new drivers, quite rightly utilized in the Alexandria 2, passed in turn through to the Maxx 3 and now the Sasha. In addition, the Sasha benefits from increased volume in both the upper and lower modules with new cabinet and baffle materials. And the crossover is now housed separately in the lower module.

Although this new speaker retains a clear genealogy with its predecessors, in truth its ascension confirms its place beside the majestic Maxx 3 and Alexandria 2.

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oval driver angled at approximately 80 degrees to the ear.

It was intended to create the illusion of sound in front of the listener, rather than just at the sides and in the skull. What improved on this early effort was the SR-Lambda of 1979, which reduced the size by better than half; I still swear by them, as does Stax. It used the Sigma driver in a less bulky, slanted frame, augmented by angled pads, and worked almost as well. And its practicality proved superior.

As importer Nigel Crump informed us, 'Today, the Stax Earspeaker business revolves around the SR-Lambda and its various energiser options, especially the matching SRM-066t matching vacuum tube amplifier. We recently introduced a 30th anniversary version of the SR-Lambda featuring revised cushions and a high purity oxygen free cable. 1000 pieces were made for worldwide production, and all were sold in four months.'

Other notable models included the round-cased Gammas and Omegas, while the company presaged the iPod generation's love for minimalist in-the-ear-designs with the SR-001 of 1995. It even answered the need for a sealed-back electrostatic headphone for studio usage and other loud environments with the 4070 of 2001. But Stax Earspeakers did

not evolve in isolation. The new models also gave birth to a range of energisers, allowing customers to mix and match headphones and adaptors according to budget. For many users, the golden moment came in 1987 with the SRM-T1 valve energiser. During the 1980s, when Stax developed the Professional Series, it worked for German car manufacturer Daimler Benz, who were investigating noise, vibration and harshness in the cars; the Stax headphones became design tools, and the resultant SR-Lambda Pro was the first to feature a driver with a 0.5mm electrode gap and a 'PRO-series' voltage of 580V.

ALL GO PRO

Stax eventually increased the voltages of all of its models to 'PRO' status, supplanting the 230V voltages of the older models entirely in 1992, when the last

'normal bias' Staxes were produced. To prevent accidental connection to the wrong voltage, the company changed the plugs, from 6-pin to 5-pin, so only PRO models could connect to the 580V PRO bias, as energisers came supplied with both outputs.

Stax closed in 1995 but was saved by its loyal engineers, who have restored the brand to its former glory. They wisely decided to concentrate solely on their Earspeakers and related accessories. But for those unaware of



STAX TIMELINE

- 1938 Founding of the company
- 1950 Stax brand starts; high frequency style condenser microphone
- 1952 RF modulation type condenser phono pick-up system CP-20 and CP-30; LA-24 tonearm for CP-20/CP-30 cartridge
- 1954 Electrostatic tweeter: CSG-1 (high frequency); CSP-500 (mid/high frequency)
- 1959 Stax shows the first Earspeaker at the Tokyo Audio Fair
- 1960 Sales begin for SR-1 Earspeaker and SRD-1 Earspeaker Adaptor
- 1964 First full-range electrostatic loudspeaker systems launched, with SRD-5 Adaptor
- 1970 Stax UA-7 integrated tonearm; SRX Earspeaker introduced
- 1971 SR-3 Earspeaker and SRD-7 adaptor
- 1975 SR-5E Earspeaker and SR-X Mk-3 adaptor
- 1976 DA-80, DA-80M A class DC type power amplifier
- 1977 SR-Sigma semi-panoramic Earspeakers
- 1978 Full-range electrostatic loudspeaker systems ELS-8X, ELS-4X
- 1979 SR-Lambda Semi-panoramic Earspeakers
- 1981 SRM-1 PRO Driver Unit for Earspeakers; Full Range Electrostatic loudspeaker system, the ELS-F81
- 1983 Full Range electrostatic loudspeaker system ELS-F83
- 1985 SR-Gamma Pro 'PRO Bias' Earspeaker
- 1987 SR-Sigma PRO Earspeaker; Pure Crystal Ohno Continuous Casting Cable (PC-OCC)
- 1988 Quattro 2 CD Player
- 1989 DAC-X1t 20-bit/8x oversampling D/A converter
- 1993 SRM-T1S valve output stage energiser; SR-Omega Earspeaker
- 1995 SR-001 in-the-ear electrostatic Earspeaker system
- 1995-6 Stax Industries Ltd closes but is reformed by a few engineers as Stax Ltd
- 2001 4070 closed-back Earspeaker
- 2003 SRM-310 solid state driver unit

TOP LEFT: Superior model – the SRX Earspeaker, produced in 1970

LEFT: The ELS-F81 from 1981, a full range electrostatic speaker that worked on the same principals as Stax's Earpiece

its history, it is easy to marginalise Stax by thinking of it only as a manufacturer of headphones.

Reality is quite different: the company produced everything bar a turntable: sophisticated power amps, tonearms and cartridges, cables, CD players and DACs, and – most desirable of all – a handful of full-range electrostatic loudspeakers, including the immortal ELS-F81. But to remember Stax only for the Earspeakers is no back-handed compliment: it's like forgetting about 'I Got Rhythm' and remembering Gershwin only for *Rhapsody In Blue*. ☺

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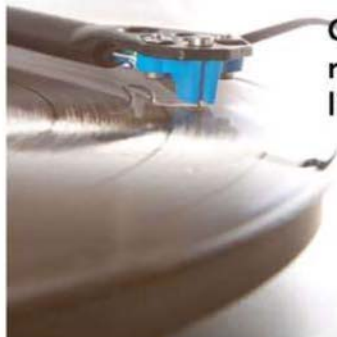
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Mythical.....

Metronome Technologie Kalista Integrated

Apart from being a masterpiece of audio sculpture it is singularly the most persuasive, most spiritually rewarding CD player we have ever heard. It was Alan Sircom who wrote last year "Turning off the music felt like you were insulting the performer, a bit like walking out of a concert" this is so true.

The Kalista literally draws out & sustains every single nuance of the music with a breathtaking delicacy & ease. It is so powerful yet so gentle. This 24 bit/192KHz player produces such vitality in dynamics, colour & spatial content that it leaves one feeling finally that whilst analogue may never leave our affections listening to this player does totally convince us that the future is with digital after all.



dartZeel CTH-8550

Herve Deletraz with the assistance of his partner Serge Roch have taken a simple computer added circuit design and slowly transformed it into the mythical Swiss brand adopted by discerning audiophiles around the world.

The introduction of the new CTH-8550 is quite frankly a sonic revelation. There is no amplifier on this planet that can deliver more honestly the complete performance. The sound is full bodied, synchronized and emotionally driven to the edge, whilst never allowing the music to drift out of control.

The CTH-8550 extends the design principles applied to the earlier NHB-108 power amplifier and partner pre the NHB-18NS. Amazingly, the front to back developments have literally turned things inside out..... a truly astonishing amplifier with no peers in sight!



Kj west one. We are fortunate to be given the opportunity to audition many new innovative high end products. The exceptional performance capabilities of the items we have featured above reminds us we must keep raising our own standards too. KJ are pleased to be working very closely with Pinewood Music now and in the future offering a superb consultancy partnership which is aimed @ benefiting our fellow music lovers both in our listening rooms as well as their homes.

Magical.....

Continuum Audio Labs. Criterion with Cobra

What truly lies within our vinyl record collections? With the plethora of exotic turntables and tonearms available today, surely there is nothing left to be unearthed from those tiny grooves? That's what we all thought until Continuum Audio Labs threw away the rule book, defied conventional wisdom and took the industry by storm with their extraordinary designs.

Take the Cobra tonearm, there is nothing like it. Its sensuous reptilian curves are a jolt to the eyes after decades of tubular arms. Coupled to the more affordable Criterion turntable one is in awe of every curve, every line. Every piece of material in this combination is the result of painstaking research into the elimination of all micro-resonances.

At last our choice of cartridge is able to deliver the deeply hidden delights from those tressured pressings.....

The outcome, the ultimate vinyl experience.



Magico V2

Curiously there appears no visual evidence of the magic that apparently underpins this latest revered brand! Just pure honesty. Although impeccably built and finished, there seems nothing remarkable about the prosaic cabinet, it certainly doesn't scream 'lifestyle'?

But this is a classic example of appearance being deceptive, for the musical qualities of this speaker are in a class of their own. This is not hi-fi as we know it-but it is music as it should be. And it comes as a shock.

Designer Alon Wolf has no time for trickery, no wish to indulge in black art, he applies nothing but the most rigorous scientific principles in the design of his loudspeakers. If your goal is to enjoy music with an honesty that has never been heard before, you need look no further.....magical!



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Tag McLaren CDT20R-T2L	£695
Teac P70 D70	£750
Theta Data Basic II + DAC DS Pro Prime II	£750
Theta Jade CD Transport	£700
Trichord Genesis	£170
Trichord GENESIS	£170
Tube Technology Fulcrum DAC & Transport	£1595
Wadia 16	£1750
Wadia 17 Atod	£750
Wadia 861b	£3500
Wadia X64-d DigiMaster	£1295
Yamaha CDX 1100	£350
Zhaolu D3	£250

Integrated Amplifiers

Acoustic Arts Power 1 mk2	£3600
Antok ASO	£420
Audio Flight Amp Two mkl	£2000
Audio Flight Flight One Integrated	£2000
Audio Research VS155	£1795
Bel Canto S300i	£1599
Bel Canto S300ii	£1500
EARMAX Anniversary	£600
Icon Audio 300B	£1295
Leak Stereo 30	£195
Lizard Wizard PMC	£250
Marantz PM-17 KI Signature Amp	£550
Marantz PM17mkII KI Sig LE	£1000
Marantz PM-66SE Signature	£80
Marantz 1050	£500
Naim Audio Nait 3	£200
Pioneer aaj 6	£450
Rolsan rolsan kandy ka1	£450

Loudspeakers

Adam Audio Active Pencil	£1499
Apogee Diva	£3995
Apogee Duetta signature active dax crossover	£1750
Arcam One	£300
ART Emotion	£3250
ATC SCAM 100 A	£2500
ATC SCAM 100A SL	£4995
ATC SCAM7	£1800
ATC SCAM-10 2A	£1800
ATC SCAM-100SL YEW New	£6000
ATC SCAM35	£499

Audio Acoustics

FUNDAMENTAL K2	£7000
Audio Acoustics Sapphire Ti-C Mocha	£0
Audio Physic Spark 1	£895
Audio Physic Virgo 3	£2250
Audioreactor M3signature active	£2100
Aurosul A1 MKIII	£495
Avantgarde Acoustics Duo	£4500
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B&W DM620	£120
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bang and olufsen Beolab 5	£7800
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JBK TLX103, 121, 111	£180
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JMLab Electra 1027 BE	£3400
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JMLab Mezzo Utopia	£10000
JMLab Micro Utopia Be +Stands	£2750
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KEF Q50;ref 90;30B;70S	£600
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Leema Acoustics SPLX12 sub-woofer	£550
Linn Katers (Passive)	£795
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Linn Katan	£350
Linn Kellidh black	£325
Linn Kellidh Cherry	£325
lowther drive units 2 x pm2c with phase plugs	£350
Lumley Loudspeakers reference signature	£1300
Martin Logan Prodigy	£4850
Martin Logan Summit	£5995
Meridian Audio dsp33 centre	£525
Mirage FRX 9	£600
Mirage OM-C3 center channel	£150
Mirage 290is ref monitors & stds	£295
Mission 753 Floorstanding	£249
Mission M33i	£135
Mission 75C CENTRE CHANNEL SPKR	£99
Monitor Audio PL100	£1795
Monitor Audio radius	£1800
MORDAUNT SHORT MS-50 Floor Standers in Black Ash	£1150
MORDAUNT SHORT MS Avant 9041	£120
MORDAUNT SHORT Performance 6	£1900
Naim Audio DBL	£7000
Naim Audio SBL	£500
Naim Audio SBL Walnut	£420
Neat Acoustics Motive 3	£400
Paradigm CC150	£45
Piega P4	£850
Piega SR3 satellite	£300
Piega P4XL Mk2	£1295
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PMC Loudspeakers BB5	£7000
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Proac Studio 250	£950
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Quad ESL 63	£895
Quad ELS 57	£995
Quad ESL 988	£2295
Reynaud & Gradient Subs	£1695
Reynaud Offrande	£750
Richard Allan Dimension Five 3	£300
Rogers LS3/5a	£500
Rogers LS3/5a	£995
Ruark Crusader II	£775
Ruark Templar 2	£225
Sonus Faber Cremona Elipsa	£8750
Sonus Faber STRADIVARI GRAPHITE	£20000
Sonus Faber Electa Amator II's w/W Stds	£1990
Sonus Audio SA2K	£1595
Talon Firebird Diamond	£17500
Tannoy DC3000	£299

Power Amplifiers

Accuphase A-45x2	£499
Aragon 4004	£13500
Art Audio Diabolo	£2500
Artcooustic PA-300	£1695
Audio Flight Flight One100	£595
Audio Research Ref 600 Mk1	£550
Audio Synthesis Desire Monos	£75
Audiolab 8000P	£295
Audiolab 8000A mkIII	£150
AVI 2000MM Monoblocks	£35
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Bel Canto Evo 2 Gen 2	£26120
Bel Canto Ref 1000mk2 Mono blocks	£2200
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Boulder 500 AE	£1995
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Crimson Electronics 640E MKII Monoblocks	£2750
Crimson Electronics 620E Stereo	£2750
Crimson Electronics 630 E Monoblocks	£11995
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Cyrus III	£895
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Denon PQA-T10	£500
DNA PA2B5	£200
Electrocompaniet AW 60 FFT	£175
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Halco Logic MC20	£550
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Krell PFB700cx (upgraded600)	£6995
Krell Evolution 402	£2542
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Linn LK100	£325
Linn C2100	£900
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Lumley 0001 Reference	£1100
Lumley Reference M120	£1750
Marantz SM-17 Power Amp	£1100
Mark Levinson 333	£450
Mark Levinson 335	£2995
Mark Levinson 436 Monoblocks	£2750
Mark Levinson ML2 Monoblocks	£6995
Mark Levinson ML434 Monoblocks	£1995
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Musical Fidelity KW550 Superchargers	£3999
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Tom Evans Linear A1	£3750
Tube Technology Genesis Monoblocks	£1499
Tube Technology Genesis Monobloc	£2500
VAC 30/70 MkII monoblocks	£1695

Pre Amplifiers

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Arcam Delta T10 Pre	£150
ART VP1	£425
Audio Flight Flight 1 Pre	£2995
Audio Research SP11	£1925
Audio Research LS2 mkII	£1295
Audio Research Reference 2 mkl	£3850
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Tom Evans PULSE 2	£1500
Tom Evans The Vibe	£2495
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Turntables/Arms/Cartridges & Phonostages

Audio Note ANS-3	£3800
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Boulder 2008 Phono	£13995
Cello Cartridge	£2800
Clear Audio Titanium MC cartridge	£3500
Clear Audio Master & TQ1 arm & Transfig	£4995
Denon DL103 CL	£500
Dynavector 10X4	£150
Dynavector DV507 mkII	£1995
Garrard 401	£495
Garrard TPA 10 Pick Up Arm	£89
Goldmund Studiotteta	£395
Graham Slee Era Gold V	£500
Graham Tonearms Phantom B-44 Gold arm wand	£500
HENLEY DESIGN HMC100 PHONOSTAGE	£750
Koetsu Black	£900
LFD MC-2	£50
LFD Scorpion reference	£495
LFD MC1 Phono Stage & psu	£2495
Linn LP12/ARO/Armageddon	£190
Luxman PD131	£0
Luxman PD444	£850
Michell Gyro SE	£1200
Michell GyroDec/RB301	£1000
Michell Gyrodec QC	£1000
Michell Orbs	£2150
Michell Gyro SE/ RB301	£1000
Mission 774 Wand	£100
Naim Audio Phono boards	£45
Oracle MKIII	£795
Origen Live Encounter	£825
Origen Live Digital Stylus Force Gauge	£57
Ortoton 510 MM	£35
Ortoton Jubilee	£1000
Ortoton MC15 Super	£66
Ortoton MC3000	£795
Ortoton Kontrapunkt B	£650
Ortoton MC25FL	£65
Ortoton Rohmann	£850
PHONOTE PHONOTE MC	£350
Pink Triangle Export/ Zeta	£1495
Pro Ject 2 Xperience /DVX10	£425
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Pro Ject Debut 3	£80
Rega Planar 3	£300
Rolsan Xerxes 10/DS1.5/Artemiz/Jubilee	£3500
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SME 3012	£995
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SME Series 3009 MKIII	£295
SME CA1 Cartridge arm	£3336
SME Model 10A	£5695
SME Model 20/2A	£19563
SME Model 30/12A	£8995
SME Series 3009 MKII	£250
SME Series V Arm	£1795
Stanton 500 AL II	£50
Systemdek IIX900	£200
Thorens MCH 63 TP16 Wand	£995
Tube Technology MM MC Phono stage	£495
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Southampton - Audio T - Tel: 02380 252827
Basingstoke - Audio T - Tel: 01256 324311
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Maidenhead - Audio Venue - Tel: 01628 633995
Maidstone - Home Media - Tel: 01622 676703
Brentwood - Audio T - Tel: 01277 264730
Kingston upon Thames - Infidelity - Tel: 02089 433530
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DEFINITIVE AUDIO

Sale of part exchanged and ex-dem items

ITEM DESCRIPTION	SALE	NEW
Impulse Lali small horn loudspeaker. Maple.	£350	--
Pure Sound A8000 CD player	£600	£1060
Naim NACD5 CD 2002.	£500	--
Naim NAC102 Pre with NAP 140 Power amplifier 2002.	£800	--
Dynaudio Contour 11 Rosewood 2002.	£300	--
Magnum Dynalab 106T. Superb tuner in pristine condition. 2 years old. Very light use.	£2500	£3800
Gotham Type 39 monos. 50 watts, class 'A', PPP 300 B. Made by Canary Audio for Western Electric. Like CA 309 / 339 but better o/p transformers and Kondo wire. Huge enveloping sound. Refined gluttony.	£6000	£15000
Acoustic Zen Hologram Zero Crystal bi-wire speaker cable. 2 metres. Terminated with spades.	£200	£750
Suggden CD21 Ex-dem. '09 Smart looking and nice sounding CD player. Titanium.	£900	£1365
SME 20/2. May '09. As new - spotless. Less than 30 hours use. Boxed.	£3800	£4850
Pure Sound T10 moving coil step-up transformer. 1:10 ratio. New.	£175	£290
Revolver Turntable. c.1985 c/w OEM tonearm minus counterweight.	£150	--
Technics SU-770 integrated. VU meters, wood effect wrap, 118-118 style.	£150	--
Technics SL PS-900 CD player. Late 80's flagship. Sounds fine. Bags of facilities.	£150	--
Living Voice MC 20/80 ohm step up transformer in smart wooden plinth. Excellent.	£400	£800
EAR 859 power amplifier. Elegant looking hair shirt unit. Smart.	£1000	--
Pathos TT integrated amplifier. Hybrid. Remote vol. Boxed. 2001. VGC. One lady driver.	£1750	£4800
Quad II - Forty monos. Less than 20 hours use. Perfect condition boxed.	£2000	£4000
Kondo 5-way active x-over. Made by Mr Kondo for in-house horn speaker development. Very rare, maybe unique. Invaluable asset for a man with too many amps and a 5-way horn.	£5000	--
VdH Condor - XPM. 0.15 mV output. Opt load 40 ohms. 10 hours use.	£2000	£3100
VdH Grasshopper III SLA. 200 hrs. Unused since service and calibration by VdH.	£1200	£2860
VdH Canary XGP. Very good. 20 hours.	£1800	£2760
Fidelity Research MC201 cartridge. Fully rebuilt by Vden Hul. New cantilever and tip.	£500	--
SME Model 30/12. February 2009. 2 hours use. Perfect. Crated.	£15300	£19200
SME V-12. May 2009. Kondo silver internal wiring. 20 hours use. Perfect. Boxed.	£2800	£3600
SME IV. Kondo silver internal wiring. June 2009. Unused.	£1500	£1765
Dynaudio Contour S 3.4. Maple. 10 months old. As new.	£2000	£4500
Dali 104 speakers black. VGC.	£250	--
KEF Uni-Q model 90 Centre channel speaker. Good condition. Please take me away.	£10	--
Audio Innovations Series 400 integrated amp with phono. Beefy and chewy sounding class 'A' fun.	£400	--
Tom Evans Linear A power amplifier. As new. Someone love me.	£2500	£4400
Accuphase A 20V amplifier. 2003. Boxed.	£2250	£4000
Accuphase DP 75V CD player. 2003. Boxed.	£4000	£8500
Horning Zeus loudspeakers. Cherry. Lovely condition. Boxed.	£1000	£2200
Acoustic Energy AE1MKIII Piano Back finish. 18 months old. Immaculate condition. Box. Manual. Stands included.	£1200	--
Wave Mechanic. 240v a/c in, 240 a/c out. Power supply for a/c motor turntables. Big improvement.	£300	£450
Arcam Delta 80 tuner. Bit of an old bag lady, but still continent.	£75	--
Kuzma XL-2 turntable. Looks like the MI-5 building, sounds like heaven. As good as it gets.	£10000	£18000
CEC TL 53 CD player. Very good. Engaging and musical sounding player. Ex.Dem.	£1400	£2200
Living Voice Auditorium II. Ex dem. Fabulous ripple-cherry veneer. Scrumptious. Light use.	£1700	£2800
Puresound A30, 6550 integrated. Ex-dem. Light use c.100 hrs. As new.	£900	£1400
Audio Innovations L2 line pre-amp. Tidy example. Living Voice upgrades.	£650	--
New Audio Frontiers 'Supreme' 300B. Hernia inducing behemoth. June '09. Rich, fluid sound.	£7000	£9800
New Audio Frontiers 'Performance' 2A3. Possibly the heaviest 2A3 integrated ever. '09. Lovely.	£5800	£8400
CEC TL 1N. Very substantial belt driven top loading CD transport. Slick. Sept.'09. Boxed. Perfect.	£7000	£11700
CEC DA 1N. DAC with BNC Superlink, USB, AES/EBU inputs. Balanced / SE outputs. Sept.'09.	£2500	£4200
CEC Tube 53. Very cute and super-neat 5881 integrated. 16 watts. Sweet, refined and detailed sound.	£1500	£2350
Helios Model 1. Doesn't work. Good project for a geek or useful for spares.	£150	--
Suggden Masterclass Integrated. Very light use. Ex demo. Dec '07. As new. Unused for 12 months.	£2250	£3675
Suggden A21aL. Line integrated. Very light use. Ex. dem. As new.	£1000	£1469
Suggden Masterclass Stereo Power Amplifier. Titanium fascia. c.5 years old. Good condition.	£1750	£3675
Electrofluidics 20/20 speaker cable. 5 metre single set. New, unused. Very fine sound.	£300	£500
AudioQuest Topaz HyperLitz interconnect. 5 pin DIN to 2 x RCA	£75	--
JPS Labs Superconductor FX balanced interconnect.	£300	£650
Synergistic Research A/C Master coupler. 1m. power cable. Long name for a short cable. US-IEC.	£100	--
Synergistic Research A/C Master coupler. 2.5 metre power cable. UK-IEC.	£150	--
Townshend DCT speaker cable. Single set comprising 1x 4metre and 1x 2.5metre lengths.	£325	£650

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YAMAHA DSP - E800 processor/three-channel amp £85, XTC-PRE-1 preamp £120, call Bob on 02088547697 after 6pm (Kent) [MA]

MUSICAL Fidelity A308 choke regulated power amp, dual mono, 250wpc 8ohms, massive spec, battleship build, mint, boxed, as new, cost £2400, sell for £1100 Tel: 07876 705266 [MA]

COPLAND CSA14 valve/solid state integrated amplifier, Harma vintage valves fitted, excellent, unmarked condition, supplied in original box £500 email: paul@redboxav.com Tel: 07949 910455(Brentwood, Essex) [AB]

BELLES Soloist 5 stereo power amp, 120 hours use, mint condition, excellent reviews, sensible offers please Mobile: 07910 231 774 [AB]

RUSS Andrews preamplifier, several years old, good condition, 2 x monobloc configuration, no switches only a volume control, updated with Teflon boards, after update £1800 was total spend, will accept £400 Tel: 017683 51226 [AB]

MUSICAL Fidelity A5 power amps £800 each and one A5 preamp £750, all in mint condition with boxes and manuals Tel: 0208 650 8185 or 0770285 0275 or e-mail: vj.barnes@btinternet.com [AB]

CHAPTER Audio Preface plus pre-amp as new with flight case and remote, 14 months old £2000 ono (£4500 new), buyer must collect Tel: 01843 600722 evenings (South East Kent) [AB]

SUGDEN Masterclass SPA-4 stereo power amp, 50 Watts Class A. As new, 7 months old, £2500 ono (£3675 new) buyer must collect Tel: 01843 600722 evenings (South East Kent) [AB]

NAIM NAP 300 late 2005, mint £3250 ono, Naim NAC 252, early model and supercap late olive, very good condition £3750, boxes and leads Tel: 02380 470107 email: lesliestubbs@tiscali.co.uk [AB]

3. CABLES

QED Qonduit MDH6 high performance six-way conditioning block including 1m mains cable, new in box RRP £240, sell £100, two available, QED Signature Audio silver spiral, 1m interconnect, new in box, *What Hi-Fi?* star rating, RRP £100 sell £65, QED Signature Audio XT 1m interconnects, new in box RRP £150, sell £90 Tel: 01639 774144 [AB]

ANALYSIS Plus Silver Oval interconnects, XLR balanced 1.0m pair £145 ono, XLR balanced 0.5m pair £125 ono, purchased 2006 and as new Tel: 01603 702330 [AB]

JPS Labs SC-2 interconnects 1m and 1.5m lengths with balanced terminations. Superb quality cables at £370 & £395 or £750 for the pair, one third of new price Tel: 01273 845029 (West Sussex) email: tonjen@tiscali.co.uk [AB]

JPS Labs Powercords, Digital AC £100 (£299), Analogue AC £100 (£299), Power AC+ £125 (£399) Tel Paul 07917 233468 [AB]

KIMBER Select 1030 1m RCA interconnect, deep cryo treated black pearl silver conductors + flight case, list price £1844, accept £585 ono Tel: 01294 829323 after 5pm [AD]

TWO x 2.5m Kimber 8TC speaker cable, blue and black edition with SBAN banana plugs, brand new surplus, new £396 bargain at £210 insured with tracking number, enquiries/photos email: klugheit.123@gmail.com [AB]

4. CD/DVD PLAYERS

SONY D-50 CD players, 1984, Sony's second player, compact unit, portable, sadly don't have battery pack but comes with AC power dock, solid construction, ex working order, piece of rare hi-fi history, offers Tel: 07876 705266 [MA]

MARANTZ CD6002, amp PM6002, as new, silver, both £250 or £135 each, Cambridge Audio 740A Azur amp as new £350 ono Tel: 07970 115378 (Bristol) [AB]

NAIM CD5i with Trichord 4 and Never Connected PSU (£479 with receipt) mint, instructions, remote, boxed £525, Naim Armageddon power supply for LP12, mint, boxed £450 Tel: 0772 962 0621 [AB]

CD Rotel RCD820B £90, no P+P Tel: Peter 01606 784767 (Cheshire) [AB]

SONY 630ESD, 100w amp & DAC, black, heavyweight, expansive sound, only £199, EAR 8L6 50 wrms tube, lifetime investment? £1790 (£3300) Tel: 01206 510392 [AB]

DENON 2800 black DVD/HDCD + remote £150 (£750), Sony SACD 705V player, good sound £120 (£470) Tel: 01206 510392 [AB]

ROKSAN Caspian M Series 1 CD player and integrated amp, 6 months old, black, bargain at £800 each or £1500 the pair Tel: Mike 01424 753641/email: matthews.mike@btinternet.com (E.Sussex) [AB]

SONY D-50 CD player, 1984, Sonys second player, compact unit, portable, sadly don't have battery pack but comes with AC power dock, solid construction, excellent working order, piece of rare hi-fi history, offers Tel: 07876 705266 [AB]

5. DACS

MUSICAL Fidelity Tri-Vista 21 DAC,

mint condition, new tubes less than one year ago £550 Tel: 01205 366691 [AB]

FUBAR USB DAC for sale in mint condition £80, cost £125 new, great little DAC for use with PC, see Sept 09 *HFW* for full review Tel: 01424 753641 or email matthews.mike@btinternet.com (E.Sussex) [AB]

7. SPEAKERS

WILMSLOW Audio Centurion speakers £858, call Bob on 0208 854769 after 6pm (Kent) [MA]

WILKINSON MkII loudspeakers, KEF B200A, Audax HD13D34H, 24 element 4th-order crossovers, black, 19x13.5x13.5in, £99.50, Focal tweeters TC90Tdx, 30mm tioxid dome and phase cone, £31.50. Tel: 01749 676174 [MA]

CASTLE Severn speakers, owned from new 1997, new drivers 2000, mahogany finish and near mint condition, recent upgrade means I have to let these well loved speakers go, offers please, email: yotrev@talktalk.net Tel: 0118 9589 466 [MA]

ATC SCM50 ASL Active towers in walnut, only two months old, very reluctant sale due to loss of job, amazing speakers, mint, as new condition, boxes etc cost £9500 sell £6200 Tel: 07876 705266 [AB]

WILMSLOW Audio hand-built large floor standing classique loudspeakers, 910mm tall x 260mm wide x 300mm deep, to large after all my efforts for my room £1050 or vno, buyer will have to collect, 40kgs in weight Tel: Vic on 01372 456196 anytime [AB]

WILSON Watt/Puppy 8 speakers, mint condition approx one year old in Bugatti Blue custom finish crates docs etc. choice of black & grey grilles as on Wilson web site, serious offers only, email: mrpauld@hotmail.com [AB]

ATC SCM7 (pair) £180, Adam Audio Sub-24, two by 12in drivers, heavy duty active pro subwoofer, domestic use only, bought new Dec '08 £900, Adam Audio active Pencils, bought new Feb '08 £1900, sale due to purchase of new Adam S5A monitors Tel: 07887 591440 (Berkshire) [AB]

AVI duo Active loudspeakers, (no amplifier required) see Avi website for details, two years old, pristine condition, in cherry £1800 new, reasonable offers considered Tel: 017683 51226 [AB]

KEF Reference 105.3 loudspeakers in black ash, very good condition £700, 2x4m original Hitachi LC-OFC speaker cable (biwire) £50, together make a wonderfully expansive sound Tel: 01949 876957 (Notts) or email: nickpolly@ntlworld.com [AB]

REVOLVER Cygnis speakers, as new, 16 months old £3800 ono (£6000 new), buyer must collect Tel: 01843 600722 evenings (South East Kent) [AB]

MERIDIAN M30 Active, 70 watts + stands, high quality, black £599, Kef Cresta 3s, cherry floorstanders £130 or swap for

DAC/CD Tel: 01206 510392 [AB]

ATC SCM50 ASL Active towers in walnut, only 3 months old, very reluctant sale, amazing speakers, used in studios worldwide, mint, as new condition, boxes etc, cost £9500 sell £6200 Tel: 07876 705266 [AB]

8. TUNERS

SONY ST-B 900 DAB/ FM /AM tuner £75, call Bob on 0208854769 after 6pm (Kent) [MA]

LEAK Delta 30FM £50+p+p, boxed, cable to power from amp, Hitachi FT5500 AM/FM Mk1 £70 +p+p Tel: 01606 784767 [AB]

9. TURNTABLES

PIONEER PL12D + M75 ED, vgc except needs new belt, offers £50 + Tel: 01206 510392 [AB]

11. COMPLETE SYSTEMS

LEAK stereo 70 amp and Leak stereofic tuner with Ruark Broadsword M2 speakers, all in working order, can demonstrate £135 Tel: 01825 722936 (Sussex) [MA]

12. MISCELLANEOUS

SENNHEISER HD650 headphones £150, Creek OBH – 21SE headphone amp £150 or sell both together £275, both items mint condition, boxed with instructions, buyers pays p+p Tel: 01623 744261/07816 063648 [AB]

RUSS Andrews: Purifier Block/MegaClamp £125 (£486), Reference PowerKord 3ft 16A IEC £50 (£190), SuperPurifier £75 (£350), Reference PowerKord 3ft WATTGATE 350 £50 (£190) Tel Paul 07917 233468 [AB]

SORBOTANE hemispherical feet, blue, 50mm diameter, each set of 4 cost £60 new, £30 per set (4 sets) Tel: 07879 460935 [AB]

NINETY new/sealed/unplayed vinyl LPs for sale, at 50% off new cost, 35 second hand albums available at £3 each, will separate Tel Roy on 01453 544354 for list [AB]

RUSS Andrews Torlyte platforms x 3, size 44½cm wide x 35cm deep x 1in thick including oak cone feet, each cost £120 will accept £60 each, also 2 x Torlyte speaker platforms, size 30cm wide x 37cm deep x 7½ cm thick, has spiked feet, cost £240 will accept £150 Tel: 01132 785245 [AB]

WANTED

RATA RP70 phono cartridge or any Tel: 01606 784767 (Cheshire) [AB]

CAMBRIDGE DAC magic, latest model, IMF monitors, Linn LP12, CD12 Audio Research CD/amp, Rel Sub Quad ESL63's Tel: 01206 510392 (Colchester) [AB]

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AS30 TUNER PRE/RI 610/DS-100 TUNER ALL RACKED	UNIQUE	£1995
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MAGNUM DYNALAB MD-208 TUNER AMP	EXCLT/BOXED	£1595
DK DESIGN VS.1 SIGNATURE MKIII INTEGRATED	DEM/BOXED	£2450
PASS LABS ALEPH P PRE AMP	EXCLT	£1150
XTC PRE-1 (REMOTE/POW-1) POWER AMP (E3000+)	MINT/BOXED	£1495
TECHNICS A-800 MKII INTEGRATED	EXCLT	£199
MARANTZ MA-700 MONOBLOCS	NOS	£495
MUSIC FIRST SILVER PRE AMP (E3K7)	DEM	£2250
ALCHEMIST FORSETTI 2 BOX PRE RCA/XLR	MINT/BOXED	£495
H-CAT 12-B PRE WITH WTC CONTROL (E2800)	DEM	£1750
H-CAT P-12A PRE AMP (E2500?)	DEM	£1250
ROTEL RB-870BX STEREO/MONO AMP	EXCLT	£175
ADVANTAGE 1200 INTEGRATED AMP	EXCLT/BOXED	£995
ROKSAN S-1 PRE AMP NO PSU	EXCLT	£295

VALVE AMPS

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NAIM CD5X CD PLAYER	MINT/BOXED	£895
LYNGDORF CD-1 CD PLAYER/TRANSPORT	EXCLT/BOXED	£995
DENON DVD-11 UNIVERSAL PLAYER (GOLD)	MINT/BOXED	£895
AUDIO ALCHEMY DDC V3 & PSU (LAST ONE £900)	NEW OLD STOCK	£375
PIONEER ELITE MINIDISC (1100) URUSHI CHEEKS	MINT/BOXED	£350
PIONEER ELITE LASER DISC/CD PLAYER	VGC	£295
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V.T.L. MODIFIED MARANTZ SA7001 (SUPERB £1300)	BRAND NEW	£995
TRICHORD GENESIS CD PLAYER	MINT/BOXED	£175
ORELLE CD 100C CD PLAYER	EXCLT	£249
MERIDIAN 200 TRANSPORT	EXCLT	£795
MERIDIAN 602/606 TRANSPORT/DAC	EXCLT	£995
IMERGE S-2000 MKII 160 GB SERVER	EXCLT/BOXED	£895

PEPUL TECH P-3A MOODWRIGHT SIG II	BRAND NEW	£795
PROCEED PDT (LEVINSON) TRANSPORT	MINT/BOXED	£495
CHORD 1500C DAC/DIGITAL PRE AMP (E6800)	MINT/BOXED	£2750
THEIA DSP/PRO GEN III XLR/RCOA OUT	MINT/BOXED	£795
KRELL MDC-1 TRANSPORT/SBP-64 DAC/PSU (E15K7)	EXCLT	£2995
ACQUAPHASE DP-90 TRANSPORT (E8000?)	EXCLT	£2750
SONY MDS 920 MINIDISC PLAYER	EXCLT	£199
THEIA DATA UNIVERSAL CD/LD PLAYER (RARE!)	EXCLT/BOXED	£395
THEIA PRO GEN III DAC GLASS & BALANCED OPTIONS	EXCLT/BOXED	£795
TRICHORD DIGITAL TURNTABLE	EXCLT	£395
DENON DVD 2800 MK11 (GOLD £800?)	MINT/BOXED	£350
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LAST WORD

OFF THE LEASH!

KEN KESSLER TELLS IT LIKE IT IS...

Does some vintage gear actually sound better than brand new kit?

Ken Kessler thinks so...



Referring 'old over new' is almost a Monty-Python-routine-that-never-happened. You know the drill: 'Back in my day, X' was better than anything you kids have now', *ad nauseum*. Whether it's music, the NHS, the post – there are always elements of truth on both sides. To wit: yes, the trains ran with greater punctuality 35 years ago, but, damn, those carriages were uncomfortable, and usually too hot or too cold.

When it comes to hi-fi, it's a stance that fuels many enthusiasts to heights of near-apoplexy. To engage in such debates with worthy opponents, nothing beats attending an audio jumble sale, like those sponsored by our own John Howes. Take a few hundred audiophiles buying, selling and trading vintage gear, and even the 40-year-olds sound like granddads bemoaning the demise of old-school, warm beer pubs, pre-gastro.

I'm guiltier than most, having built a career on anachrophilia. I was reminded of this by Symmetry's Nigel Crump.

VINTAGE, ER, DIGITAL

Nigel had just located a rare Stax D/A converter, so old it was limited to 48k. And still, he told me, it blew away most modern stuff with 16-bit, 'red book' CDs. I found this wildly amusing, because it means

we're now at a stage where even *digital* hardware has a vintage element! Holy cow! Will we soon be getting teary-eyed about laser discs? Anyway, we got to talking, and I remembered a challenge I maintain to this day. Nigel, however, being a distributor, pointed out that raising the argument that old is better than new wins no friends in the audio industry because every part of it, from manufacturer to retailer to reviewer, exists to sell *new* equipment. Telling people to stick with aged gear would be like advising car-buyers to forego the government's £2000 rebate for junkers.

A CHALLENGE

As we discussed it further, we came to the same conclusions: the true high-end products of today *do* deliver performance unimaginable even 20

years ago. The low-end and middle markets are the most vulnerable to being vanquished by veterans. And the worst culprits of 'new losing to old' are probably loudspeakers.

Such observations open massive cans of worms, enough to fuel many a website. But we returned to a perfect example of old-vs-new that throws down a gauntlet.

Using like-vs-like prices, I maintain that a Thorens TD-150 turntable with SME 3009 arm and an Ortofon SPU cartridge, fed into an Audio Research SP-6 or Dynaco PAS3 preamp, driving a Radford STA-25 power amp and LS3/5As, AR-2Axs, small

dual-concentric Tannoys or, to be truly cruel, Quad ESL 57s, will deliver a greater musical experience than any similar current system up to, oh, £5000. If there was an independent hi-fi show worth attending in the UK, I'd even volunteer to set up the shoot-out from my own collection. (But that's a topic for another day.)

EVER THE SCIENTIST...

When I ran this past Editor Miller, he responded – as is his wont – with the sort of clarity that marks a scientist from a mere Piscean scribbler such as I.

While he agreed with Nigel that dwelling in the past and promoting old-kit-via-eBay over a visit to your local hi-fi emporium for something new is a dangerous thing to do in a commercial sense, he felt there was more to it than meets the eye. Or ear. He used my recent life-choice to illustrate this.

Knowing that I put my name down for an Audio Research REF 5 when funds allow, he asked, like a true Freudian, what does that say about my argument? 'Well,' I admitted, feeling like a TV lawyer opposing Rumpole, 'the Audio Research REF 5 is the best preamp I've ever heard.' Pause. 'Even better than the old stuff.'

'Which supports what you and Nigel said about the current high-end outperforming vintage kit. But what else does it say?'

That drew a blank.

'Think about it, Ken. What is the REF 5?'

'An all-valve line stage.'

'Exactly. So in its own way, it, too, is vintage. The REF 5, aside from operational niceties outside of the signal path, like the florescent display and the remote control, employs older technology. It may be refined beyond the preamps of the past, but it still proves your point.'

Paul signed off to go and measure the latest streamer or some such. For me, a litany of choice illustrations rolled past like prizes on a conveyor belt. The old STAX F81 is still the speaker I most covet, yet my much-loved, just-launched MartinLogan Summit Xes are electrostatics – like the F81s. I listen to LS3/5As every day of my life, and my fave CD player was manufactured when Maggie was in No 10.

Call me 'gramps,' I guess. ☺

'Arguing that old is better than new wins no friends in the audio industry'

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