

# hi-fi news

& Record Review

World exclusive

## BLACK & WHITE

B&W's 801 D4 flagship is a clear-cut winner!

65  
YEARS  
of Product  
Reviews &  
Features



**Jadis Diapason Luxe**  
Glittering Gallic tube amp

**Cambridge Evo 150**  
All-in-one streaming solution

**Roksan Attessa**  
New deck with a twist



**Plus...**

Exposure, Chord,  
MartinLogan &  
SoundSmith



VINYL  
ICON

**VINTAGE**  
**Sony CDP-502ESII**  
Classic CD spinner celebrated

**INVESTIGATION**  
**All that jazz**  
Our foundation guide  
to building a jazz library

• **OPINION** 12 pages of letters & views • **VINYL RELEASE** Metallica's '91 *The Black Album* on 180g LP  
• **CLASSICAL COMPANION** Riccardo Muti, Conductor • **STUDIO TOURS** SARM Music Village, London  
• **FROM THE VAULT** Krell KSA-50 Class A power amp • **READERS' CLASSIFIEDS** Hi-Fi bargains galore

UK £5.50 Aus \$13.99





# Rockport Technologies

## Atrial II

*Cutting edge, stand-out products  
by virtue of extraordinary, relevant  
applied technology and execution.*

£30,995



Distributed in the UK and Ireland by:



[www.padood.com](http://www.padood.com) | [info@padood.com](mailto:info@padood.com)  
+44 (0)1223 653199 | 9 Hills Road, Cambridge, CB2 1GE



# CONTENTS

NOVEMBER 21

## VINYL & RECORD REVIEWS

- 78 Classical Companion**  
This month Peter Quantrill brings together the key recordings of Italian conductor Riccardo Muti
- 80 Vinyl Release**  
*The Black Album* saw Metallica hone their metal in a manner that would make them arena mainstays. Steve Sutherland hears the 180g LP
- 82 Vinyl Icon**  
Did this LP *really* re-invent Prog rock for the 20th century? Johnny Sharp has the story of the recording of Radiohead's 1997 LP *OK Computer*
- 88 In The Studio**  
From Bob Marley to Band Aid, Stiff to ZTT... SARM has pioneered new studio technology for 40+ years. Steve Sutherland tells the tale
- 92 Music Reviews**  
Our selection of audiophile LP and hi-res downloads reviewed by our specialists alongside the latest rock, jazz and classical albums

## DEFINITIVE PRODUCT REVIEWS

- 40 Bowers & Wilkins 801 D4**  
Our cover stars represent the most potent model so far in the pedigree 800 Series Diamond range, but can their sound reach a new peak?



**ABOVE:** MartinLogan's ElectroMotion ESL X loudspeaker sports a CLS XStat panel, p60



- 48 Jadis Diapason Luxe**  
Company bids to widen its appeal still further with a low-power artisan tube amp priced to excite
- 52 Cambridge Audio Evo 150**  
As the company unveils a brace of just-add-speakers streaming solutions packing Hypex Ncore Class D amps, we hear the lineup's premium model
- 56 Exposure 3510**  
Looking for hassle-free hi-fi? A splash of trickle-down tech and traditional looks as company hopes integrated will prove that 'old school' still rocks
- 60 MartinLogan ElectroMotion ESL X**  
A heady dose of the electrostatic high-life at an attractive price as we enjoy the room-filling majesty of the US company's ElectroMotion flagship
- 64 Roksan Attesa**  
Uni-pivot arm, Dana pick-up, inbuilt phono stage, potential to upgrade – meet the company's new LP spinner
- 68 Soundsmith Zephyr MIMC Star**  
Low-output moving-iron/fixed-coil cartridge is a 'delightfully quirky' pick-up all LP addicts should hear
- 72 Chord Electronics 2go/2yu**  
Why this portable pairing of streamer and digital interface has real appeal, and not only for owners of Chord kit

## VINTAGE

- 120 Vintage Review**  
How does the classic kit of yesteryear shape up today? We test a mid-'80s CD player – the Sony CDP-502ESII
- 126 From The Vault**  
We rewind to *HFN* Aug '83 where John Atkinson is pondering Class A topology with Krell's KSA-50 amp

## NEWS AND OPINION

- 21 Welcome**  
A message from the editor
- 22 News**  
Technics takes wraps of direct-drive SL-1210G deck, CD drive/ripper unveiled by HiFi Rose, Fyne Audio expands its 'SP' speaker range, new standmount for Focal's K2 series
- 24 Jazz For Starters**  
Just beginning your journey into jazz or seeking to add to a collection of landmark recordings? Steve Harris suggests some crucial choice cuts
- 30 Under The Covers**  
Johnny Sharp tells the story behind the making of some of the world's most famous record sleeves, with David Bowie's 1973 LP *Aladdin Sane*
- 103 Opinion**  
Insider comment on the hot audio topics of the day from Barry Fox, Jim Lesurf, Adam Smith, Steve Harris and, writing from the US, Barry Willis
- 112 Sound Off**  
Living with Lowther speakers, reader hails most stylish hi-fi ever made, modern and '70s amps compared, seeking a low-cost Koetsu substitute
- 138 Off The Leash**  
Felt, rubber, leather, glass... this month sees Ken Kessler focus his attention on turntable mats. The best fun you'll have under £15?



**ABOVE:** A carefully curated sample of jazz classics as we set you on the path to building a library of jazz recordings. See p24

SUBSCRIBE!  
**hi-fi**news  
Save 75% on digital with a print subscription See p134



Hi-Res.grade Network Audio Components

# *fi data*

Network Audio Server

The ultimate in audio quality, from a brand that lives up to the meaning of its name : “reliability”

Today's high-resolution audio files deliver quality that approaches that of master recordings by incorporating an enormous amount of data. With the debut of network audio, consumers quickly have become familiar with the immersive experience made possible by that level of quality. Introducing fidata, a family of network audio components that lives up to the meaning of its name: “reliability.”

Welcome to the world of ultimate sound.



HFAS1-XS20U



HFAS1-S10U

MADE IN JAPAN

[www.selectaudio.co.uk](http://www.selectaudio.co.uk) Tel +44 (0)1900 601954

**selectaudio**®  
exquisite audio products





# CrystalConnect

— by Crystal Cable —

*Art Series Monet*



*Mastering the Art of Music*



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



Distributed in the UK and Ireland by Padood  
[www.padood.com](http://www.padood.com) | [info@padood.com](mailto:info@padood.com)  
+44 (0)1223 653199 | 20 Station Road, Cambridge CB1 2JD



# THORENS®

## Introducing **Thorens** new range of turntables.

Our first turntable was manufactured 92 years ago. Since then, Thorens has created some of the best known turntables within our hifi community, used in countless studios world-wide and enjoyed by ambitious music lovers everywhere.

Thorens has always been a pioneer of Turntable technology. Our new range has been 2 years in development. Remembering and paying homage to the history and tradition of our most famous turntables, we are proud to bring you the new Thorens TD range.

**TD1601**   £3000



**Thorens new TD 1601 combines all the benefits of the TD1600 and an electric tonearm lift and a contactless auto shut off.**

Special features include:

- Stabilised sub chassis on three conical springs
- Polished precision belt
- Two part platter
- Adjustable belt tension
- Electrical controlled motor
- Electrical lift
- Contactless shut off
- Balanced (XLR) and unbalanced (RCA) output
- Thorens precision tonearm TP 92 (9")





**TD 201** £450



**TD 202** £600



**TD402DD** £800



**TD102A** £700



**TD1600** £2500

The original TD 124 was introduced in 1957 and there remains a dedicated and loyal fan base to this day.

The new TD 124 DD has been completely re-developed with innovative technologies. The purist design and basic construction are based on the original, but the height-adjustable aluminium chassis now rests on vibration-damping rubber elements. A new "High Precision" Direct Drive replaces the previous belt-drive.



**"The look is 100% correct, and the sound is better than I recall of the original"**

Ken Kessler - hi-finews



**TD124/SPU 124** £8000/£2000

This provides powerful torque, allows precise speed control, and keeps unwanted vibrations from the drive away from the platter. A brand new tonearm, the TP 124 can be precisely adjusted in all parameters to the cartridge of choice and features an innovative anti-skating solution with a ruby bearing and a patented electric tonearm lift to facilitate gentle placement and removal of the stylus. Thorens has paid attention to every detail when developing the new TD 124 DD to ensure that it meets your highest aspirations in sound performance.

AUDIO SYSTEMS  
*Signature*

Distributed by Signature Audio Systems,

**T: 01959 569842 M: 07738 – 007776**

or by e-mail to: [info@signaturesystems.co.uk](mailto:info@signaturesystems.co.uk) web: [www.thorens.com](http://www.thorens.com)





VIVID audio®

# Introducing the new baby of the Kaya Range, the S12.

"...it is easily the best compact floorstander I've heard in ages and competes with the best speakers at its price regardless of size."

- theear.net

"...this is one of the best monitors in the market."

- Techweek & KAYA S12

"the Kaya S12 is one of the best monitors I have ever heard."

- Audio & Cinema em Casa

## Contact your nearest Vivid Audio Dealer for immediate demonstration

ART + SOUND  
95 Delamere Road  
Ealing, London  
W5 3JP  
Call: 020 3488 6261  
[www.artandsound.co.uk](http://www.artandsound.co.uk)

Analogue Seduction  
The Manor House  
6 Manor View, Whittlesey  
Peterborough, Cambridgeshire  
PE7 1TF  
Call: 01733 350 878  
[www.analogueseduction.net](http://www.analogueseduction.net)

Glasgow Audio  
88 Great Western Road  
Glasgow, G4 9AD  
Scotland  
Call: 0141 332 4707  
[www.glasgowaudio.com](http://www.glasgowaudio.com)

Audio Lounge  
138 Wigmore Street  
London, W1U 3SG  
Call: 020 7487 4080  
[www.audiolounge.co.uk](http://www.audiolounge.co.uk)

Holburn HiFi  
441 Holburn Street  
Aberdeen, AB10 7GU  
Scotland  
Call: 0141 332 4707  
[www.holburnhifi.co.uk](http://www.holburnhifi.co.uk)

6 Audio  
6 Star Road, Partridge Green  
West Sussex, RH13 8RA  
Call: 01403 713 125  
[www.sixaudio.co.uk](http://www.sixaudio.co.uk)



**Vivid Audio UK**  
Call: 07515 127049

**[www.vividaudio.com](http://www.vividaudio.com)**  
[vividaudiouksales@gmail.com](mailto:vividaudiouksales@gmail.com)



The sound and vision of Scandinavia



## Elegant Design Inside and Out





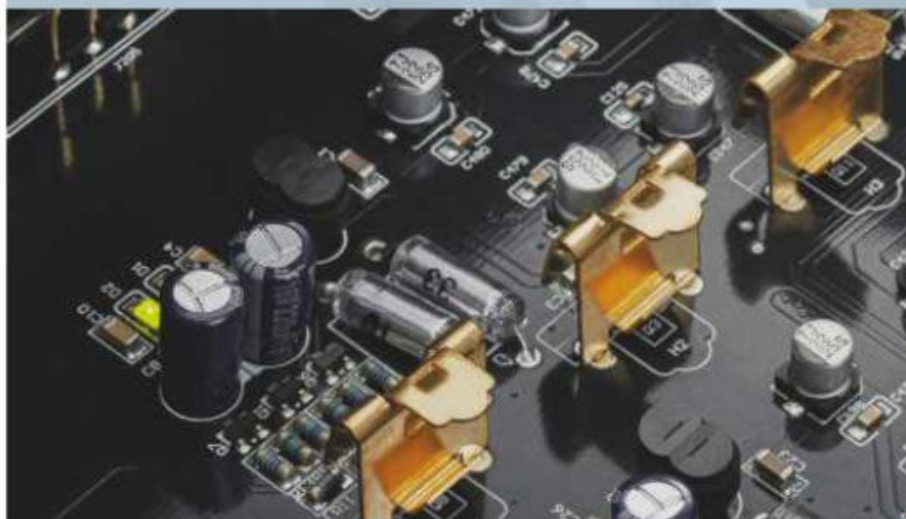
### Elegant Design Inside and Out

Primare is known for the elegant exterior design of its products, which reflects the artfully crafted electrical designs based on our practical design approach allowing every component to work sympathetically together as a cohesive whole.

Power supply designs are custom crafted to best serve the unique needs of each component, whether it be switching or linear, based on toroidal or laminated core transformers, so that all elements of any design operate effortlessly.



Signal paths are kept as short and as simple as possible, with gain preferably in one device, and utilizing four-layer circuit boards to more easily and effectively design circuitry with the most direct connection of components to reduce distortion and eliminate noise.



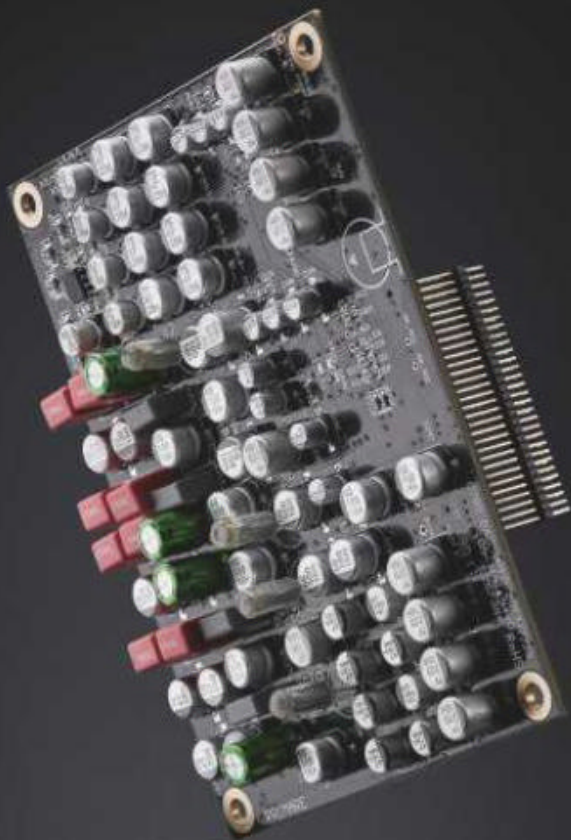
Non-essential signal carrying wires are eliminated, exemplified by the use of surface mount components when possible and by directly connecting the output stage to the speaker binding posts free of wires or solder to interfere with power delivery.







Modular design is offered in as many of our products as possible, providing the power to choose just the right features to meet any system needs, with the reassurance that as technology evolves and changes so too can Primare modular models.



For over thirty years Primare has produced components that embody the Scandinavian design ideal of *lagom* – that sense of not too much or too little, but just right; everything in balance, proportion, and harmony, both inside and out.



► For more details, go to [primare.net](http://primare.net)



# Bowers & Wilkins

## Excellence. Evolved.

### The new 800 Series Diamond.

This is not just another speaker range. This is our benchmark, our icon; the most advanced range of loudspeakers we know how to make. For us, the 800 Series Diamond is everything we know, and everything we are. Listen, and you'll see.

**bowerswilkins.com**



#### Available now at Authorised Retailers

**Acoustica**

Chester  
acoustica.co.uk

**Analogue Seduction**

Peterborough  
analogueseduction.net

**Audio Republic**

Leeds  
audiorepublic.co.uk

**Audio T**

Bristol  
audiot.co.uk

**Audio T**

Southampton  
audiot.co.uk

**Audio Venue**

Ealing  
audiovenue.co.uk

**Billy Vee**

Lewisham  
billyvee.co.uk

**Cloney Audio**

Dublin  
cloneyaudio.com

**Grahams Hi-Fi**

Canonbury Rd, London  
grahams.co.uk

**Frank Harvey  
Hi-Fi Excellence**

Coventry  
hifix.co.uk

**Hi-Fi Corner**

Falkirk  
hificorner.co.uk

**Hi-Fi Corner**

Edinburgh  
hificorner.co.uk

**Loud & Clear**

Glasgow  
loud-clear.co.uk

**Martins Hi-Fi**

Norwich  
martinshifi.co.uk

**Nintronics**

Welwyn Garden City  
nintronics.co.uk

**Peter Tyson**

Newcastle  
petertyson.co.uk

**Peter Tyson**

Carlisle  
petertyson.co.uk

**Robert Ritchie**

Montrose  
robertritchie-hifi.com

**Robert Taussig**

Blanford St, London  
roberttaussig.co.uk

**Soundcraft Hi-Fi**

Kent  
soundcraft-hifi.com

**The Audio Room**

Hull  
theaudiroom.co.uk

**Senso Systems**

Truro  
sensosystems.co.uk

**Sevenoaks  
Sound & Vision**

Sevenoaks  
ssav.com

**Sevenoaks  
Sound & Vision**

Chelsea  
ssav.com

**The Sound  
Organisation**

York  
soundorg.co.uk

**Soundstage**

Barnet  
soundstage.uk.com

**Sonority Design**

West Midlands  
sonoritydesign.co.uk







## Stream music as never heard before.

The new Anszuz PowerSwitches take an unprecedented approach to tackle the issue of World Wide Web noise suppression. They are all equipped with Anszuz's innovative grounding circuitry that cancels out noise disturbances caused by devices such as computers, routers, switches, etc., thus providing audio data as clean and low noise as possible before it reaches your streamer. Partnered with Anszuz Digitalz LAN cables, Anszuz PowerSwitches are the most critical part of a streaming system.

Please contact your Anszuz Acoustics dealer to hear how neutral and transparent streaming music can be and get ready to be amazed.

 **AUDITORIUM  
HIFI**  
[auditoriumhifi.co.uk](http://auditoriumhifi.co.uk)

### DEALERS

Kronos Audio Visual  
[kronosav.com](http://kronosav.com)

Oxford Audio Consultants  
[oxfordaudio.co.uk](http://oxfordaudio.co.uk)

Pythagoras Audio  
[pythagorasaudio.co.uk](http://pythagorasaudio.co.uk)

True Path Audio  
[truepathaudio.co.uk](http://truepathaudio.co.uk)



background image by Markus Spiske on Unsplash



Wireless Fidelity  
Has a New Champion





also for balanced wired connection

### **Legend 40 Silverback:**

“most impressive of all is this wireless speaker’s compelling sound, which majors on resolution, bass power and a fine grasp of rhythm.”





The Expert Imaging & Sound Association of as many as sixty specialist magazines from around the world has honoured System Audio with its Best Wireless Speaker Award two years running! Located at Roskilde, the music city of Denmark, System Audio has received more than 150 awards for sound, design and innovation since 1984.



also for balanced wired connection

### **Legend 5 Silverback:**

“a beautifully elegant, and fine-sounding, wire-free music solution.”

01423 358 846 [karma-av.co.uk](http://karma-av.co.uk)

**karma**  
audio - visual



“

# OMINOUS & AWESOME

Hi-Fi News • Oct 2021





**Engström ERIC Encore** • Distributed by **Boyer Audio**

**Official UK Launch** • Oct 1st & 2nd • KJ West One

More info at [\*\*boyeraudio.com/news\*\*](http://boyeraudio.com/news)



# OOR by **Ferrum**

a star is born



## Ferrum **OOR**, the only headphone amplifier with a soul

We tasked our most talented engineer with an impossible goal: create the perfect headphone amplifier. The result is an alchemical masterstroke with part of his soul forged right into it, and it blew us away. OOR is a ground-up design without precedent, created from a profound exploration of analogue audio in its purest form. In true Ferrum style, OOR marries understated looks with sophisticated power delivery and amplifier technologies, delivering ultra-low distortion, huge dynamics and unrivaled detail. For those who want to go even further in unleashing unheard musicality, OOR is, of course, designed to pair perfectly with the HYPPOS Hybrid Power System.



Ferrum **OOR** Headphone Amplifier

- Truly balanced design • > 8W into 60Ω (bal. mode) output power •
- headphone output impedance < 0,3 Ω • 21,7 x 20,6 x 5,0 cm •



Ferrum **HYPPOS** Hybrid Power System

- Linear/switching PSU design • 110 ~ 240V AC in •
- 5 ~ 30V DC out • 6A/80W • 21,7 x 20,6 x 5,0 cm •

**30-day Free Trial • Free Support • Free Extended 3-year Warranty**

More info on [www.ferrum.audio](http://www.ferrum.audio)

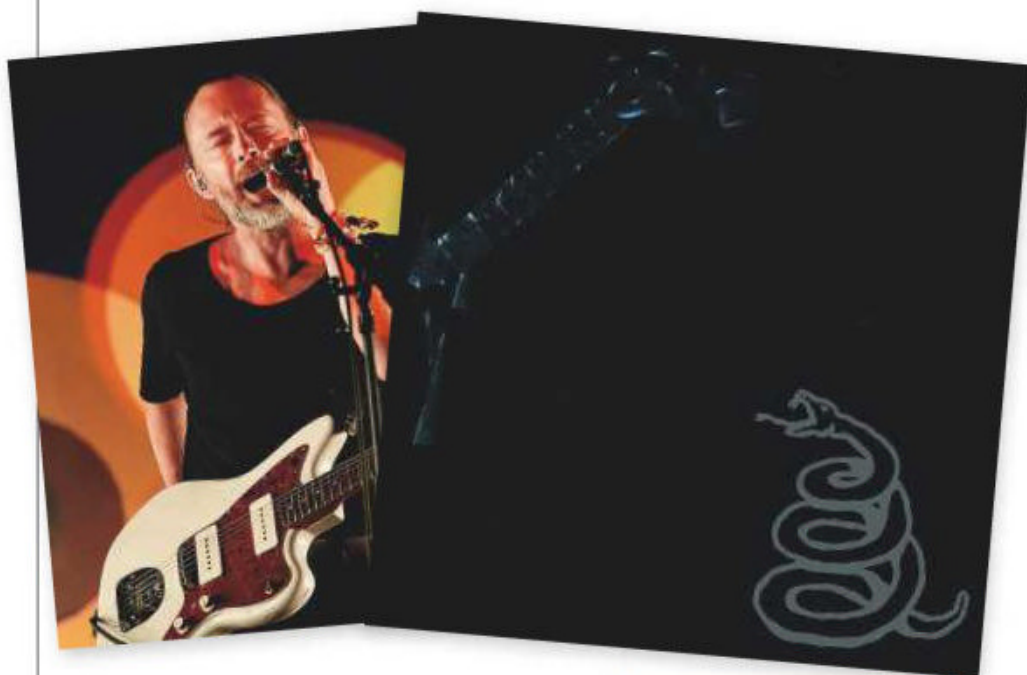




**ABOVE:** Instantly recognisable despite decades of subtle evolution – Exposure's new 3510 integrated proves that old school still rocks, p56



**ABOVE:** With custom streamer, DAC, phono preamp and power amps on board, Cambridge Audio's Evo 150 is a true pocket rocket. See p52



**MUSIC:** Radiohead take control with their third release, *OK Computer*, our Vinyl Icon (p82), while Steve Sutherland pitches into Metallica's *The Black Album* now available on 180g vinyl (p80)

**RIGHT:** *Hi-Fi News & RR* is the UK's representative of EISA's Hi-Fi Expert Group. Editor Paul Miller took over as EISA's President in June 2016



Speakers come and speakers go, but every five or six years the perennial refresh of Bowers & Wilkins' flagship 800 series marks a high point of excitement in the audiophile calendar. Due, in no small part, to 'that which shall not be named' the build-up to launch was more of a slow burn this year and the international press gathering necessarily rather subdued. None of which should detract from the achievements, more remarkable than ever under the circumstances, of B&W's talented and surprisingly varied engineering team.

These latest 'D4' variants of the seven-strong 800 series feature hundreds of detail improvements together with a handful of new innovations that, once appreciated, immediately provoke the question 'I wonder why no-one had thought of doing that before?'

Such moments are rare in hi-fi but I'll leave you to discover them for yourself throughout our special feature review of the flagship loudspeaker from the flagship series, starting on p40. Here we not only have the world scoop on the 801 D4 (yes, B&W has returned to the old numbering protocol) but also offer a uniquely in-depth comparison of the 'D4' with the outgoing, and *HFN* favourite, 'D3'.



Meanwhile, as live music lifts off once again, many of our readers have enjoyed the 2021 Proms broadcast by the BBC from the Albert Hall. It's reassuring to see some semblance of normality at the world's greatest classical music festival, unlike the eerie 2020 Proms where socially-distanced performers worked

**'Real innovation means "I wonder why that had not been done before?"'**

their socks off into a cavernous, audience-free space.

Closing this issue of *Hi-Fi News* for press coincided with the Last Night of the Proms where Australian tenor Stuart Skelton and Latvian accordionist Ksenija Sidorova joined with Sakari Oramo conducting the BBC Symphony Orchestra and BBC Singers for the climax of the Proms season. No doubt the team at B&W were hoping the traditional *Rule, Britannia!* would ring true for its new 800 series!

**PAUL MILLER GROUP 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



**DAVID PRICE**  
An avid collector of audio treasures, and life-long hi-fi addict, DP lends his ears and experience from analogue to digital



**KEN KESSLER**  
is a long-serving contributor, luxury goods writer and champion for the renaissance in valves and 'vintage hi-fi'



**MARK CRAVEN**  
Editor of our sister title *Home Cinema Choice*, Mark's passion for music extends from stereo to multichannel and Dolby Atmos



**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



**ANDREW EVERARD**  
has reviewed hi-fi for over 30 years and is still effortlessly enthusiastic about new technology, kit and discovering new music



**STEVE SUTHERLAND**  
Editor of *Hi-Fi Choice*, Steve was at the helm of *NME* through the Britpop years. Steve brings a unique slant to our music features



# Back in black

## TECHNICS' HIGH-END DIRECT-DRIVE LP SPINNER EVOLVES

Technics' range-topping turntable has been reborn in a new 'minimalist' black finish, as the brand continues to target the audiophile community alongside its fervent DJ fanbase. The SL-1210G features the same specification as the previously released silver SL-1200G (which remains on sale), and follows last year's now-sold-out limited edition SL1210GAE, which celebrated the brand's 55th anniversary and debuted the black aesthetic. 'We realised there was high demand for a "regular" black version of this flagship 1200 Series model', says Technics European product manager Frank Balzuweit.

The new deck features an iron-coreless twin rotor/single stator direct-drive motor, cold-drawn magnesium tonearm on a gimbal suspension, and

a vibration-suppressing triple-layer platter – each model is balance-adjusted before leaving the factory. Technics' four-layer 'high-rigidity' chassis is topped by a 10mm aluminium plate and damped via silicone-rubber insulators. The SL-1210G turntable is available in

October, priced £3499.

**Panasonic Corp, Osaka, Japan,**  
**0844 844 3899; [www.technics.com](http://www.technics.com);**  
**<http://panasonic.net>**



## Fynely priced

### FYNE AUDIO'S 'AFFORDABLE' SP SPEAKER

Sporting the coaxial IsoFlare driver technology that has become the manufacturer's calling card since it first arrived in 2017, Fyne Audio's F500SP standmount is the most affordable model in its Special Productions (SP) range – speakers that are all 'handcrafted and handfinished' at its Glasgow factory. It is available now for £1300 in white/black piano gloss, or £1500 in walnut veneer (pictured). The speaker vents its 150mm bass/mid driver (with centrally mounted magnesium dome compression tweeter) via a downfiring port onto its integrated plinth stand – bass extension is a claimed 42Hz and sensitivity 90dB. The crossover and components have trickled down from Fyne's high-spec F700 standmount, while the speaker shares the magnetised grilles and diamond-cut chassis surrounds of its SP siblings. **Fyne Audio Ltd, Lanarkshire, 0141 428 4008; [www.fyneaudio.com](http://www.fyneaudio.com)**

## HI-FI NEWS' NUGGETS

### NEAT COMPACT

Neat Acoustics has launched a fourth loudspeaker to bolster the scope of its existing Strata range. Joining the Ministra, Ekstra and Orkestra, the new Majistra expands on the form factor of the standmount Ministra, using the bass/mid driver and ribbon/AMT tweeter from the top-of-the-range Orkestra. Once again, Neat is employing isobaric bass loading with pairs of its 164mm woofers mounted on the front 'sub-baffle' and behind, inside the cabinet. The Majistra is offered in black oak, satin white, natural oak and American walnut, priced at £3495 per pair. [www.neatacoustics.com](http://www.neatacoustics.com)

### ISOTEK'S NEW HOME

Ahead of its release of new AC power conditioners, IsoTek has announced its collaboration with Fine Sounds UK. From the fourth quarter of 2021, the specialist in 'power optimisation' devices will be distributed alongside McIntosh electronics, Sonus faber speakers and Bassocontinuo racks. <https://isoteksystems.com>

## Rose ripper

### HIFI ROSE ADDS RSA780 CD DRIVE

A recent arrival to the UK, Korean manufacturer HiFi Rose has expanded its product line with a CD player/ripper designed to partner its network audio hardware. The £399 RSA780, pictured here atop the RS250 network streamer, houses its slot-loading drive mech in a 900g silver-finish metal chassis with a rubberised base and high-performance insulators to tackle noise and vibrations. Output is over USB-B (HiFi Rose bundles its own RSA705 cable), and the drive can operate in either Isolation (read-only) or Normal (read/write) modes – the former with iCoupler-style digital isolation technology for optimal playback, the latter designed for use with a PC. Ripping to integrated or attached storage, and playback control, is managed through the Rose app. **Citech Co., Ltd, South Korea, 01235 511166; <https://eng.hifirose.com>;**  
**[www.henleyaudio.co.uk](http://www.henleyaudio.co.uk)**





## Signature sounds

**NODE AUDIO ANNOUNCES SPECIAL EDITION HYLIXA SPEAKER**

Three years after launching its '3D laser-printed' Hylixa loudspeaker, Cambridge-based Node Audio returns with a Signature edition that claims performance improvements as well as an aesthetic 'more compatible with different interior styles'.

Starting at £30,000, the Hylixa now features a solid stainless steel base to improve vibration damping, plus a re-engineered central 'pillar' where extruded aluminium has been replaced by the glass-nylon composite also used for the main enclosure. The

speaker's crossover network has been redesigned with upgraded Mundorf capacitors and further separation of components within its rigid 3D chassis. Also, its binding posts have been repositioned closer to ground level.

As before, the speaker is a three-way, single point-source design, featuring an internal, reverse-mounted 135mm bass/mid driver with 1.6m 'helical' transmission line. Piano gloss or silk finishes are in 'any colour'.

**Node Audio Research, Cambs, 012 2389 5854; [www.node-audio.com](http://www.node-audio.com)**



## Aria for music and film

**FOCAL K2 RANGE EXPANDS WITH NEW STANDMOUNT**

Joining the launched-last-year 936 floorstander in Focal's Aria K2 lineup is a new standmount model, plus a dedicated centre channel speaker for home theatre set-ups. Both the Aria K2 906 (£1200, pictured) and Aria K2 Centre (£749) are manufactured at the company's French facility. They both employ a 165mm 'next-generation' K2 bass/mid driver – an aramid fibre cone that traces its heritage back to JMLab's 1980s-era polykevlar design – plus a 25mm magnesium alloy inverted dome tweeter.

The Ash Grey finish of the speakers' non-parallel MDF cabinets, meanwhile, is borrowed from Focal's Utopia III Evo lineup,

and offset by a leather-effect front panel. A nominal 8ohm impedance and 89dB sensitivity are claimed for the front-ported Aria K2 906, suggesting an easy-going amplifier partner. For mounting, Focal's Aria 900 S stand (£250) is an option. **Focal-JMLab, France, 0845 660 2680; [www.focal.com](http://www.focal.com)**



## Meze flagship 'phones

**ROMANIAN BRAND LAUNCHES 'ELITE' PLANAR MAGNETIC**

Headphone specialist Meze Audio has announced a new flagship model, the £3700 Elite. This is the Romanian company's latest collaboration with manufacturer Rinaro Isodynamic, following 2018's Empyrean design [*HFN* Dec '18].

Once again, the new headphones utilise a custom-made 'Isodynamic Hybrid Array' driver, improved here with a new low-mass Parus diaphragm material, impregnated with spiral and switchback voice coils and sandwiched between neodymium magnets. The headphone's chassis, described

by Meze as 'alien-like', mixes aluminium, carbon fibre and leather materials. The supplied earpad choices are 30mm-deep Alcantara, or a 25mm-deep Alcantara/leather hybrid said to lower bass pressure for a more 'airy' sound signature.

Termination options for its four-pin mini XLR cable are 6.35mm, 3.5mm and XLR. The hand-built Elite is serviceable, with all parts of the chassis easily disassembled. It ships in an alloy case with foam inserts.

**Meze Audio, Romania, 0208 971 3909; [www.mezeaudio.com](http://www.mezeaudio.com)**

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

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

Subject to availability

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

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

Surname.....

Address.....

.....

.....

Postcode.....

Telephone number.....



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

**Just ask!**



# Jazz for starters...



If you'd like to get more jazz on your menu, **Steve Harris** can suggest some essential ingredients, and not just those landmark recordings you may well already own

However you define it – and it's better not to try – the word jazz implies a vast spectrum of music, and an immense body of recordings. So how do you pick just a handful? To narrow it down, I excluded all but a very few vital items from the 1920s, 1930s and early 1940s. So there's no Jelly Roll Morton (even though his 1926 recordings offer superb sonics for the time), no Bix Beiderbecke, no Fats Waller, no Art Tatum, no Django Reinhardt...

But then my favourites from the 1950s filled up the list before I'd done more than scratch the surface. So 1960 became a

natural cut-off point. *Kind Of Blue* is a key recording, but then many people already have it. Indeed, I could have filled the whole list with Miles Davis. Limiting him to one album meant leaving out, for example, the great quintet sessions recorded in 1956, issued by Prestige as *Workin'*, *Steamin'*, *Cookin'* and *Relaxin'*, not to mention *Sketches Of Spain* from 1960.

## RAISING STANDARDS

Where appropriate I've chosen standard albums as issued (avoiding cheap-label knock-offs) rather than compilations or completist editions, because the original

albums will usually be more immediately listenable than a series of rejected takes.

But the other jazz album that everybody has is, of course, Dave Brubeck's *Time Out*. At the end of 2020 came a first chance to hear alternate takes from the *Time Out* sessions, on *Time Outtakes* [Brubeck Editions, BECD20200901]. And in this case it was fascinating to hear how 'Take Five', a tune that seems set in stone, actually evolved during the session.

My picks here are purely subjective and some may be thought eccentric. But if you listen to any of these with a fraction of the pleasure they've given me, I'll be happy.

## JOHN COLTRANE

*Giant Steps* (60th Anniversary Edition)

Atlantic 0349784839

In February 1959, *Cannonball Adderley Quintet In Chicago* (also called *Cannonball & Coltrane*) was released. It's the Miles Davis group without Miles, a brilliant showcase for the two saxophonists. A month later, they were in the studio recording *Kind Of Blue*. But soon after that Coltrane, who'd signed a new contract with Atlantic, began recording his own epochal and stunning *Giant Steps*, with music that's a jubilant exposition of Coltrane's



advanced harmonic concepts. The anniversary edition adds a second disc with eight out-takes, but if this isn't enough for you there's a streaming edition with 35 tracks in all.

## DUKE ELLINGTON

*Never No Lament: The Blanton-Webster Band*

RCA 82876-50857-2 (3CDs)

Ellington's greatness extends from the 'jungle' sound of the 1920s orchestra to the Sacred Music Concerts of his last years. But if you have to home in on one edition of the Ellington Orchestra, it has to be the one named in retrospect for the revolutionary bass of Jimmy Blanton and uniquely sumptuous tenor sax of Ben Webster. On this CD set you get 77 tracks, including so



many that have become jazz standards: 'Take The "A" Train', 'Perdido', 'Chelsea Bridge', 'Concerto For Cootie', 'The "C" Jam Blues', 'I Got It Bad And That Ain't Good'. A treasury.

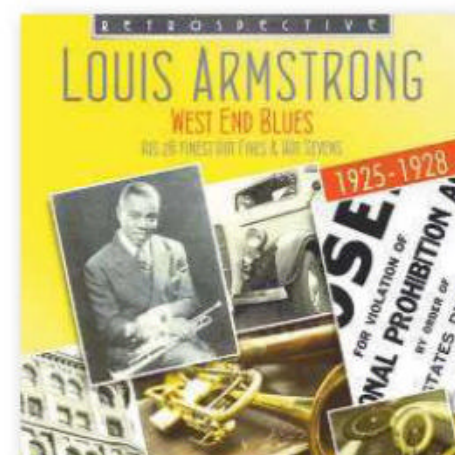
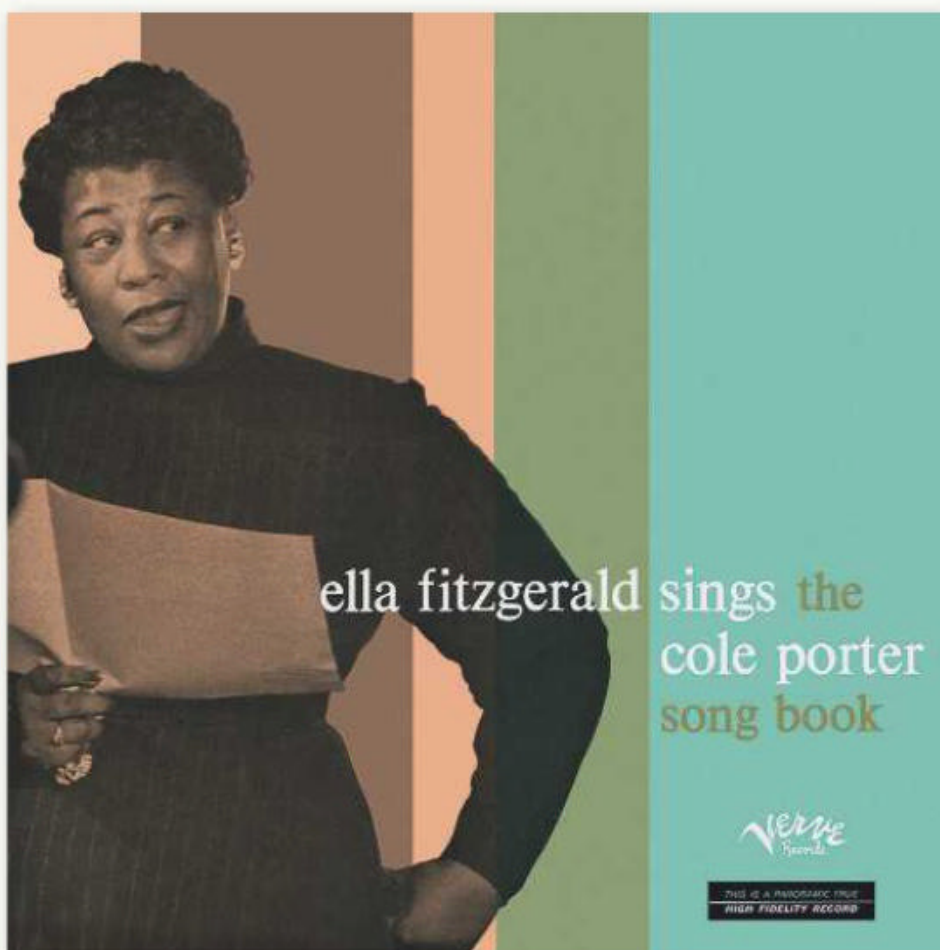


## ELLA FITZGERALD

### Ella Fitzgerald Sings The Cole Porter Songbook

Verve 5372572 (2CDs)

After starting out with Chick Webb's swing-era band, and becoming its leader after Webb's death in 1939, Ella came to fame in the bebop years and was celebrated for her scatting technique. In 1956 the jazz impresario Norman Granz, who was also Ella's friend and manager, launched the Verve label and had her record every Cole Porter song he could find. In what turned out to be only the first of the magnificent Songbook series, she showed how they could and should be done. And there was nothing she couldn't do: the same year brought *Ella And Louis*, with Louis Armstrong and The Oscar Peterson Quartet.



## LOUIS ARMSTRONG

### West End Blues: His 26 Finest Hot Fives & Hot Sevens

Retrospective RTR4129

Armstrong came to Chicago, and the beginning of his fame with The King Oliver band, but then came his supremacy as a soloist leading his own groups. Columbia has the 'official' 4CD set of the complete Hot Fives and Hot Sevens, and there are other offerings. But this is a neat and handy package that does give you all of the classics. If you only know the Armstrong of 'Wonderful World' and 'Hello Dolly', this is a must.

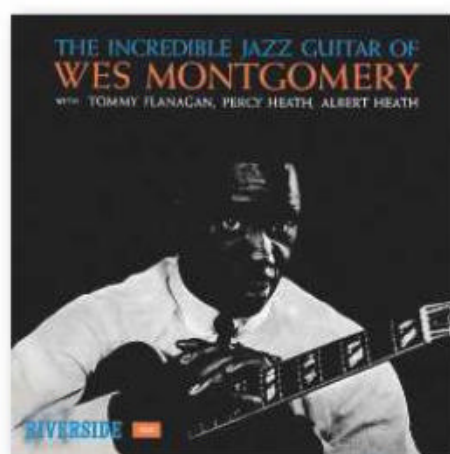


## LESTER YOUNG

### Lester Young With The Oscar Peterson Trio

Verve 314 521 451-2

Why pick Lester Young from the 1950s, when his work in the '30s and '40s is essential? Well, in 1952 he was in great form, stretching out on uptempo swingers including 'Indiana' and 'Tea For Two' with fabulous playing from Peterson. A couple of numbers ('Stardust' and 'I'm Confessin') are less successful, but then you have Lester's sublime duet with Barney Kessel on 'I Can't Get Started' and his beautiful take on 'There Will Never Be Another You'.

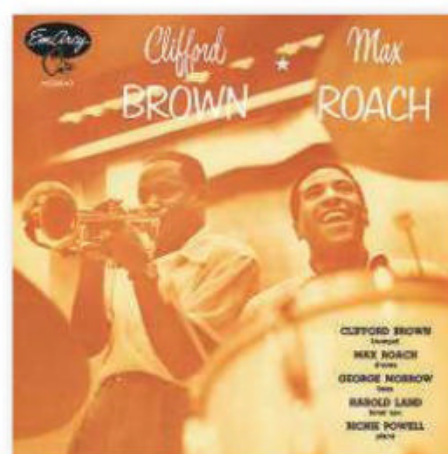


## WES MONTGOMERY

### The Incredible Jazz Guitar Of Wes Montgomery

Riverside RLP 1169, 9320

After an early spell with Lionel Hampton, Wes returned home to Indianapolis, playing small clubs while holding down a day job. By 1960, he'd recorded (on Pacific Jazz) with his brothers Monk and Buddy and others and (on Riverside) with organist Mel Rhyne. But this album was a breakthrough, thanks in part to pianist Tommy Flanagan, who always found exactly the right things to play to complement Wes's guitar. It's as if Wes had finally taken off.



## CLIFFORD BROWN AND MAX ROACH

### Clifford Brown And Max Roach

Emarcy MG-36036

While Roach's drums had been at the centre of early bebop, trumpeter Clifford Brown had toured with Lionel Hampton and Art Blakey. Their quintet's warm, intelligently constructed music took bop in a new direction, still technically brilliant yet accessibly melodic. It thrived until Brown and pianist Richie Powell were killed in a car crash in June 1956. On this 1954 album (with two later tracks that made it a 12in in 1955) Brown was supreme.



## MILES DAVIS

### Birth Of The Cool

Decca 4797297

In 1948, Miles Davis began rehearsing with a seminal group that looked beyond bebop, a nonet that included French horn and tuba as well as the usual jazz instruments. The music was arranged by Gil Evans, who would collaborate with Davis again later on *Porgy And Bess* and *Sketches Of Spain*, Gerry Mulligan who would define West Coast cool with Chet Baker, and John Lewis who would found the Modern Jazz Quartet. Here you can enjoy the original 12 tracks on vinyl. ➡



# inakustik

## PHYSICS NOT VOODOO



"There's a lot of hand-made cable here for the money, making it a reliable bet for that first 'big upgrade'."

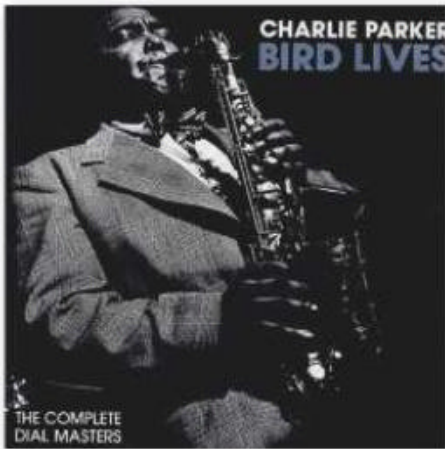
*Paul Miller, Hi Fi News, February 2021*

**karma**  
audio - visual

01423 358 846

karma-av.co.uk





## CHARLIE PARKER

**Bird Lives: The Complete Dial Masters**

NME/Spotlite JU-6-7333 (or CD SPI-CD 109-2)

These tracks have been reissued countless times. But long ago Spotlite's Tony Williams worked directly with Dial producer Ross Russell, to offer his admirable multi-album complete edition. Later, for NME, he compiled this excellent issue of the master takes as a corrective to the awful soundtrack on Clint Eastwood's *Bird* movie. After this, you'll want the rest: the Savoy sessions, the Verve recordings including the strings and the 1950 reunion, *Bird And Diz*. And *Jazz At Massey Hall*.

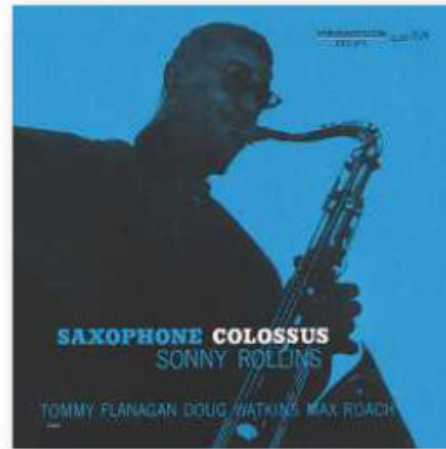


## BILLIE HOLIDAY

**Lady Day: The Complete Billie Holiday On Columbia (1933-1944)**

Sony Music/Columbia Legacy 88697930362

After her first 1933 session with Benny Goodman, Billie Holiday made a long series of sides with pick-up bands led by pianist Teddy Wilson. If the songs were often second-rate, the musicians were the best. These buoyant, seemingly carefree tracks give context to Holiday's great recordings of the 1940s and are the antidote for the tragic ones of her last years. 'They Can't Take That Away From Me', live with the Basie band in 1937, is unmissable.



## SONNY ROLLINS

**Saxophone Colossus**

Milestone 1881052

Tenor saxophonist Sonny Rollins had reached an early career peak when this was recorded in June 1956. He'd worked with Miles Davis, and had replaced Harold Land in the quintet led by Clifford Brown and Max Roach, who is the drummer here. Rollins demonstrates his power, directness and endless invention as he improvises absorbingly and stunningly on what turn out to be not-so-simple themes, the calypso-like 'St Thomas' and 'Moritat' (aka 'Mack The Knife'). A true great.



## SARAH VAUGHAN

**Sarah Vaughan (With Clifford Brown)**

Emarcy MG-36004, 814641-2

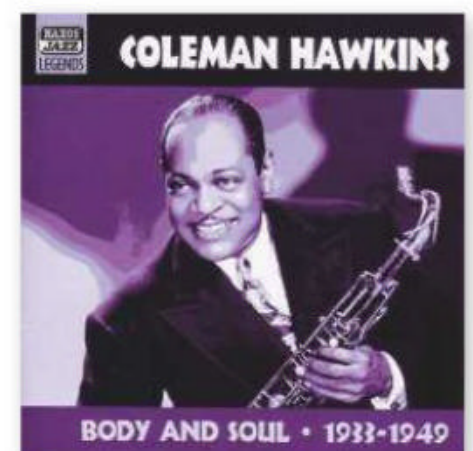
In 1950 Sarah made her self-titled debut album (10in) for Columbia with a group including Miles Davis, and in 1955 Columbia added four orchestral tracks to compile the 12in *Sarah Vaughan In Hi-Fi*. But by then Sarah had changed labels, successfully recording pop for Mercury and jazz for its Emarcy subsidiary. And the 1954 *Sarah Vaughan* is a magical album, apparently her own favourite. If you don't know why she was called 'The Divine One', listen to this.

## THELONIOUS MONK

**Thelonious Alone In San Francisco**

Riverside E1862312

It could have been the 1947-1948 Blue Note sessions with Milt Jackson and Art Blakey, reissued (for example) as *Genius Of Modern Music*, which introduced many of Monk's best-known compositions. Or the Prestige recordings with Sonny Rollins, or *Monk/Trane* with Coltrane or *Brilliant Corners* with Rollins, both from 1957. Or one of Monk's later recordings with his own groups, usually including Charlie Rouse on tenor sax. But this beautiful album from 1959, Monk alone at the piano in an empty hall playing 'Blue Monk', 'Pannonica' and 'Ruby My Dear', has depths of its own and it's one you will always return to.



## COLEMAN HAWKINS

**Body And Soul (1933-1949)**

Naxos 8120532

Just one of many compilations named for and including the all-time great 1939 recording of Hawkins' signature piece. Though marred by surface noise this set, unusually, takes us from 'Jamaica Shout' – one of the fabulous tracks from a 1933 session – to varied performances from the '40s including the miraculous 'How Deep Is Ocean' from 1943. For more, there's the often-reissued *Classic Tenors*, which also has some amazing Lester Young. 🔊



# THE ULTIMATE



 **absolute sounds** ltd.

International Distributors & Consultants of Specialised Hi-End Home Audio & Video Systems

58 Durham Road, London, SW20 0TW T: +44 (0)20 89 71 39 09 F: +44 (0)20 88 79 79 62

[absolutesounds.com](http://absolutesounds.com) [info@absolutesounds.com](mailto:info@absolutesounds.com)





# MUSIC PLAYBACK

For Your Nearest Dealer Please Visit The [Absolute Sounds](#) Website

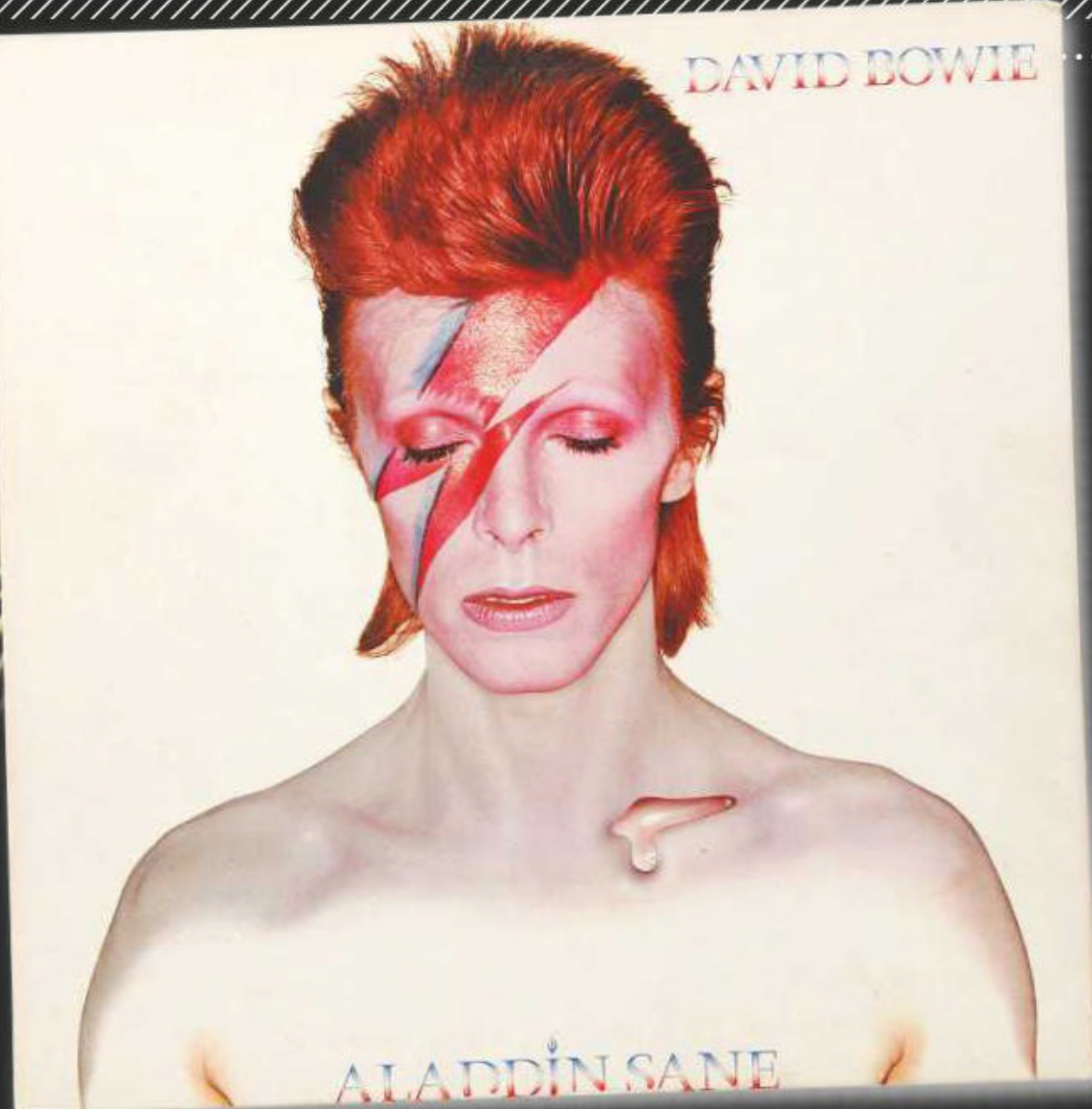


## INVESTIGATION

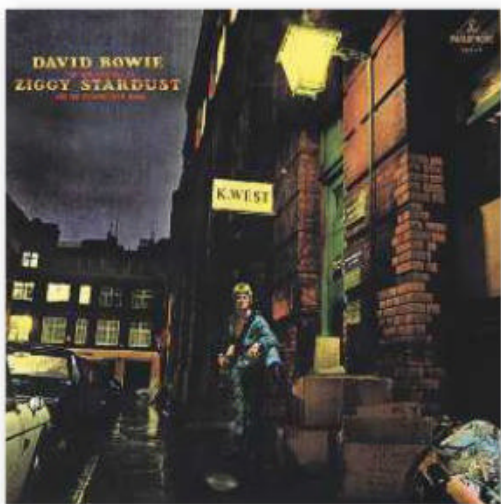


# Under the covers...

Johnny Sharp on the creation of the artwork for David Bowie's early '70s album *Aladdin Sane*



**BELOW:** Bowie pictured on the sleeve of his 1972 album *Ziggy Stardust*. The personas 'Ziggy' and 'Aladdin Sane' are often confused, especially as Bowie performed material from the *Aladdin Sane* LP while under the guise of Ziggy



If you want to go to a fancy dress party as a rock star, there are plenty of different ways that you could 'do' David Bowie. But probably the easiest would be to paint a red, blue and silver lightning flash over your right eye. Kapow! Instant Bowie. Fancy paying tribute to the great man on your Facebook profile? A lightning flash should do the trick. You might even get away without dying your hair red or growing a mullet.

### DRESSED TO IMPRESS

Throughout the history of popular music, has there ever been an artist more associated with shape-shifting switches in image than Bowie?

From the post-hippie eccentric resplendent in a dress on the cover of *The Man Who Sold The World* through Ziggy Stardust's pre-apocalyptic sci-fi rock star to Halloween Jack, The Soul Man and the Thin White Duke, Bowie's personae just kept on evolving.

But while other albums are more acclaimed and other periods in his career more celebrated, the front cover of *Aladdin Sane* established a look for Bowie that has become arguably more iconic than any of his other arresting visual constructs.

Ironically, though, outside the Bowie cognoscenti, the image of *Aladdin Sane* is often confused with that of his predecessor among the great man's cast of characters, many a harassed picture editor having slapped in the sleeve photo with the caption 'David Bowie as Ziggy Stardust'.

To be fair, they are closely related. As Bowie plotted his exit route from the Ziggy Stardust avatar that had launched his career into the stratosphere but which, he felt, was also threatening to restrict him creatively, he suggested publicly that his next album would be *Ziggy Goes To America*. He said later, 'I was trying to move into the next area – but using a rather pale imitation of Ziggy as a secondary device'.

Indeed, the lines between Ziggy and *Aladdin* were pretty blurred, both aesthetically and historically.

In his head Bowie seems to have embraced the latter as early as the 20th of January 1973, soon after he'd penned a track entitled 'Aladdin Sane (1913-1938-197?)' on a week-long voyage by cruise ship back from the US. And he looked distinctly Aladdin-ish, wearing make-up and a single chandelier-like earring.

### WHO WILL LOVE ALADDIN?

Contrary to the now widespread assumption that every artistic move

Bowie made was carefully planned and backed by a slick conceptual marketing strategy, when *Aladdin Sane* was released in April 1973, he was still midway through The

Ziggy Stardust Tour, and still had to play 59 dates on the British leg.

It was only at the end of that tour, on a famous night at Hammersmith Odeon in July, that he shocked fans by announcing that this would be 'the last show we'll ever do'. He was heralding the end of Ziggy, although many fans feared it meant the end of Bowie's career.

Their confusion was surely compounded because by that point,

“The National Panasonic logo inspired the zigzag”





the *Aladdin Sane* LP had long since peaked at the top of the album charts, and its first two singles, 'The Jean Genie' and 'Drive-In Saturday', had made the UK top three.

It soon became clear that although Ziggy's screwed up eyes and screwed down hairdo were now history, Bowie was anything but finished, and indeed the look achieved on the *Aladdin Sane* sleeve would endure more powerfully than any other. His face is split in two, as if to denote a half-man, half-supernatural being, by that red and blue lightning streak. He is looking down, as if despondent or waking from some sort of hibernation, while a shiny, metallic airbrushed tear has dripped onto Bowie's unclothed collar bone below.

'An electric kind of thing', Bowie later explained to *Rolling Stone* magazine. 'Instead of, like, the flame of a lamp, I thought he would probably be cracked by lightning. Sort of an obvious-type thing, as he was sort of an electric boy.'

'But the teardrop was Brian Duffy's, an English artist-photographer. He put that on afterward, just popped it in there.

I thought it rather sweet.' In fact it was airbrushing specialist Philip Castle who added the teardrop, also lending a silvery effect to the subject's already milky-white skin.

### FLASH OF INSPIRATION

But that's not to detract credit from Duffy, the former fashion photographer who played a key role in firming up the visual elements. Duffy, who died in 2010, has said he believes that Bowie took



**TOP:** Bowie pictured in the early '70s with mullet hairstyle and (left) front sleeve of the original LP

**ABOVE:** Rykodisc publicity photo shows the singer in early Ziggy guise (left), inner sleeve with zigzag motif and printed lyrics (top), inner gatefold image with Bowie in silver leotard (top right), label of original UK release (above) and early '70s shot of Bowie with red hair

**LEFT:** Could Bowie ever put his *Aladdin Sane* persona behind him? The singer in an EMI press shot from 1990

inspiration for the flash from the ring Elvis used to wear with the 'TCB' acronym (standing for 'Taking Care of Business'). However, the zigzag was further inspired by a humble domestic appliance Duffy and make-up artist Pierre LaRoche had seen lying around in the photography studio. 'It was the trademark [logo] for National Panasonic – a red and blue zigzag that I took from a rice cooker', Duffy recalled in 2007.

'I drew the zigzag onto his face...' Duffy's studio manager, Francis Newman, elucidated further when talking to *AnOther Magazine*: 'Pierre started to apply this tiny little flash on his face and when Duffy saw it he said, "No, not f\*\*\*\*\*g like that, like this". He literally drew it right across his face and said to Pierre, "Now, fill that in". It then took Pierre about an hour to apply properly. The red flash is so shiny because it was lipstick.'

### SILVER LINING

Other factors at work in this look and many others of Bowie's around this time came from his fascination with Japanese Kabuki theatre, which was a big inspiration for the fashion designer Kansai Yamamoto, who worked with Bowie on many of his Ziggy costumes, such as





**PMC**<sup>®</sup>

# NOTHING BUT MUSIC

## factfenestria

Introducing PMC's most beautifully transparent **ATL**<sup>™</sup> loudspeaker yet, where engineering defines and complements the aesthetics. Featuring cutting-edge cabinet and driver design, PMC's aerodynamic **Laminair**<sup>™</sup> venting and literally groundbreaking vibration cancelling technology, **fenestria** eliminates all unwanted colouration, leaving nothing but music.



*"It's a striking piece of engineering, and delivers speed and detail, along with exceptional soundstaging and an involving effortless listen."*  
**HiFi News, June '21**

Book a demonstration to hear your favourite music.  
**See: [www.pmc-speakers.com/fenestria](http://www.pmc-speakers.com/fenestria)**



**fenestria** in Tiger ebony





asymmetrical leotards, a silver example of which Bowie models on the gatefold of *Aladdin Sane*.

The photo that ended up being chosen was one from a contact sheet, some of whose shots see Bowie looking directly at the camera and some in profile. The one used turned out to be the only one in which he was looking down.

## THE COLOURS OF MONEY

For all that, the vibrant shades that shone out from record sleeves actually had a lot to do with the power games of Tony DeFries, Bowie's manager. DeFries was keen to make the record company take his client seriously, and to that end, he insisted the cover image be produced with an unprecedented seven-colour printing system, as opposed to the usual four. This, he argued, would optimise its visual impact on record shelves.

'I was looking for an iconic cover image and artwork that would help me to persuade RCA that Bowie was sufficiently important to

warrant megastar treatment and funding', Tony Defries explained. 'Tony realised that, in order to get the record companies really going, you had to get them up to their neck in debt, which was, of course, a masterstroke', said Duffy in 2009. 'If it cost 50 quid... well, so what one

way or the other. If it cost £5000, then the record company were now having to pay attention.

'The photograph would be a dye transfer, while to get the colour

transparency onto paper at further outrageous expense, plates were ordered from Switzerland. And typesetting for the coloured name and title, [in Cristal font, typography nerds] was by Conways – again the most expensive,' Duffy added.

The result was reputed to have been, at the time, the most costly cover in pop history. But if you're

“You had to get the record label up to its neck in debt”

**TOP LEFT:** In 1983 came a movie of Bowie's last appearance as Ziggy Stardust, in July 1973

**TOP:** Bowie on stage at The Rainbow Theatre in summer 1972

**ABOVE:** Original press ad from Sept 1973

**ABOVE LEFT:** Bowie played all the songs from *Aladdin Sane* during his 1973 tour, except 'Lady Grinning Soul'

**RIGHT:** Brian Duffy in a 1968 self-portrait

## THE LIFE OF BRIAN DUFFY

By the time Brian Duffy came to photograph David Bowie, he was already no stranger to capturing icons of popular culture on camera, having photographed the likes of Brigitte Bardot, John Lennon and Terence Stamp for magazines such as *Vogue* and creating numerous award-winning advertising images for brands such as Smirnoff.

Later he photographed another classic cover for Bowie – 1979's *Lodger* – and his photos were also used on 1980's *Scary Monsters (And Super Creeps)*. 'My father was very friendly with David', his son Chris said in 2015. 'He was kind of a regular punter at my mum's dinner table'.

By the time of those last Bowie jobs, though, Duffy had become disillusioned with photography and was about to turn his back on it completely. 'I had nothing more to say in photographs', he reasoned. 'I'd taken all the snaps I needed to.'

One day he tried to burn the negatives of many of his best-known shots in his back garden in West London. Only neighbours' complaints and the subsequent intervention of the local council saved some of the work. The Bowie shots were among those unharmed, but Duffy still wouldn't take a photo again for the next 30 years.

He would switch to moving pictures for a while, and go on to direct commercials and pop videos (including Spandau Ballet's 'Gold'), before retraining as a furniture restorer in 1990. Brian Duffy died in 2010, but not before his son had set up an online archive for his work, at [www.duffyarchive.com](http://www.duffyarchive.com).





# Old's cool.

The new Dynaudio Heritage Special.  
Classic premium hi-fi, handmade with love in Denmark.



Listen to craftsmanship. Listen to real wood. Listen to true, state-of-the-art, hand-built tweeters and woofers. To more than 2000 hours of devoted R&D. To the depths of your record collection. Listen to what you love.

'Heritage Special' isn't just a name. It's a salute to traditional high-performance Danish audio design, featuring Dynaudio's now-legendary materials, technologies and performance.

Each of the 2500 limited-edition pairs is unique. And they're brimming with the spirit (and flødebolle-fuelled boldness) that made the Dynaudio name. Run your fingers over the hand-finished American Walnut veneer. Pause at the groove around the baffle (you'll remember it from our speakers that you coveted years ago). Then play some music and rock your socks off.

It isn't for everyone. But that's OK. We made it for *you*.

**DYNAUDIO** Heritage Special

[www.dynaudio.com/heritage](http://www.dynaudio.com/heritage)





**ABOVE:** Early androgenous look (left), on stage during the Ziggy Stardust Tour (top right) and Bowie in 1967

going to push the boat out, you might as well get a lasting bang for your buck, and the way that sleeve has resonated down the ages is something that could hardly have been foreseen at the time.

## SIGN OF THE TIMELESS

'To me, it was competent, very competent, but I wouldn't take it much beyond that', the ever-unexcitable Duffy said later. However, his designer colleague Celia Philo remembers taking a different view. 'When I first saw the



contact sheets, I knew it was going to be a very, very powerful album cover. Time wise, it was pre-punk, it was pre- people walking down the King's Road with coloured hair and make-up on their face'.

Oddly enough, the album shoot was the only time Bowie wore the flash design across his face, although it featured on concert backdrops. Unlike the astral sphere he had worn as Ziggy, it didn't end up as a part of his regular stage or photoshoot make-up – again, a reflection of not everything Bowie did being quite as clear-cut and controlled as his reputation would suggest.

Yet Duffy's son Chris reckons it's iconic enough to be compared to the ultimate artwork. 'Several years ago I started calling it the Mona Lisa of pop', he told *AnOther Magazine*. 'There isn't really an image that is as ubiquitous. It's been used on fridge magnets, caps, calendars, t-shirts, lighters, beer mats...'

And will we still be gazing at the image on the walls of galleries for centuries to come? Quite possibly. ☺

**LEFT:** Sleeve of the 1971 UK release of *The Man Who Sold The World*. The LP was first released in 1970 in the US with a pop art cowboy on the cover

## BOWIE'S COVERS

The sleeves of David Bowie's albums certainly played an indispensable role in reflecting his chameleonic approach to his art. After a couple of rather more conventional covers, it was the 1971 UK sleeve of *The Man Who Sold The World* (1970) that really turned heads, with our androgynous hero(ine) resplendent in a Michael Fish-designed dress as he presented himself as if the subject of a pre-Raphaelite painting. It replaced the frankly somewhat incongruous original image, a pop art illustration of a cowboy walking past a lunatic asylum, which adorned the US version of the album, but whose appeal quickly waned on Bowie.

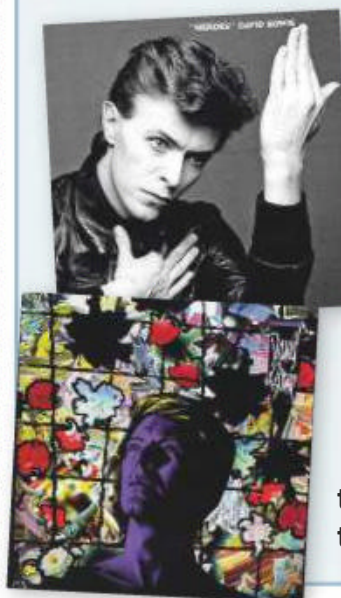
1971's *Hunky Dory* saw the great man adopt a similarly classic pose as he channelled a Marlene Dietrich look from a photobook he took to Brian Ward's photo session. But after that the characters took centre stage, most iconically in *The Rise And Fall Of Ziggy Stardust And The Spiders From Mars*, wherein the bewitching protagonist posed in a Soho doorway lit up with a hint of the other-worldly glow surrounding Bowie's most famous alter-ego.

For the follow-up to *Aladdin Sane*, 1973's *Pin-Ups* LP of cover songs, Bowie commandeered a shot of himself in Paris with supermodel Twiggy, taken by her manager Justin de Villeneuve and originally intended for use in *Vogue* magazine until Bowie got his hands on it. Arguably the last of this visual era for Bowie was the Guy Peellaert illustration of *Diamond Dogs*, which saw him surrounded by curious man-dog creatures.

A more urbane look was adopted for 1975's *Young Americans*, reflecting the album's slicker, more soulful sound, but with the use of stills from his appearance in Nicolas Roeg's *The Man Who Fell To Earth*, the images for *Station To Station* (1976) and *Low* (1977) immortalised Bowie as the Thin White Duke. The follow-up, *"Heroes"* (1977) brought the Berlin period to a close with a cover whose image, snapped by Masayoshi Sukita, was

later reprised for Bowie's penultimate studio release *The Next Day* (2013).

We could mention other covers, such as the faintly satanic image adorning 2002's *Heathen* or the Gilbert & George-style look of *Tonight* (1984), but ultimately they would never be able to approach *Aladdin Sane* and its 1970s contemporaries for images that defined one of music's true originals.







# ELECTROCOMPANIET

*If music really matters™*

When Electrocompaniet burst onto the scene in the 1970s they kick started a revolution with their unique and groundbreaking transistor technology. For the first time ever in history, a company was able to offer to the discerning public a transistor based amplifier that had a demonstrably better tonal reproduction than the best valve amplifiers. They still believe passionately in the music and continue to work with developing and refining their much-loved transistor technology.

To the Electrocompaniet team working in Norway, Music *Really* Matters !

## The Electrocompaniet Classic Line

The lineage of the Classic line began over forty years ago with their 25W amplifier, widely hailed as being the very best in the world. Good design doesn't age, and we are confident that the Classic Line will be just as relevant in thirty years time as it is today. The concise but striking range today consists of eleven award-winning products guaranteed to enhance your enjoyment of your music. So if *music really matters* to you—consider investing in some Electrocompaniet audio equipment...

### Power Amplifiers



AW180 Monoblock **£4299**



AW400 Monoblock **£5699**



AW250R Stereo **£6599**



NEMO (AW600) Monoblock **£7499**

### Integrated Amplifiers



ECI 6 DX MKII (+DAC / Streamer) **£5499**



ECI 6 MKII **£4799**



ECI 80D **£2899** (white variant shown +£200)

### Streamers & Sources



EMC 1 MKV Reference CD player **£4999**



ECM 1 MKII High End DAC and Music Streamer **£3999**

### Preamplifiers



EC 4.8 MKII Reference Preamplifier **£3499**



ECP 2 MKII Phono Stage **£1999**



Hand-made  
in Norway.



Exclusive UK distribution by Elite Audio UK | **DEALER ENQUIRIES WELCOME**



Our last CD player was  
widely felt to be one of the  
best on the market.

**This one is even better...**



### **EMC 1 MKV – Reference CD player**

The new EMC 1 MKV builds upon the legacy of one of the best sounding CD players on the market, the EMC 1 UP, and refines by using a new drive unit. The MKV also introduces updated electronics for better sonic performance, new mechanics for more rigid construction and brand new chassis with updated design to be in line with the new MKII edition of our other products.

- **Top Loading CD Transport**

(Preventing the laser pickup from receiving mechanical distortions)

- **Balanced audio**

(Fully balanced D/A converter with discrete analog audio circuitry)

- **Shielded construction**

(No-compromise mechanical design with five different housings, which shield analogue, digital, transport, transformer and controller circuitry)



**0800 464 7274 | [info@eliteaudiouk.com](mailto:info@eliteaudiouk.com)**



# QUIET please



**NEW**  
**GroundARRAY**



**CHORD<sup>TM</sup>**  
**COMPANY**

Available now as single units  
and in demonstration/home  
loan packs from all participating  
Chord Company retailers.

For more information visit:  
[www.chord.co.uk](http://www.chord.co.uk)





# The **hi-finews** Reader Pledge

& Record Review

*Hi-Fi News*' readers can take full confidence in the fact that every product featured on our front cover, throughout the magazine and on our website has been comprehensively reviewed (auditioned, photographed and lab tested) at our facility

You hold in your hands the world's oldest and most respected hi-fi magazine – *Hi-Fi News* – where heavyweight audio engineering is our stock in trade. All our review products are typically subject to a one-month test process from shipping, unpacking, installation, photography, lab work, extended listening, disassembly/packing and collection. This practice was maintained right through the pandemic period, with full Covid biosecurity adding to the logistical complexity of our four-week issue schedule.

But we did it... never missing one issue of the magazine or compromising the 'Hi-Fi News Pledge':

**1.** Our hardware reviews are never brief 'hands on' experiences of a product from a press conference or distributor's back room spun up into a four or five page article.

**2.** Products reviewed in *Hi-Fi News* already have secure distribution channels in the UK. So readers *should* be able to arrange their own auditions if suitably inspired!

**3.** Every product reviewed in *Hi-Fi News* is shipped to and installed at our main facility. It is photographed by us (unless some stock shots conform precisely to our template) and separately lab tested to a uniquely world-class standard.

**4.** We believe in quality investigative journalism by experienced writers and editors – we ask questions, we do our

**LEFT:** Innovative, research-based test & measurement – with exclusive colour 'data visualisation' – underpins every review in *Hi-Fi News*. In every issue you will discover performance-determining facts that are unique to our reporting



**ABOVE:** Alex, B&W's legendary one-man delivery service, came out of retirement for a day to see the first production 801 D4s arrive safely at *Hi-Fi News* [see p40]

research and we make truly independent evaluations. We do not release reviews to brands for 'fact checking' or other modification prior to publication. They read it when you read it.

**5.** Above all we respect our readers. You demand the best reviews informed by decades of experience, product knowledge and technical expertise. We endeavour to live up to that expectation.

## IN THIS ISSUE...

**LEFT:** Heavy work! One of the pair of Engström ERIC Encore power amps – last month's cover star – collected by distributor Boyer Audio Ltd *en route* to demonstration at KJ West One

**RIGHT:** B&W's engineering and demonstration team were on hand to unpack the 801 D4s and establish the ideal positioning in our listening room. Installation/set-up took around five hours





# B&W 801 D4

A new 800 series, and a return to the original 801 name, but the 801 D4's enhancements are more than skin deep  
 Review: **Andrew Everard** Lab: **Paul Miller**

Some six years since the arrival of the Bowers & Wilkins 800 Series Diamond range, and over 40 years after the launch of the company's original 'no compromise' 801 model [Audio Milestones, *HFN* Jan '13], here we are with an all-new flagship lineup for the Worthing-based company. The timing's about right: in the rolling programme of upgrades, we've seen the 600 and 700 series replaced since the 800 D3 models broke cover [*HFN* Dec '15], and the company makes no secret of the fact that work started on these new 800s almost as soon as the last generation was released.

Much has changed since that 2015 launch of the 800 D3 range: Bowers & Wilkins was acquired first by Silicon Valley-based Eva Automation, then by Sound United – joining the likes of Denon and Marantz. Meanwhile, the world-famous Steyning Research Establishment has been replaced with a much larger facility at Southwater, also in Sussex.

## DIAMOND COLLECTION

The new 800 lineup – officially called the 'new 800 Series Diamond' – comprises seven models: five main stereo speakers and two matching centre-channel designs. The range kicks off with the 805 D4 standmount at £6250 a pair, and then there are three floorstanders – the £9500 804 D4, the £16,000 803 D4 and the £22,500 802 D4 – plus the two centre speakers: the £4750 HTM82 D4, designed for use with the 803 and 804 models, and the £6500 HTM81 D4, for use with the larger speakers. All models are available in a new Satin Walnut finish, as well as the Gloss Black, White and Satin Rosenut available on the previous series.

And the largest of those speakers is the one we have here – the 801 D4 flagship, at £30,000 a pair, marking a return to the model designation of the original 800 series flagship, the 801 of 1979 [see

boxout, p41]. The last series had an 800 model, the 800 D3, as its range-topper [*HFN* Oct '16], launched a year or so after the rest of the lineup arrived. Bowers & Wilkins isn't making quite the same claims for this one that it did when launching the 800 D3, when it made clear that just about every component was new aside from the odd nut and bolt. However, even though the new model might look very similar to the 800 D3 it replaces, much has changed.

## PLUS ÇA CHANGE

Now adopted across the board is the company's 'reverse wrap' technology, in which the entire cabinet assembly, front and sides, is made as a single moulding, using thin sheets of wood laminated with glue under heat and huge pressure. This wraps round to create a tapered enclosure, terminated with a metal spine at the rear, onto which the crossover components are mounted for mechanical stability and heatsinking.

But that was already the case for the larger 800 D3 models, and not new in the 801 D4. What is, though, is a reinforced version of the company's honeycomb-like Matrix internal bracing, again used across the range. This now features vertical aluminium sections in addition to the horizontal used in the past, affixed with screws and glue rather than the simple pressure-fit of before. Moreover, the entire Matrix frame is now coupled to the front baffle via a substantial 10mm steel plate.

All that's internal, and thus hidden, but look a bit closer and the changes begin to reveal themselves. The

**RIGHT:** The flagship 801 D4 features B&W's 25mm diamond dome 'tweeter on top', a 150mm Continuum cone FST midrange and a pair of 250mm Aerofoil cone bass units, reflex-loaded through a very wide, down-firing port





## FROM 801 TO 801

The last-generation 800 series flagship was something of an outlier, being designated 800 D3, whereas its predecessors were all 801 models – now the company has returned to where it all started, with the original 801 of 1979. At the time, Bowers & Wilkins had been in existence as a speaker company for some 13 years, and founder John Bowers gave a simple brief to the engineers: they were to throw away the rulebook and develop the very best speaker they could, without any restrictions.

In fact, the manual accompanying those loudspeakers described them as ‘the first commercial effort to develop and produce a loudspeaker that would reflect the highest standards attainable without regard to any of the so called “practical considerations” that inevitably compromise conventional designs’.

Four years of research went into the original 801 speakers, involving the innovative use of computer modelling and analysis. While this is a mainstay of loudspeaker design today, along with the use of laser interferometry to analyse driver motion, these techniques were all but unheard of back in the 1970s. The result was a speaker so unlike anything else on the market that an optional foam ‘hood’ was available for those users who thought it looked too radical! Already in place were the separate enclosures for the woofer, tweeter and midrange driver – still very much apparent in today’s 801 D4.

EMI adopted the 801 as its reference monitor at Abbey Road Studios [see inset picture], a co-operation through successive generations of 800 series speakers that continues to this day, as does their use in many other world-leading recording facilities.



top-plate of the main enclosure, on which the midrange ‘Turbine’ and treble housings sit, is now aluminium, rather than the wood of the old model, and trimmed in Connolly leather. Black is specified for the Black and Satin Rosenut main cabinets, and a light grey trim for the White and Satin Walnut finishes to match the silver Turbine Head used on those colours. Crucially, this top-plate is now a structural component, further stiffening the construction of the cabinet and the platform for the components above it.

This metal-to-metal fit allows a superior decoupling of the Turbine Head containing the 15cm Continuum Cone FST ‘floating’ midrange driver, which also gains foam wedges to the rear of its mounting, plus Techsound damping and revised Tuned Mass Dampers within. The driver itself now has a four-point silicone decoupling, and a new ‘Double Silver’ motor, with silver

on the top-plate and pole, further reducing distortion. Perhaps the most radical change is the removal of the concertina-like rear suspension ‘spider’ in favour of a flexible ‘Biomimetic’ skeletal frame with thin legs that connect the cone to the basket [see PM’s boxout, p43].

The 25mm Diamond Dome tweeter atop the Turbine Head now sits in a longer milled-from-aluminium ‘Solid Body Tweeter-on-Top’ tube-loading system, for improved attenuation of rearward energy. There are now two, not three, neodymium magnets in the motor, reducing compression behind the dome, while additional vents in the voice-coil former further enhance this ‘free-breathing’ design. The decoupling between the treble tube and midrange head is also improved with two L-shaped steel mounts covered in silicone rubber.

The woofers look bigger, but the size is an optical illusion caused by the use of a new foam anti-resonance plug at the centre of each of the 25cm Aerofoil bass units. Behind the cone, the steel in the motor system has been upgraded, for better current handling and lower [\[p45\]](#)





# BAT

## SOLID-STATE POWER WITH TUBE FINESSE

Introducing the VK-3500 hybrid integrated amplifier,  
celebrating 25 years of engineering excellence.



“...an imperious blend of lush looks,  
audiophile engineering and stellar  
performance across all musical flavours.”

Hi Fi News September 2021



**karma**  
audio - visual

Balanced Audio Technology  
**balanced.com**



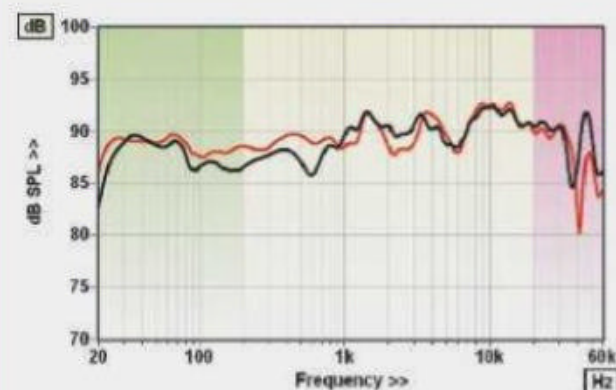
## FROM 800 D3 TO 801 D4

With B&W's previous flagship 800 D3 seeing service as our reference loudspeaker for the past five years, the arrival of the new 801 D4 gave us the perfect opportunity to compare 'old' with 'new' and examine, in detail, the subtlest of its revisions and upgrades. The headline is this: while there are differences between the forward response, bass tuning, impedance and THD, these are secondary to how the improvements in resonance control and spurious output impact on the D4's subjective transparency and low color.

### THE BASICS

Sensitivity is a high 89.5dB (2.83V/1m/500Hz-8kHz) for both D3 and D4 but detail improvements in the design of the drivers has pushed distortion down by ~6-8dB in the 801 D4 – typically <0.3% from 60Hz-200Hz to 0.05% through the midrange and <0.25% above 10kHz (all re. 90dB SPL at 1m). We've seen lower treble THD before, but the 801 D4's figure simply reflects the extended ultrasonic response of the 'Diamond Dome' [pink shaded area, Graph below].

This feature is shared with the 800 D3 but there are changes in bass/mid response between 70Hz-1kHz where

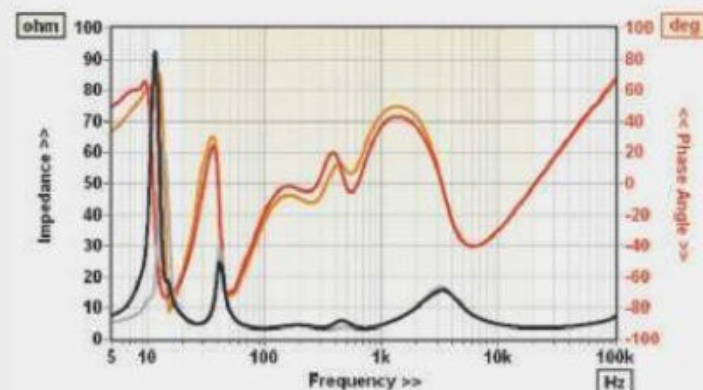


**LEFT:** Response inc. nearfield summed drivers/port [green], freefield corrected to 1m at 2.83V [yellow], ultrasonic [pink]. B&W 801 D4, black; 800 D3, red

the D4 is shelved down by ~2-3dB [black trace, above]. The biggest difference occurs after the 400Hz crossover where B&W has changed an inductor value and lowered the  $F_s$  (free-air resonance) of the Continuum driver – the dip in response coincides with an increase in impedance at 460Hz from 3.7ohm (D3) to 5.8ohm (D4) [grey vs. black trace, Graph top right] and a slight increase in phase angle 'switch' [orange vs. red trace].

### LOADING AND RESONANCES

In general terms both the D3 and D4 represent current-hungry loads for any amplifier but the newcomer is arguably just that bit kinder. While the former presents a 3.02ohm/340Hz minimum (and a low 4.0ohm coinciding with a phase angle of  $-49^\circ$  at 73Hz), the latter's minimum is 3.4ohm



**LEFT:** Impedance magnitude (black/grey) and phase (red/orange) for B&W 801 D4 and B&W 800 D3

at 96Hz. The maximum swings in impedance phase are  $+50^\circ/1.35\text{kHz}/6.15\text{ohm}$  and  $-72^\circ/52\text{Hz}/8.8\text{ohm}$  for the 800 D3 compared to  $+43^\circ/1.38\text{kHz}/6.55\text{ohm}$  and  $-71^\circ/48\text{Hz}/10.1\text{ohm}$  for the newer 801 D4.

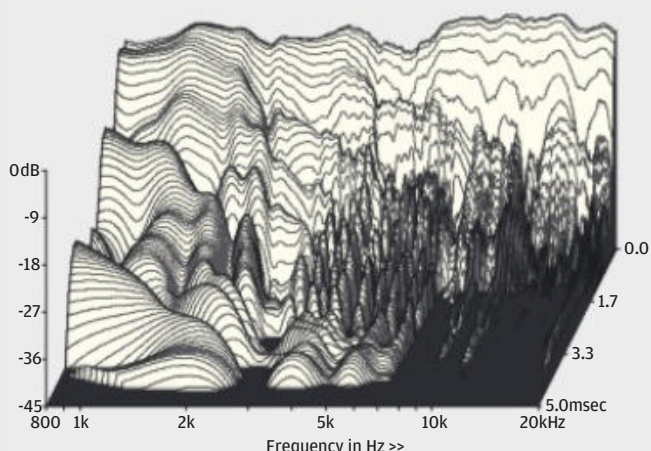
However, none of this shows us why the presence/treble sounds *cleaner*. The new 'Biomimetic' suspension [pictured below] eliminates the resonances inherent with the old [yellow] spider while the three tuned-mass dampers further 'deaden' the Turbine/tweeter heads. The deep suppression in spurious output above the 4kHz crossover at 5kHz-9kHz [see CSD waterfalls, below] is indicative of the changes to both the 801 D4's mid and treble environment.

### THE DEEPEST BASS

Nearfield analysis reveals that while both the 800 D3 and 801 D4's woofers have almost exactly the same 31-420Hz bandpass, there is a higher (+8dB) level of spurious output above the 400Hz crossover from the upper 800 D3 woofer. The D3 also shows a fractionally lower 17Hz bass extension, versus 19Hz for the new 801 D4, but the +3dB lift below 70Hz (re. 200Hz) might well lend the newcomer the perception of extra rib-tickling heave.

There's more to this, of course! The 801 D4's 'tweaked' bass alignment is best seen in the impedance/phase plots [Graph, above] than the nearfield responses with all the 'action' now focused below 20Hz. The 800 D3's major phase angles of  $+66^\circ/9.5\text{Hz}$  and  $-73^\circ/14\text{Hz}$  are shifted 3Hz lower in the 801 D4 while the  $F_s$  is down from 13.7Hz (grey, D3) to 11.5Hz (black, D4), and the peak impedance lifted from 60ohm to 92ohm.

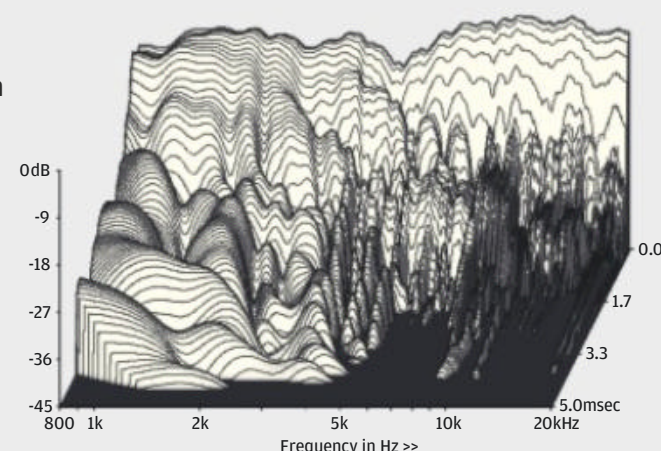
This reflects a change in the aerofoil woofers' suspension which is now more compliant and the throw more linear, the reduced mechanical losses seen in that lifted ~12Hz impedance [black trace]. Subjectively, the improved transient performance is realised not only in the bass but upwards towards a more open-sounding midrange. PM



**ABOVE:** Web-like 'Biomimetic' suspension replaces conventional and acoustically opaque support used in the 800 D3's mid

**LEFT:** High-res cumulative spectral decay for the 800 D3 Turbine and tweeter heads

**RIGHT:** The same test applied to the new 801 D4 – note reduction in spurious treble /presence output, particularly 5-9kHz





# CELEBRATING THE YEAR'S RED HOT PRODUCTS



## GLOBAL AWARDS 2021-22

visit [www.eisa.eu](http://www.eisa.eu) for the winners

EISA is the unique collaboration of 60 member magazines and websites from 29 countries, specialising in all aspects of consumer electronics from mobile devices, home theatre display and audio products, photography, hi-fi and in-car entertainment. This truly international association includes expert members in Australia, India, Canada, the Far East, USA and the wider European community, ensuring the EISA Awards and official logo are your guide to the best in global consumer technology!





# LOUDSPEAKER



**LEFT:** 3D rendering illustrates the component parts of the solid-body diamond 'tweeter on top' and Continuum FST midrange cone – with new suspension – and Turbine Head with proprietary tuned-mass damping

**BELOW:** Cutaway of the mid/treble section of the original 801, ancestor of the 801 D4's sophisticated 'head' unit. Note crossover inside

proved that while they relish a good clean dose of power, when so driven they are capable of astounding results.

Indeed, having positioned the speakers in what was the long-established optimal position for the resident 800 D3s, we later pulled them out a little further from the walls – easy, with that new wheel arrangement – so mighty was the bass on offer here from the Classé/B&W combination. While that didn't alter the weight of low-end available, which is consistently phenomenal, it did tighten things a smidge, making even more of the speaker's excellent low-end definition.

Also worth noting is that the magnetically-attached grilles provided for

the bass and midrange units have less impact on the sound than any we have encountered [see PM's Lab Report, p47], but have a twist – quite literally. When attaching them, it's necessary to rotate them to align the

magnets, as otherwise they will fall off... So, it's a matter of offering them up, then rotating them slightly until the magnets abruptly 'grab'.

With the studio heritage of the 801 series – the original was swiftly adopted as a reference by Abbey Road – it seemed

only fitting to commence auditioning with some classical music, in the form of the remarkable Octave Records two-volume set of Zuill Bailey playing the Bach solo cello suites [Octave OCT-0008; DSD64]. Instantly there was a marvellous sense of three-dimensionality, of the instrument in space. I was tempted to push up the level a little – the 801 D4s will take a lot of power, and play extremely loud with no stress – whereupon the presentation became even more 'real', from the sound of bow on string and the resonance of the body of the instrument plus, of course, the acoustic around it.

The superb recording was conveyed with remarkable presence and detail – but all to the benefit of the music, not as a distraction. These are not in any way speakers lending themselves to a quick listen: the 801 D4s draw you into the music, and just won't let go, so compelling is their presentation.

## THRILLING IMPACT

A familiar test-track – the Jerry Junkin/Dallas Winds recording of the John Williams march from 1941 [At The Movies; Reference Recordings RR-142, DSD64] –

thrilled from the off, with the distant percussion under the opening phrases in the woodwind resolved wonderfully. And when the bass drum kicks in, it does so with both serious conviction and absolute speed, the snap of snare-drums and the crispness of the tuned percussion set against the impact of the low bass, and the wide-open dynamics as the track builds piling on the excitement.

That mixture of growling low frequencies and absolute detail also serves well 'The Haunted Ocean' from Max Richter's *Exiles* [DG 00289 486 0445], the bass truly menacing and fully energising the room without ever seeming overblown or excessive, and still leaving plenty of space for the finely-detailed instrumentation above it.

Loading up Patricia Barber's latest album, *Clique* [Impex IMP7002; DXD], the entrance of her voice on 'Shall We Dance?' is astonishing in the intimacy of its focus – it just hangs in the room between the speakers, with the accompanying bass, brushed drums and piano delicious in their clarity. The warmth of the ambience is lovely, as is the way Jim Gailloro's sax solo soars out of the mix, precisely located and

[from p41] distortion, while single spiders replace the double units used in the old model. Finally, the bottom of the cabinet has a new aluminium plate to stiffen it around the downward-venting Flowport, and the heftier alloy plinth now has 360° spinning wheels, for easier positioning, and threaded holes that accept long spikes to adjust the forward tilt of the speaker.

## GEM QUALITY

Yes, the 801 D4 may look very like the 800 D3 it replaces, but it's almost entirely different – and its performance pays tribute to all the changes made by the B&W R&D team. Set up in PM's listening room powered by the mighty 350W Classé Delta pre/power amps [HFN Jun '21], with the Melco N1ZS20 music library [HFN Jun '17], the speakers

'The bass is truly menacing, fully energising the room'





# MUSICAL FIDELITY



INTRODUCING THE:

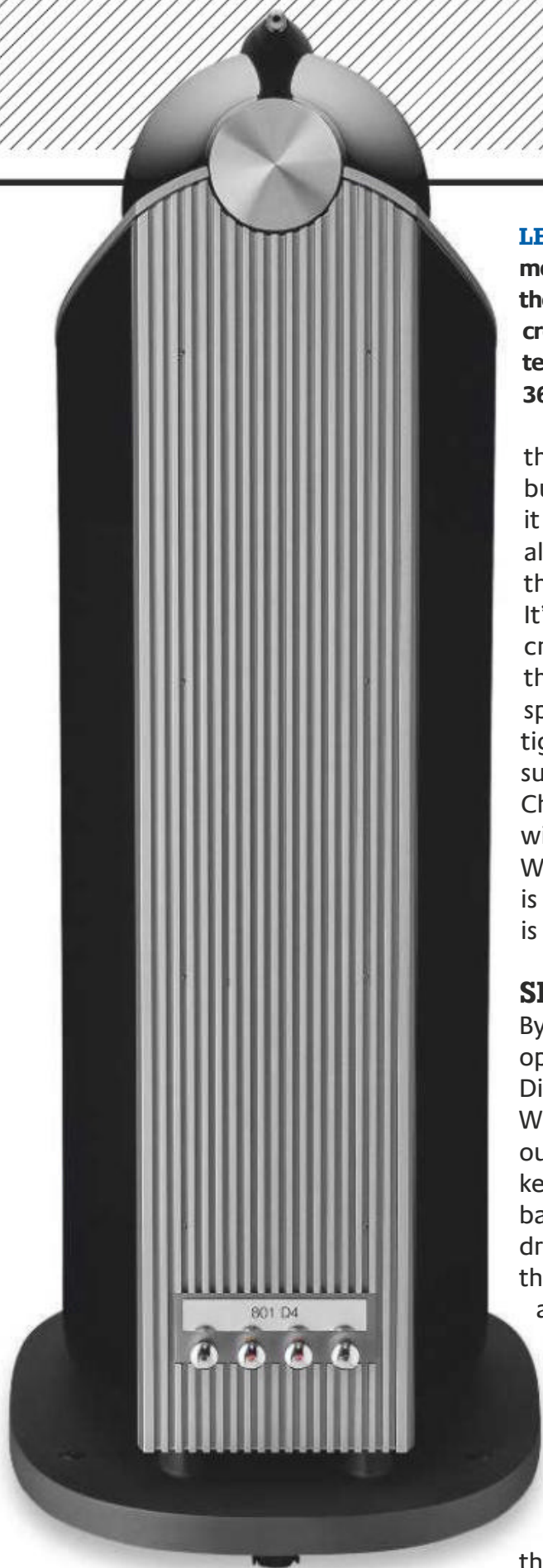
## M8 xi

The M8xi is a preamp with two monobloc power amps combined. Each has its own heat sink and separate transformer. The preamp has its own dedicated power supply that is mounted close to the input sockets; consequently, PCB tracks are very short. This elegant idea ensures that both channels signals are ultra low impedance the instant they get into the amplifier. Each channel has twelve bipolar transistors - 200 amps peak to peak is easily achievable. The front panel is a custom made fine line extrusion of milspec aluminium keeping its clean style easy to maintain.

**Dont Settle for anything less than perfect Musical Fidelity.**







**LEFT:** As debuted on the 800 D3, the metal 'spine' of the 801 D4 completes the 'reverse wrap' cabinet, and hosts the crossover and (rearranged) bi-wirable terminals. The enlarged alloy plinth has 360° swivelling wheels plus spikes

the solo guitar has great character, but above all Charlie Watts drives it with such restrained drumming, always leading the rhythms rather than simply cruising at the back. It's an understated, beautifully crafted track, and hugely impressive through these ultra-revealing speakers, with their controlled, tightly-resolved soundstaging and superb bite when required. When Charlie gets into an easy groove with 'You Can't Always Get What You Want', the speed of the big 801 D4s is much in evidence: the drumming is so laid-back, but so tight.

### SERIOUS SLAM

By contrast, the big slam of the opening of Yes's 'Yours Is No Disgrace' [*The Yes Album*; Atlantic WPCR 15903, DSD64] just cannons out from the speakers. The complex keyboards and driving, grumbling bass line fuse with the drums to drive the track relentlessly, and those harmonies are wide-open, as are the words – for good or bad!

Yes, the soundscape is huge here, and the low end from those two aerofoil drivers is both punchy and remarkably controlled. These speakers will also go scarily loud with enough amplification driving them, but they remain resolutely clean and clear – a fitting apex to B&W's latest 800 Series Diamonds. ⚡

with wonderful breathy reediness and the sense of the keys working.

Also sparkling in its intimacy is Anna Fedorova's new release, *Shaping Chopin* [Channel Classics CCS 43621; DSD128], her reading of the Three Mazurkas, Op.50, treated to that full picture of the scale and size of the piano. Every note, every touch is wonderfully clear, and there's such a persuasive impression of the instrument in the room, with the expression of the playing beautifully resolved.

Switching to the lush sound of *Charlie Watts Meets The Danish Radio Big Band* [Impulse! 0602557441932], the take on 'Paint In Black' has real depth to the sound of the massed forces. Here

### HI-FI NEWS VERDICT

Not a match for low-powered tube amps, but driven firmly the new B&W flagships are capable of a sound as informative as it is vivid. They bring to life everything from driving rock to the most subtle of solo instruments and voices, with breathtaking insight into performance and music alike. Yes, they're demanding of both amplifier and system quality, but get it right and they will thrill and entice like almost no other.

Sound Quality: 92%

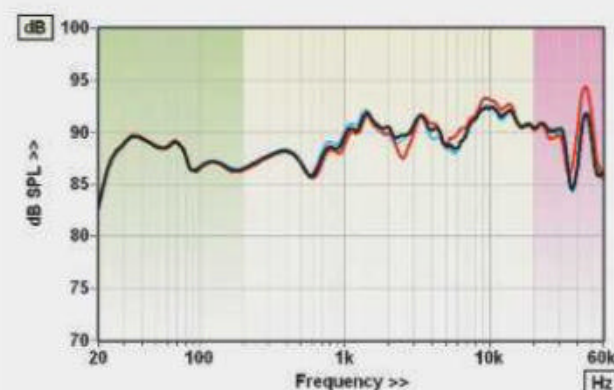


## LAB REPORT

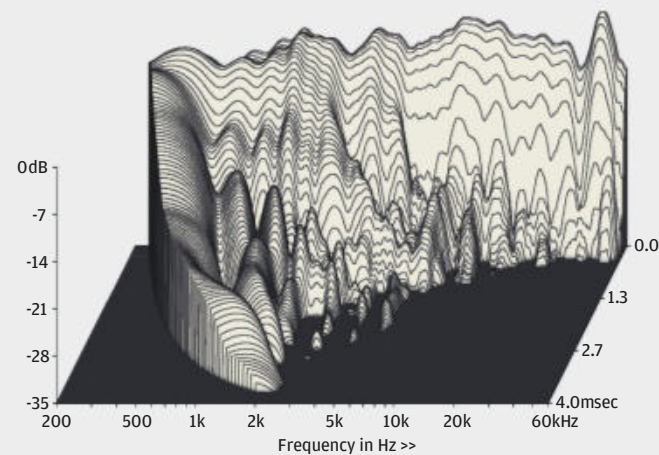
### B&W 801 D4

Rated at 90dB sensitivity, the new 801 D4 romps home with a very fine 89.7dB (1kHz) and 89.5dB (500Hz-8kHz). The forward response trend now has something of a +2dB 'step' between 100Hz-1kHz and 1kHz-20kHz [see Graph 1, below], resulting in errors of  $\pm 3.3$ dB from 200Hz-20kHz or  $\pm 2.2$ dB over a narrower 800Hz-20kHz. The principle 'features' are a 3dB dip at ~600Hz and an uplift in treble of ~4dB between 6-10kHz, the ultrasonic output being remarkably flat and extended over the next two decades [pink shaded area, Graph 1]. The magnetically-attached grilles offer precious little disruption [blue trace, Graph 1] with a maximum loss of just 0.8dB between 2-6kHz and should present minimal subjective impact. Pair matching was less impressive with these samples, however, a dip between 2-3kHz in one [red trace] resulting in a 2.2dB difference. Outside of this narrow band, the matching was within a tighter 1.5dB (200Hz-20kHz).

Distortion is fabulously low, especially through critical midrange frequencies at ~0.05% (re. 90dB SPL at 1m). Measuring the output of the substantial downward firing port was trickier, but not impossible, the 801 D4 tuned to 26Hz with a 19.5Hz-55Hz bandpass (-6dB) and with a mild tube/cabinet mode showing at 410Hz (-16dB). Its two woofers offer a near-identical output, operating between 31Hz-420Hz (-6dB) and combining with the port to yield a deeply impressive diffraction-corrected bass extension of 19Hz (-6dB re. 200Hz). There's payback for the combination of high sensitivity, low distortion and exceptional bass in the form of a fairly tough amplifier load, but the 3.4ohm minimum is still 'easier' than B&W's spec. [see boxout, p43]. PM



ABOVE: Response inc. nearfield summed drivers/port [green], freefield corrected to 1m at 2.83V [yellow], ultrasonic [pink]. Left, black; right, red; w grille, blue



ABOVE: Aside from a slight mode at 1.3kHz (coincident with a peak in response), resonances are swiftly quelled

### HI-FI NEWS SPECIFICATIONS

|  |                                   |
|--|-----------------------------------|
| <b>Sensitivity</b> (SPL/1m/2.83V – 1kHz/Mean/IEC)            | 89.7dB / 89.5dB / 87.3dB          |
| <b>Impedance modulus: minimum &amp; maximum</b> (20Hz–20kHz) | 3.37ohm @ 96Hz<br>24.9ohm @ 41Hz  |
| <b>Impedance phase: minimum &amp; maximum</b> (20Hz–20kHz)   | -71° @ 48Hz<br>+43° @ 1.39kHz     |
| <b>Pair matching/Resp. error</b> (200Hz–20kHz)               | 2.2dB/ $\pm 3.3$ dB/ $\pm 3.8$ dB |
| <b>LF/HF extension</b> (-6dB ref 200Hz/10kHz)                | 19Hz / 34.7kHz/33.5kHz            |
| <b>THD 100Hz/1kHz/10kHz</b> (for 90dB SPL/1m)                | 0.25% / 0.05% / 0.25%             |
| <b>Dimensions</b> (HWD) / <b>Weight</b> (each)               | 1221x451x600mm / 101kg            |



# Jadis Diapason Luxe

The artisan of high-end tube audio, Jadis, has imbued more than a little Gallic flair into this 'entry level' integrated. Serve with sensitive speakers for a taste of magic...

Review: **David Price** Lab: **Paul Miller**

Until the mid-1990s, valve amplifiers were typically *persona non grata*. The '80s had been all about solid-state – from tweeky low-powered integrations to mega powerful monster power amps – and tubes didn't so much as get a look in. By the turn of the millennium however, the pendulum had swung back and tube amps were reinvented as exclusive objects of luxury and desire, famed for their sweet and satisfying sound. How times change!

A raft of new companies surfaced to satisfy the demand, many Far East-based with ersatz classic styling and branding. Jadis is most decidedly not one of these, however. This French marque has been around since the '80s, resolutely focused on high-end pure Class A tube amps such as its iconic JA80. So the £3598 Diapason Luxe you see here was never designed to 'cash in' on the valve revival. Rather, it's an attempt to give a taste of this respected European brand's famously sweet sound, but at a more affordable price.

## SOMETHING SPECIAL

I could not help but be impressed by how well this little integrated is presented, considering its price. This latest Luxe version has a 24-carat gold-plated front fascia plate and non-magnetic stainless steel frame. It's very well screwed together, with none of the usual sharp edges, poor pressed steel folding or ill-fitting switchgear that plague some similarly priced rivals. The gold trim adds visual décor, and the controls feel nice and work well, even if the power toggle switch is like something you'd find inside an old Renault 4.

On top, beneath the fitted mesh cover, are seven 'specially selected' valves. There is one Electro Harmonix ECC82 and two Tung-Sol ECC83s for the input stage, plus four Tung-Sol 6L6s (two per

channel) in push-pull configuration for the output stage. The latter are mounted on vibration-damping ceramic supports. Behind these are the three transformers, said to be simplified versions of high-end Jadis trannies. They still sport resin to damp down vibrations, however.

Round the back are six line-level RCA analogue inputs. Our sample had the optional USB-A digital input (not the usual USB-B for computer connection), which replaces the sixth RCA line in; if you don't specify this, the amp is £100 cheaper. This is said to be for smartphones, but I couldn't get our example to work with my Apple iPhone or Android-powered Sony. Meanwhile, power output is a modest 15W [see PM's Lab Report, p51] and Jadis uses

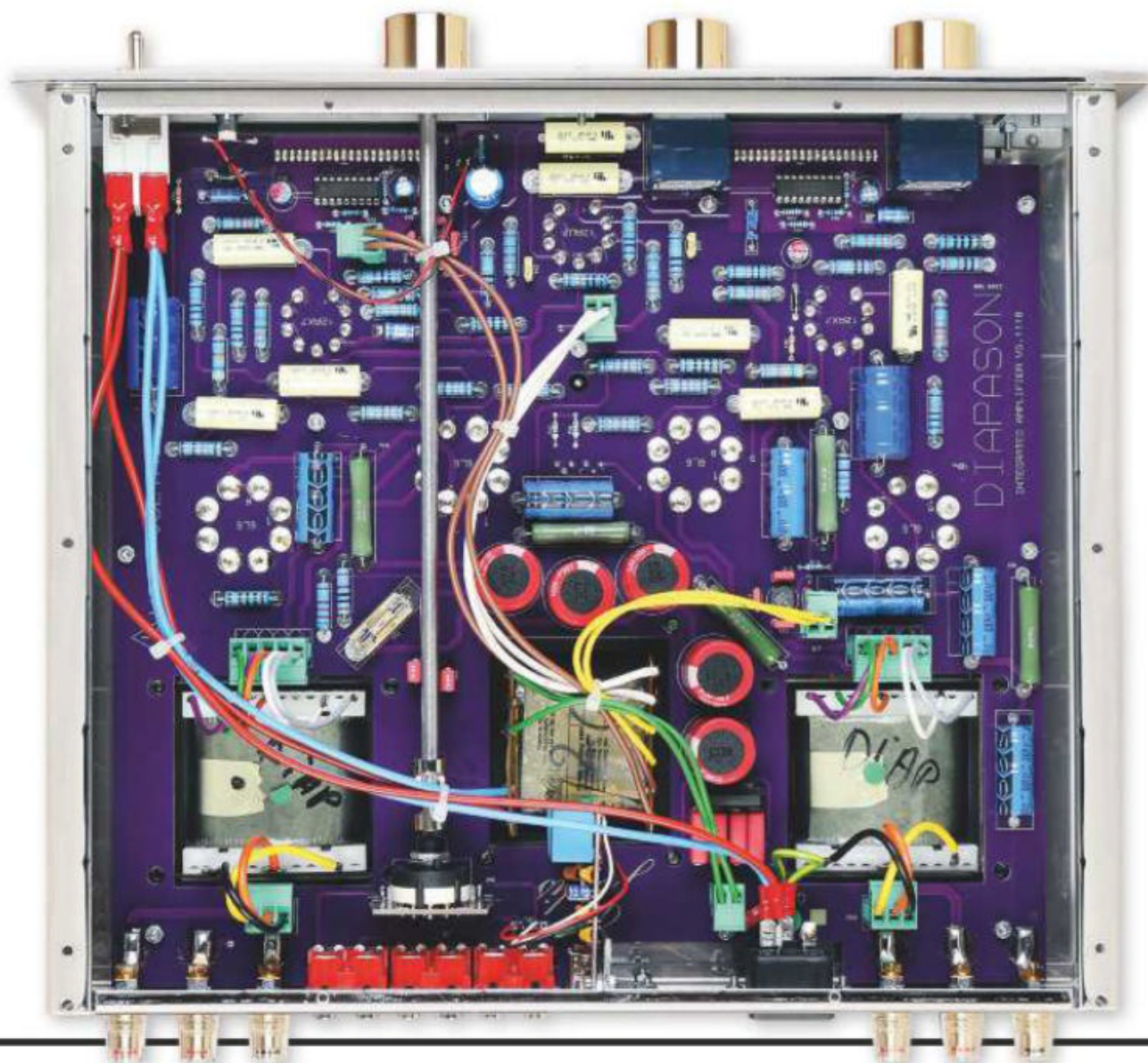
what it calls 'semi automatic' tube biasing, which is in effect manual.

## GOING GREEN

For this purpose, two strips of LEDs are fitted; the manual instructing the owner to twiddle the two small potentiometers set into the top plate, normally hidden under small black caps. They need to be turned until all green LEDs are illuminated, but no amber or red ones. It's a simple process but might put off newcomers to valve amplifiers all the same. These LEDs can be switched off by clicking a small switch under a plastic cover just in front of the ECC82.

As with most low-powered tube amps, loudspeaker matching is key [see PM's

'I focused on the wonderfully pure and natural vocal presence'



**RIGHT:** Seen from underside is PSU transformer [bottom centre] and two audio transformers [bottom left/right]. Note ALPS volume/balance pots [top right], local input switching [long rod], WE WCAPs [red] and Vishay caps [dark blue]





**LEFT:** Brightly mirrored chassis and gold faceplate of the 'Luxe' sports heavyweight input, balance and volume rotaries. Up top are an ECC82 double triode and a pair of ECC83s as preamp/phase splitters driving push-pull pairs of 6L6GC beam tetrodes

boxout, below]. I tried a wide range of speakers from classic Wharfedale E70s (with a claimed sensitivity of 94dB) to the latest German Physiks HRS-130 (87dB) via the 8 and 4ohm taps, respectively. I settled on my pair of Cambridge Audio Aero 6s (90dB/8ohm) which yielded a combination of high quality sound at decent listening levels. Frankly, a home demo of this amp with your choice of speakers will be vital.

## SUGAR BABY

At this price, it's nigh on impossible to find a valve amplifier that does everything well – so it forces manufacturers to make

choices. With the Diapason Luxe, Jadis has opted to focus on the natural charm of music, rather than its raw power and scale. This is not a forensic-sounding design that ekes out every last detail from the recording, and nor can it impact its visceral power. Instead, the emphasis is on the subtle nuances of a piece of music, the gentle rhythmic inflections and the chemistry of the finished product.

The result is something that sounds especially inviting, appealing and beguiling – far more so than you'd expect from most similarly priced solid-state designs. The Diapason Luxe goes about reproducing

music in a completely different way to most mainstream amplifiers, one that's strongly appealing to a certain type of listener and/or music fan. On the other hand, it has conspicuous limitations that mean it is not for all. Perplexingly however, it often makes the listener forget these, to the extent that even ardent valve critics may be left grumpily admitting that it sounds 'rather gorgeous'.


Take Sting's 'Englishman In New York' [*Nothing Like The Sun*; A&M Records CDA 6402] for example. There is so much about this song that annoys me; as a former Police fan, I've always thought it to be glib and false, the singer going through

the motions. Yet the Diapason Luxe made me sit down and listen, grudgingly, and I rather enjoyed the experience.

It does three things particularly well, all of which were showcased by this excellent quality recording. First, this amp has a lovely tone. There's no getting

around it for everything is imbued with a silky texture that's not too overdone. The hash, mush and grain of so-so amplification is nowhere to be heard here and, instead, one focuses in on a wonderfully pure and natural vocal presence. What's more, the timbre of instruments such as saxophones and drums is also beautifully carried.

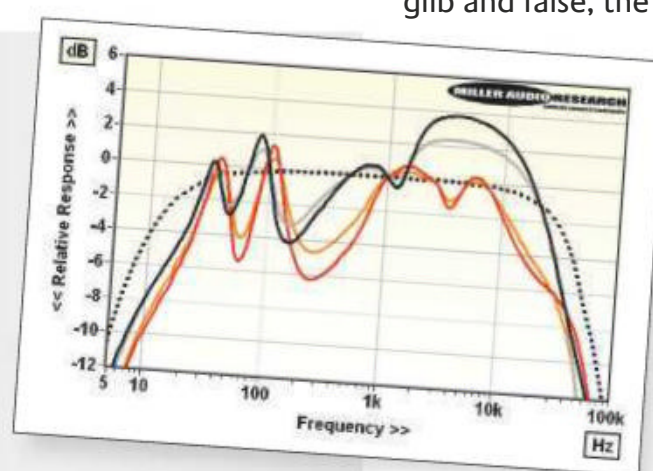
## ETHEREAL FEEL

Second, despite its lack of power, the Diapason Luxe images extremely well. I found the different elements in the mix floated before my very ears. Switching to the German Physiks HRS-130 speakers – which are highly revealing of stereo space 

## SPEAKER MATCHING

Unlike other Jadis amplifiers that are configured internally for either 8 or 4ohm operation [*HFN* Apr '21], the Diapason offers a pair of transformer taps to 'match' with so-called 8ohm and 4ohm loudspeakers [see pic p51]. These transformer taps step-down the high voltage/high impedance output of the 6L6GC beam tetrode tubes to better match the lower impedance and higher current demand of the attached loudspeaker. However, in practice few speakers offer a flat 4 or 8ohm impedance, so as the load swings up and down in value across the audio range so too does the *system response* of the amp/speaker combination.

Typically, solid-state amplifiers offer a sufficiently low source impedance to minimise this effect, but tube amps like the Diapason with its 2-4ohm output impedance [see Lab Report, p51] incur a lift in response with rising speaker impedance and vice-versa. Into a non-reactive 8ohm load the Diapason shows a gentle bass (–1.6dB/20Hz) and treble (–1.0dB/20kHz) roll-off [dashed trace, inset Graph]. This really does not tell us how the Diapason will 'sound' into a real loudspeaker – as illustrated by it driving likely partners in the form of the little JBL 4309 [black trace, via 8ohm tap; grey trace, via 4ohm tap] and very little Monitor Audio Silver 50 7G [red trace, 8ohm tap; orange trace, 4ohm tap]. In both cases we see how the swings in impedance through the reflex-loaded bass of both speakers moderates the system response, while the inductive upswing in impedance via JBL's 2410H-2's mid/treble compression driver delivers a broad +3.8dB boost through presence and treble. This alone will mean the Diapason/JBL combination will exhibit significantly more 'sizzle' and bite than an equivalent Jadis/MA-based system. PM





Start your journey by scanning the QR code or contact:  
The Audio Business, [hello@theaudiobusiness.co.uk](mailto:hello@theaudiobusiness.co.uk)

# # Precision, no compromise



Experience the  
Solitaire P-SE

**T+A**  
Engineering Emotion





**ABOVE:** Six single-ended line ins on RCAs are joined by an optional 48kHz/16-bit USB-A (smartphone, etc) connection. Speaker taps for 8ohm and 4ohm nominal loads are offered on 4mm cable binding posts [boxout, p49]. Note cage in place over tubes

and ambience – I felt there was a slight vagueness at the very centre of the soundstage, but it wasn’t an unpleasant effect. Rather it gave the recorded acoustic a slightly ethereal feel, one that was enchanting in a way few ‘plain vanilla’ amps might achieve at this price, power notwithstanding. Its handling of The Cocteau Twins’ ‘Lazy Calm’ [Victorialand; 4AD CAD 602] only reinforced this. A beautiful mid-’80s ambient recording, it proved as spacious as it was tonally sweet.

### TIME AND MOTION

Thirdly, this amplifier does that archetypal tube amplifier trick of making music flow. The aforementioned Sting track sounded annoyingly jaunty, forcing me to keep listening when normally I’d have reached for the stop button. The contemporary psychedelic pop/rock of Syd Arthur’s ‘Coal Mine’ [Apricity; Harvest Communion Records COMM158], with its heavily syncopated rhythm guitar and snare drum, and unusual time signatures, saw the Diapason Luxe knitting the music together better than most amplifiers I’ve heard. Instead of trying to reproduce the last tenths of the track’s dynamics, it settled into a subtly compressed but infectious groove.

Ask an audiophile to describe the stereotypical ‘tube sound’ and they’ll very likely paint a picture of this diminutive Jadis amp. Direct competitors such as PrimaLuna’s 40W EVO 300 [HFN Mar ’21] show it a clean pair of heels with a good deal more grunt, powering along tracks like Simple Minds’ ‘Someone Somewhere In Summertime’ [New Gold Dream; Virgin 32VD-1038] with more gusto and drama. Yet it just doesn’t have the sheer charm of

the baby Jadis – super as it is, there’s less of a sense that you’re in the presence of greatness.

Indeed, the Diapason Luxe seemingly sprinkles a little magic dust on everything it touches, and it is special stuff that’s normally only the province of truly high-end designs. And this, in turn, rather cleverly conceals the amplifier’s limitations – provided you keep the volume control well away from ‘11’. At modest-to-reasonable listening levels it’s really not so obvious that you’re auditioning an ‘inexpensive’ valve amplifier.

So I loved what it did with the first movement ‘Allegro Ma Non Troppo’ of Beethoven’s ‘Pastoral’ Symphony [EMI Classics 0946 2 75812 2 3]. The sweet string tone was a joy to behold, as was the expansive recorded acoustic with its surprisingly decent stage depth. Only on those big orchestral crescendos did the Diapason Luxe display its modest means, otherwise the music seemed always to sashay along in highly infectious style. Colour me addicted! ⚡

### HI-FI NEWS VERDICT

Rather than attempting to be all things to all audiophiles, the Diapason Luxe is unapologetically a baby Jadis valve amplifier. Its low power output is an issue, but you’d know this if it was on your audition shortlist anyway. So it’s neither a direct rival for powerful solid-state integrations or do-it-all budget valve designs. Instead, you get a charming sound that’s not strictly accurate, yet still lovely to listen to.

Sound Quality: 83%

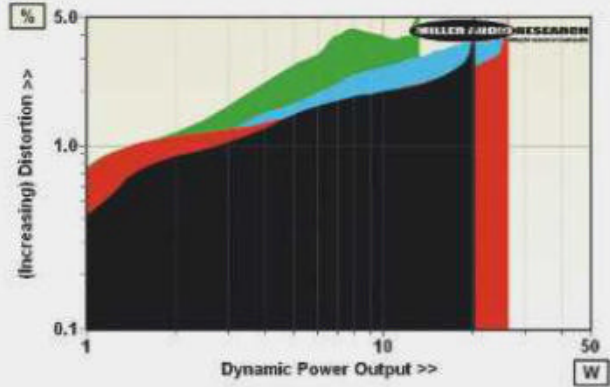
0100

## LAB REPORT

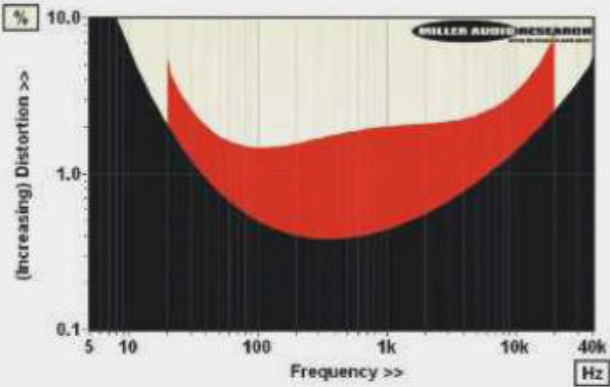
### JADIS DIAPASON LUXE

While the Diapason Luxe is intended as a stepping stone into Jadis’s world of artisan audio, this low-powered amp still employs the choice passives and tubes that we’ve seen in its far costlier single-ended designs [see p48 and HFN Apr ’21]. This integrated is a push-pull design, and biased into Class AB, but Jadis’s customarily enigmatic specification still holds sway – power is rated at ‘15W’ without reference to load, distortion or frequency! In practice the available power rather depends on the level of distortion you’ll tolerate, increasing from 0.2%/0.5W to 0.4%/1W, 1%/2.9W, 2%/6W and 3%/11.6W (all 1kHz into 8ohm via the 8ohm tap or 4ohm via the 4ohm tap). Relaxing our tolerance to 5% THD, and testing the Diapason Luxe under dynamic conditions (1kHz/10msec), reveals a significantly higher 26W (8ohm tap), 26W (4ohm tap), 27W and 17W into 8, 4, 2 and 1ohm loads, respectively [see Graph 1, below]. So while these are not high figures, and sensitive speakers are a must, the amp will still likely *sound* louder than you might expect.

The tonal balance, however, is influenced by both its high 2.4-4.06ohm source impedance [see boxout, p49] and the increase in distortion either side of the midrange. At just 1W/8ohm THD is lowest at ~0.5% from 200Hz-2kHz while the limited feedback allows 1%/6kHz to 2.5%/20kHz [Graph 2, below]. Transformer core saturation is also at least partially responsible for the increase in THD at low bass frequencies – 1.9%/1W up to 5.5%/5W (both 20Hz/8ohm). Cautious compensation typically means a higher overall gain (+38.2dB) and, in this instance, a slightly below-average 78.5dB A-wtd S/N ratio (re. 0dBW), the latter a combination of both hum and white noise. PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max current is 4.1A



**ABOVE:** Distortion versus frequency at 1W/8ohm (black, 5Hz-40kHz) and 5W (red, 20Hz-20kHz)

### HI-FI NEWS SPECIFICATIONS

|                                     |                            |
|-------------------------------------|----------------------------|
| Power output (<3% THD, 8/4/2ohm)    | 11W / 12W                  |
| Dynamic power (<5% THD, 8/4/2/1ohm) | 26W / 26W / 27W / 17W      |
| Output impedance (20Hz–20kHz)       | 2.4-4.06ohm                |
| Freq. response (20Hz–20kHz/100kHz)  | –1.6dB to –1.0dB / –14.2dB |
| Input sensitivity (for 0dBW/10W)    | 35mV / 110mV               |
| A-wtd S/N ratio (re. 0dBW/10W)      | 78.5dB / 88.5dB            |
| Distortion (20Hz-20kHz, 1W)         | 0.4–2.5%                   |
| Power consumption (Idle/Rated o/p)  | 86W / 110W (1W standby)    |
| Dimensions (WHD) / Weight           | 370x165x350mm / 12kg       |



# Cambridge Audio Evo 150

This London-based company may be a relative latecomer to the all-in-one streaming system market, but its debut models have style a-plenty – and performance to match  
Review: **James Parker** Lab: **Paul Miller**

Given Cambridge Audio's track record in digital audio, it is perhaps a little surprising it's taken the company so long to enter the network systems arena. It was an early developer of add-on DACs in 1994 [see *HFN* Jun '21] and has been making streaming components for a good while, even going to the lengths of developing its own network audio hardware. The Cambridge catalogue currently caters for 'computer audio' enthusiasts with the entry-level £169 DacMagic 100 right up to the £4499 Edge NQ network preamp.

However, a full decade since the network-attached systems market was shaken into being, we now have a duo of 'just add speakers' systems from Cambridge Audio, combining full network audio playback with preamp functionality and onboard amplification courtesy of Hypex's Ncore Class D modules. Both units – the £1799 Evo 75 and the £2249 Evo 150 featured here – share the same slimline casework, just under 32cm wide and standing a little under 9cm tall, and are immaculately finished with high-quality anodised casework. And both share a full colour display that carries a host of information, including album artwork.

## MEET THE PANEL

You get a choice of finishes, too, albeit in an unusual manner: packed with each of the Evo models are two sets of side panels, which are held in place by (very strong) magnets, and can thus be swapped – with a bit of tugging – by the user. The wooden panels are finished in a walnut veneer while the alternative sculptural black panels are made from a material called Richlite, the principal constituent of which is recycled paper. And although the company has made no announcement to the effect, it's perfectly possible that other finishes could

be made available through aftermarket snap-on panels should there be a demand.

Clearly the Evo(s) are designed to be more than just another Cambridge Audio product. There's already a matching pair of Evo S bookshelf speakers, offered for £649 via the company's website, while on the way is an Evo-style CD player, set to sell for £749, for which a dedicated connection is provided on the rear of both the Evo 75 and 150 [see picture, p55].

The obvious distinction between the two Evo models is their power output – the Evo 75 is rated at 75W/8ohm and the Evo 150 is double that. But while the streaming provision and feature-set are largely similar, there are other differences, in the form of the Evo 150's greater input/output flexibility. The Evo 75 is hardly meanly

equipped with its optical and coaxial digital inputs, a single line-in, an HDMI ARC connection for a TV and a USB port for playing music from storage devices. Output is via a single set of loudspeaker terminals, a mono subwoofer output and a pair of preouts, along with a 3.5mm headphone socket on the front panel.

## COMPLETE CONTROL

To this the Evo 150 adds extra inputs – a second optical in, a USB-B port for computer connection, one set of balanced XLR inputs and a MM phono stage – and an additional set of speaker terminals complete with A/B switching. The upshot of all this is that, while the Evo 75 will be more than sufficient for many users' needs, the more expensive model really has all the bases covered, and also more flexibility

**RIGHT:** The StreamMagic hub [lower right] also connects via two internal aerials [near left] with an XMOS USB solution [lower left] joining S/PDIF and analogue preamp [below]. Switchmode PSU and Ncore amp are combined [top right]







for those wanting to use it in a custom installation: to the 75's simple input for a remote infrared receiver, the 150 adds 12V trigger in/out and an RS-232C control port. The Evo 150 also offers a range of other options including device naming, tone controls and volume limiting.

Common to both is extraordinary flexibility when it comes to music playback. As well being able to stream from network storage and access services including Qobuz, Spotify Connect, Tidal Connect and Internet radio, the Evo 150 supports AirPlay 2, Bluetooth input/output and Chromecast built-in. MQA decoding is also onboard, and the Evo range is Roon-ready. Both models allow the audio ground to be lifted from the chassis ground, to tackle any hum problems, and the Evo 150 additionally allows the option of isolating the USB-B ground. ESS's Sabre DACs feature in both systems – the ES9018K2M used here being a step up from the ES9016K2M in the Evo 75 – allowing the playback of both hi-res PCM up to 384kHz/32-bit and DSD256.

The main volume control mirrors the company's Edge preamps, using a concentric collar for input selection, and there are also slender buttons beside the

display for basic functions such as play/pause and loudspeaker switching, plus a high-quality – and rather stylish – remote handset. But the bespoke StreamMagic app offers the greatest control over the Evo 150 [see boxout, below].

### REAL STAR

Although it might seem counterintuitive to audition the Evo 150 via its external inputs – in this case the balanced XLR line input and MM phono – it's a useful method of deriving an impression of the unit's sound before drilling down into its digital capabilities. In this respect, I have to say it acquitted itself very well indeed,

sounding every bit the powerful, mature and detailed amplifier, and more than worthy of my trusty Rega turntable.

Firing up the network section, however – using the Evo 150 both via Wi-Fi and Ethernet before deciding to stick with the latter purely on stability grounds – allowed this remarkable unit to flex its muscles and show what makes it a very strong contender in this competitive streaming audio arena. Playing the *Shaping Chopin* set by pianist Anna Fedorova [Channel Classics CCS43621] showed not

*'It explodes into life with the battle of the prologue'*

**ABOVE:** Understated Evo 150 plays it simple with slender buttons beside a display handling basic functions, while the volume control's concentric silver ring also allows input selection

only the expression and delicacy of touch of the performer, but also the skill with which the acoustic in which she played was captured. The dancing rhythms in the three Op. 34 waltzes were as crisp as the piano was well-weighted and perfectly scaled, making this charming set fly by.

And that whole thing of listening never being a chore was to become a theme of my time spent with the Cambridge Evo 150. The insight offered into the excellent sound of rock band Augustus's *Ragtime World* [Octave Records 0006; DSD64] brought the well-crafted recording to life. Furthermore, the outstanding realism of Zuill Bailey's set of Bach solo cello suites for the same label [0008] showed this slimline system has real star quality.

### UNDER THE SKIN

Even driving loudspeakers well beyond its price-grade, the Evo 150 shows not only excellent grip and control, but also a wonderful freedom and spaciousness for which no apologies need be made. The three-dimensionality and near-tangibility ➔

### THE MAGIC APP

Some hi-fi companies will say, 'just drive our product with your choice of third-party app because we've spent all the money on the sound'. The Evo models give the lie to that kind of thinking, so smoothly does the StreamMagic control app work with the streaming platform here, the two having been designed together in-house by Cambridge Audio. Running on Apple iOS, it puts everything from your own music library to streaming services at your fingertips. It also leads you through the entire set-up and adjustment of the Evo 150, from bringing it 'up to speed' with your home music servers to niceties such as which inputs the system will display, and what they're called. You can hide unused inputs for fast switching, for example, and all these menus are helped by the use of clear, logical screens, big on plain language and free from jargon. This truly is excellent hi-fi made simple, without sacrificing any flexibility, and is testament to the hard work the engineers have put in on their software development.







## Nothing else sounds this good

Delivering flawless reproduction, dynamics and an openness to the sound that will totally captivate, our Reference Ruby cartridge takes its name from the ultra-rigid ruby cantilever. With superlative tracking abilities, subtle details are a revelation of breath-taking transparency with lower frequencies formidably tight with no loss of control, and thanks to the diamond micro ridge stylus, surface noise is vanishingly low. Abandon the constraints of time, and vividly discover what your most cherished records really sound like with this true jewel of sound.

**AVIDHIFI** has full creative independence, designing and crafting extraordinary instruments that connoisseurs consider to be the world's finest, from the vinyl record to the final sound.



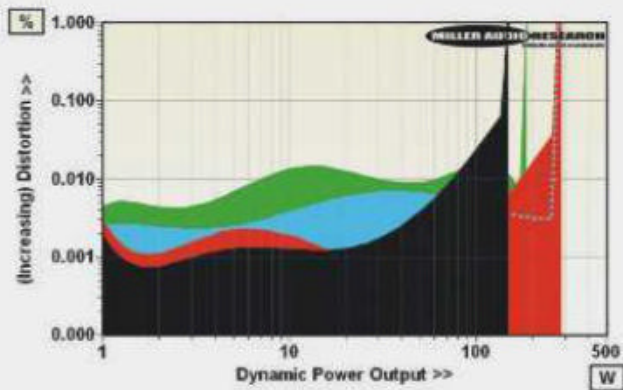
see everything at  
[avidhifi.com](http://avidhifi.com)



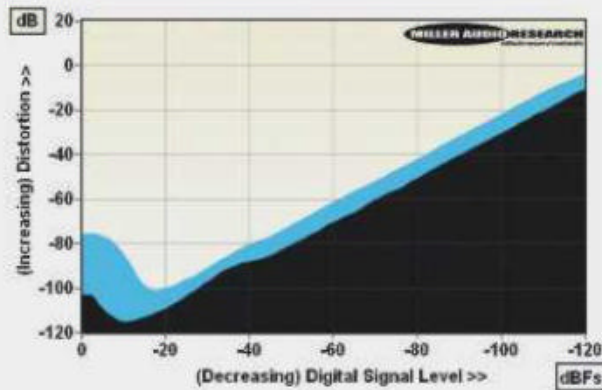
## CAMBRIDGE AUDIO EVO 150

Rapidly becoming the Class D solution of choice, Hypex's Ncore module, and particularly the 150W variant, is delivering reliably high performance in a wide variety of audiophile separates [most recently the Mola-Mola Kula, *HFN* Oct '21]. The 'fingerprint' is becoming familiar – it offers the rated 2x150W/8ohm by the skin of its high speed transistors, and up to 2x280W/4ohm, while the technology allows for little or no dynamic headroom, realising 150W, 290W, 275W and 193W at <1% THD into 8, 4, 2 and 1ohm loads, respectively. Maximum current is limited to ~14A [see Graph 1]. Gain is a sensibly moderate +34dB (balanced input), but the 82dB A-wtd S/N (re. 0dBW) falls about 5-6dB short in the Evo 150 courtesy of two spurious idle tones at ~1kHz and ~2kHz. Bass/midrange distortion remains very low at 0.0006% up to 10W, increasing to just 0.004-0.007% at 100W, though THD does pick up above 10kHz to 0.025%/20kHz/10W, in line with the gently tailored response of -0.6dB/20kHz to -6.5dB/100kHz.

Also thoroughly tried-and-tested is the ESS Sabre ES9018K2M DAC, implemented here with its fixed linear phase digital filter. This trades pre- and post-ringing in the time domain for an 89dB stopband rejection and flat, extended responses that reach out to -0.12dB/20kHz, -0.9dB/45kHz and -2.4dB/90kHz with 48kHz, 96kHz and 192kHz media, respectively. Measured at a 2V (preamp) output, low-level resolution is true to within ±0.2dB over a 100dB range and the S/N is a wide 106.5dB (no idle tones here). Distortion, too, falls to a low 0.0002-0.001% (20Hz-20kHz) over the top 20dB of its range [see Graph 2, below] while jitter is very well suppressed at less than 25psec, across all sample rates and all digital inputs. **PM**



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 13.9A



ABOVE: Distortion versus 24-bit digital signal level over a 120dB range (1kHz, black; 20kHz, blue)

## HI-FI NEWS SPECIFICATIONS

|                                     |                                 |
|-------------------------------------|---------------------------------|
| Continuous power (<1% THD, 8/4ohm)  | 149W / 275W                     |
| Dynamic power (<1% THD, 8/4/2/1ohm) | 150W / 290W / 275W / 193W       |
| Output imp. (20Hz-20kHz, Pre/Amp)   | <1ohm / 0.031-0.032ohm          |
| Freq. resp. (20Hz-20kHz/100kHz)     | +0.0 to -0.6dB/-6.5dB           |
| Digital jitter (USB / S/PDIF)       | 25psec / 25psec                 |
| A-wtd S/N ratio (DAC/Amp)           | 106.5dB (0dBFS) / 81.8dB (0dBW) |
| Distortion (DAC, 0dBFS/Amp, 0dBW)   | 0.0015-0.025%/0.0005-0.018%     |
| Power consumption (Idle/Rated o/p)  | 24W / 340W (1W standby)         |
| Dimensions (WHD) / Weight           | 317x89x352mm / 5.3kg            |



ABOVE: Analogue line ins on RCAs and XLRs are joined by MM phono, two Toslink optical, coaxial, USB-A (for HDD connection), USB-B and wired Ethernet (both 384kHz/32-bit and DSD256) and, inside, Wi-Fi/Bluetooth (aptX HD – 48kHz/24-bit). Pre outs (RCAs) sit alongside two sets of 4mm speaker cable binding posts and 12V triggers

of Zuill Bailey's centuries-old instrument was simply delicious.

As you might expect with those powerful Hypex Ncore modules in harness [see PM's Lab Report, opposite], the Evo 150 is never short of clout or drive, and will play a good deal louder than you might think without showing any signs of stress. But neither is it just for flat-out rockers. So with the layered African and Latin percussion of Art Blakey's *Holiday For Skins* [Blue Note UCCQ-9526; 96kHz/24-bit], the sheer punch of the percussion and drumming, set against a seemingly unstoppable beat, was thrilling. And this is not just in its impact but in how much one could hear of the tonality of the instruments.

## SHEER QUALITY

Similarly, exploring some of the lesser-known works on Decca's *Journeys In Modern Jazz: Britain 1965-72* sampler from its British Jazz Explosion remasters series [n/a cat no; 96kHz/24-bit download] showed just how much information the Evo 150 can convey while still making a

magnificent noise. It also revealed the sheer quality of jazz recordings from this era.

Even better, it was as impressive whether playing music from a downloaded collection or streaming from high-quality

services such as Qobuz or Tidal. Picking out Sturgill Simpson's wonderful *The Ballad Of Dood & Juanita* found the Evo 150 exploding into life with the battle effects of the prologue, then snapping into sharp focus as the music began for real.

Simpson's voice was powerfully evoked and right before the listener, while the backing musicians had a great intimacy – just like dropping into an ad hoc gig – and fine ambience. It's just a pity this brilliant set is so short, coming in at a mere 27 minutes from start to finish.

Even unleashing an orchestra on this compact system doesn't faze it. The 2016 Vienna Philharmonic reading of Mussorgsky's *Pictures At An Exhibition* under Gustavo Dudamel [DG 479 6297] was resplendent in all its weight and sheer orchestral scale, yet packed with wonderful detailing between and within the great showpiece climaxes. What's more, winding up the volume brings greater detail, and even more drama, such is the dynamic headroom on offer here – cementing the impression that this is a very fine streaming solution to which one only need add some rather good speakers. **PM**

## HI-FI NEWS VERDICT

Compact, stylish and impeccably engineered – Cambridge Audio's absurdly capable little streaming amplifier performs like a far bigger system that successfully bursts out of its diminutive frame. It'll do everything you want when it comes to network audio, is flexible when it comes to system integration, and best of all is a delight to use thanks to that StreamMagic platform. A firm 'must listen', this one.

Sound Quality: 87%



LEFT: Cambridge Audio's latest remote offers access to input, presets, display info, volume, A+B speaker and headphone switching



# Exposure 3510

Exposure returns to its roots with a full-width integrated inspired by the improved circuit design of the recent 5010 monoblock power amps. Does 'old school' still cut it?  
Review: **Ken Kessler** Lab: **Paul Miller**

**N**ostalgia doesn't come any better than this: an integrated amplifier that looks like it escaped from the 1980s, all minimalist and line-level and 440mm wide. But Exposure has been around for close to 50 years [see PM's boxout, p57], so this isn't some exercise in retro from an arriviste brand with cod heritage. Rather, the 3510 is a device for reminding people like me of (hi-fi) life in simpler times.

Even its realistic price of £2250 equates to around £440 in 1980, typical of a quality British integrated amplifier of a politically correct nature. It's part of a range, with all models available in black or titanium and sharing the same casework, which will ultimately comprise the 3510 Stereo Power Amplifier (£1590), 3510 Mono Power Amplifier (£2990 per pair), 3510 Preamplifier (£1590), and a range of optional plug-in modules.

## BOLD STEP

There are three forthcoming plug-ins – a USB/DSD64-compatible DAC (£410) and an MM phono or an MC phono board (£300 each), but the 3510 can only house one. Both phono modules will offer two sensitivity/gain settings combined with 47kohm loading for MM and 100, 110, 130, 160, 210, 310 and 470ohm for the MC board. In the spirit of the price category, I reviewed our line-only 3510 with an external sub-£500 phono stage.

Specs-wise, too, the 3510 integrated amplifier could have been plucked from the pages of the *1980 Hi-Fi Yearbook* although key areas of the preamp circuit design, and even the choice of power transistors, have witnessed a process of evolution and improvement over the decades. Otherwise Exposure operates under the very sensible 'if it isn't broken, don't fix it' school of engineering. The conservative factory

power rating is 110W/8ohm [see PM's Lab Report, p59] and it provides line inputs labelled Aux/Phono, CD, Aux 2, AV with fixed gain for switchable home theatre bypass, a tape in/out loop and two preamp outs, the latter useful for feeding subs or for connecting other power amplifiers.

All of these are single-ended RCA connections, accompanied by two sets of loudspeaker outputs for which Exposure took a bold step – instead of multi-way binding posts, the 3510 accepts banana plugs only. And, in case you're wondering why an amplifier would offer two sets of speaker outputs, but no A/B speaker selector switch (as was once the fashion), their role here is to simplify bi-wiring.

Its uncluttered front panel contains, from left to right, a push button for power on/off, rotary source selector, a row of LEDs to indicate the chosen source, a sensor for the remote control and a ¼in headphone socket. The supplied remote [see p59] is a

new system commander with buttons for other Exposure components, but here deals with source, volume up/down and mute.

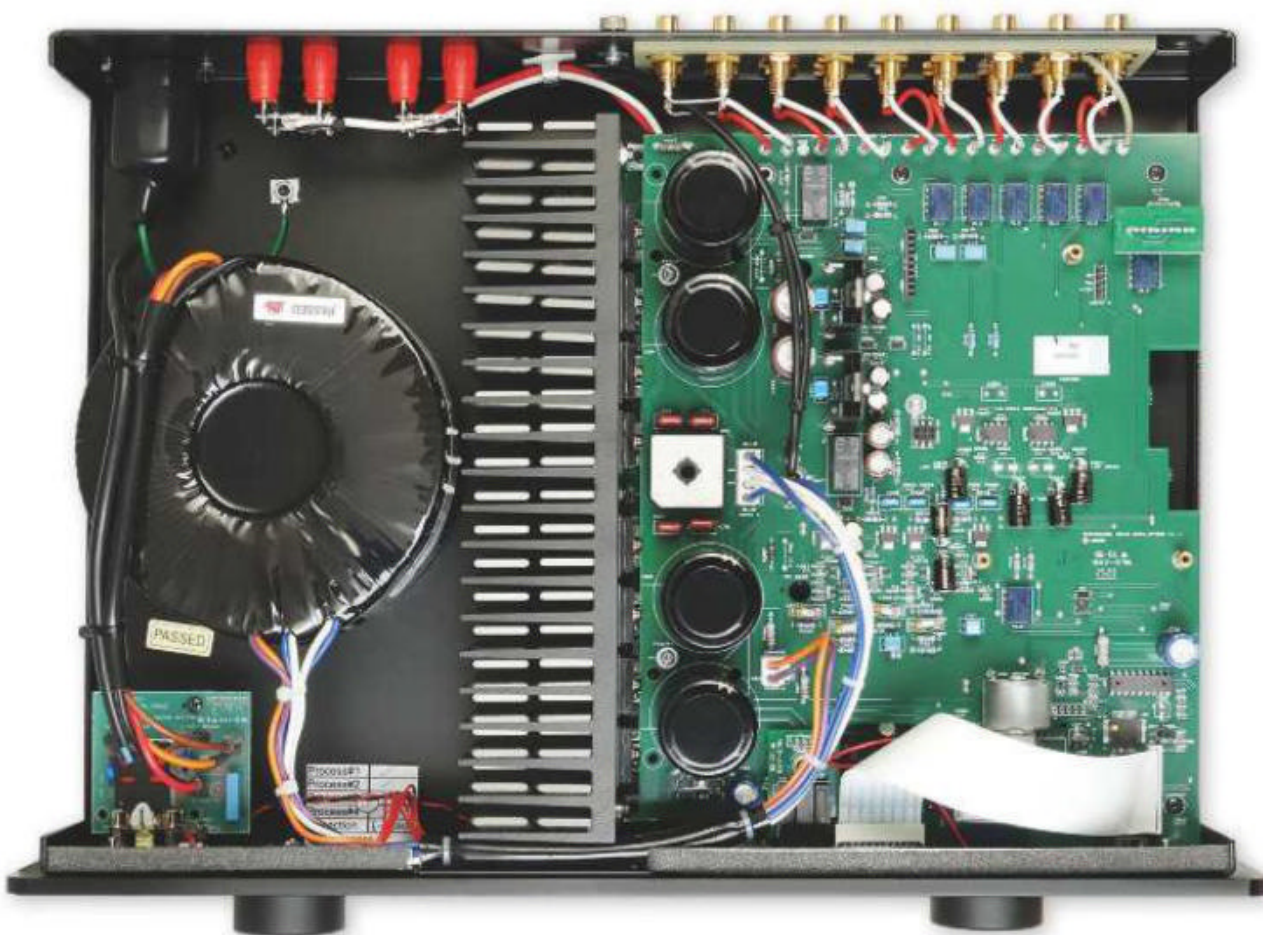
## HOT TOPIC

The installation is self-explanatory for anyone who has ever set up a basic system, which adds to the delicious blast-from-the-past ambience. The lack of phono or DAC modules in our sample made my life even easier, and I immediately set it up with feeds from an SACD player, a CD player, an open-reel deck and a turntable-via-phono-amp. Speakers were

all stand-mounted two-way systems, but I couldn't resist a burst of the Wilson Sasha DAWs [*HFN* Mar '19] to sate my curiosity.

Despite the closed nature of all integrated amplifiers, the 3510 does encourage growth over the years, as its doubled-up pre-out and speaker outputs suggest, while a detachable mains cable also begs for experimentation. These, too,

*'I heard snap  
and transient  
attack, braced  
by rich bass'*



**RIGHT:** Evolved from the 3010 series, the 3510 features two pairs of Toshiba power transistors per side [on internal heatsink, centre] and fed from a beefy linear PSU [near left]. Phono module is missing here [fitted top right]





recall the mind-set, zeitgeist and status quo of the early days of Exposure, when cables, bi-wiring and other tweaks were hot topics, and even audiophiles on a tight budget expected an element of flexibility. If I remember correctly, even the market-dominating, £79 NAD 3020 [*HFN* Jan '80 and Nov '12] offered a preamp output.

### SILKY THRILLS

Switch-on is accompanied by a brief muted period, after which three red LEDs illuminate and tell you the system is operational: one for power on, one for the source indication and the last is on the motorised volume control so you can see its position from the listening seat. When you hit mute, the source and level LEDs are extinguished. As for the headphone output, this mutes the speakers when you insert a ¼in jack, and I'm happy to report that I couldn't find a pair of cans it wouldn't drive with anything less than distinction.

Of late, I have been rediscovering SACD, staggered by the way it narrows the gap between CD and LP, but baffled by its cult

status. What Exposure's 3510 delivered with the kind of impact I would expect of a £25k high-end import weighing 50kg was Nilsson's *Schmilsson* [Mobile Fidelity UDSACD 2219], in its tougher moments. Of course, the aching ballad 'Without You' demanded finesse, which the 3510 exhibits by the bushel, but it was the bass run that opens 'Jump Into The Fire' that made me realise this wasn't 'just another integrated'.

For this track, the bass guitar is the lead instrument with Herbie Flowers in virtuoso mode, dominating the number while the rest of the album is piano-biased. The 3510 reaches down deep, but it pulls off a deft trick: instead of the bass overshadowing all else, the guitars at the extreme ends of the soundstage hover around it, while Nilsson's slightly nasal vocals nestle on top of the big, fat, bottom end.

All the while, there's a coherence and openness that reminded me more of the vinyl offering than CD, while the drum solo towards the track's finish had the kind of atmosphere I expect of a pristine Kodo recording. Then the bass comes in again,

**ABOVE:** Available in solid black or titanium casework for a lighter look, the 3510 offers an updated industrial design with logic-controlled rotary input selection and motorised volume

and even my diminutive LS3/5As seemed more comfortable with the surfeit of lower octave material than one might imagine. Why is simple, for the 3510 exhibits speaker control like a Sgt Major.

As I wasn't in the mood to wallow solely in wooferland, I cued back to 'Without You', a song so excruciatingly poignant that even Maria Carey's histrionic delivery couldn't butcher it. Nilsson treats it with a tenderness that recalls the great romantics such as Johnny Mathis, the stage set with the most delicate piano trills, along with utterly gorgeous strings and horns.

What the 3510 did to surprise me was to present them with a silkiness I associate more with tubes like EL34s or even 300Bs. The 3510 was emerging as a solid-state amp for those who want but cannot cope with valves. Better still was the sense of majesty that this love song warrants, because it is one of the all-time heartbreakers, up there with the likes of 'In My Life' and 'Waterloo Sunset'.

### INTO AFRICA

I was starting to think that, at least in digital terms, using SACD was a cheat because it is so inherently superior to any other pre-recorded digital format I have experienced. Turning next to conventional CDs, I slipped in a disc from a package I detest, 80 vile tracks from *Now Yearbook 1983* [Sony/EMI 94398 73352]. It made me thank the heavens that I wasn't a teenager when the charts were dominated by the likes of Spandau Ballet, Wham, Spandau Ballet, Duran Duran, or the tedious Spandau Ballet. Desperate to find even one track that wouldn't render me suicidal, I settled on Toto's 'Africa'.

Why, you might ask, would I even bother with this set if I hate 75% of the content? Simple: if a system is magical, you will ➔

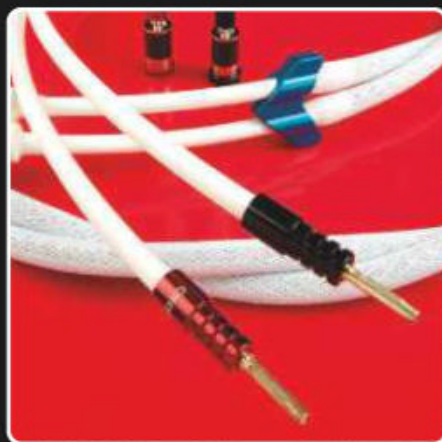
## EARLY EXPOSURE

Founded in 1974 by John Farlowe, Exposure set out to make 'real world hi-fi at real world prices', shoe-horning audiophile circuit design into basic but sturdy matt-black casework. In practice, the fledgling brand took flight with the Exposure I speaker, followed by the II shortly after [*HFN* Jul '77]. The first amplifiers were a solid-state pre/power combination dubbed the III and IV [*HFN* Oct '78] that went head-to-head with competing black boxes from that other estimable Brit brand of the same era, Naim Audio, in Salisbury.

By the mid-'80s, the X integrated amp had proved itself popular, followed much later by the XV [*HFN* May '95], XX and XXV derivatives. The digital revolution had rather passed Exposure by for the first 15 years until it finally launched its first CD player [*HFN* Mar '99]. Subsequently there was a veritable flurry of silver disc spinners including the 2010 CD [*HFN* Jun '02] and premium XXII CD player [*HFN* Nov '03]. Early products were designed by Farlowe, and later by his successor Tony Brady who has held the chair from 2000 to the present day. Tony masterminded the 2010 series [*HFN* Feb '01] and, very soon after, the long-running 3010 series, only now superseded by the new 3510 amplifier featured here. Finally, although still describing itself as 'a British company...', with its design and manufacturing base remaining in Lancing, West Sussex, Exposure Electronics Ltd has been in Malaysian ownership for the last 20 years. PM



# Winning performance



**CHORD**<sup>TM</sup>  
COMPANY



## Audiophile quality at a realistic price

The multi-award-winning Chord Company cables feature the latest high-performance shielding and our unique ARAY technology, first introduced on our flagship products and now benefitting all ranges.

A wide variety of analogue and digital interconnects are available alongside high-performance speaker, tone arm, mains power and HDMI cables. We also supply stand feet, contact cleaner and the acclaimed English Electric 8Switch and 16Switch.

Proudly designed in England since 1985 by a dedicated team of music, cinema and game lovers. Used and recommended worldwide by a host of professionals, including record producers, studio engineers, musicians and hi-fi manufacturers.

Ask your nearest Chord Company retailer for a demonstration/loan - including the new Chord Company GroundARAY.

Find out more: [www.chord.co.uk](http://www.chord.co.uk)





# INTEGRATED AMPLIFIER



**ABOVE:** The 3510 offers five line inputs (one for an MM/MC phono option), a tape loop and two preamp outs. Dual 4mm speaker cable sockets support bi-wiring but are for banana plugs only – no bare wire or spade lugs here!

listen to anything, as I found myself sitting through open-reel tapes from Mantovani, Percy Faith, and even the soundtrack to *Zorba The Greek*. If the 3510 could render any of those tracks tolerable, from a period when everything was synthesiser-driven, reeking of artifice and so bright and edgy that one's teeth ached, then it was a champion indeed.

## THUMBS UP

Back to Toto, which I actually admire because they are peerless musicians and 'Africa' is a gorgeous, elegiac work. (It was that, or Public Image Ltd, or New Order...) Bang! Straight off I was hearing snap and transient attack, supported by rich bass. I have no idea what instruments are on this track because it is, like the dreck that shares disc space with it, a mix of the real and the electronic.

Regardless, the sound drew me in, a scaled-down facsimile of what was possible from an SACD via £100,000's worth of high-end kit. And it was enough to sell me on the 3510's sheer listenability, its competence having already been demonstrated with the Nilsson

SACD. One other track on *Now Yearbook 1983*, though, couldn't be skipped as it's been a while since I revelled in genuine *a cappella*.

Five voices in perfect harmony: The Flying Pickets' magnificent 'Only You' was a fave demo track back 40 years ago and it still

**LEFT:** Exposure's new full system remote caters for the 3510's input selection, volume, mute and power on/off



sends chills up and down my spine. Here the challenge was to see how Exposure's 3510 separated the voices, though I have no idea if this was multi-tracked, tweaked in the studio or otherwise manipulated electronically. Whatever its origins, the performance was opened up sufficiently for me to home in on each voice with remarkable facility, and yet it was always cohesive.

It was the new 45rpm issue of Jeff Beck's immortal *Truth* [Mobile Fidelity MFSL 2-502] that stamped a solid thumbs-up on this integrated amp. Take my word for it, if you love this album as I do, this is as good as it gets. The 3510 handled every element with skill, from the textures of a then-young Rod Stewart's vocals to the roiling bass courtesy of Ronnie Wood, all the while respecting the thunderous percussion of Micky Waller.

But the star here is Beck, and his specialty is wrenching myriad textures and sounds from his guitars: wah-wah, fuzz, even a lush interpretation of 'Greensleeves'. So a tip for Exposure dealers: demo the 3510 amp with this album, and you'll sell one every time. ⚡

## HI-FI NEWS VERDICT

In addition to providing a much-needed and refreshing wander down Memory Lane, Exposure's 3510 integrated reminded me how much fun an uncomplicated system of source/amp/speakers can be. It worked faultlessly, drove hungry speakers with ease (inc. Wilson's Sasha DAW) and established a case for simplicity – not something every part of the audio biz wants to hear. You want painless hi-fi? You got it.

Sound Quality: 87%

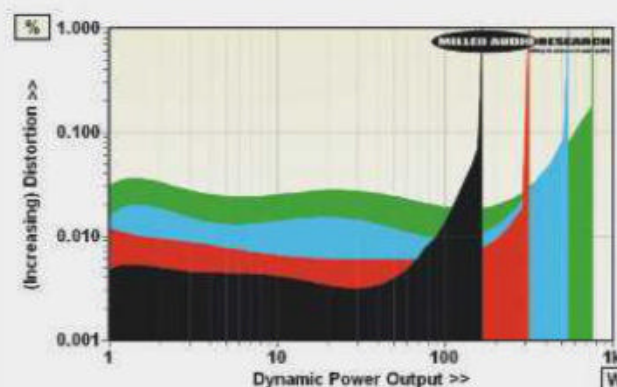


# LAB REPORT

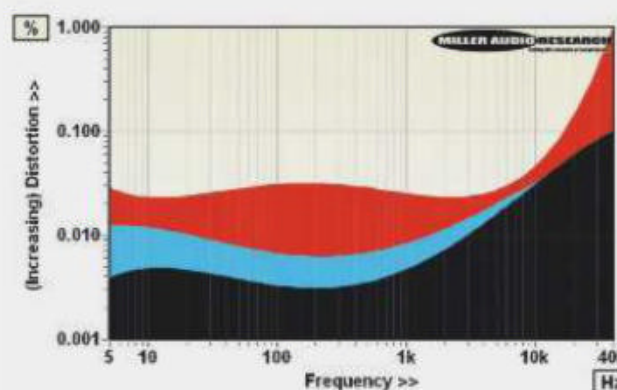
## EXPOSURE 3510

While there is some trickledown from the 5010 monoblocks [HFN Nov '18] there is still a clear connection between the design of the new 3510 and the earlier 3010S2 integrated [tested for HFC Jul '13]. The overall +41.1dB gain and slightly below-average 80.2dB A-wtd S/N ratio are unchanged, but this is a white noise rather than invasive hum, so any subjective impact is likely to be benign. The power output of the new 3510 is also identical to the 3010S2's at 2x135W/ 8ohm and 2x220W/4ohm, both illustrating the very strict PSU regulation that is a feature of all Exposure amps. The figures are also comfortably ahead of their 110W specification, but the 3510 wins out courtesy of its much improved ability to drive low impedance loads. The 3010S2 offered 175W, 330W, 555W and a (protected) 335W into 8, 4, 2 and 1ohm loads under dynamic conditions while the 3510 powers on to totals of 166W, 318W, 546W and 762W [see Graph 1]. This 27.6A maximum current delivery (<1% THD/10msec) is very impressive for a 'mere' 100-watter.

The ~0.01ohm output impedance and HF response shaping observed from the 3510 is, again, almost identical to that measured with the 3010S2, both amplifiers offering a -3dB response reaching from 4Hz-40kHz (-1.0dB/20kHz). Distortion is also closer in level to that achieved by the 3010S2 than the 5010 at 0.006-0.051% (3510) vs. 0.0006-0.005% (5010), all for 20Hz-20kHz/10W. At two-thirds output, distortion increases to 0.025-0.18% [see red trace, Graph 2, below] which is not unreasonable given the stress on an output stage configured with only modest levels of feedback. In a nutshell, the 3510 is a proven, fine-sounding design, now with added 'grunt'! PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 27.6A



**ABOVE:** Distortion vs. frequency at 1W/8ohm (black, 5Hz-40kHz), 10W (blue) and 70W (red, 20Hz-20kHz)

## HI-FI NEWS SPECIFICATIONS

|                                     |                             |
|-------------------------------------|-----------------------------|
| Continuous power (<1% THD, 8/4ohm)  | 135W / 220W                 |
| Dynamic power (<1% THD, 8/4/2/1ohm) | 166W / 318W / 546W / 762W   |
| Output impedance (20Hz-20kHz)       | 0.010-0.022ohm              |
| Freq. resp. (20Hz-20kHz/100kHz)     | -0.19dB to -1.0dB / -15.8dB |
| Input sensitivity (for 0dBW/110W)   | 25mV / 265mV                |
| A-wtd S/N ratio (re. 0dBW/110W)     | 80.2dB / 100.6dB            |
| Distortion (20Hz-20kHz, 1W/10W)     | 0.003-0.058% / 0.006-0.051% |
| Power consumption (idle/rated o/p)  | 25W / 370W (1W standby)     |
| Dimensions (WHD) / Weight           | 440x115x300mm / 12kg        |



# MartinLogan ElectroMotion ESL X

Flagship of the ElectroMotion series, this hybrid electrostatic promises a taste of the range-topping Masterpiece loudspeakers at a more wallet-friendly price

Review: **Mark Craven** Lab: **Paul Miller**

The hi-fi market is replete with loudspeakers that look a little 'different', but few are as eye-catching as an electrostatic design where music appears to be coming almost from thin air. MartinLogan, the Kansas-based company established in the early 1980s, is one of the technology's best-known advocates. It began life with a 'static model, and even though its range has expanded since into conventional box-type speaker territory, its mantra remains 'wherever possible, we go electrostatic'.

With the ElectroMotion series, it also 'goes' affordable. The EM-ESL X tested here sells for £4995 (there's also the option of the smaller £3495 EM-ESL) and when compared to the company's Masterpiece stable, where pricing extends from the £7995 Classic ESL to the £90,000 Neolith [*HFN* Jul '16], this seems something of a bargain.

That impression doesn't wane when you lay eyes on it. A floorstanding model standing 1.5m on pre-fitted feet, the EM-ESL X will likely tower over your listening seat – although maybe 'over' isn't the right word, as the XStat panel, a 12-micron-thick film diaphragm sandwiched between two perforated steel stators, leans back slightly. This rake is intended to channel the speaker's limited vertical dispersion, targeting energy at the listening position and reducing off-floor reflections.

## YOU'VE BEEN FRAMED

MartinLogan's XStat panel is curved, an engineering tweak the manufacturer says enables an optimal 30° horizontal dispersion. It's then housed in an aluminium composite AirFrame enclosure that maintains panel rigidity, while maximising 'playable surface area'. This enclosure joins to the speaker's lower cabinet, which has a front baffle that

continues the angle of the electrostatic transducer, and a rear that angles the opposite way [see inset picture, p61]. The result is an unusual overall aesthetic – I rather like it, even though the EM-ESL X's front and rear grilles aren't a great match for the cabinet's gloss black finish.

## SHINING A LIGHT

Behind these grilles are 200mm woofers, completing the speaker's hybrid design. In this case the bass section is passive, whereas most of the pricier Masterpiece models incorporate Class D amplifiers in fully active bass solutions.

Meanwhile, the standard ElectroMotion ESL has a single front-facing driver while the EM-ESL X we have here has another 200mm unit mounted to the rear. So while you can think of this model's 'X' suffix as

signifying 'extra-large' – the panel has 50in<sup>2</sup> of extra surface area over the step-down EM-ESL, by virtue of being 16cm taller – it could also stand for extra bass.

However, this second woofer doesn't result in a radical change to the claimed bass extension as the EM-ESL X's 41Hz (–3dB) is just one Hz deeper than the ESL's 42Hz [see PM's Lab Report, p63].

Some speakers are more obliging when it comes to placement than others, and the EM-ESL X fits into your room begrudgingly. It's not only very tall but, as a dipole speaker, boundary wall proximity needs to be managed. The recommendation is a minimum 61cm, as outlined in the in-depth

**RIGHT:** ML's CLS XStat panel offers an effective radiating area of 344in<sup>2</sup>. Below 400Hz it is augmented by front- and rear-facing 8in stiffened paper-coned woofers. Rear grille is removable, exposing a driver that looks more 'polymer' than paper!

installation manual (where the use of a torch – to reflect off the inner third of the curved panel – is even recommended to help toe-in the cabinets).

MartinLogan suggests that side walls should be less of a concern, thanks to the EM-ESL X's low, phase-cancelled, horizontal output, but the gist is that this is a speaker that benefits from plenty of space. And that includes a distance to the listening position in excess of the width between the pair – and plenty of experimentation.

Then, of course, each speaker needs an AC wall socket for the supplied DC PSU that gives the electrostatic panel its get and up go. This socket, and







## PRACTICAL HYBRIDS

If the ideal driver is entirely weightless then the electrostatic principle gets the loudspeaker designer fairly close, albeit with a host of technical challenges. MartinLogan has been developing this technology since its inaugural CLS prototype seen at CES in 1982 – employing a ‘cling film’ thickness (about 12µm) conductive membrane stretched between two highly charged, perforated steel stators. Then, as now, the membrane was positively polarised and pushed and pulled in sympathy with the applied audio signal. Reproducing deep bass remains tricky, however, for as the sound wavelength exceeds the size of the membrane there’s a progressive cancelling of rear and front output.

In short, the bass rolls away very swiftly, as audiophiles discovered when Quad launched its seminal ‘full range’ electrostatic back in 1957. Arthur Janszen was ahead of the game with his smaller Model 65 electrostatic in 1955, as this was often partnered with Acoustic Research’s AR1, complete with 12in woofer, to flesh out the lower octaves. MartinLogan’s 1983 Monolith was a fused electrostatic/moving-coil loudspeaker and the brand has continued with this hybrid theme right up to the flagship Neolith [*HFN* Jul ’16] and EM-ESL X of today, the latter with dual 8in woofers. PM



corresponding status light, is mounted on the EM-ESL X’s rear [see p63], below dual sets of speaker binding posts that are contoured for an easy grip. Forget to plug it in, and all you’ll hear are the woofers...

## GRAND ENTRANCE

Having spent considerable time setting up these speakers, I was relieved to sit down and enjoy the show. Thankfully, it proved to be one worth the entry fee. As expected, the sound was noticeably different to much of the cabinet-meets-driver competition, most obviously in terms of imaging and soundstaging nuance. I’d struggle to think of a more ‘invisible’ model at this price or one that bettered the clarity and openness of its mids and highs. The EM-ESL X’s sizable transducer elicited a detailed, transparent listen, and this was joined by a well-defined and up-to-speed bass performance.

But first there’s the scale of the performance to applaud. The size of the EM-ESL X’s sound outshines the speaker itself, its grand soundscape a feature of other large dipole panels [see *HFN* Apr ’18]. Jon Hopkins’ instrumental ‘Contact Note’, from the eponymous 2004 album [Just Music TAO 010; 44.1kHz/24-bit], provided a perfect demonstration of its room-filling ability. Ominous synths and choral vocals emerged from a deep, wide wall of sound that felt totally independent of the diaphragms. Details were placed so far beyond them left and right I couldn’t help but cock my head in bafflement.

This presentation is the EM-ESL X’s calling card, but it wouldn’t count for much if traded for a shortfall in tonal or

timbral accuracy.

Iron Butterfly’s proto prog-rock epic ‘In-A-Gadda-Da-Vida’ [eponymous; Rhino Records SALVOCD071], found the EM-ESL X bringing superb texture and body to plump bass, overdriven guitar and vibrato organ. Ron Bushy’s legendary drum solo also became a barometer of the speaker’s handling of stereo movement. As tom-toms danced forward and back, stage right, and then drifted leisurely across to the left channel, this late ’60s production trick was easy to appreciate.

Iron Butterfly singer Doug Ingle sounded distant here, almost lurking at the back of the soundstage, but with recordings that put a focus on vocals, this speaker can be ridiculously entertaining. In My Baby’s funk-fusion ‘Supernatural Aid’ [*Mounaike – By The Bright Of Night*; Prehistoric Rhythm J81 H270020], the distorted and reverbed verses felt close enough to reach out and touch, and when Mark Knopfler started saluting ‘these mist-covered mountains’ in ‘Brothers In Arms’ [eponymous; Vertigo 824 499-2], there was a lucidity to his vocal that encouraged me to close my eyes.

## SWAGGER STICKS

Even with two bass drivers in play, the EM-ESL X is voiced to ensure the low-end rarely sounds dominant. In fact, it seems more concerned with transitional speed and detail than sheer output. Considering the uncoloured, transparent nature of the loudspeaker’s midband, this makes sense, but does mean the sound here is drier rather than warm, and won’t suit those who cherish bass weight above all else. ➔



**DS Audio**



*Inheriting the essence of the Grand Master*

**DS 003**



Contact:  
0118 9814238  
[info@soundfoundations.co.uk](mailto:info@soundfoundations.co.uk)

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







# Roksan Attesa

Launched as part of a series including a CD transport and two amplifiers – one with onboard streaming – the Attesa turntable completes Roksan's most stylish offering  
Review: **Adam Smith** Lab: **Paul Miller**

There are a few announcements guaranteed to make an audio fan sit up and take notice, one being the unveiling of a new turntable from Roksan. After all, the company burst onto the scene in 1985 with the Xerxes – a deck that is still going strong 36 years later in '20 Plus' guise [*HFN* Dec '11]. However, the new deck in question is the £995 Attesa turntable, and it forms part of a completely new Roksan range.

The Attesa models also mark a new entry-level point for Roksan, sitting below the blak, Caspian and K3 components. They also continue the brand's styling evolution – the rather 'industrial' appearance of its oldest separates disrupted by the arrival of the Oxygene models [*HFN* Aug '13] before its new owners, none other than Monitor Audio, extended the range and appeal of the Roksan marque. The new Attesa models are its sleekest yet!

## FLOAT ON

As well as the turntable here, there are currently two amplifiers – the £995 Attesa Integrated Amplifier and the £1495 Attesa Streaming Amplifier – plus the £495 Attesa CD transport. Strangely, the amps and CD player are offered in a silver or black finish, but the turntable's options are satin white or satin black, which strikes me as a stumbling block to stylistic harmony.

Fortunately, there are no such concerns under the skin. Fully developed and assembled in the UK, the Attesa turntable is based around a single-layer plinth sitting on three isolating but non-adjustable feet. A stable and level sitting surface will be a prerequisite for this deck as it's also fitted with a 'floating' uni-pivot arm...

Meanwhile, the striking orange sub-platter contains an integral stainless steel spindle that locates into the brass bearing

housing on the main plinth, and spins on a captive steel ball. Drive is transferred by a flat cross-section belt from an aluminium pulley atop a 24-pole synchronous AC motor. With a nod to cost and also to maintain steady belt tension, rather than use Roksan's traditional spring mounting, the motor here is secured into the plinth with a vibration-dampening gasket.

Meanwhile, the motor is driven via a two-speed synthesised supply within the plinth – one for 33rpm and one for 45rpm – and the deck is operated and speed-switched by three rather delicate touch buttons. The platter is a 10mm-thick tempered glass disc with spun and anodised aluminium edging, and weighs in at just less than 2kg. A Roksan R-MAT turntable mat tops it off. As for the partnering arm, the company has stuck with the uni-pivot bearing

configuration found on its other current tonearms – the Nima and Sara.

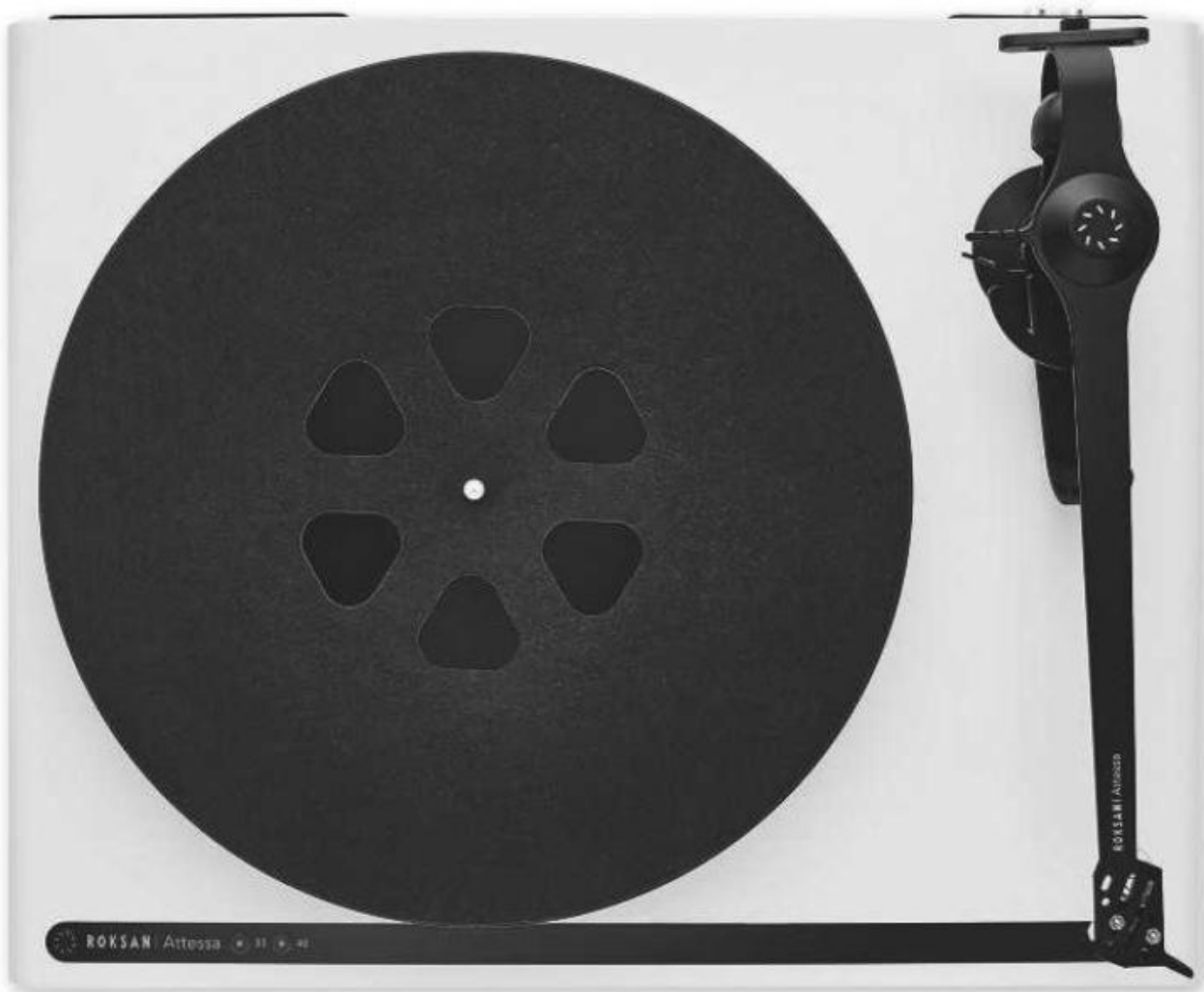
## PHONO INSIDE

On the Attesa turntable, this means a stainless steel uni-pivot on a single jewel bearing and an arm wand comprising a flat construction of lightweight ABS topped with aluminium. As noted in PM's lab report [see p67], this does confer a higher than average effective arm mass, so cartridge choice needs to be carefully considered.

Otherwise, the arm felt solid and was very stable in use, thanks largely to its separate azimuth balance and tracking force counterweights.

As part of this plug-and-go package, the deck is supplied with a pre-fitted and aligned Roksan Dana MM cartridge. This has a nominal 3.5mV output and a stylus

'It spins its  
magic and  
you're hungry  
for more'



**RIGHT:** Precision cut and polished 10mm glass platter is damped and (flywheel) assisted by a peripheral alloy 'edge'. Uni-pivot arm's azimuth is trimmed by sliding an outrigger to the left or right, while the counterweight is set further in, closer to the jewelled bearing





tip described as ‘diamond titanium’ – if I was a gambling man, I’d wager pick-up specialist Audio-Technica is the source!

By way of final flourish, the Atessa turntable also has an inbuilt phono stage, well disguised with only a preposterously tiny slide switch to activate or bypass it, which you will find on the rear of the deck. This is dedicated to MM only, and offers no adjustable loading or gain options [see PM’s boxout, below].

Setup of the deck is simple and straightforward and the quick-start guide clear enough, with the full manual available online, plus video tutorials to assist. For the purposes of this review, I parked the deck on the damped glass shelf of an Atacama Equinox RS rack, and hooked it up to a Naim SuperNait 2 amplifier [HFN

Dec ’13] driving a pair of PMC Twenty5.24 loudspeakers [HFN May ’17].

### SWEET ESCAPE

With the deck in ‘active’ mode and the inbuilt phono stage enabled, a couple of issues came swiftly to light. First, the Atessa proved more than a little microphonic in my setting, and handling the arm could result in thumps through the loudspeakers, so take care with volume!

Second, and more concerningly, the Atessa has no earth terminal so I could do nothing about the soft buzz permeating the background, the noise increasing in intensity when the arm was touched. This seems a fairly basic oversight in my view.

**ABOVE:** Available in gloss white or black, the chassis hosts a 24-pole synchronous motor with soft-touch electronic speed control, a brass/steel main bearing and novel uni-pivot tonearm

Fortunately, the musical performance of the deck went a long way to winning me back around. The Atessa really is a sweet and polished performer and a typically very enjoyable listen. No matter what kind of music passes under the stylus, the Atessa has a relaxed but confident air about its presentation. It doesn’t leap out and grab you by the lapels but rather it sneakily draws you in with its subtle and alluring sound. The deck has an easy way about it and after a side or two it spins its magic

and you’re left hungry for more.

The standout feature has to be its midband – close your eyes and it’s not difficult to work out that a uni-pivot tonearm is at the business end, and a very good one at that. The traditional uni-pivot

sense of air and space around performers and instruments was present and correct, and is always a joy to encounter. However, this was accompanied by a real sense of precision in placement, the performers finely etched within the soundstage.

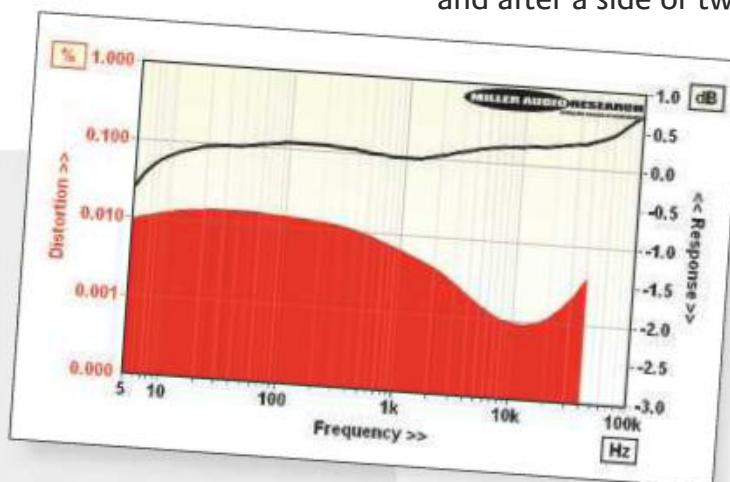
### ULTRA VIVID

Don Henley’s vocals on the title track from The Eagles’ *Long Road Out Of Eden* [Universal 0602517546950] have seldom sounded more vivid and securely placed centre stage, with a level of projection out into the room that was quite uncanny. I’ve heard decks many times the cost of the Atessa make a far worse job of this and I was hugely impressed. Despite its apparent

## GOING ACTIVE

Tucked away adjacent to the output RCAs at the rear of the Atessa [see pic, p67] is a very small switch labelled ‘passive’ and ‘active’. No, this has nothing to do with passive or active loudspeaker connections but refers, instead, to the disabling or enabling (respectively) of the Atessa’s in-built MM phono stage. This is a fixed-gain (+46.7dB) preamp that offers a maximum 7.2V output from a 56ohm source impedance. The latter increases through low bass frequencies to 300ohm/20Hz, presumably through capacitor-coupling, although the RIAA eq does not adopt the more recent subsonic amendment and, instead, is flat to –1dB/4Hz and –3dB/2Hz [black trace, inset Graph]. So slightly warped LPs and big, flappy reflex-loaded loudspeakers are unlikely to be comfortable bedfellows for the Atessa!

The response shows a slight HF lift (+0.3dB/20kHz) – inconsequential given the larger response variations of most MM pick-ups – while distortion decreases from a maximum of ~0.015% through bass frequencies down to ~0.002% at 20kHz [red infill, and lefthand Y axis, inset Graph]. Of greater potential subjective impact is the reduced headroom of the phono stage – the output clipping at just 34mV input. This amounts to an input overload margin of +16.7dB (re. 5mV/1kHz or +19.7dB re. the 3.5mV rated o/p for the supplied Dana MM). So higher output MM upgrades should probably be avoided. Finally, the A-wtd S/N is also a little below average (and below the 70dB spec.) at just 62.3dB re. 5mV/5cm/sec. Judged in context, however, the built-in Atessa phono stage is an ideal, if temporary, ‘get you on the road/out of jail’ all-in-one solution. PM







## The best of both worlds: thin film accuracy, deep bass thrills

Standard loudspeakers struggle to reproduce mid-range and high frequency audio with the lifelike detail and three-dimensional effect of an electrostatic loudspeaker. Nothing delivers bass like woofers in a box.

MartinLogan combines these elements in the most advanced electrostatic hybrid loudspeakers ever made with the Masterpiece range.

With a unique suite of innovative design elements, these loudspeakers deliver a detailed vibrant soundstage, in all listening spaces. No other loudspeakers feature the controlled dispersion of a curvilinear electrostatic transducer combined with PoweredForce woofer alignment and Anthem Room Correction (ARC®) technology.

The result is a breathtakingly seamless, full-range performance that will remain in your memory forever.

If you haven't experienced a  
MartinLogan, it's time you did:  
[www.martin-logan.co.uk](http://www.martin-logan.co.uk)

**PMC**<sup>®</sup>  
DISTRIBUTION UK  
[www.pmc-speakers.com](http://www.pmc-speakers.com)



Renaissance ESL 15A



## TURNTABLE PACKAGE



**ABOVE:** Stereo RCA sockets are mounted under the left of the plinth while the 5V 'wall wart' PSU plugs in on the right. Note the minuscule 'Passive/Active' switch adjacent to the RCAs that enables the in-built phono stage [see boxout, p65]

simplicity and relatively budget nature, the arm here clearly follows in the estimable footsteps of its more expensive Roksan stablemates.

The same album also hinted at the deck's good speed stability – there are some fine keyboard effects throughout the track and it doesn't take too much to give them a subtle tremor. But through the Atessa they sounded solid, suggesting its drive system is more than capable. This also paid dividends at the low end with a detailed bass, and individual notes easy to pick up on and follow.

### MOVING ON UP

On the other hand, this bass didn't seem especially deep, so although the deck didn't sound lightweight it did lack a little authority and punch in the lower registers. With the 12in single of OMD's 'Forever Live And Die' [Virgin VS888-13] travelling under the Dana cartridge, the Atessa played it cheerfully enough but I am more used to the sound pinning me into my seat with thundering drums and snappy percussion. The Atessa made it clear all was there, but rendered the track in a way that was a little too 'safe'.

'Safe' could also be used to describe the top-end sound of the deck with its onboard phono preamp in tow – everything was sweet and well-ordered but it could have done with more crispness. Hi-hats on tracks like 'A Man Alone' from the soundtrack to *The Ipcress File* [Decca DL79124] lacked their customary urgency and snap, for example. Fortunately, the Atessa is built to accommodate the audiophile's need to fiddle and upgrade!

I bypassed the deck's internal preamp and hooked-up an Arcam rPhono [HFN Jun '17]. This proved a revelation as the soft background buzz diminished and the treble took on a new lease of life. Hi-hats stepped up to the front of the soundstage again, and a sense

of glossy crispness appeared, but without any associated hardness. If I'd wondered that the cartridge was a little over-smooth, the rPhono proved not – the Dana is far more insightful than I'd given it credit.

Switching out the internal phono stage brought an all-round uplift in sound – the bass was deeper and firmer, the treble lighter, brighter and articulate as the Atessa picked up its skirts and found its mojo. The *Ipcress File* soundtrack now regained the sense of frenetic urgency I'd naturally expect from the pace of the performance. Even better was that the magnificent insight, spatiality and precision of the midband remained unaffected.

There's still greater potential to be realised from the Atessa if you'll countenance a cartridge upgrade. Recognising the moderate effective mass of the arm, I substituted the Dana for a (costlier) Denon DL103 [HFN Jul '09] whereupon the Atessa's very capable bass was finally revealed. Returning to the OMD 12in single, I now felt proper impact from the drums and heard rhythms that were tight, punchy and pacy. This is clearly a deck to buy for its great sound-for-pound and then upgrade at your leisure. ⚡

### HI-FI NEWS VERDICT

There's no doubt that the Roksan Atessa turntable is an excellent value package. I'd argue that better isolation and an earth terminal wouldn't go amiss, while the phono stage is handy as a get-you-started feature rather than a long-term solution. However the motor unit and arm are solidly implemented and, with a little effort and careful cartridge choice, really do turn in a rewarding performance.

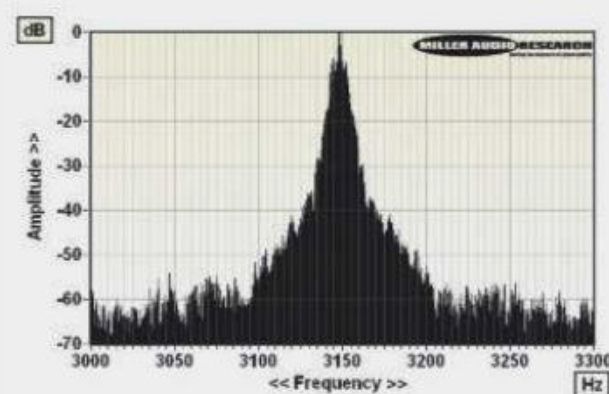
Sound Quality: 80%



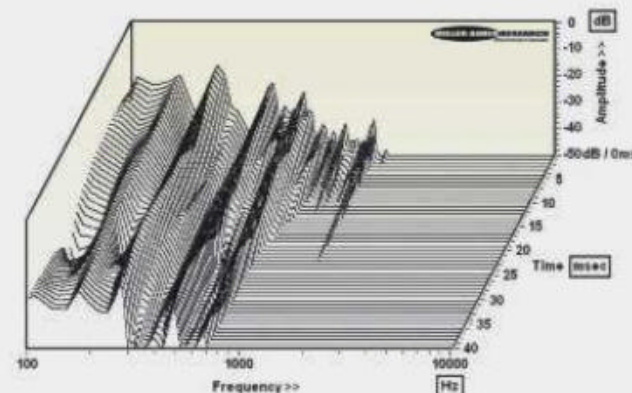
## ROKSAN ATESSA

The Atessa is fitted with a high quality stainless steel/brass main bearing while the platter – a 10mm glass disc with a bonded, precision-machined alloy periphery – contributes a full 1.8kg to the deck's total 6.3kg weight. This well-damped platter comes up to speed over a leisurely 4-5 seconds with a fine absolute accuracy of  $-0.06\%$ . Peak wow is a low  $0.03\%$ , the main component at  $\pm 4.5\text{Hz}$ , but peak flutter is distributed over a wider  $\pm 50\text{Hz}$  bandwidth and amounts to a higher  $0.09\%$  [as illustrated by the broadened main peak, see Graph 1 below]. Through-bearing rumble is also quite high at  $-63.5\text{dB}$  (DIN-B wtd re.  $1\text{kHz}/5\text{cm/sec}$ ) with modes visible at  $1\text{Hz}$ ,  $7\text{Hz}$  and  $96\text{Hz}$ , but the combination glass/alloy platter with its custom felt mat takes this figure down to a more respectable  $-67.4\text{dB}$  through-the-groove. In practical terms, this is the figure that matters.

The partnering uni-pivot tonearm is rather more substantial than it looks – a half-round ABS moulding plus aluminium top section – so the effective mass is also above-average at  $14.5\text{g}$  and arguably slightly better suited to lower compliance pick-ups than either the Roksan Dana or, in particular, the popular Ortofon 2M series. The undamped uni-pivot necessarily offers very low friction and setup is very easy but its resonant behaviour is quite 'lively', possibly due to its numerous flat alloy surfaces. There's a low-Q bending mode at  $65\text{Hz}$  followed by harmonics, twisting and other bending patterns at  $165\text{Hz}$ ,  $260\text{Hz}$ ,  $460\text{Hz}$  and  $670\text{Hz}$ , followed by a smattering of short-lived resonances above  $1\text{kHz}$  [see Graph 2]. The more energy ploughed into this arm via the pick-up, the more these modes will be aggravated, so medium-compliance MM's will be favoured over low compliance MC's. PM



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



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

### HI-FI NEWS SPECIFICATIONS

|  |   |
|--|---|
| Turntable speed error at $33.33\text{rpm}$     | $33.31\text{rpm}$ ( $-0.06\%$ )                       |
| Time to audible stabilisation                  | 4-5sec  |
| Peak Wow/Flutter (Peak wtd)                    | $0.03\%$ / $0.09\%$                                   |
| Rumble (silent groove, DIN B wtd)              | $-67.4\text{dB}$                                      |
| Rumble (through bearing, DIN B wtd)            | $-63.5\text{dB}$                                      |
| Hum & Noise (unwtd, rel. to $5\text{cm/sec}$ ) | $-54.9\text{dB}$                                      |
| Power Consumption                              | $5\text{W}$ ( $1\text{W}$ standby)                    |
| Dimensions (WHD, with lid) / Weight            | $432 \times 105 \times 353\text{mm}$ / $6.3\text{kg}$ |



# Soundsmith Zephyr MIMC ★

Arguably best known for its high-end strain-gauge pick-ups, Soundsmith also offers a series of high- and low-output moving-iron/fixed-coil cartridges. Is the Zephyr a 'star'?  
 Review: **David Price** Lab: **Paul Miller**

The so-called 'vinyl revival' has not only fermented an uptick in sales of both turntables and LP records but it's also created a renewed demand for cartridges of all shapes, sizes and types. Designer/audio artisan Peter Ledermann was far from alone in seizing the opportunity, sensing, very specifically in this instance, that many Bang & Olufsen turntable owners wanted to get their ageing record players going again. He successfully obtained a licence to restart production of these plug-in MMC pick-ups, and Soundsmith was born.

Naturally, Peter's own design of conventionally mounted cartridges soon appeared and the £1999 Zephyr MIMC Star we have here is the latest incarnation, a mid-priced model in what is a very diverse range. Soundsmith's sprawling product portfolio also includes several very specialised strain-gauge pick-ups, such as the SG-230 [*HFN* May '21], alongside a raft of 'fixed-coil' cartridges. The latter are offered in both low- and high-output guises, all using an ultra-low-mass moving-iron stylus and cantilever assembly [see PM's boxout, p69].

The Zephyr MIMC Star is from the low-output portfolio, rated at 0.4mV and thus comparable to a lowish output moving-coil design. However, the company advises that the minimum cartridge load must be at least 470ohm for proper high-frequency performance [see PM's Lab Report, p71].

Otherwise, weighing a claimed 12.2g, the Zephyr MIMC Star is an easy enough fit for most modern tonearms, although the slightly odd and irregular body design makes it trickier than many rivals to fine-tune its final alignment.

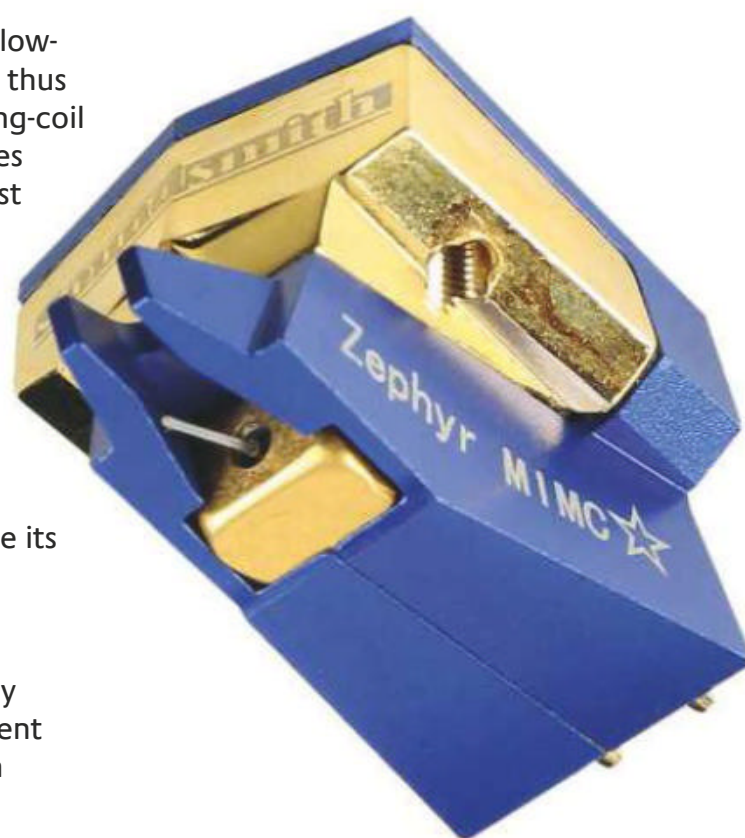
## DELIBERATE DESIGN

Its multiple surfaces are not especially helpful when fiddling with an alignment protractor, but Soundsmith says form follows function – the body is shaped as it is in order to reduce resonances. Indeed, Peter Ledermann is emphatic that this is key to the Zephyr MIMC Star's performance, pointing out in the instructions that 'it is one of the major contributing design efforts towards perfection', no less.

Before the cartridge is installed in the headshell, you have the option of fitting Soundsmith's so-called 'DEMS' silica inserts. These are tiny white alumina rods designed to electrically decouple the cartridge body from the headshell should you encounter a hum loop. Two half rods are supplied, placed in specially milled recesses at either side of the cartridge's top-plate (visible in the main picture, p69).

Additionally, one fully round rod is also supplied for deployment in the centre slot to provide azimuth adjustment – should you need it. With these *in situ*, you can align the

*'It bounds along, always pleased to meet you'*

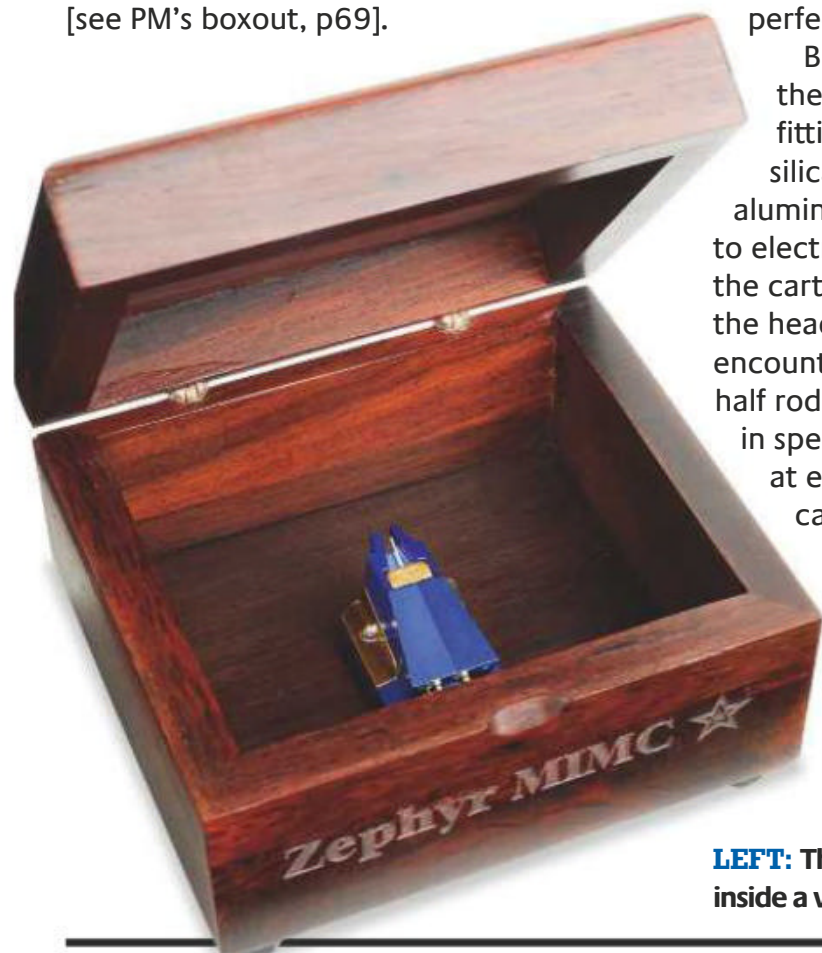


**ABOVE:** Viewed from the underside of the substantial alloy body, Soundsmith's choice of rigid, lightweight sapphire cantilever is revealed

cartridge, attach the arm leads and tighten everything up in the headshell. This was straightforward enough in my Technics SP-15/SME Series IV combination, cartridge shape notwithstanding.

The Zephyr MIMC Star looks to be very well built, from its rugged alloy shell to the choice of laser-drilled sapphire cantilever, a more desirable and expensive fitment than the crimped aluminium tubes used in lower cost pick-ups. The sapphire pipe is fundamentally stiffer and gives a better start in life to the line-contact nude diamond stylus.

The latter, by the way, is said to give one thousand hours of playing time, and the cartridge can be re-tipped by the manufacturer for a very reasonable sum. Recommended tracking force is 1.6g to 2.2g; I ran it at 2g, where it rode the groove securely. Interestingly, Soundsmith suggests daily stylus cleaning using a



**LEFT:** The Zephyr MIMC Star comes mounted inside a very solid wooden case with hinged lid



small blob of Blu Tack – Peter Ledermann says that a dry brush isn't ideal and wet cleaning should only be done in extremis.

## THE GOOD OL' DAYS

Driving Trichord's Diablo NC phono stage (set to 1kohm), the Zephyr MIMC Star proves itself anything but a 'generic-sounding' phono cartridge. Many moving-coil rivals at this price have a clean and quite analytical sound – not too far from hi-res digital, in a way – while the Zephyr MIMC Star contrasts with a decidedly voluptuous balance that harks back to the days when phono cartridges were less about absolute neutrality and more about sounding, well, just very *nice*.

By way of example, it's a long way from the sound of an Audio-Technica AT-ART9, or the Lyra Delos [*HFN* May '13] that I use as my daily. It doesn't sound super detailed, but still resolves the timbre of instruments and voices to realistic effect. It certainly captured the smooth, mid-'70s sound of Fleetwood Mac's classic track 'Dreams' [*Rumours*; Warner Bros. Records P10233W] while bringing a very earthy feel to the bass guitar and drum kit – both instruments seemed unusually alive with crisp transients and accurate decay.

At the same time vocals had a pleasing lustre, especially on the harmonies. The rhythm section behaved as if it was a coiled spring, and the vocals syncopated beautifully with the bass guitar work. It was a sensory delight, rather than a kind of analytical 'detail fest' that some rivals try hard to deliver.

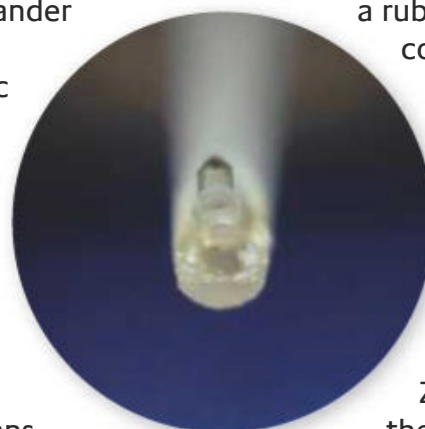
**RIGHT:** The attractively coloured, but irregular, bodyshape makes initial cartridge alignment a little tricky but the exposed sapphire cantilever – protected by a U-shaped 'nose' – ensures that day-to-day cueing is very easy and safe



I was equally impressed by the rhythmic flow, the Zephyr MIMC Star simply refusing to sound bland or uninteresting. So the sultry ska of 'Walking In The Sunshine' by Bad Manners [*Gosh It's...*; Magnet MAGL 5043] was reproduced to grander effect than perhaps I had anticipated. This atmospheric early 1980s recording proved to be a barrel of fun with this novel pick-up in charge, and while the band was never treated with the seriousness they deserved back in the day, what I heard here told me they were truly great musicians.

The rhythm was so tight and snappy that I wondered why I hadn't played this track for so long. Bass guitar

**BELOW:** A 0.12mm square diamond is cut to a 6x17µm tip radius and mounted into the end of an industrial sapphire tube cantilever



was strong but didn't overpower, with a rubbery, sinewy nature that contrasted with the lightning-fast snare drum and cymbals.

The electronic organ was also a surprise, sounding richer and more vibrant than anything I've heard since I was running my Supex SD900 moving-coil, decades ago. Although the Zephyr MIMC Star isn't one of the brightest designs around,

it will still capture the atmosphere of a recording. It made 'Wait A Minute' by the James Taylor Quartet [*Wait A Minute*; Urban URB1P17] a treat. The crashing Hammond organ sounded even more enveloping than usual, and I was more aware of it being used percussively too.

There's some great drum kit work here, which showcased how civilised the Zephyr MIMC Star can be. Hi-hat cymbals were well resolved and tactile yet surprisingly silky. The tightly tensioned snare drum can sound a little harsh with some cartridges, but not here – my attention drawn to the reverb effect that had been unsparingly employed in the studio.

## SPACE MAKER

So although this cartridge doesn't quite have the super-fine resolution, delicacy or tidiness I've experienced with some squeaky-clean MCs, it gives little away in terms of musical enjoyment – and arguably has more of that indefinable and enigmatic quality that many vinyl fans crave.

As well as its sumptuous nature, fine timbral resolution and inherent 'musicality', the Zephyr MIMC Star can also recreate a

## MOVING THE IRON

The origins of moving-iron or 'variable reluctance' pick-ups and cutters extends back over a century with contemporary evolutions on the theme introduced by the likes of Decca, Grado, Stanton, Goldring and SoundSmith in the last 50 years. Moving-iron (MI) pick-ups are similar to moving-magnet (MM) types except here the permanent magnet attached to the cantilever of an MM is replaced by a sliver of some ferromagnetic metal, iron or a 'permalloy'. The coils are fixed, as they are in an MM, but there is also a fixed *magnet* as employed in a moving-coil (MC) pick-up. As the MI's stylus traces a groove its cantilever moves the small iron sample towards the fixed magnet, the sliver becoming magnetised and inducing a voltage in the fixed coils.

On the face of it, this technique would seem to offer numerous advantages, not least the possibility of an MI 'generator' offering a lower overall moving mass, and inertia, than the stylus, cantilever and magnet or coils of either an MM or MC. A lower moving mass may improve both tracking and HF response, but the *output* of an MI type cannot simply be increased by beefing up the fixed magnet and coil windings to compensate for reducing the size and weight of the 'moving iron'. In practice, if the local magnetic flux density is increased too far then the minuscule iron sliver will become saturated and its induced magnetism highly non-linear as it moves towards and away from the large, fixed permanent magnet. As ever, implementing a successful MI solution is as much a balancing of the 'magnetic circuit' as faced by designers of MM or MC types. PM





*Sonically*  
**SUPERIOR**  
INTRODUCING THE  
*Forte*<sub>IV</sub>



## FLOORSTANDING LOUDSPEAKERS

Horn Loaded Loudspeakers | 15" Passive Radiator | New High Fidelity Network | 99dB Sensitivity

Since its inception in 1985, the Forte has been a standout speaker. The new Forte IV is a three-way horn-loaded speaker design featuring updated cosmetics and the latest advancements in acoustic engineering for premium performance.



Available in 4 bookmatched finishes



Distributed by Henley Audio

T: +44 (0) 1235 511 166 | E: [sales@henleyaudio.co.uk](mailto:sales@henleyaudio.co.uk) | W: [www.henleyaudio.co.uk](http://www.henleyaudio.co.uk) | [f](https://www.facebook.com/HenleyAudioUK): HenleyAudioUK | [y](https://www.youtube.com/HenleyAudio): HenleyAudio



## CARTRIDGE

**RIGHT:** Threaded metal lugs ensure the Zephyr MIMC Star can be bolted very firmly into any headshell. The 'fixed-coil' mechanism is equally securely screened

really immersive recorded acoustic when given half the chance.

Play a decent classical music recording and the effect is clear enough. My early '70s pressing of *A London Symphony* by Vaughan Williams [HMV ASD 2740] was a treat, the first movement having a beautifully thick, full sound that underlined the music's brooding quality. Soundstaging was capacious – and bold with it. The concert hall's acoustics were clearly audible and poured forth from my loudspeakers to give an expansive effect. Stage *depth* wasn't perhaps as cavernous as I've heard, but this didn't diminish the overall experience one bit.

### GETTING ENGAGED

Indeed, to my ears Zephyr MIMC Star covers its tracks very well, so to speak. Yes, it's not the world's most detailed or explicit-sounding cartridge, but its sheer charm means that you'll struggle to notice. A fundamentally expressive, engaging and dynamic nature all conspire to put anyone trying to find fault with it firmly off the scent. As a result, the listener feels encouraged to throw as wide a range of music at it as possible. Rather like a young



Labrador dog, it bounds along and is always pleased to meet you.

For yours truly at least, there was no greater proof of this than when listening to electronic music. New Order's 'True Faith' [Factory FAC 183] was as engaging and emotive as I've heard it in a long time. This late-period analogue pop recording can sound flat and/or leaden in a less than sympathetic system, but the Zephyr MIMC Star powered it along like a steamroller.

The edgy sound of the Yamaha DX7 synths was less evident than usual, and I heard more expression in singer Bernard Sumner's deadpan vocals, too. Peter Hooke's distinctive, effects-laden bass guitar cut through the dense mix like a knife through butter, and the drum programming seemed unstoppable.

All in all, it was highly rousing stuff and something that felt just a little exotic compared to the welter of very capable but often overly-analytical moving-coil cartridges on sale at this price. ⚡

### HI-FI NEWS VERDICT

This delightfully quirky US-made phono cartridge takes on its contemporary competition with gusto. SoundSmith's Zephyr MIMC Star offers much of what many analogue addicts regard as desirable in a cartridge – not least a combination of tonal warmth and musicality. So while it doesn't quite have the forensic insight of some rivals, or the front-to-back stage depth, its sheer cheerfulness is hard to beat.

Sound Quality: 84%

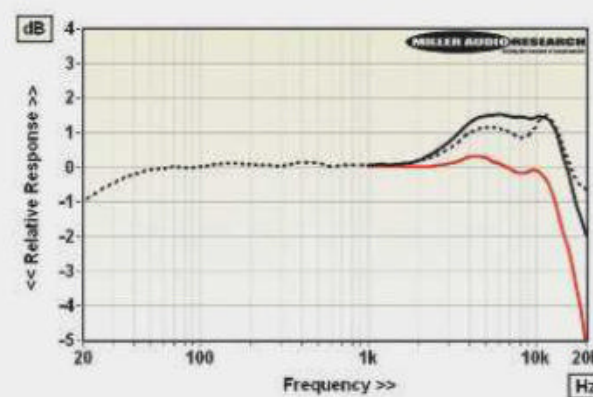


**ABOVE:** The gold-plated output pins are not straight but are curved upwards so that lugs are 'shoehorned' into place

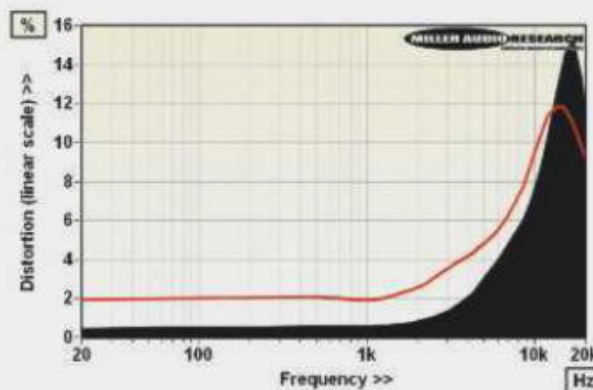
## SOUND SMITH ZEPHYR MIMC STAR

Depending on where you look – the website, downloadable 'manual' or engraved on the bottom of the Zephyr MIMC Star's wooden case – the suggested tracking force varies from 1.8-2.0g, 1.6-2.0g and 1.8-2.2g. I performed all my tests at 2.0g where this 'moving-iron' pick-up tracked like a high compliance moving-magnet, successfully navigating the 80µm groove while keeping hold of the top +18dB modulation (315Hz lateral cut, re. 11.2µm) at just 1.4% THD. Indeed, compliance is rather higher at 16/20cu (vertical/lateral) than SoundSmith's rated 10cu which, combined with the high-ish 12g bodyweight, suggests the MIMC Star is best suited to low/medium effective mass arms.

Output is also a little under the rated 0.4mV at 338µV (re. 1kHz/5cm/sec) but channel balance is within tolerance at 0.5dB. Stereo separation meets the >28dB specification at 1kHz while the 'Ultra Low Mass' stylus is securely mounted on its sapphire cantilever to achieve a slightly high 26° VTA. More important is how you arrange the ~60dB gain required by this pick-up without slugging it with a low impedance MC phono stage – a standard 100ohm load produces a broad loss of presence/treble amounting to *circa* -6dB/20kHz. So, either pick the highest gain setting available on your MM input or use an MC stage with selectable loading over 1kohm. Here the MIMC Star realises a flat and extended response with good lateral/vertical symmetry and a useful +1dB lift from 3-12kHz [Graph 1, below]. Stereo distortion reflects the extended HF response [dashed trace, Graph 1], the unequalised figure amounting to 3% at 1kHz/5cm/sec (0dB) and RIAA equalised from 0.5-15% (lateral) and 1.9-12% (vertical) across 20Hz-20kHz at -8dB [see Graph 2, below]. PM



ABOVE: Freq. resp. curves (-8dB re. 5cm/sec) lateral (L+R, black) vs. vertical (L-R, red) vs. stereo dashed



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

### HI-FI NEWS SPECIFICATIONS

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Generator type/bodyweight         | Moving-iron / 12g               |
| Recommended tracking force        | 18-22mN (20mN)                  |
| Sensitivity/balance (re. 5cm/sec) | 338µV / 0.49dB                  |
| Compliance (vertical/lateral)     | 16cu / 20cu                     |
| Vertical tracking angle           | 26 degrees                      |
| L/R Tracking ability              | 80µm / 80µm                     |
| L/R Distortion (-8dB, 20Hz-20kHz) | 0.5-15% / 1.9-12%               |
| L/R Frequency resp. (20Hz-20kHz)  | -0.9 to +1.3dB / -0.7 to +1.4dB |
| Stereo separation (1kHz / 20kHz)  | 31dB / 18dB                     |



# Chord Electronics 2go/2yu

The latest additions to Chord Electronics' range don't immediately give up the secrets of what they do – but dig deeper, and you'll find they're intriguing digital components  
 Review: **Andrew Everard** Lab: **Paul Miller**

**T**here are times when one might think Kent-based Chord Electronics is being wilfully abstruse in its selection of model designations. After all, its flagship DAC is called DAVE [HFN Apr '16], and its pocket-sized DAC/player combination is the Mojo [HFN Jan '16] and Poly. Then there's the portable Hugo DAC/headphone amp, now in both Hugo 2 [HFN Aug '18] and less-portable Hugo TT (for 'tabletop') versions [HFN Dec '15], to which the company has now added two extra units, named 2go and 2yu.

Now, while the £995 2go can be bolted onto the £1800 Hugo 2, bringing to it both Ethernet and wireless streaming, plus memory card playback, in the same way that the Poly adds these facilities to the little Mojo, the £449 2yu is a rather different matter. It's designed to be used with the 2go, adding to the playback and streaming functionality a digital output interface with RCA/BNC electrical and Toslink optical sockets, plus a USB-A to which a suitable DAC can be connected.

## IN YOUR POCKET

In short, while the 2go is expressly built as a Hugo 2 add-on, the 2yu opens up the 2go's capabilities for use with other DACs. It's powered by the 2go's internal battery, the pair effectively putting a complete network audio transport in your pocket or, with the 2go's ability to accept up to 4TB of microSD storage via two slots, a complete portable music library/player. You can also use the 2yu alone, powered and fed data from your computer over USB, with pass through over coax/optical to conventional digital outputs.

If that's got you a shade baffled, you have my sympathy: even with

the three immaculately-built components – Hugo 2, 2go and 2yu – before me, all resplendent in their machined-from-solid aluminium casework, with deeply-engraved model numbers and those familiar Chord ball-shaped controls, I still found myself forced back to the user guides.

## HELLO WORLD

I also struggled a bit with the company's GoFigure app [see boxout, p73] which is used to set up both Mojo/Poly and the 2go, and is greatly improved since first I encountered it. But once grasped, both these devices are a delight to use.

Whether the 2go is clipped onto the Hugo 2 as the Poly does to the Mojo, or used with the 2yu as a digital transport, it is able to connect to the outside world via 2.4GHz Wi-Fi and A2DP Bluetooth, as well as wired Ethernet via an RJ45 socket. It can then play online services including Qobuz, Tidal and Internet radio, as well as being a DLNA-compliant server/renderer, meaning it will play content on network storage and make files on inserted microSD

storage visible to other players. It supports DoP and 'bitperfect audio', is AirPlay ready and can also function as a Roon endpoint.

All this is achieved using a proprietary streaming platform and a triple-core processor, along with a slightly gimmicky voice engine to give the user status updates. Otherwise, to control the 2go you'll need to resort to a third-party DLNA/UPnP client app. I used the excellent mConnect with good results. And it

isn't just the Chord 2go streamer that's crammed with in-house technology.

The 2yu may look like a simple USB in/digital out interface, but it has a hugely powerful processor up its sleeve, and offers an integrated sample rate

converter, plus a jitter-suppressing PLL [see PM's Lab Report, p75].

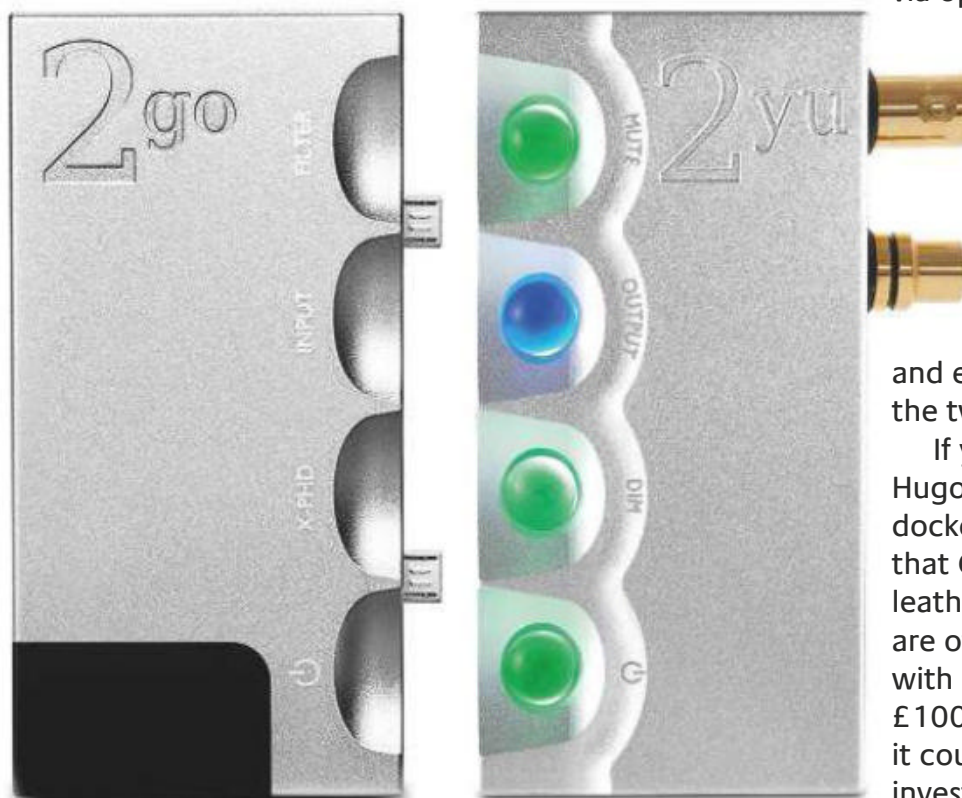
## DOCK TO ROCK

Used together, the 2go and 2yu can pass data at up to 768kHz/32-bit and DSD256 to a suitable DAC via USB, up to 384kHz/32-bit and DSD64 via the coax and BNC digital outs, and up to 192kHz/24-bit via optical. Meanwhile, docking

the 2go to the Hugo 2 is a matter of locating the two Micro USB plugs and sockets (charging and audio) and then locking the components together via a couple of Allen bolts. This proved a little tricky at first, but after some gentle trial and error jiggling I managed to get the two firmly joined.

If you're planning to use the Hugo 2 and 2go permanently docked, it may be worth noting that Chord offers a choice of two leather cases for the pairing. These are of superb quality, in black with red stitching, and start from £100. That may seem steep, but it could prove to be a worthwhile investment if you're thinking of

*'The kitchen sink was often thrown into the production'*



**RIGHT:** Chord's 2go wired/wireless network bridge (left) also powers the partnering 2yu digital-to-digital converter (right), bringing network access to 'legacy' digital hardware





**BELOW:** The 2go streamer can also be connected via its Micro USB charging and audio ports to the 2yu digital interface, offering USB and S/PDIF outs

**LEFT:** The 2go wireless/Ethernet streamer connects via protruding Micro USB ports into the back of Chord's Hugo 2 DAC/pre/headphone amp, completing its digital feature set

That's not to detract from the quality of the Hugo 2, and fed from the 2go it does make a very compact and convenient streaming solution. Playing Anna Fedorova's *Shaping Chopin* recital [Channel Classics CCS 43621; DSD256], the combination was as impressive when driving a highly revealing pair of headphones as it was when plumbed into my main system. This exemplary recording is as striking for the solid, three-dimensional impression of the piano as it is for the sense of the concert-hall acoustic, and these – along with the beautiful control and expression of Fedorova's playing – were thrillingly resolved by the Chord Electronics package.

## NEW DIMENSION

When listening on headphones I enjoyed the added perspective of the binaural version of Duo Rozemond & Bekker's *Vox* set [Cobra Records COBRA0082; DSD256]. The 'straight' stereo recording of this violin and accordion piece – with occasional voice – is impressive enough, but the binaural version via 'phones quite literally brings a new dimension to the sound.

It's hard to judge the sound of the 2go, or indeed the 2go/2yu pairing, without reference to the DAC(s) with which it's used. I settled on plumbing the duo into the iFi Audio Neo iDSD, which just had the edge over the Hugo 2 used with the 2go, and found myself delighting in

taking almost £2800-worth of hardware 'on the road'.

## FIRM RESOLVE

You might struggle to find the 2TB microSD cards the 2go can handle, and even the 1TB cards I found will cost you around £200 a pop. However, with a 200GB card loaded with music, and the 2go connected to my network, I was ready to listen to the 2go/Hugo 2 combination, as well as feeding the 2go/2yu pairing to iFi Audio's excellent NEO iDSD [HFN Mar '21] via coaxial digital and USB. And here those observations picked up in PM's Lab Report came into play, for while the 2go did sound

very fine docked to the Hugo 2, with a crispness and detail to recordings such as James McMurtry's *The Horses And The Hounds* [New West Records, NW6518], allied to fine bass weight and definition, it soon became clear that the 2go/2yu/NEO iDSD combination was just edging it when it came to resolution and the sense of musicians before the listener. This, given the fact the iFi Audio DAC is a fraction of the price of the Chord Hugo 2, was suitably intriguing.

Exploring further, I tried connecting the 2go/2yu via optical, then coaxial, digital to the Hugo 2's inputs, and was surprised to find this slightly awkward configuration improved on the 'docked' 2go/Hugo 2 combination. Clearly there's some good stuff going on within the 2yu beyond simple digital format conversion.

## GOFigure

At the heart of setting up Chord's network devices is the GoFigure app, available for Android and iOS devices. When first issued the app proved slightly flaky, but the latest version is much more stable, allowing the 2go – and indeed the smaller Poly – to be connected to a home network, configured, and of course updated to the latest firmware. Options include the choice of wireless, wired or Bluetooth connectivity, as well as setting the network player to operate as a Roon endpoint. You can even have it act as a Wi-Fi hotspot – a hub for other devices to connect to the Internet. With that all sorted, it's possible to use the GoFigure app to control playback from the microSD card storage, online sources, or Internet radio, but you might well find the interface of third-party apps, such as the mConnect used for our testing here, clearer, and smoother to use. While GoFigure is fine for basic set-up and installation, it can be a bit slow and obstructive when one wants to flick rapidly between albums, tracks, or online streams.







# Debut Pro

## 30 years of experience

The Debut Pro is far more than a special edition, though it was released to commemorate the 30th anniversary of Pro-Ject Audio Systems. It's a new premium addition to the Debut range, exhibiting the very best technical design, elegant aesthetics and true high-end sound from an affordable audiophile device.



Pick-IT Pro  
MM Cartridge



Carbon Fibre  
Coated Alu  
Tonearm



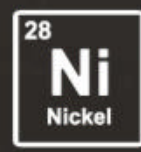
TPE Damped  
Platter



Full VTA and  
Azimuth  
adjustment



33 / 45 RPM  
rocker switch



Durable Nickel  
coated Aluminum



# NETWORK BRIDGE

**RIGHT** (Top to bottom): 1. side view of 2go showing wired Ethernet port; 2. 2x2TB microSD card slots plus Micro USB charging port; 3. Micro USB audio and charging outputs connect to... 4. matching 2yu (and Hugo 2) inputs; 5. 2yu has USB-A, opt, RCA and BNC digital outs

Gerry Rafferty's posthumous solo album, *Rest In Blue* [Parlophone 0190296700149]. Its stripped-back sound puts all the focus on the late singer's voice on tracks both familiar and less so. I relished the dark, moody reading of 'Dirty Old Town', and the joyously countrified version of 'Stuck In The Middle With You', the insight offered into the recordings serving to elevate the superb character of the vocal and instrumental timbres on offer.

## ON THE BEAT

And this combination of close focus and sheer vivacity also serves well Emmylou Harris & The Nash Ramblers' 'lost' live set *Ramble In Music City* [Nonesuch 075597917406]. It explodes into life with the opening 'Roses In The Snow', and then just carries the listener on through the entire concert, complete with superb harmonies, sprightly fiddle, and that lovely warmth behind Emmylou's slightly fragile voice.

It's hard not to be drawn in by the sense of accomplished musicians doing what they do best, and having a great time in the process, and the speed and detail here are much in evidence when the band charges into 'Amarillo' at breakneck velocity. It's hardly surprising, then, that this set-up can also power out beat-driven music in wholly convincing fashion, as it shows with Toyah's *Posh Pop* [Edsel EDSL0087], slamming into the opening 'Levitate' and giving the bass and percussion plenty of weight and speed while keeping Mrs Fripp's vocals upfront and full of character.

The pop here may be posh, but the mixes occasionally verge on the down and dirty. The whole enterprise has a somewhat old-fashioned feel about it, coming from a time when the kitchen sink was frequently thrown into the production to make it even bigger and bolder. Yet the assured Chord components have it all under control. Whether you play or stream, the 2go and 2yu is a persuasive pairing, and a viable, pocketable alternative to more conventional streaming transports. ⏻

## HI-FI NEWS VERDICT

Used with the Hugo 2, the 2go creates a very transportable digital music solution, but things really start to shine when you add on the 2yu, whether upstream of the Chord DAC, or DACs from other companies. Building on the Mojo/Poly pairing, this is an innovative – and slightly quirky – digital front-end for both playback and streaming, and one likely to be of interest beyond its use in an all-Chord set-up.

Sound Quality: 85%



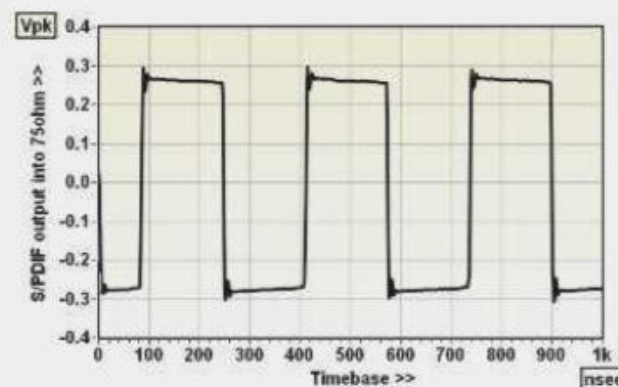
# LAB REPORT

## CHORD ELECTRONICS 2GO/2YU

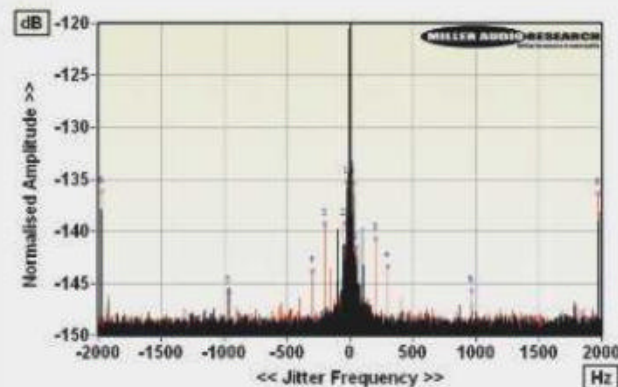
With its 2go/2yu network bridge/digital-to-digital converter Chord joins a very specialised group of products that includes the dCS Bridge [HFN Jun '17], Roon Nucleus+ [HFN May '18], Pro-Ject Stream Box S2 Ultra [HFN Oct '18], Melco N10 [HFN Jun '19], Innuos Statement [HFN Jan '20], Aqua LinQ [HFN Sep '20], Grimm Audio MU1 [HFN Dec '20] and Auralic Aries G2.1 [HFN Feb '21], all of which are digital signal conditioning devices with or without either onboard ripping or storage services. In Chord's two-box solution this means re-clocking and formatting data between Wi-Fi/Ethernet and local microSD storage to, in this case, USB and S/PDIF output formats.

Via the 2go network bridge, it's now possible to 'stream' over wired Ethernet to the Hugo 2 DAC/headphone amp [HFN Aug '18] where there's no observable difference in either the maximum 4.57V output, the 116.1dB A-wtd S/N ratio or THD which remains 0.0002%/1kHz and 0.0025%/20kHz. Jitter was marginally higher at 14psec (all sample rates 48kHz-192kHz), this via the Micro USB connection from 2go to the Hugo 2 [red spectrum, Graph 2 below]. Interestingly, there's an incremental gain from adding the 2yu USB-to-S/PDIF converter and driving the Hugo 2 via coax or optical inputs. The 2yu includes additional re-clocking, jitter suppression and sample rate conversion that shaves a few psec off the Hugo 2's jitter performance [black spectrum, Graph 1].

The 2yu's S/PDIF output falls a little below the 0.9-1.2V IEC-958 specification at 612mVp-p but deterministic jitter is well within the required ±20nsec window at just ±0.5nsec. Chord uses a proprietary driver that confers a very 'fast' 4.3nsec risetime with minimal ringing and overshoot, or circulating RFI, into a standard 75ohm termination [see Graph 1]. PM



ABOVE: S/PDIF data pattern from Chord 2go/2yu coaxial output into a default 75ohm receiver



ABOVE: 48kHz/24-bit zoom jitter spectrum for network-to-USB (2go/Hugo 2, red, with markers) and network-to-USB-to-S/PDIF (2go/2yu/Hugo 2, black)

## HI-FI NEWS SPECIFICATIONS

|                                 |   |
|---------------------------------|---|
| Digital inputs (2go)            | Gigabit Ethernet; 2.4GHz Wi-Fi; Bluetooth 4.1 A2DP                                    |
| Digital outputs (2yu)           | USB-A (768kHz/DSD256); coaxial RCA/BNC (384kHz/DSD64); Toslink optical (192kHz/DSD64) |
| S/PDIF (output level/risetime)  | 612mVp-p / 4.25nsec (into 75ohm)  |
| Digital jitter (2go/Hugo 2)     | 14psec  |
| Digital jitter (2go/2yu/Hugo 2) | 10psec  |
| Power consumption               | 4W (Charging)   |
| Dimensions (WHD) / Weight       | 115x22x100mm / 362g (combined)  |



er



Pioneering world class audio products

# PS Audio's Stellar range is affordable excellence

## Stellar Gain Cell Preamplifier/DAC

The Stellar Gain Cell™ combines the benefits of an exceptional analogue preamplifier and a full-featured DAC. Fully balanced analogue circuitry from input to output, the Stellar Gain Cell builds upon years of research and innovation in the art of Class A analogue amplification and state-of-the-art digital reproduction.



£1,800

## Stellar S300 Stereo Amplifier

Breathe new life into your loudspeakers with the Stellar™ S300. The S300 combines the slam, linearity, and toe-tapping pacing of a Class D output stage with the warmth, grace, and rich inner detail of Stellar's Class A proprietary Analog Cell.



£1,550

## Stellar M700 Power Amplifier Monos (pair)

The Analog Cell is the heart of the M700's musicality, where richly overlaid layers of music's inner details are preserved even in the most complex orchestral crescendos. The Analog Cell is a proprietary, fully differential, zero feedback, discrete, Class A MOSFET circuit, hand-tuned to capture the smallest micro dynamics without sacrificing the loudest macro dynamics music has to offer.



£3,000

## Stellar Phono Preamplifier

The new Stellar Phono Preamp has both fixed and variable loading for moving coil cartridges, fully adjustable from the remote control. The unit's ultra-low noise allows the use of MC cartridges with output as low as 0.15 mV. Two different tonearms can be selected via the remote, with either single-ended or balanced outputs. A massive, heavily-regulated power supply and full DC coupling allow the unit to provide up to 20V rms output for powerful bass and unrestricted headroom and dynamics. PS Audio's first product way back in 1974 was a phono preamplifier that outperformed and replaced far more expensive units. Since then, we've offered a number of excellent phono preamps, but the new Stellar Phono Preamplifier is the best we've ever made.



£2,500

**"I recommend a listen to the Stellar to anyone in the market for a new phono preamp, regardless of price. I don't think I've ever written that before." Michael Fremer - Stereophile, Jan 2020**



## Stellar Power Plant P3

Built as an evolution from our renowned P12, P15, and P20 the P3 is our most affordable regenerator – perfect for powering sources and small to medium systems. Power Plants generate sine-wave-perfect, regulated, high current AC power from your home's AC. In the process of regeneration, problems on your power line such as low voltage, distorted waveforms, sagging power, and noise are eliminated and the power quality enhanced. The results are both audibly and visually stunning when powering either audio or video products.



**£2,400**

PS Audio Power Plants are regarded for their ability to reduce noise and THD to virtually zero while providing rock steady voltage output.

Traditional power conditioners can only affect a portion of incoming noise and are unable to compensate for over or under voltage. Furthermore, power conditioners raise the impedance of the power going to your system, which can bleach your sound and drain away dynamics. The P3 handles things completely differently. Through the P3's active regeneration process, it provides perfect power while also lowering the impedance, increasing the dynamics and openness of your system.

## PS Audio introduces the Stellar Strata integrated & M1200 Mono Power amplifiers

**NEW**  
Product Launch



**£3,150**

### Stellar Strata (full featured streaming amplifier)

The Stellar Strata combines the benefits of an exceptional analogue preamplifier, a full-featured state-of-the-art DAC, a stereo 150 watt per channel power amplifier, and a high-resolution streaming module in one gorgeous package.

### Stellar M1200 Mono Amplifier (pair)

The Stellar M1200 monoblock power amplifier combines the rich warmth and musicality of vacuum tubes with the jaw-dropping power and seemingly infinite headroom of a 1200 watt high-performance output stage. This extraordinary hybrid amplifier knows no limits.



**£6,250**

*Signature*  
AUDIO SYSTEMS

Distributed by Signature Audio Systems, **call: 07738 – 007776**  
or by e-mail to: **info@signaturesystems.co.uk** Web: **www.psaudio.com**



# Classical Companion

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

## Riccardo Muti Conductor

Verdi holds the key to understanding the work of the old-school maestro, 80 this year. **Peter Quantrill** surveys a tumultuous career and finely honed legacy on record

I remember how my heart skipped a beat one hot afternoon in 1989 when, browsing through the stacks of a secondhand LP emporium in London, I pulled out Riccardo Muti's recording of Tchaikovsky's 'Little Russian' Symphony. It was a noisy Italian EMI pressing – 'La Voce del Padrone' – and there was a huge scratch in the middle of *Romeo and Juliet* on Side A.

I didn't care, as all I wanted at the time was to complete a Tchaikovsky symphony collection on my teenage pocket-money budget. Even so, I still haven't heard another version to touch the finale's mounting excitement, the raw impact of the gong stroke before the coda or the electric timpani tattoo in the closing bars. It's classic Muti.

### NEAPOLITAN DIALECT

Perhaps it's his age-defying black mane, but the idea of Muti turning 80 is hard to credit. He is a Neapolitan through and through, even if he spent formative years on the Adriatic coast and then trained at the conservatoire in Milan. There he made the transition from violin

→ It's all in the eyes... Italian conductor Riccardo Muti is famous for getting what he wants



to conducting. 'It just seemed, suddenly, something I could do. I taught myself, really, though I learnt a lot from [Antonino] Votto, who helped Toscanini at La Scala. Toscanini and Furtwängler were the two biggest inspirations – totally different, but the control they had, of their minds, was the same.'

As early as his 20s, appointed music director of Florence's Maggio Musicale in 1968, Muti began to shape his own orchestral sound image. 'Very direct, very pure, sharp but not edgy', it was ideal for Italian music, and recognisably cast in the mould of Toscanini. In 1971, just turned 30, he made his debut at the Salzburg Festival, where he rapidly established a rapport with both the Vienna Philharmonic and the well-heeled audience.

The following year he became chief conductor of the Philharmonia – then the New Philharmonia – at a watershed moment for the orchestra after its years with Otto Klemperer in charge. EMI signed him up and a string of late-analogue gramophone classics ensued, centring on the Russian and Italian repertoire which has always drawn the best from Muti's temperament.

Among his early recordings, Muti rated most highly the 'Scottish' Symphony of Mendelssohn and Verdi's *Macbeth*: 'With *Macbeth*, the balance between the orchestra and the singers is the nearest to my ideal. It's not a case of the singers being the stars and the poor orchestra just accompanying'.

### DEVOTION TO VERDI

The conductor's drive for technical perfection, sometimes at the expense of the music's inner life, more reliably strikes gold in operatic than orchestral repertoire – unexpectedly, you might think, when there is so much more to go wrong. Yet there is something palpable about his devotion to Verdi in particular, and his conviction over both the uniquely universal reach of the dramas and a symphonic approach to them that never treats the orchestra as 'mere' accompanist.

'If Wagner or Beethoven or

Spontini were to tell me, "You were wrong, Riccardo!" I'd be able to take it', Muti wrote in his autobiography. 'But if Verdi were to tell me that – Verdi, to whom I gave my devoted love, and for

whom I stood ready to retreat into an ideal orchestra pit and disappear – it would be terrible.'

In a long-planned handover, Muti took over from Eugene Ormandy at the helm of the Philadelphia Orchestra in 1980, refining but also polishing the ensemble's trademark deep-pile string sound. The focus of his recording activity followed suit, and while EMI continued to score artistic successes – a sensational *Scheherezade* and suites from *Romeo and Juliet* – it was Philips who picked the repertoire to record as carefully as Muti performs it.

"His eyes are trance-like. It's an intense experience"





As well as more Prokofiev there's an electric Strauss rarity [see the Essential Recordings boxout below], a retro-styled but beautifully 'heard' Brahms cycle and the original, orchestral version of Haydn's *Seven Last Words* – one of those reclusive bywaters Muti has returned to with almost obsessional devotion (he co-wrote a book on the piece) in a similar manner to his older colleague Claudio Abbado with Brahms's *Rinaldo* and Nono's *Prometeo*.

Muti liked to say he was looking for new music 'written with heart, not only with exercise', but this agenda has led him in unexpected directions beyond neoromanticism, to the Stravinskian *Notturmo* of Irving Fine, the First Symphony of Penderecki ('a fantastic piece') and Schoenberg's *Kol Nidrei* [CSOR9011602, download only].

While a lot of the Chicago Symphony own-label albums in the latter part of his career have retained the perfectionist temperament but not the urgent expression of his analogue years,



Muti gets the bit between his teeth for a pairing of works by the orchestra's resident composers, Anna Clyne and Mason Bates [CSOR9011401, download only].

From his tumultuous period in charge of La Scala (1986-2005: initially a dream job, eventually a nightmare) only Sony came close to documenting the spectrum of Muti's gift for drawing together the many strands of an operatic drama and pulling the singers with him through Karajanesque magnetism. Live at La Scala again, Spontini's *La Vestale* [88697527302, download only] is another of those immaculately cast and prepared rarities destined to sink without trace against the prevailing tide of performance values in early 19th-century music.

➔ Cherubini  
Masses  
bookend Muti's  
huge EMI/  
Warner legacy  
recorded  
between 1973  
and 2007



Since taking up the CSO directorship in 2008 (due to conclude next year) Muti has cut back his operatic and guest appearances, though a recent DG album documents both his enduring relationship with Salzburg, and his selective engagement with Bruckner (an unconventional, cantabile-led account of the Second, 4798180).

## NUMBER ONE

Films available to stream or buy as DVDs on Muti's own website at [www.riccardomuti.com](http://www.riccardomuti.com), document his increasing concern to pass on aesthetic values to a younger generation through the Orchestra Giovanile Luigi Cherubini which he founded in 2004. When Muti worked with the Australian Youth Orchestra in 2018, his apprentice Alexander

Briger found it 'an incredibly intense and exhilarating experience... His eyes are mesmerising, trance-like, having every member of the orchestra in his sights'.

Sometimes Muti seems to push hard at the wrong door, or rather to open it and lock it behind him. At least outside his native Italy his efforts have not increased wider enthusiasm for full-scale stagings of Neapolitan farce, symphonic snippets of Nino Rota or hour-long Masses by Cherubini and Paisiello.

*Folie de grandeur* is an occupational hazard of the conducting profession, and Muti makes no apology for an aesthetic standpoint and working methods belonging to another age. 'The conductor must be Number One... That is the lesson of Toscanini.' 🔌

➔ Muti  
with the  
Swiss pianist  
Andrei Gavrilov  
recording  
Tchaikovsky  
in 1979

## ESSENTIAL RECORDINGS

### Complete Warner Symphonic Recordings

Warner 9029500834 (91 CDs)  
The EMI years in London and Philadelphia, high-voltage Prokofiev and Tchaikovsky, collectable Cherubini and Viennese Schubert.

### The Verdi Collection

Warner 9029594588 (28 CDs + DVD)  
Live and studio, definitive EMI versions of *Aida*, *Vespri Siciliani* and *Macbeth*, plus electric early Verdi such as *Ernani* and *Attila*.

### Italian Masters

Sony 88985465182 (7 CDs)  
Verdi preludes, Rota film suites, Martucci and Casella rarities in sumptuous La Scala studio accounts from the 1990s.

### Strauss: Aus Italien, Don Juan

Philips 4223992  
Still the finest version of Strauss's early programme symphony, with both Muti and the Berliners on 'home' territory.

### Mozart: Sinfonia concertante, etc

Orfeo C867121B  
Highlights from Muti's early Salzburg concerts, accompanying VPO principals in Mozart and Richter in Schumann.

### New Year's Concert 2021

Sony 19439840162 (2 CDs; DVD, Blu-ray, LP)  
A characteristically serious response to the pandemic-affected event, fastidiously programmed and played.



# Vinyl Release

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

## Metallica *The Black Album*

For this fifth long-player, the thrash-metal pioneers transformed into heavy rock titans. Now the LP is out on 180g vinyl, **Steve Sutherland** relates its rocky birth

Lars Ulrich is not amused. 'Is this the test pressing?' he asks his manager, Peter Mensch. 'No', Mensch answers emphatically. 'That's the jacket, the cover that's going out across the country.'

The Metallica drummer looks at the record sleeve he holds in his hands. 'It's not gonna say anything?'

'No', says Mensch. 'It's gonna be black. Simple. Beautiful. Classic.'

'There's something about this that's so... black.' This is guitarist/vocalist James Hetfield now. 'It's like, how much more black could this be? And the answer is, none. None more black.'

All of this, of course, never happened. It's a scene from *This Is Spinal Tap*, with the members of Metallica and their manager substituted for the members and manager of Spinal Tap because... well, there's no denying that the cover of Metallica's fifth LP, the eponymously titled *Metallica*, is 'none more black'. So black, in fact, that it's commonly known as *The Black Album*, the way The Beatles' 1968 double *The Beatles* is known as *The White Album*.

Metallica's previous LP, 1988's *...And Justice For All*, had been a monster success in metal circles, reaching No 6 on the *Billboard* Hot 100 and selling more than six million copies worldwide. It kept the band credible with their fanbase, while growing the audience via the heavily TV-rotated video for 'One'.

Everyone was chuffed in Metallica land. Everyone except the band. For them it felt like more of the same. 'We'd pushed that 50-riffs-and-25-time-changes-in-ten-minutes thing about as far as we could go', said Ulrich.

### SLEEPER HIT

In 1991 they wanted something different, something more. And that something more came in the shape of the track 'Enter Sandman', built on the heaviest riff Hammett could think of and titled after the terrifying boogeyman who punishes naughty children by visiting them in their sleep and rubbing sand

### STEVE SUTHERLAND

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



"The months we spent in that room were hell"

in their eyes. 'Some of the things we tell our kids that are supposed to be soothing, aren't', Hetfield later explained.

On its release, 'Enter Sandman' became the band's defining anthem, even though some hardcore fans accused them of selling out. 'We were scared of falling into the trap of autopilot', says Ulrich. 'People wanted to define us. "Enter Sandman" was the gateway to the next phase of Metallica.' And there were other crucial changes

afoot. All previous Metallica albums had been co-produced and mixed by the band themselves on the premise that to relinquish any control would inevitably diminish their true essence.

This time, though, they reached out to Bob Rock, the producer of Mötley Crüe's 1989 album *Dr Feelgood*, to take a hand in the mix. Rock, who was commercially astute, was apparently equally flattered and bemused by the offer. His mind was made up when, on a vacation driving around the Grand Canyon, he came across a Native American kid by the side of the road, miles from anywhere, wearing a Metallica T-shirt.

Rock got back to the band. His offer? He would mix *and* produce the album. It wasn't the answer the band expected, let alone the one they wanted. At first they demurred but then, in some sort of cathartic epiphany, they acceded.

'We thought that maybe we shouldn't be so stubborn', recalled Hetfield, 'and maybe see where this would bring us'.

'Some people thought Bob would make us sound too commercial', Hammett continued, 'but we wanted to create a different record and offer something new to our audience... A lot of bands put out the same record three or four times, We made a conscious effort to alter and expand the band's basic elements'.



ROSS\_HALFIN

➔ Metallica in 2016 (l-r): James Hetfield, Lars Ulrich, Kirk Hammett and Robert Trujillo and (inset) label of the 1991 European vinyl release of *The Black Album*





➔ Priced £28.99, the 180g vinyl reissue of Metallica's *The Black Album* is available at [www.concordemusic.com](http://www.concordemusic.com)

That's when the trouble really started. Bob Rock had never worked anywhere else but his native Vancouver. Metallica weren't up for that. They compromised, settling on One On One studios in Hollywood, where renowned perfectionist Rock insisted the band play the songs through together, take after take after take, creating a groove and a feel – a method contrary to Metallica's usual working practices. 'The whole first three months of pre-production were very difficult. They were suspicious', noted Rock.

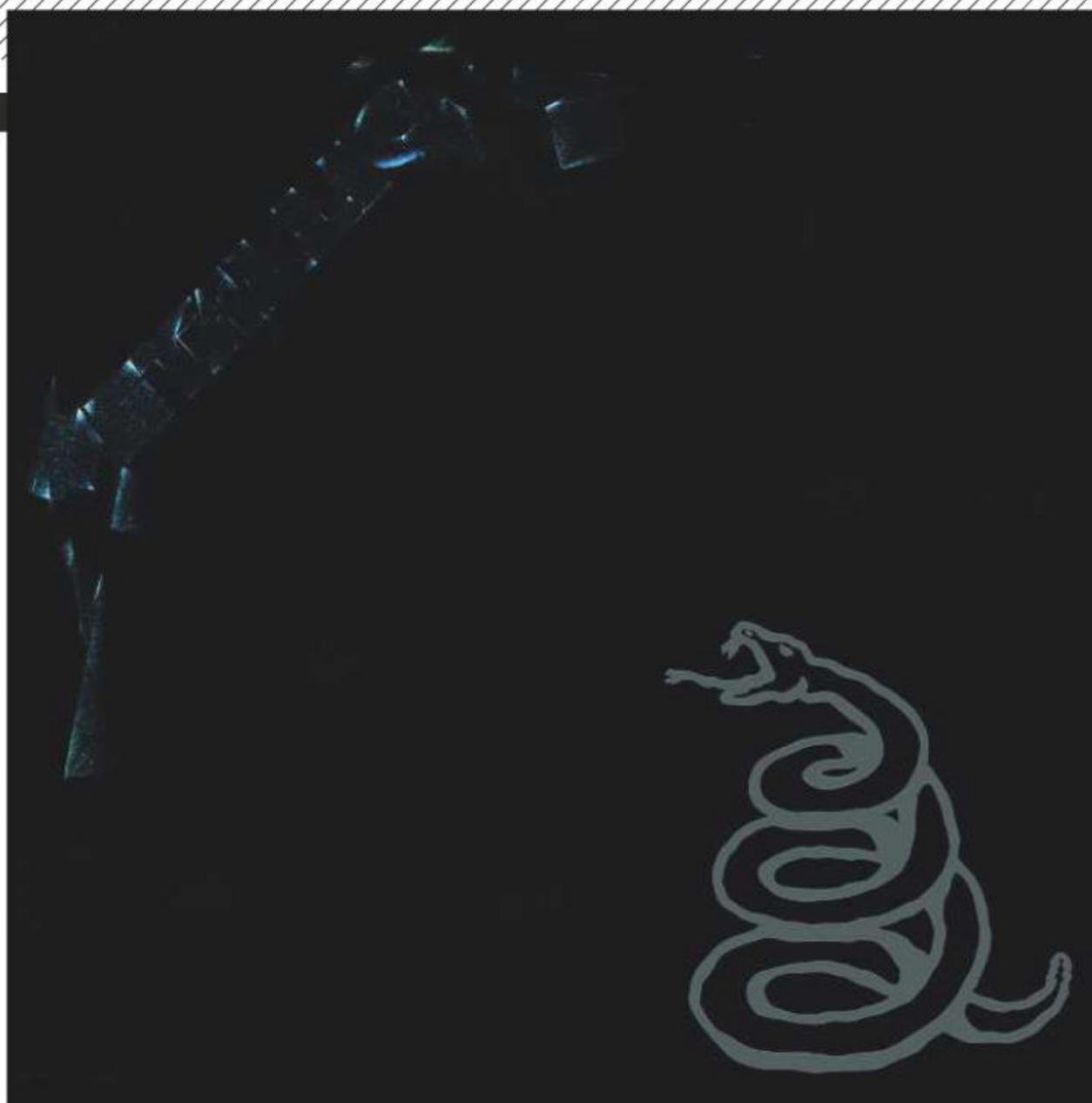
### STRANGE ORCHESTRA

'In retrospect', confirmed Ulrich, 'the months we spent in this room were pure hell. We were just really reluctant. The door was open just enough for Bob to open it more and pull us through. Our reaction was initially negative but when the first few songs started to develop, we realised that the s\*\*t we were doing was a little more open-minded. In the past our stubbornness has been one of our shortcomings, as well as the reasons for our success'.

There were other hassles. Ulrich liked to work at night. Hetfield preferred the



➔ Metallica guitarists Hammett and Hetfield onstage in London in 2008



day. So Rock ended up in the studio '24-7'. The songs, though, were taking shape beautifully. 'It's too easy to watch the news and write about what you saw', admitted Hetfield. 'Writing from within is a lot harder but once it's out, it feels a lot easier to put your weight behind.' The singer dug deeper and more personal than ever before, and Rock then challenged Metallica to come up with a ballad. And a big one at that, with a symphony orchestra. 'Nothing Else Matters' was scored by Michael Kamen and worked out so well that eight years later Metallica performed (and recorded) a full orchestrated concert.

### ROCK AND ROLL

The album eventually took a gruelling nine months to complete, mostly down to Rock's fastidious methods. He would spend five hours patching a perfectly pitched note into a Hammett solo. He would push Ulrich through 40 takes, then cut them together 'into one magical track'. Three band members managed to get divorced during this period, which naturally added to the tension. 'To have one record like that in your career, it's truly amazing', Ulrich recalls. 'It was a very creative time. I also remember a lot of nastiness.'

The album cost a million dollars to make – it was mixed three times, searching for the *one* – but it was money very well spent. It debuted at the top of the *Billboard*

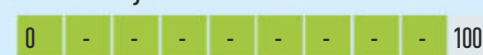
charts, staying there for four weeks and going platinum in two. It claimed top spot in nine other countries and was a fixture on the *Billboard* chart for 488 weeks. Total US sales would reach over 16 million copies. This may account for the fact that, despite the record's painful birth, the band and Rock settled their differences and continued to work together for a further three albums.

To mark the making of *The Black Album*, the band created a documentary entitled *A Year And A Half In The Life Of Metallica*. And guess who featured in it, comparing black album covers. Yup, Spinal Tap! 🔌

### RE-RELEASE VERDICT

This double-disc 180g vinyl pressing, issued on Metallica's own Blackened Recordings label, is part of a wave of releases to celebrate *The Black Album*'s 30th anniversary – fans can also choose from the triple CD 'Expanded Edition' and a 6LP/14CD/6DVD 'Deluxe Boxset'. Also released in October is the not-for-profit *The Metallica Blacklist*, a version featuring the album's 12 tracks covered by 52 artists, including Elton John, Royal Blood and Yo-Yo Ma. *HFN*

Sound Quality: 83%







# Radiohead *OK Computer*

With like-minded producer Nigel Godrich onboard, the Brit band's experimental side came to the fore on their platinum-selling third album, released in 1997. And if you listen closely, you might just hear the sounds of ghosts wailing in the Somerset night...

Words: **Johnny Sharp**



**D**ifficult second album? Been there, done that, sold the T-shirts. Now, about that blissfully easy third album...

It's a relatively rare luxury for a band on a major label to be granted the freedom, the budget and the technology to pretty much do what they want. But after Radiohead slowly but successfully reinvented themselves in the eyes of the world – from post-grunge one-hit wonders to pioneers of an introspective, hauntingly melodic yet crunchingly cathartic rock sound – they were answerable to no one.

After the snowballing success of their 1995 long player *The Bends*, no A&R man could ever tell them, 'I don't hear many hits – go back and write a single'. Nor did they have to prove anything to a music press that mocked the apparent Nirvana-esque 'complaint rock' of their transatlantic 1993 hit 'Creep', and presumed they'd fade as quickly as a thrift store lumberjack shirt now Britpop was the sound sweeping the airwaves. By the time their third album *OK Computer* was ready in May 1997, the only question was how they could match its predecessor's universal acclaim.

## COMPUTER GAMES

It's an interview cliché for bands to say, 'It would have been so easy for us to go back and write another [insert name of previous hit album], but we wanted to do something different'. Yet for Radiohead it would turn out to be an understatement, reflecting a creative spirit that would later produce a startling left turn with the band's highly experimental, electronically oriented 2000 release *Kid A*. With *OK Computer*, they were more than ready to take a bold new step forward.

Thom Yorke recalls being in the position to basically tell the band's label, Parlophone, exactly what they wanted in order to make their third album, which they planned, for the most part, to self-produce.

'We were like, "we want all our own gear. We

↑ Label for side 1 of the album on Parlophone. It was originally released as a double LP

→ Thom Yorke at the Sziget music festival in Budapest on August the 12th, 2006

→ Yorke and guitarist and keyboard player Jonny Greenwood (right)

→ The group's bass player and Jonny's brother, Colin Greenwood

↓ 'We'd been listening to Ennio Morricone', recalled Yorke of the album's influences



NORTHOTO/SHUTTERSTOCK.COM



want our own studio and we wanna work with Nigel [Godrich]", he told *Rolling Stone's* Andy Greene in 2017.

Their wishes would be granted, but to begin with there was also a feeling of wanting to get back to basics, writing and demoing songs together in a small rehearsal room without outside influence – although Godrich was now on the inside, having assisted John Leckie's production of *The Bends*. The producer was the same age as the band and shared similar ideas, which would result in him turning into something of a sixth member, continuing to work with them to this day.

As the spring of 1996 turned into summer, the band reconvened with Godrich at their already-established rehearsal space, Canned Applause, situated in the Oxfordshire countryside near Didcot. According to guitarist

Ed O'Brien, it was little more than a farm outhouse, albeit one appealing to the group's romantic notions of bucolic isolation.

## TOUR OF DUTY

First, though, the band had commitments to honour in the US – a string of arena dates opening for the newly crowned queen of radio-friendly angst-rock, Alanis Morissette. Few of the multi-platinum-selling Canadian's fans knew Radiohead's work beyond 'Creep', and since the band had by

now pretty much mentally archived *The Bends* material and were more excited about the new songs they were writing, they figured it didn't make too much difference if they played as-yet-unreleased songs. This would be with a view to living with these compositions before they developed them for the next album.

'That tour was really important', O'Brien told *Rolling Stone* magazine. 'We ended up just playing "Creep", and all the rest were new songs. So we played "Paranoid Android", "Let

'They were ready to take a bold new step forward'





# WILSON AUDIO AT OXFORD AUDIO

Need we say more?



## TELEPHONE

01865 790 879

## E-MAIL

[shop@oxfordaudio.co.uk](mailto:shop@oxfordaudio.co.uk)

## WEBSITE

[www.oxfordaudio.co.uk](http://www.oxfordaudio.co.uk)

OXFORD  
AUDIO  
CONSULTANTS

## SHOP ADDRESS

Cantay House, Park End Street  
Oxford, OX1 1JD

## BUSINESS HOURS

Tuesday - Friday: 10am to 6pm  
Saturday: 10am to 5pm

Closed: Mondays, Sundays  
& Bank Holidays

Sign-up (on website) to our popular newsletter for the Latest News and Offers  
Ask about our popular Buy Now Pay Later finance - No Interest - Apply online



## VINYL ICONS

### PRODUCTION NOTES

*OK Computer* began life, perhaps unintentionally, on the 4th of Sept 1995. The band had written the song 'Lucky' and when asked to contribute to the Brian Eno-curated compilation *Help!* for the charity Warchild, they took advantage of a week off touring to record the song in just five hours. It later made it onto the album without further changes.

Skip ahead to May 1996, from which point Radiohead spent around two months at their Canned Applause rehearsal space, writing and demoing after investing in equipment that they could work with and take anywhere they wanted in the future. Among the hardware they obtained was a plate reverb unit bought from the English musician Jona Lewie. 'That was very important, because everything went through it', Yorke told *Mojo* magazine.

The plan was to later relocate somewhere more comfortable to complete the album, and engineer Nigel Godrich soon became their co-producer. It was during this stage of production at St Catherine's Court that his and the band's penchant for

Down", "Climbing Up The Walls" and "No Surprises". All of these were new songs at the time.'

When the tour finished, they were ready to go into serious studio mode. But as Yorke explained later, they wanted their own space in which to experiment at their leisure. St Catherine's Court near Bath, an Elizabethan manor house owned by US-based British actress Jane Seymour, was chosen to be the centre of operations.

### TECH ME TO THE BRIDGE

In fact the band barely left St Catherine's Court for the next few months, and while they were spooked by the inevitable stories of the centuries-old estate being haunted ('ghosts would talk to me while I was asleep', Yorke claimed), they were also inspired and very much up for experimenting.

'We'd been listening to Ennio Morricone and Can and lots of stuff where they're abusing the recording process', Yorke told *Mojo*'s Jim Irvin on the album's release. 'We wanted to try that. We were coming at it from complete ignorance, though, standing in front of some beautiful digital delay... until suddenly everyone says, "That sounds great!". And that's what we'd use.'

The album's lyrical themes, from the title inwards, seemed to tap into a distinct feeling of pre-millennial tension, articulating a love-hate

relationship with the possibilities of technology and the attendant impersonal, alienating coldness of the new century soon to unfold.

That informs a recurring fantasy of escape. 'Exit Music (For A Film)', Yorke's captivating small-hours meditation based on a notion of eloping lovers, wherein his delicately strummed acoustic is joined by oddly electronicised, faintly detached choral backing vocals, was partly inspired by film director Baz

Luhrmann asking him to pen a song for his movie *Romeo & Juliet*.

Similarly, 'Airbag' seems to fantasise about surviving catastrophic events ('In a jackknifed juggernaut, I am born again'), while 'Lucky' pleads, 'Pull me out of the air crash... pull me out of the lake'.

Yorke has also described 'Let Down' as about being 'in the bubble and looking at things as they passed by me', a result of heavy touring and travelling. That feeling of detachment seems also to run

'The lyrics tap into a theme of pre-millennial tension'



↖ The group pictured in 2008 (l-r): Selway, Yorke, O'Brien, Jonny Greenwood and Colin Greenwood

↖ Yorke in 1998, the year after the album was released

↖ Artwork for *OK Computer* was created by regular collaborator Stanley Donwood

↖ The band's 'sixth member' Nigel Godrich co-produced the album

↓ Yorke looks out from the stage in 2006



CHRISTIAN BERTRAND/SHUTTERSTOCK.COM

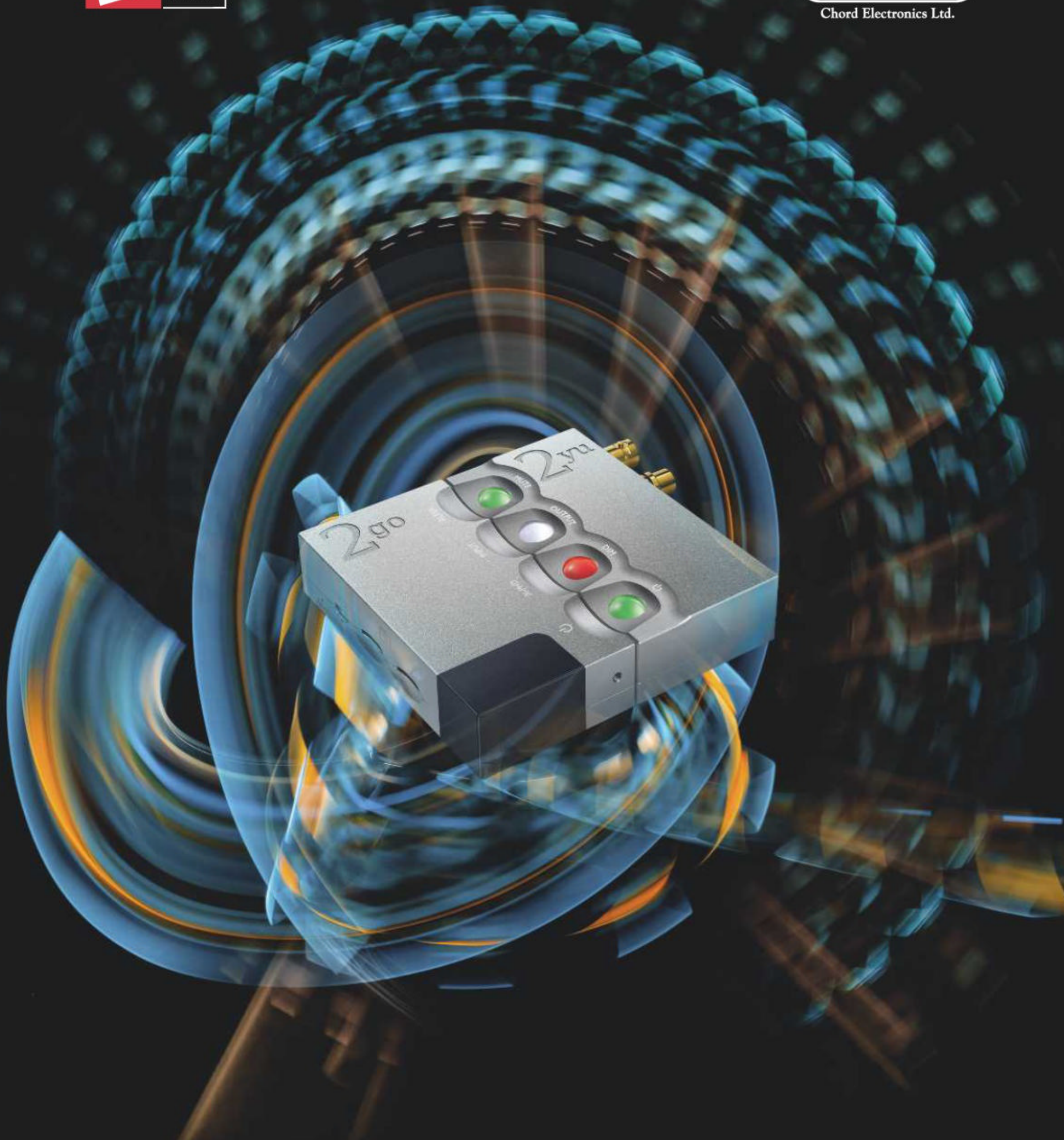


experimental recording came into its own. The drum loop used for 'Airbag', inspired by DJ Shadow, was run through Jonny Greenwood's guitar effects pedals, while 'Karma Police' incorporated the buzzing sound of an over-worked fridge.

Many of the songs were recorded in different areas of the house, to add atmosphere. The acoustic guitar for 'Exit Music' was captured in a stone staircase, for instance, while 'Let Down' was brought to life in a ballroom at 3 o'clock in the morning. And the majority of the instruments weren't overdubbed separately, adding to the mostly live feel of some portions of the record. Given the result, can you argue with any of those decisions?

CHRISTIAN BERTRAND/SHUTTERSTOCK.COM





# A WORLD OF MUSIC STREAMED 2YU

Upgrade your audio system with Chord Electronics' award-winning streaming technology. The 2go/2yu network bridge offers effortless music streaming plus up to 4 TB of SD card library playback direct to your DAC.

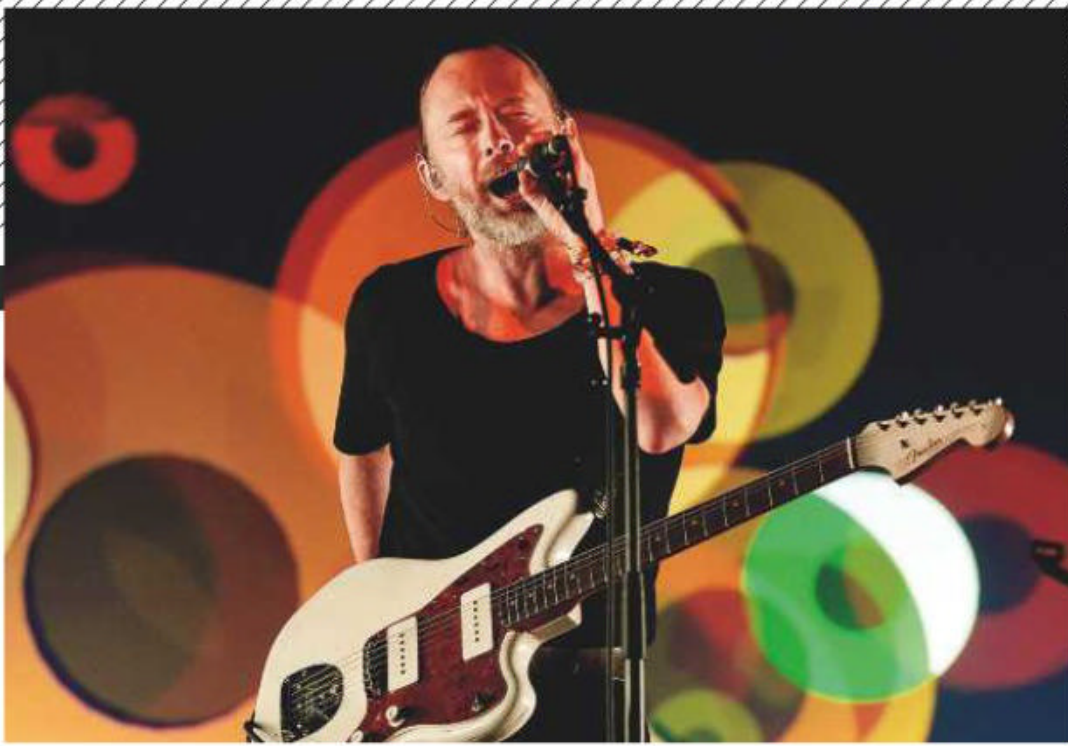
2<sup>go</sup>  
+ 2<sup>yu</sup>

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



# Alternate Format Discography

CHRISTIAN BERTRAND/SHUTTERSTOCK.COM



➔ Thom Yorke has been Radiohead's frontman and primary songwriter since the band's formation in Oxfordshire in the mid-1980s

through songs such as 'Subterranean Homesick Alien', which bemoans a sterile modern life ('I live in a town where you can't smell a thing') and also dreams of alien abduction: 'I wish they'd swoop down in a country lane... take me on board their beautiful ship'.

Musically, meanwhile, there were also several marked departures on *OK Computer*. For many listeners, 'Paranoid Android', the album's daring, freewheeling six-minute lead single (edited down from the original 14!), was the moment Radiohead reinvented progressive rock for the 21st century. As it happens, Jonny Greenwood, an avowed fan of early Genesis, had taken to using that most quintessentially prog rock of instruments, the Mellotron, bewitched by the exotic sounds it could produce.

## GETTING YORKE'S DRIFT

The results surfaced on that very track, but it was the unorthodox time signatures and the multi-segmented structure of the song, lurching from acoustic yearning to brooding, hair-tearing rock to meditative hymnals, squalling guitar noise and back again, that provoked the prog references.

'People thought it was prog', O'Brien told *Rolling Stone*, 'but prog always took itself so seriously. And "Paranoid Android", there's a kind of serious message in there, but it's kind of cartoon-like.'

The humour in Radiohead's work, of course, is rarely noted, but it's certainly there on 'Paranoid Android', whose title is borrowed from the character in Douglas

Adams' *The Hitchhiker's Guide To The Galaxy*. Similarly, lines from 'Karma Police' ('Her Hitler hairdo is making me feel ill') are dry as a bone, with the band having often acknowledged a debt to Morrissey's faux-despairing oeuvre during his Smiths era.

## GONE FOR A SPIN

Other lyrics, meanwhile, hint at a more overtly political focus – particularly on the abrasive track 'Electioneering' – that would be further firmed up on albums such as 2003's *Hail To The Thief*. In a 1997 interview that appeared in *Mojo* magazine, Yorke explained his approach

to topical lyrics, with a style of reference influenced by REM singer Michael Stipe's sometimes oblique takes on current events.

'On "Electioneering", for example... What can you say about the IMF, or politicians? Or people selling arms to African countries, employing slave labour or whatever. What can you say? You just write down "Cattle prods and the IMF" and those people who know, know.'

All told, though, the band felt they were finally coming towards a sound that truly represented themselves. Even the incorrigibly self-critical Yorke was in love with it. 'Exit Music,' he told *Mojo*, 'was the first performance we'd ever recorded where every note of it made my head spin – something I was proud of, something I could turn up really, really loud and not wince at any moment.'

Rare praise indeed. ⚡

'It's prog rock reinvented for the 21st century'

## ORIGINAL RELEASE (1997)

This album may have been released at the height of CD's dominance in the format wars, but it still makes it into our Vinyl Icon series because the band's preference for vinyl was reflected in the fact it first appeared in the UK not only as a silver disc but a double LP.

And if you venture onto Discogs to check out the album, you might find something curious. The LP [NODATA 02] is listed under four section headings: 'Eeny', 'Meeny', 'Miney' and 'Mo'. A gatefold 2LP release for a single album?



Clearly these men were ahead of their time in more ways than we previously appreciated.

Those original pressings can be identified by run-off groove etchings reflecting distinctly 'Fitter, Happier'-style slogans such as 'I'm full of enthusiasm I'm going places' and 'I'll be happy to help you'.

The artwork, produced by Thom Yorke with his long-time sleeve design collaborator Stanley Donwood, featured a computer-generated collage of images Yorke had created, with stick figures shaking hands [pictured below]. 'Someone's being sold something they don't really want', Yorke explained in 1998, 'and someone's being friendly because they're trying to sell something. That's what it means to me'.



The album was also issued on cassette [Parlophone 7243 8 55229 4 9] and MiniDisc [Parlophone 7243 8 55229 8 7].

## ORIGINAL CD RELEASE (1997)

*OK Computer* was released on CD in Japan on the 21st of May 1997 [TOCP-50201], a few weeks earlier than in the rest of the world [pictured above]. This was a common ploy back when Compact Discs were extremely expensive in Japan, as it made it less tempting to wait for a cheaper import CD. The production quality, which is sometimes markedly superior on Japanese discs of that era, doesn't seem to put its overseas counterparts to shame.

## SPECIAL EDITION/BOX SET

With the rights to the original album's material back under the group's control due to XL Records' purchase of the Radiohead catalogue from EMI, the band themselves curated *OKNOTOK 1997 2017* [XLLP868], celebrating the 20th anniversary of the album with an expanded and remastered reboot. This featured three previously unreleased tracks, 'I Promise', 'Man Of War' and 'Lift'. Blue vinyl 3LP incarnations were also made available, as well as a UHQCD Japanese edition [XLCDJP868].

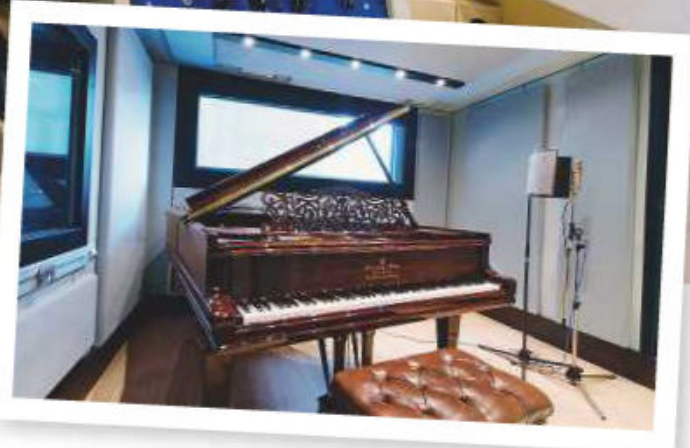
## AUDIOPHILE VINYL

Radiohead famously parted ways with Parlophone and its parent company EMI in 2007, but the latter retained rights to their back catalogue until 2016. The year before that, the label squeezed the last drops from its investment with a 2LP 180g reissue of the original album [7243 8 57331 1 8]. Some listeners say this vinyl pressing is superior to its expanded XL successor. Just don't tell Thom.



# Inside the Studio

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW



## SARM Music Village

Beginning life in East London, SARM's name is synonymous with artists keen to use the latest tech to push the potential of sound to excite. **Steve Sutherland** has the story...

The Boy couldn't get out of bed. The phone rang. And rang. And rang again. The boy turned over, tugged the pillow down hard over his head, and fell back asleep. The phone rang. And rang. And rang again. Eventually the ringing roused him. He'd had a heavy night and was feeling rough. He answered the phone. The voice on the other end, Irish, cursed him.

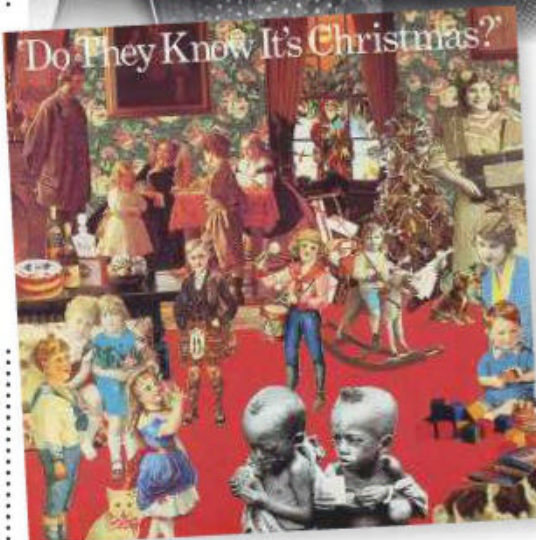
He was needed, he was told, the instruction peppered with expletives, in the studio. Now! The Boy mumbled his intention to come right over. Then he fell back asleep. The studio, by the way, was in London. The Boy was in New York.

Some hours later, at 6pm to be precise, Boy George – for it was he – sashayed into the studio on Basing Street, Notting Hill, straight off the last Concorde flight of the day, to

↑ Inside the Blue Studio with its Solid State Logic AWS924 console and (inset) 100-year-old Steinway grand piano

➔ Bob Geldof with fans in London in 1978

➔ Band Aid's 'Do They Know..?' sold 11.7 million copies



lay down what was the final vocal on Bob Geldof's – for it was he doing the hectoring – 'Do They Know It's Christmas?'. This was the charity single which would go on to raise over \$2 million for famine relief.

### MISSION CONTROL

It's surely unnecessary to recount in too much detail the genesis of how Geldof was moved by a BBC news programme highlighting the mass starvation in Ethiopia to instigate the Band Aid Feed The World project which led, seven months later, to the global Live Aid event. What does concern us here though, is why and how the Band Aid recording was hosted at SARM West Studios on the 25th of November 1984.

Geldof was on a rabid mission to round up all the available superstar talent to give the disc as big a chance as could be to sell as many

DAVID FOWLER/SHUTTERSTOCK.COM

### KEY RECORDING TIMELINE



1977

Trevor Horn and Geoffrey Downes make 'Video Killed The Radio Star' as Buggles. It's Island's first No 1



1984

Trevor Horn remixes Frankie Goes To Hollywood's 'Relax' at SARM East Studios with JJ Jeczalik as engineer



1984

Band Aid's 'Do They Know It's Xmas?' is filmed and recorded in SARM West after Trevor Horn donates studio time



money-raising copies as possible. His aim was to hit the approaching festive season when people were out at the shops and in the mood to buy and he had his eye on making sure that the single 'Do They Know It's Christmas?' had a realistic shot at the Christmas No 1.

With that in mind, he reached out to Trevor Horn, pretty much the year's most successful producer with three No1 singles from Frankie Goes To Hollywood under his belt, and asked if he'd twiddle the knobs. Horn demurred. His schedule was crammed, his technique too fastidious, and he feared he'd let the side down if he couldn't deliver the project in time. He reckoned it would take him at least six weeks to get something good together so, to make amends he offered his studio, SARM, free of charge for 24 hours as the project's recording base.

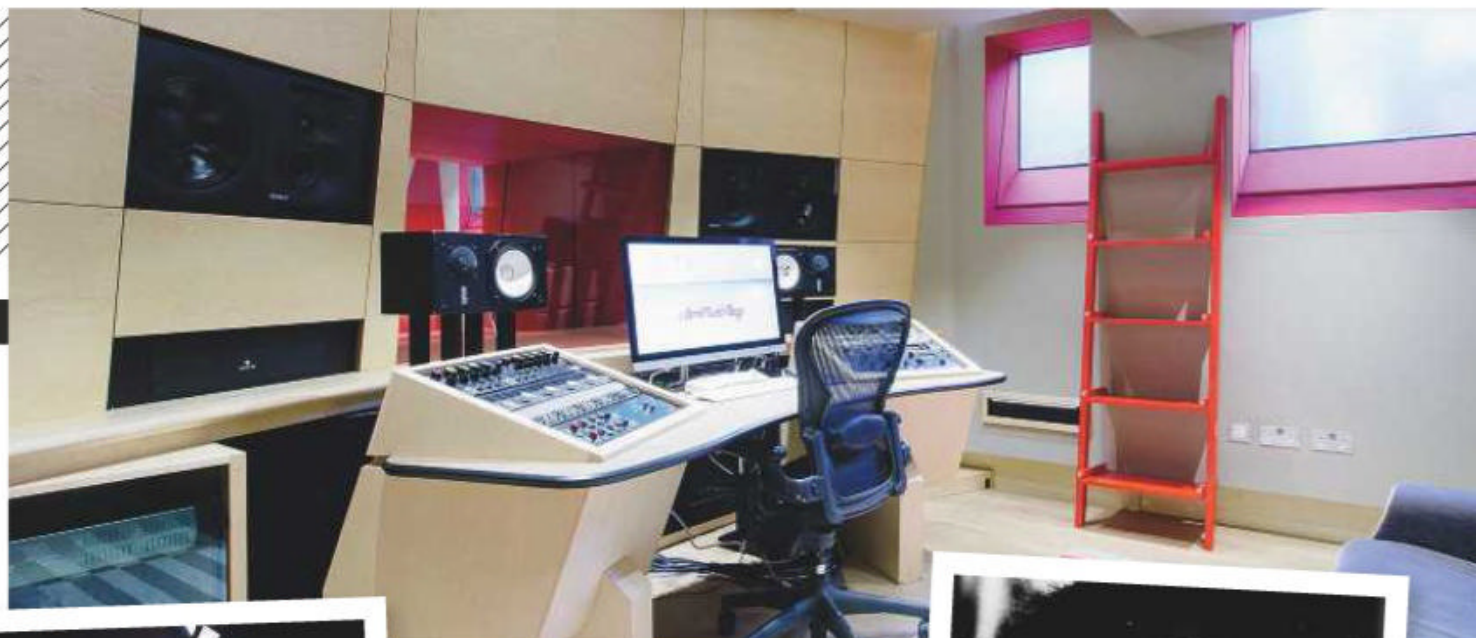
## ISLAND LIFE

Geldof snapped up the offer and that's why a steady procession of chart-busting stars were seen traipsing into the building on the day of recording. And rather more unsteadily staggering back out some hours later after the champagne corks had been popped.

Among the superstar throng gathered around the mic and captured on film for the world to witness on that historic day were Bono, Duran Duran, Phil Collins, Bananarama, George Michael, Spandau Ballet, Sting, Paul Weller and song co-writer (with Geldof) and producer in-situ, Midge Ure.

And so it was, for quite a while back then, that SARM West became the most famous studio in the world. But it hadn't always been known as SARM (which stands for Sound And Recording Mobiles)...

The business started out as a church which was deconsecrated by the time, in 1969, that Island Records boss Chris Blackwell bought it, kitted it out and rechristened it Basing Street Studios (which was also known as Island Studios for obvious reasons). During this



↑ The Red Studio is equipped with a Pro Tools HDX rig

↑ Boy George caught on camera in 1988

↑ Trevor Horn, who changed the name of Basing Street to SARM West

↑ Bob Marley lived above Basing Street, also known as Island Studios

↑ Label and rear sleeve of John Martyn's *Solid Air*, from 1973

→ SARM West on London's Basing Street



tenure, many of the label's artists recorded here. Fab albums cooked up in whole or part within its walls include John Martyn's *Solid Air*, Free's *Fire And Water*, Mott The Hoople's *Wildlife*, Cat Stevens' *Tea For The Tillerman*, Genesis' *Foxtrot* and *Selling England By The Pound*, and Traffic's *John Barleycorn Must Die* and *Low Spark Of High Heeled Boys*, while Bob Marley & The Wailers' *Catch A Fire* and *Burnin'* were mixed here. Marley lived in an apartment above the studios for a while, employing his personal chef in its kitchens.

In 1973, while The Rolling Stones were working here on *Goat's Head Soup*,

Marley & The Wailers were in the studio next door, while three years earlier, Led Zeppelin were working up *Led Zeppelin IV* at the same time as Jethro Tull were fashioning their most famous album, *Aqualung*.

## GO WEST

Other Island acts frequently making use of the facilities include Bad Company, Robert Palmer, Jimmy Cliff, King Crimson, Roxy Music, Brian Eno, and Sparks. Meanwhile, from 1973, there was another functioning studio →



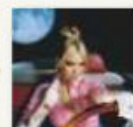
1990

Seal signs a deal with ZTT and records his self-titled debut album with Trevor Horn at the controls



2007

The Stiff Records label is acquired by the SPZ Group which releases new work by past Stiff artists



2020

Dua Lipa releases her chart-topping album *Future Nostalgia*, recorded at SARM Music Village pre-pandemic





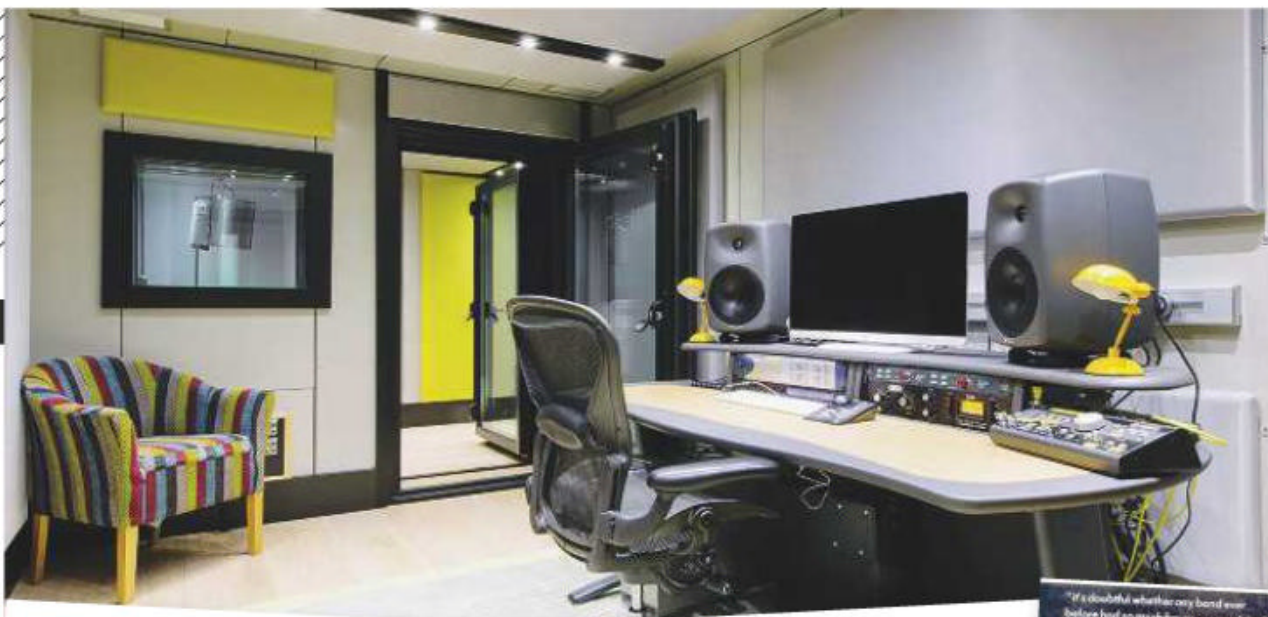
## Introducing IsoTek V5.

State of the art power cleaning systems.

**[isoteksystems.com](http://isoteksystems.com)**







called SARM East, formerly The City of London Recording Studios, which was opened by sister and brother team Jill and John Sinclair on Osborne Street in East London, near Brick Lane. SARM soon evolved into one of the most technically advanced recording studios in London – essentially the first 24-track studio – and it attracted major artists, such as Queen, who recorded parts of their mega-selling albums *A Night At The Opera* and *A Day At The Races* there.

Jill Sinclair was married to and managing Trevor Horn who, with a session player called Geoffrey Downes, formed The Buggles, signed to Chris Blackwell's Island Records, released 'Video Killed The Radio Star', and gave Island its very first No 1. The band as such was short-lived, leaving Horne to pursue production, a career in which he excelled creating hit after hit for Dollar, Malcolm McLaren, ABC and Yes.

In 1982, Sinclair and Horne formed the Perfect Songs publishing company, then their own label, ZTT, acquiring the Basing Street Studios in a deal that saw Island installed as ZTT's official

distributor. Basing Street duly became SARM West and in 1984 this is where Horn, Sinclair and journalist Paul Morley plotted Frankie Goes To Hollywood's chart domination with 'Relax', 'Two Tribes' and 'The Power Of Love'.

All of the couple's business concerns were combined into the SPZ Group (SARM/Perfect Songs/ZTT Records) in 2007. SARM East had been closed down as the West branch continued to thrive but in 2013, under financial pressures, the property was sold to developers to create residential flats.

## 'SARM was the first 24-track studio in London'

### VILLAGE PEOPLE

SPZ promptly moved its operations around the corner to Ladbroke Grove where it created SARM Music Village, described in its brochure as 'an exciting, state-of-the-art studio complex... Six brand new studios, a large playback/events space and an abundance of lounge and chill-out areas to offer the privacy found at top-end studios whilst retaining the sense of community that SARM has become renowned for... SARM Music Village [is] a music hub where the old meets the new, matching world class vintage gear with

studios designed for the modern music industry'.

The new complex breaks down into various studios patched together so they can be used in sync with one another if desired. SARM (Blue) Studio is a tracking and mix studio, the centrepiece of its control room a 24-channel Solid State Logic AWS924

console, with SSL AWSomation and DAW control. It also features a 100-year-old Steinway grand piano, once located in SARM Studio 2.

### ANALOGUE CLASSICS

The ZTT (Red) Studio combines vintage with modern. There's no traditional console here but a series of top-of-the-range analogue classics including Neve 1073 and API 3124mb+ preamps, Tube-Tech and Urei compressors, plus a vintage Fairchild 670 compressor.

The Stiff (Yellow) Suite (SPZ acquired the legendary punk/pub rock label in 2007) is kitted out for vocal sessions and 'fast-paced production work'. Built around Genelec monitors, it comes with a pair of BAE 1073 preamps (built on the original Neve blueprint) and a Urei 1176 compressor.

Then there are the Green One and Green Two Suites built as writing and production studios. Each is equipped with a MOTU 1248 USB/Thunderbolt audio interface, a pair of 1073 preamps and a vintage Urei 1176 compressor. Monitoring is provided by a Genelec 8250A DSP active speaker system.

Clients who've worked at SMV include Kanye West, Rihanna, Lily Allen and Dua Lipa. Horn's still the guvnor but sadly Jill Sinclair died in 2014, having been in a coma since 2006, the victim of an accidental incident with an air rifle. ⚡

← Singer Lily Allen poses for a publicity shot in 2011

← 'Crisp, and functional' says SARM of the Yellow Studio, with its Genelec monitors

← Queen in 1975, the year they released *A Night At The Opera*

↑ Promo ad for Frankie Goes To Hollywood issued in October 1984

↑ Dua Lipa on stage in Spain in 2017

← R&B artist Rihanna in 2012







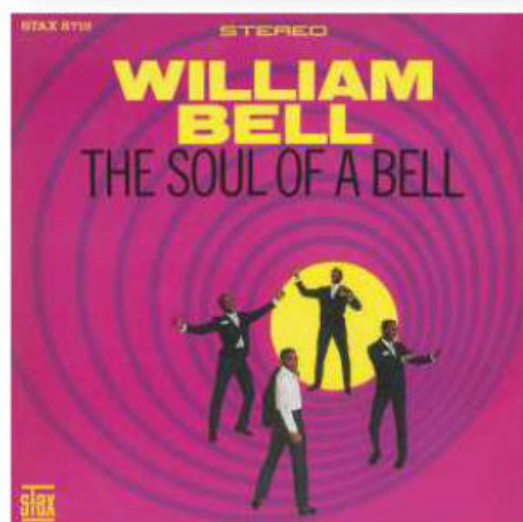
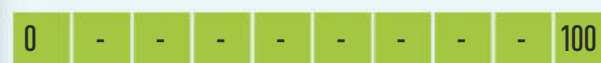
### PAUL SIMON

Still Crazy After All These Years

Mobile Fidelity UD1S 2-014 (One-Step two 45rpm Supervinyl LPs)

Back in 1975 when first released, Simon's fourth album *sans* Garfunkel proved an immediate favourite with the hi-fi crowd thanks to sound quality at an exceptional level. What could the One-Step process add to it? Standard pressings were excellent, but this lowers the noise floor so much that even open-reel fetishists have to sit up and take notice. The detail retrieval is breathtaking, the utter naturalness of the vocals transcendent. If you adored the SACD [*HFN* Sep '21], as did I, this will render you near-delirious, especially the reach of the bottom octaves. The title track, 'My Little Town', '50 Ways To Leave Your Lover' as you have never heard it before... A masterpiece made even more majestic. *KK*

Sound Quality: 95%



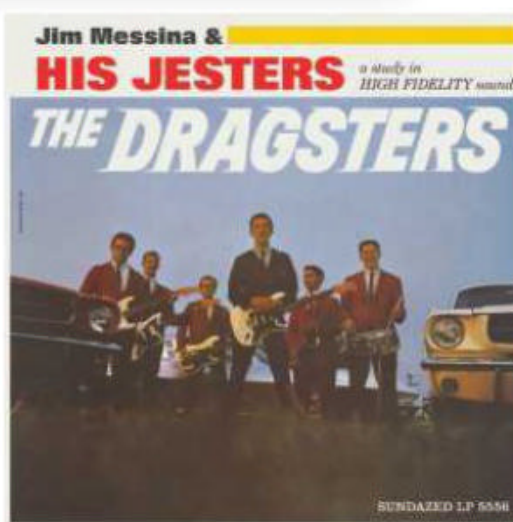
### WILLIAM BELL

The Soul Of A Bell

Speakers Corner STAX S719 (180g vinyl)

No debate allowed: this 1967 release remains one of the greatest soul LPs ever, and it was a debut to boot. Bell – now 81 – began as an in-house songwriter at Stax, then signed as its first solo male performer, yet he remains underappreciated. *Why?* His original take of his composition 'You Don't Miss Your Water' (covered by no less than The Byrds, Otis, Taj Mahal, and Jerry Lee Lewis) is a classic to rank with 'Stand By Me'. The rest isn't far behind: the original version of 'Do Right Woman, Do Right Man', later a hit for Aretha, 'I've Been Loving You Too Long (To Stop Now)', a take of 'Then You Can Tell Me Goodbye' to rival The Casinos' smash. Just buy it. *KK*

Sound Quality: 85%



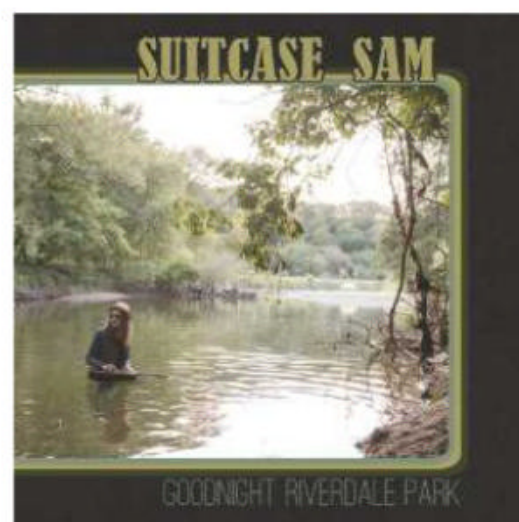
### JIM MESSINA & HIS JESTERS

The Dragsters

Sundazed LP5556 (180g blue vinyl; mono)

If you know Messina via The Buffalo Springfield or as half of a duo with Kenny Loggins, neither prepares you for this: unadulterated, circa-1964, surfing 'n' hot-rods, guitar-driven instrumentals of the Dick Dale/Surfaris sort, Messina proving to be a Fender Strat-wielding teen prodigy. But there's a twist: the sleeve notes contain the sort of recording info you'd expect of a hard-core golden-era audiophile label, *eg*, cutting info, frequency response and the rest. It turns out that this was originally on the Audio Fidelity label, which means the calibre of sound – even in mono – of which a modern recordist can only dream. But you gotta love surf instrumentals. *KK*

Sound Quality: 85%



### SUITCASE SAM

Goodnight Riverdale Park

Curve Music 8 03057 04302

Issued in Canada in 2019 but just finding UK release, this is one of those unexpected delights if you are 1) a roots music fetishist, 2) not averse to vocals which sound like yodelling even when it's not, and 3) in love with twangy guitars. Suitcase Sam channels everyone from Doug Kershaw to Leon Redbone to Ry Cooder, sprinkling the lot with a good-timey feel that recalls The Band (in upbeat mood). In fact this is such a throwback to the honky-tonk memes of the 1930s-1950s that you'd be forgiven for thinking it's actually stuff missed by Harry Smith. And read the small print: it proudly proclaims all-analogue origins. A little gem if 'Yee-hah!' is in your vocabulary. *KK*

Sound Quality: 90%





## AUDIOPHILE: DIGITAL



COMPACT DISC



SUPRAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



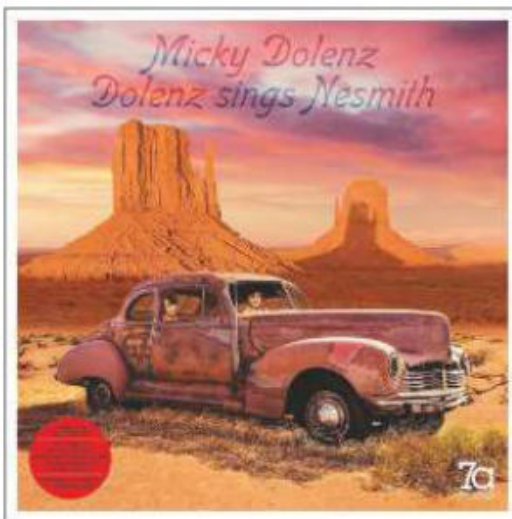
### THE BLACK CROWES

Present: Shake Your Money Maker

UMC 0880725 (three discs; 4LPs: 0880253)

Or 'how the labels get me to buy two or more formats'. The superb LP reissue of this Faces-flavoured boogie/blues-rock album [HFN Aug '21] contained just the original. This devotes CD1 to the original release, CD2 adds ten B-sides and unreleased tracks, while CD3 delivers a 'homecoming concert' in Atlanta, Georgia, from 1990. As it's bargain-priced, you might prefer it to the costlier 4LP option. Either way, the extras are worth it, eg, a genuine surprise in their stellar live cover of The Beatles' 'Get Back', a heart-wrenching studio version of John Lennon's 'Jealous Guy' and a rousing take of Humble Pie's '30 Days In The Hole'. Hmmm – that 3LP set beckons. *KK*

Sound Quality: 85%



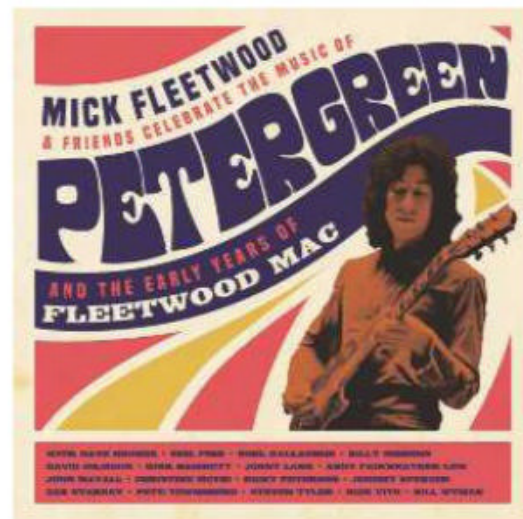
### MICKEY DOLENZ

Dolenz Sings Nesmith

7a Records 7A033

There's no shortage of Monkees reissues, but this is unexpected, drummer Dolenz covering fellow band member Mike Nesmith's compositions in 2021. Nesmith did better than the rest post-Monkees, his songwriting success beginning with 'Different Drum', which kick-started the career of Linda Ronstadt, while he enjoys cult status. Here Dolenz's distinctive vocals are applied to 14 of Nesmith's tunes, wrapped in a sleeve that pays tribute to another set of covers, *Nilsson Sings Newman*. This is a fine-sounding, enjoyable trip, but an opportunity was missed: Dolenz's voice would have proven perfect for Nesmith's incomparable 'Rio'. *KK*

Sound Quality: 85%



### MICK FLEETWOOD & FRIENDS

Celebrate The Music Of Peter Green

BMG BMGCAT454TCD-1 (two discs + Blu-ray)

Its title continues 'and the Early Years of Fleetwood Mac'. This homage to the musician – some say the best British blues guitarist of them all – was a one-off gig at the Palladium on 25 Feb '20, just before lockdown. Attesting to his legacy, guests included Dave Gilmour, Billy Gibbons, John Mayall, Bill Wyman, Pete Townshend, and too many others to list, while Fleetwood Mac were represented by Fleetwood, Christine McVie, Jeremy Spencer, and new boy Neil Finn, with Glyn Johns producing. The Blu-ray offers the video in stereo, DTS 5.1 and Dolby Atmos. A timely tribute, no classic tracks overlooked, as, sadly, Green passed away shortly after. *KK*

Sound Quality: 85%



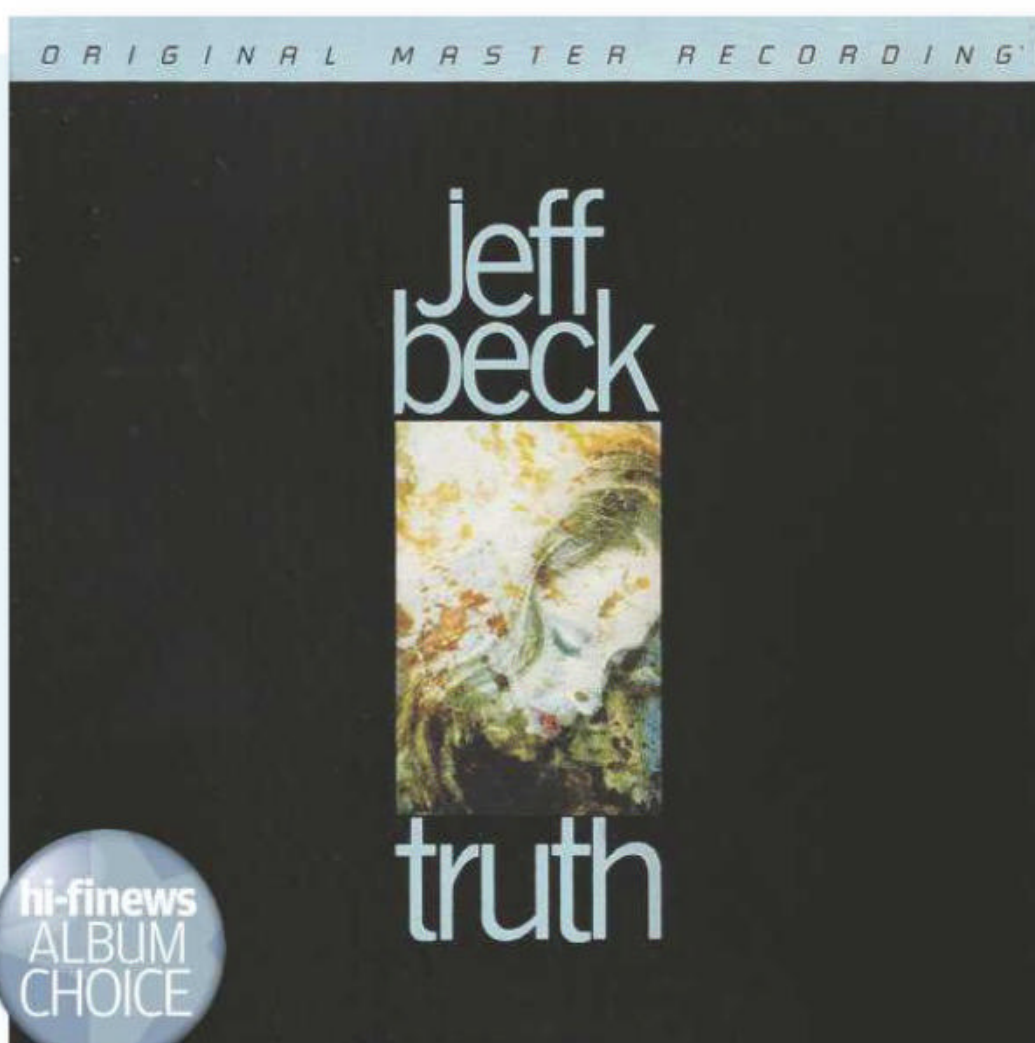
### JEFF BECK

Truth

Mobile Fidelity UDSACD2223 (stereo SACD)

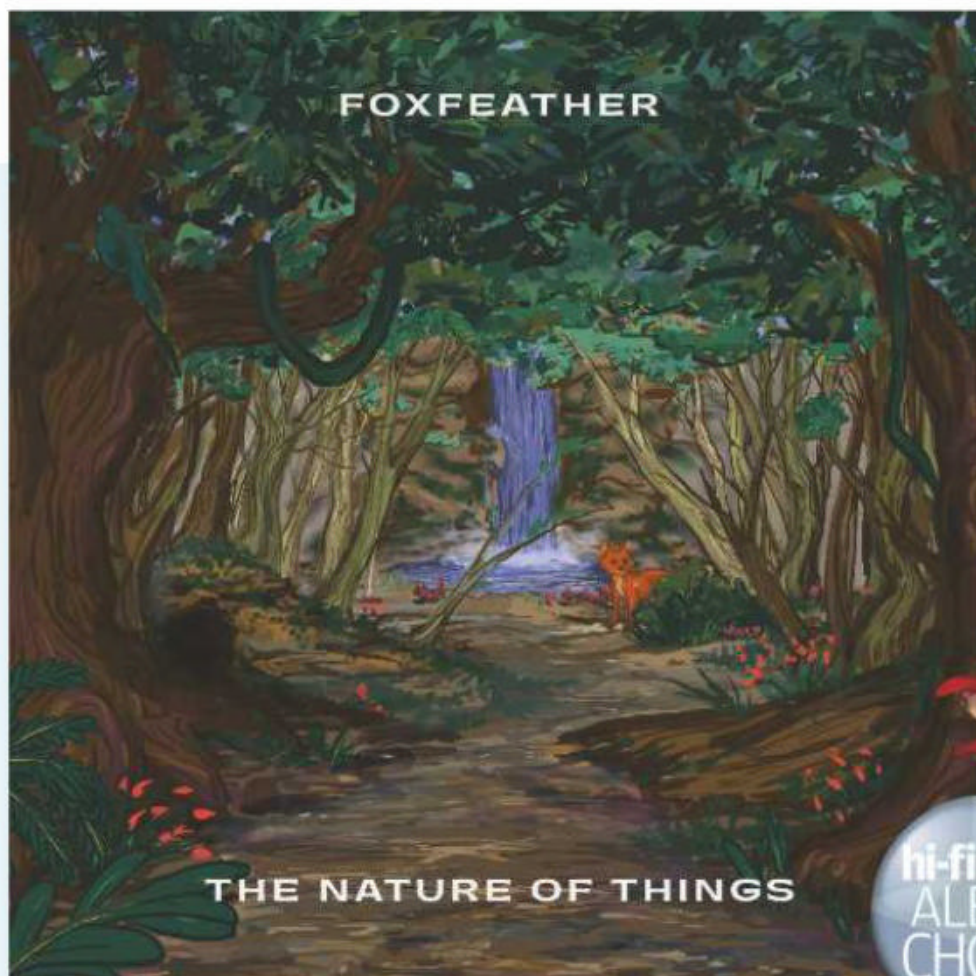
For some of us, this 1968 release – Beck's first solo effort – slaughters Led Zep's similar debut six months later. The two share roots in The Yardbirds, but Beck simply took it further, forging a megagroup with Rod Stewart on vocals, Ron Wood on bass and Mickey Waller on drums, the legendary Nicky Hopkins adding piano, with half of Led Zep contributing, too. The resultant set is one of my personal Top 10 all-time faves, up there with Howard Tate and Buffalo Springfield albums, a permanent joy thanks to Rod's interpretation of 'Ol' Man River', the reimagined 'Shapes Of Things', a gorgeous 'Greensleeves', and the double whammy of 'I Ain't Superstitious' and 'You Shook Me'. Blues rock at its most inventive. *KK*

Sound Quality: 90%



hi-finews  
ALBUM  
CHOICE





### FOXFEATHER

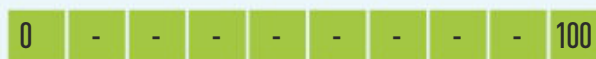
The Nature Of Things  
(DSD64; 96-192kHz/24-bit, FLAC)

[www.psaudio.com/products](http://www.psaudio.com/products); Octave Records 0007

PS Audio's Octave Records label continues to release good things, in DSD and other formats, and this beautiful album by fellow Coloradans Foxfeather is a prime example of its output. Recorded straight to DSD in the spacious acoustic of Vernon Barn in Longmont, CO., and produced by the band's Eben Grace, *The Nature Of Things* is special for so many reasons. Not least for the remarkable voice of Carly Ricks Smith, combining both power and bags of light and shade.

It stuns right from the opening title track, and then goes on to delight and amaze. The songwriting combines rock, soul and just about everything 'Americana', but this isn't just an album for devotees of the lonesome windswept highway. Instead, it's at turns bluesy, heartfelt and a real toe-tapper. In fact, if this isn't the perfect antidote to sanitised 'audiophile' albums, it's pretty damn close. *AE*

Sound Quality: 95%



### THE LOVECRAFT SEXTET

In Memoriam (48kHz/24-bit, WAV)

[www.denoali.com](http://www.denoali.com); Denovali DEN349

As you might expect from the name of the band, album title and artwork, this set was never going to be a riot of laughs. Here multi-instrumentalist, composer and producer Jason Köhnen, formerly of The Kilimanjaro Darkjazz Ensemble and The Mount Fuji Doomjazz Corp, takes the name of his group from the cult fantasy writer. He tackles themes of death, release and rebirth, taking on the 'funereal aspects of classical, operatic and Gregorian music'. The result is dark, sombre and yet multi-layered, with all the instruments rendered splendidly in their slowly-processing lines – the overall impression really rather moving. Yes, much of it sounds like cinematic funeral music for a fallen hero – one can almost imagine the camera pulling back from the graveside to take in a distant cityscape – but the sound quality is consistently high, even if the spirits aren't. *AE*

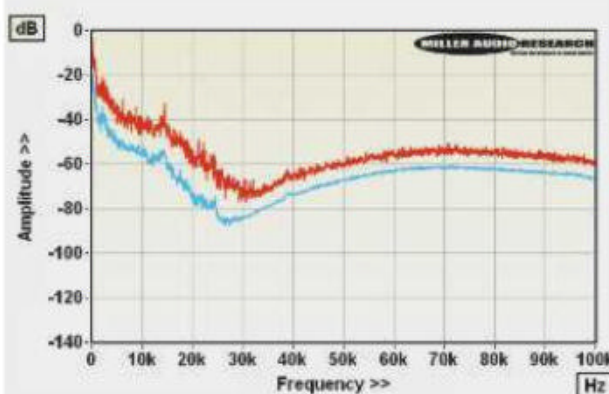
Sound Quality: 90%



### OUR PROMISE

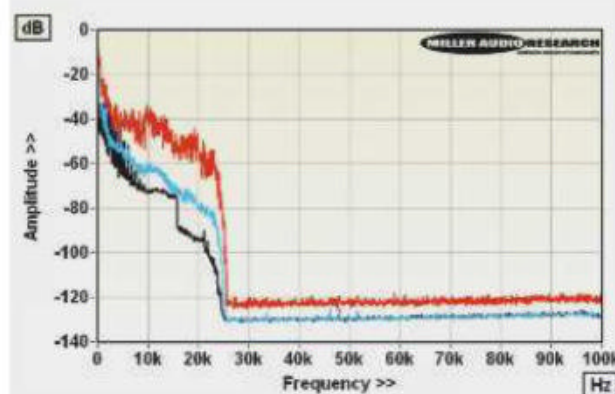
Following our Investigation feature [*HFN* Jun '11] where we examined the claimed quality of 'high-res' downloads, *Hi-Fi News & Record Review* continues to measure the true sample rate and bit-depth of HD music downloads. The Graphs show peak [red] and RMS [blue] spectra. These unique reviews will be a regular source of information for those seeking new and remastered recordings offered at high sample rates and with the promise of delivering the very best sound quality. (Note: an asterisk in the heading denotes a technical reservation – see Lab text). *PM*

### LAB REPORT



Recorded and mastered in DSD64 using a Sonoma recorder/editor, this download exhibits the expected swell in ultrasonic requantisation noise. Trks 1-5, 8 and 9 peak at 0dBfs and audioband dynamic range is a good 20dB peak-to-RMS. *PM*

### LAB REPORT



Heavily synthesised music often contains low sample rate content within a higher sample-rate mix. So it is here with some native 32kHz effects [black] buried into the 48kHz master. This doesn't make it a 'fake' file – *In Memoriam* is a good 'un. *PM*





COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



## QUINN SULLIVAN

Wide Awake (96kHz/24-bit, FLAC; MQA)\*

[www.highresaudio.com](http://www.highresaudio.com); Provogue Records n/a cat. no.

Some performers can only be described as 'precocious', and that's definitely the case with vocalist and blues guitarist Quinn Sullivan – at least in the best possible sense. Y'see, having started playing at the age of three, with Buddy Guy among his mentors from when he was just seven, he now reaches his fourth album at the age of just 22. So who said all bluesmen had to be grizzled and world-weary to sing of the troubles they've seen? Yes, Sullivan has succumbed to the odd spot of distracting vocal processing on this set, but above all it's a matter of what he does best: fine songwriting anchored by howling guitar solos and all underpinned by a sympathetic band. It's at turns catchy and involving, and treated to a fine production job in which all the performances are clear – this is far from a solo effort with backing, and is all the better for it. *AE*

Sound Quality: 85%



## JOSEPH WILLIAMS

Denizen Tenant (96kHz/24-bit; MQA)\*

[www.highresaudio.com](http://www.highresaudio.com); The Players Club TPC76322

When it comes to back-story, Joseph Williams has it a-plenty. The vocalist with yacht-rock supergroup Toto, he's also the son of legendary film composer John Williams, and the voice of the adult Simba in *The Lion King* – yes, he sang on 'Hakuna Mutata' and 'Can You Feel The Love Tonight'! On this solo album he's joined by Toto bandmates David Paich and Steve Lukather, and there are guest-slots for a handful of band alumni. The overall effect is of a slickly produced AOR, backing Williams's pleasantly inoffensive voice with big, lush scoring and fine harmonies. Strangely, the album only really takes off on a couple of cover versions: a straight down the line, string-draped take on 'Don't Give Up', with the singer's daughter Hannah Ruick taking the Kate Bush part to his Peter Gabriel, and a similarly literal version of The Beatles' 'If I Fell'. *AE*

Sound Quality: 80%



## MAMMOTH WVH

Mammoth WVH (96kHz/24-bit, FLAC)

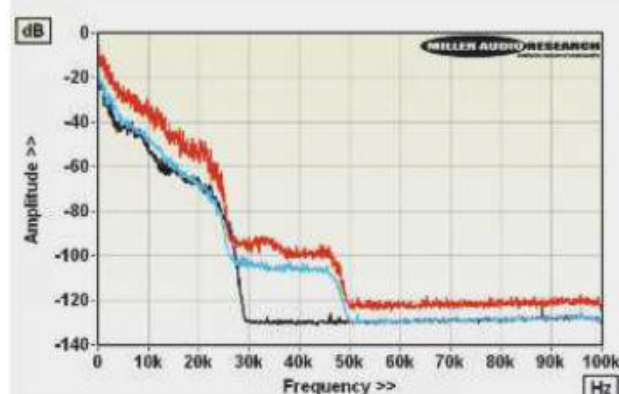
[www.highresaudio.com](http://www.highresaudio.com); EX1 Records n/a cat. no.

Frankly, this is an unadulterated 'take no prisoners' mix, as you might expect from the first solo outing by Wolfgang Van Halen – the 'WVH' of the title, and the son of guitar legend Eddie van Halen. Having played bass in Dad's band for 14 years, it's hardly surprising that this is a big, thundering set with metal overtones, and truly 'mammoth' in every way. Van Halen Jr has taken the 'Mammoth' bit of the name as tribute to his father's first band, and delivered an album that succeeds in delivering the full-on driving rock onslaught, but does little to further the genre with any originality. Indeed, it all sounds a bit similar: slamming instruments, vocal harmonies, big choruses and the occasional quiet passage seemingly only there to highlight everything crashing back in again. OK, so it's not exactly what you'd call crab, but it is something of a disappointment. *AE*

Sound Quality: 75%

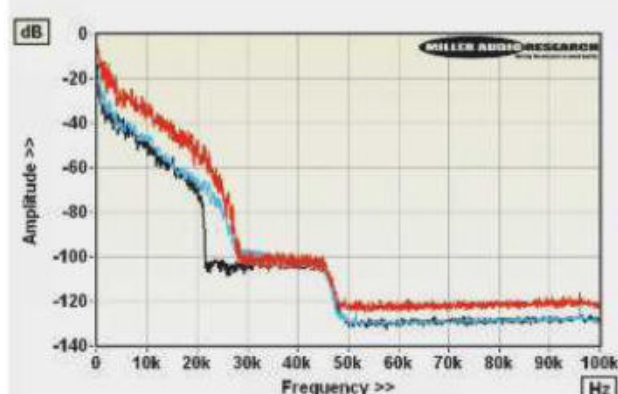


### LAB REPORT



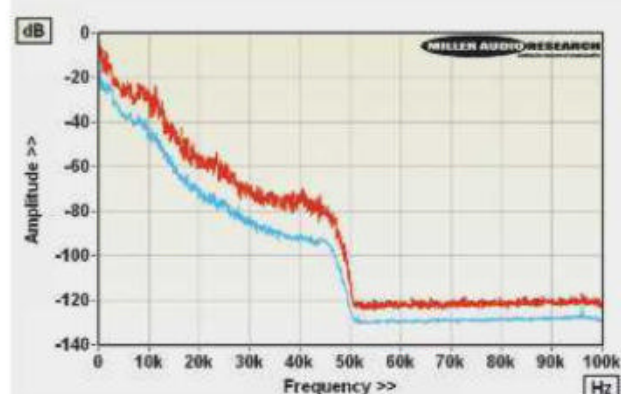
Offered as a 96kHz/24-bit download, in practice trks 3, 5 and 12 [black] will light the 88.2kHz LED on your DAC. The remaining tracks are rendered at 96kHz although these analogue recordings look to be low-pass filtered at ~28kHz. *PM*

### LAB REPORT



This album is normalised to a peak of -0.1dBfs but dynamic range is sadly limited. Tracks 4 and 12 look to be upsampled from 44.1kHz [black] and 5, 9 and 10 from 48kHz while the remainder host no useful information >30kHz. *PM*

### LAB REPORT



This album is crushingly loud! All tracks are normalised to -0.3dBfs and the RMS level does not fall below -8dBfs. Still, the full ~48kHz bandwidth offered by 96kHz sampling is occupied by drums, guitars, synth, and not a little distortion. *PM*



# WE DARE YOU! YET AGAIN



You've spent thousands of your hard earned money on your beloved hifi gear and carefully chosen cabling. So, while you're at it, why not finish it off in style with the best possible solution to connect everything? Why in the world would you settle for anything less than perfect? Of course you could pick an XLR connector that will cost you less than a fiver. It'll do the job, without a doubt. But it'll do it poorly, we can guarantee you that. A KRYO XLR connector from ETI Research will set you back a solid 70 quid. But it'll sound like a million. It is scientifically proven, a fact of life. Just try it, we dare you. Yet again...

# ETI

---

# RESEARCH

Visit us at [www.eti-research.audio](http://www.eti-research.audio)





COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



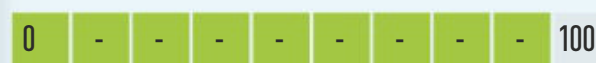
### PUBLIC SERVICE BROADCASTING

Bright Magic

PIAS PIASR1230CDX; LP: PIASR1230LP

PSB enjoy working thematically and *Bright Magic* is a kaleidoscopic musical survey of Berlin. On 'Der Sumpf (Symphonie Der Großstadt)' they metaphorically drive into town on pulsing synths like Tangerine Dream, and then examine the city's history and myths, its citizens and the people it has influenced. It was recorded at Berlin's Hansa Tonstudios [HFN Aug '21], as used by David Bowie, and Depeche Mode – who are explicitly quoted on 'People Let's Dance'. Norwegian singer EERA adds sweetness while Berliner Blixa Bargeld sounds sinister on 'Der Rhythmus Der Maschinen', and the whole shebang veers audaciously from complex guitar-based numbers to excerpts from a 1928-recorded sound collage of the city. *MB*

Sound Quality: 90%



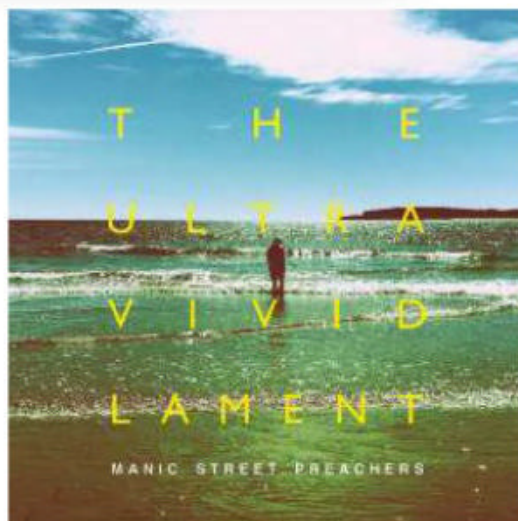
### IMMERSION

Nanocluster Vol.1

Swim WM56; two 10in LPs: VWM56

Immersion is the electronica alias of Colin Newman and Malka Spigel, who are equally adept at writing pop and rock earworms in their other projects like Wire and Githead. Here they combine those styles with guests including Stereolab vocalist Laetitia Sadier and electronic artists Ulrich Schnauss and Scanner. There are cryptic songs about disappeared neighbours and cat lovers, and on 'Remember Those Days On The Road', Spigel recounts images from half-dissolved memories. These sit alongside expressive instrumentals, particularly the radiant, song-like 'Skylarks' and the loping 'Metrosphere', which is driven along by Newman's repetitive guitar figures. *MB*

Sound Quality: 85%



### MANIC STREET PREACHERS

The Ultra Vivid Lament

Columbia 9439895432; LP: 19439895431

'Walking on my own, it's 1993' sings James Dean Bradfield on 'Snowing In Sapporo'. It's a song full of memories that 'couldn't last without the hurt', looking back at the band's beginnings as confrontational, arty punks, and their guitarist and singer Richey Edwards, now declared dead *in absentia*. It's a reminder of how much they have changed, but also that they have achieved commercial success by playing widescreen rock without bluster and with erudite lyrics. Bradfield duets with Julia Cumming on 'The Secret That He Missed,' taking the roles of artists Augustus and Gwen John, and the single 'Orwellian' sets an apocalyptic scenario to a hummable tune. *MB*

Sound Quality: 85%



### MARTINA TOPLEY-BIRD

Forever I Wait

Awal (tbc)

Since emerging as a teenager on Tricky's epochal 1995 trip-hop album *Maxinquaye*, Martina Topley-Bird has charted an idiosyncratic course. Although she has sung with musicians including Mark Lanegan, Gorillaz and Massive Attack – whose Robert Del Naja contributes here – this is only her fourth solo album. She has a beautifully controlled voice, singing soft and small, and drawing the listener into her world of atmospheric electronics and gently simmering beats on 'Hunt', then becoming more animated on the funky, bass-led 'Game'. The arrangements are subtle and imaginative, the highlight being the string quartet setting of 'Rain'. *MB*

Sound Quality: 85%





# “Aqua takes the competition to the cleaners !”



## Aqua LinQ & La Scala MkII

Network Interface      Optologic DAC

“Every once in a while, the reviewing malarkey unveils a product that is so exciting that all you can do is sit back and play as much music as possible before the plus size lady sings, or in this case the editor demands copy. This pairing from Aqua in Italy turned out to be just such a product—OK, it’s two pieces but put them together and you have one hell of a digital streaming system.”

“It reduces the low-level grunge that undermines digital audio to a far greater extent than most streamers, this isn’t something you are necessarily aware of until it’s gone or you play a vinyl record on a great turntable. Here it seems to have totally disappeared.”

“It’s almost as if the streamer is stripping away everything that isn’t music and presenting the DAC with the signal alone in a precise yet fluent form that sounds so right it’s uncanny.”

“It’s listening at a higher level, chakras fully aligned with the light of musical communication precisely focused yet natural in its pinpoint imaging and dynamic energy”

Jason Kennedy | **hi-fi+**

aqua  
acoustic quality

Distributed  
in the UK by



ASK ABOUT OUR UNIQUE **RISK-FREE** 30 DAY HOME TRIAL

[info@eliteaudiouk.com](mailto:info@eliteaudiouk.com)

**eliteaudiouk.com | 0800 464 7274**





COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



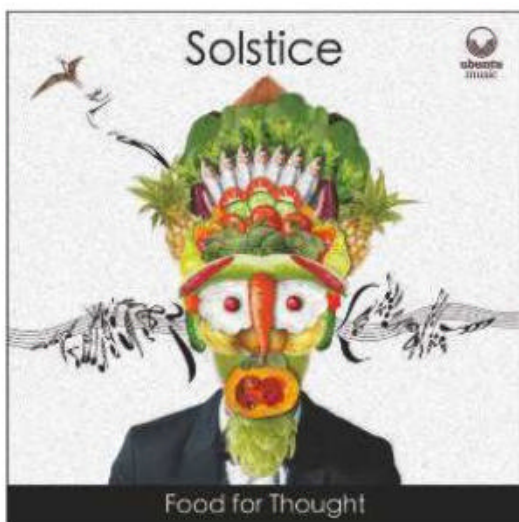
### VARIOUS ARTISTS

**Journeys In Modern Jazz: Britain (1965-1972)**

Decca Records 5393589, 2 CDs; 2 LPs

This is a generous sampler for *British Jazz Explosion: Originals Re-Cut*, a series of re-mastered albums which starts with saxophonist Don Rendell's *Space Walk*, The New Jazz Orchestra's *Le Déjeuner sur l'Herbe* and the Quixote-themed *Windmill Tilter* by Kenny Wheeler with John Dankworth. Along with key pieces from those three, you get to hear the imaginative work of Mike Gibbs, Mike Westbrook, John Surman, Alan Skidmore, Dick Morrissey, Stan Tracey and others. As the 1960s gave way to the '70s, UK jazz like this was sidelined, almost forgotten. Here's a chance to catch up on an intriguing genre you might have missed. *SH*

Sound Quality: 80%



### SOLSTICE

**Food For Thought**

Ubuntu Music UBU0061, CD and LP

A feast of a follow-up to this all-star sextet's 2016 album *Alimentation*. 'We're all foodies', explains vocalist Brigitte Beraha, on behalf of saxophonist Tori Freestone, guitarist Jez Franks, pianist John Turville, bassist Dave Manington and drummer George Hart – they've worked together in various combinations over many years. They're off to a flying start with 'Hermetica', Freestone's exuberant tribute to Hermeto Pascoal, her soaring flute brilliantly intertwined with Beraha's wordless vocal, this sextet version even more exhilarating than the one on Freestone's *Criss Cross* duo album with pianist Alcyona Mick. A joyous collaboration from start to finish. *SH*

Sound Quality: 90%



### FAPY LAFERTIN NEW QUARTET

**Atlantico**

Frémeaux & Associes FA8576

Born in 1950 into a musical manouche family, guitarist Fapy Lafertin has headed many gypsy swing groups over the decades. His New Quartet includes violinist Alexandre Tripodi and second guitarist Renaud Dardenne, both from Les Violons de Bruxelles, and bassist Cedric Raymond. They kick off with the nostalgic slow waltz 'Souvenir Of Toronto' and follow with a mix of gently swinging standards and tuneful originals, Lafertin switching to 12-string Portuguese guitar on some numbers. Unlike many other gypsy jazzers, Lafertin never uses his technique to out-Django Django with pyrotechnics. Instead, his good taste and feeling shine through in every track. *SH*

Sound Quality: 85%



### KENNY GARRETT

**Sounds From The Ancestors**

Mack Avenue MAC1180; 2LPs: MAC1180LP

Kenny Garrett was the sax hero of Miles's last tour in 1991 but he's recorded more than a dozen innovative albums as leader since then. This time, he aimed to bring in sounds he remembered from growing up, from Coltrane to Aretha to Marvin Gaye, 'the spirit from my ancestors', and the album draws on hip-hop and even gospel as well as West African music. Garrett's core group is centred on long-time colleagues pianist Vernell Brown Jr, bassist Corcoran Holt and drummer Rudy Bruner. But among many guests is trumpeter Maurice Brown, who helps Garrett pay tribute to the late Roy Hargrove, pitting an intricate hard-bop line against a street beat. And Garrett succeeds in making everything work together. *SH*

Sound Quality: 90%





# Audio Venue

bespoke audio visual consultants



Vertere Acoustics DG1  
£2,750.00



B&W 800 D4  
£30,000.00



dCS Bartock  
£12,499.00



ProAc K1  
£5,995.00



Luxman L-595SE  
£11,000.00



Sonus Faber Amati  
£26,500.00



Hegel H590  
£9,000.00



Wilson Audio Sabrina X  
£21,998.00



Auralic Vega G2.1  
£5,999.00

Part exchange and home demonstrations available

**audiovenue.com**

**BRANDS INCLUDE** Anthem, Arcam, Audeze, Audio Research, Audioquest, Auralic, Astell & Kern, Dagastino Inc, Bowers & Wilkins, Chord, Classe Audio, Control 4, Devialet, Esoteric, Focal, Fyne Audio, Hana, JL Audio, Kaleidescape, KEF, Koetsu, Krell, Lateral Audio, Luxman, Mark Levinson, Martin Logan, Michell Engineering, Musical Fidelity, Naim Audio, Primaluna, Proac, Project, PS audio, Quadraspire, Questyle, Rotel, Ruark Audio, Sennheiser, SONOS, Sonus Faber, Spectral Furniture, TelluriumQ, Vertere Acoustics, Wilson Audio, Yamaha, and many more...

27 Bond Street  
Ealing  
London W5 5AS  
**T** 020 8567 8703  
**E** w5@audiovenue.com

36 Queen Street  
Maidenhead  
Berkshire SL6 1HZ  
**T** 01628 633 995  
**E** info@audiovenue.com





COMPACT DISC



SUPERAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD

# GUSTAV MAHLER SYMPHONIE NR. 7 KIRILL PETRENKO



BAYERISCHES  
STAATSORCHESTER

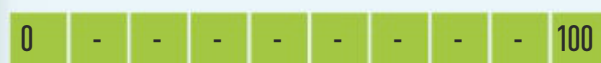
## BAYERISCHES STAATSORCH/KIRILL PETRENKO

Mahler: Symphony No 7

BSO Recordings BSOREC0001 (downloads to 48kHz/24-bit resolution)

Swift and yet tender, pulse-led yet relaxed, recorded live but with the pinprick detail of a studio production: Kirill Petrenko encompasses all the internal contradictions and ambiguities of Mahler's Seventh while placing it in time between the pictorial naturalism of Liszt and the expanded tonal energy of Hindemith. Like Carlos Kleiber and Kirill Kondrashin before him, Petrenko has the rare gift of making swift tempi feel slower by 'reading' every strand in a complex texture: each note matters. The finale is refreshingly unironised, the two *Nachmusik* movts. especially searching without false sentiment. Not since Kondrashin's long-deleted 1979 live recording [Tahra] has there been a Seventh on record of such impulsive genius. *PQ*

Sound Quality: 95%



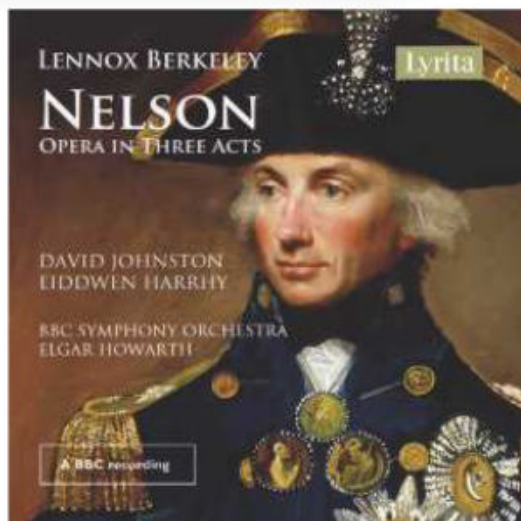
## PIERRE-LAURENT AIMARD

Beethoven: 'Hammerklavier' Sonata; Eroica Variations

Pentatone PTC5186724 (downloads to 96kHz/24-bit resolution)

The Graz Stefaniensaal makes an unusually airy venue for a piano recording – it's good for rounding out the upper partials in (i)'s eruptions, though the mics catch some distracting pedal action. Aimard's approach is less coloured by his mastery of modernist scores than you might expect: this is not a 'Hammerklavier' that sets its face against the wind. There is puckish wit (in the *Scherzo*), red-blooded pathos (the great *Adagio*), and a sense of where Beethoven was coming from (notably Bach and Haydn) as well as going to. His relative restraint in the Sonata – no small achievement – is counterbalanced by torrents of Romantic temperament in the *Variations*. *PQ*

Sound Quality: 80%



## DAVID JOHNSTON, EIDDWEN HARRHY, BBC SO/ELGAR HOWARTH

L Berkeley: Nelson

Lyrta SRCD2392 (downloads to 44.1kHz/16-bit resolution)

A military hero undone by passion and hubris, a love triangle, memorable tunes and grand set-pieces – Lennox Berkeley's opera of 1954 could have established him as an English Puccini. Only the sententious libretto and occasionally stalled action lose out to Walton's *Troilus and Cressida* of the same year. Harrhy makes a ringing and vocally alluring Emma Hamilton; Johnston is convincingly Italianate in the third-act love duet before sailing to Trafalgar for a naval denouement which takes on Britten. Tape hiss is a constant presence, but otherwise this is perfectly acceptable, slightly boxy BBC stereo sound from 1983. *PQ*

Sound Quality: 75%



## ORCHESTRE DE L'OPÉRA ROYAL/ ANDRÉS GABETTA

Vivaldi/Guido: Le Quattro Stagioni

Chateau de Versailles CVS042 (two discs + DVD)

Brother of cellist Sol, Andrés Gabetta juices up Vivaldi's perennial charmer in his bold and characterful direction of this adaptable Versailles band. Hurdy-gurdy imitations, bird whistles, the wind parts added by Vivaldi for a Dresden performance, all the king's horses and quite a few of his men, it seems, make their presence felt in this ample and very 'live' live recording. Not for purists, but the coupling is as original as the performance: a ballet of the seasons (not Glazunov again!) written by Giovanni Antonio Guido, star violinist to Louis XIV. It's a courtly evocation of country pursuits, pulled off with tremendous flair. *PQ*

Sound Quality: 80%





# Enjoy the Silence.

## The Audio Physic Reference Series

Loudspeakers that you cannot hear. Which disappear in the music. That is the mission of Audio Physic. Bringing music to life, making it physically tangible. With Audio Physic, music is not a simple reproduction. Every piano stroke, broom, violin stroke, or guitar riff is vividly clear and creates a live goose-bumps feeling. The living room becomes a concert hall, a rock stage, a festival. All made possible by our unique innovations in the use of materials and structures—from ceramic foam to our honeycomb sandwich board and spiderless drivers, enabling our speakers to offer you, as our slogan says, **Nothing But Music...**



Cardeas



Codex



Midex



Avanti 35



Tempo 35



Step 35



HHC III  
Centre

**[audio physic]**  
NOTHING BUT MUSIC

*discerning dealer enquiries welcome*

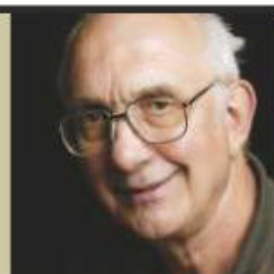
all available with our unique **risk-free** 30 Day Home Trial



[info@eliteaudiouk.com](mailto:info@eliteaudiouk.com)

**eliteaudiouk.com | 0800 464 7274**





## 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

# Planet of the apps

Getting out and listening to live music is a vital part of the hi-fi experience, says **Barry Fox**, but in our new 'Covid-safe' era it's one that comes with smartphone strings attached

**T**o go out or stay in? That will be the question. Covid has been kind to the home entertainment industry. Instead of going out to hear live music we have been staying at home with streams or discs, and probably bought new and better equipment.

The known unknown is how long it will take for live music to return to anything resembling normal – we might be taming Covid with jabs and tests but it is not going away – and how many people will then just not bother to go out. Why should this matter? Because hearing and seeing an occasional dose of the real thing is an invaluable yardstick for judging recording and playback quality.

### GOING LIVE

I have tried to attend live events over the last year or so. It's been a real eye-opener. Ronnie Scott's club in Soho has done a sterling job in providing work for musicians, and enjoyment for audiences, with both live events and streamed shows via YouTube. The live events barely pay their way because audiences are shrunk to maintain social distancing. But at least the musicians and the audience have not had to wear a mask, because you can't blow a trumpet or drink a beer with a face covering.

The same goes for the nearby Crazy Coqs cabaret theatre at Brasserie Zédel on Sherwood Street. I made the effort to get into both venues because they have good acoustics, and solid sound systems ridden by engineers with ears. Another London club, Kansas Smitty's, has also pushed the boundaries when it comes to live show streaming, along with the Metropolitan Opera in New York and National Theatre in London.

Everyone has been learning on the go about the practical pitfalls of the different approaches, especially lip sync. And all

of this work, done out of necessity, has made streaming an increasingly viable future alternative to going out.

The whole process of ticketing live events looks likely to change too, in a way that will seriously disadvantage anyone who scorns the use of a smartphone. The risk of cross infection has put a stop to paper tickets from a box office or through the post. This has forced venues to find all-electronic methods and these will very likely become the norm.

The enabling tech is generally based on QR codes – square images with black-and-white shapes that a smartphone camera converts into traditional text, or uses to steer the phone to a website.

Buying rail tickets to get to an event is going electronic, too. 'E-ticketing' relies on either home-printing a paper image of a QR code that the venue staff can scan with a hand-held reader, or showing a phone with a QR code on the screen.

One of my trips to the theatre involved accessing the box office website to provide the venue with personal details and my phone number. On the afternoon of the show

the box office sent an SMS text message, which contained an internet URL that could lead the phone to a website displaying seat numbers, plus a QR code to be shown on the door.

This system relies on smartphones because computers and tablets usually cannot receive SMS texts. And everything falls apart if there is no data signal, or the phone has no credit or its battery is flat.

### BACK IN VOGUE

Getting into the wonderfully restored Wilton's Music Hall in London E1 for a show by jolly all-girl band Tricity Vogue was even more of an ordeal – despite the very best efforts of helpful staff on hand to assist struggling customers.



PHOTO: SIN BOZKURT

**ABOVE:** All-girl swing band Tricity Vogue, with leader Tricity standing second from left

Staff outside the venue told us to 'use the NHS phone app' and point our phones at a QR code printed on a notice board. This caused confusion because there are two quite different NHS phone apps. One is like a medical passport which securely stores a patient's medical data, such as when they have been vaccinated.

The other app is the NHS Covid-19 App, which uses Bluetooth to track and trace anyone who has inadvertently sat next to another concert-goer who later shows symptoms. And there have been reports of people deleting the app to stop it telling them to isolate...

### FINGERS CROSSED

I'm now booked into two events at the Barbican: a theatre musical and a music concert. The omens are not good. The musical show *Hairspray* had to close a few days after opening because a member of the company needed to self-isolate. A play at the Royal Court theatre was suspended and a choir had to pull out of the Cheltenham Music Festival.

All I can do now is keep my fingers crossed. I really don't want to stop getting my live music fixes. ☺

'At least the musicians haven't had to wear a mask'





## Audiodesksysteme PRO X Ultrasonic Vinyl Cleaner

The original ultrasonic vinyl cleaner first introduced over 10 years ago. The PRO X is now more efficient and easier to use. Contactless cleaning action removes more dirt than conventional cleaners which apply liquid and use suction.

Completely automatic cleaning and drying cycles. Both sides are cleaned simultaneously resulting in a dry, ultraclean LP in 6 minutes. A deliberately low energy ultrasonic generator ensures deep cleaning without potential damage to the delicate vinyl surface.

Used LPs, brand new albums, and previously cleaned discs sound significantly better after ultrasonic cleaning. It is more than just removing noise. The soundstage is larger; more detail is revealed; tonal balance is more natural; the dynamics are faster. Ultra clean grooves will extend stylus life.

**Colour options:** grey, black, red, white.  
Optional 7" singles adaptor kit available  
Small footprint: 33cm (w) x 20cm (d)  
**£2500. Contact us for your nearest dealer.**





## 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

# The myth of originalism

While collectors search for 'original' versions of their favourite music – even down to the colour of the record label – **Barry Willis** argues that the term is more provocative than practical

**W**hat is an 'original' recording? Is it the first commercial release? Is it the version of a song that first appeared in the artist's home country? Is it stereo or mono? Is it a single or a song included on an album? Can 'original' apply to an unaltered reissue? Can it mean the first time you heard one of your favourites?

For music fans and especially for record collectors, 'original' encompasses all these definitions and more. It's one of many attributes that make records valuable and worth seeking.

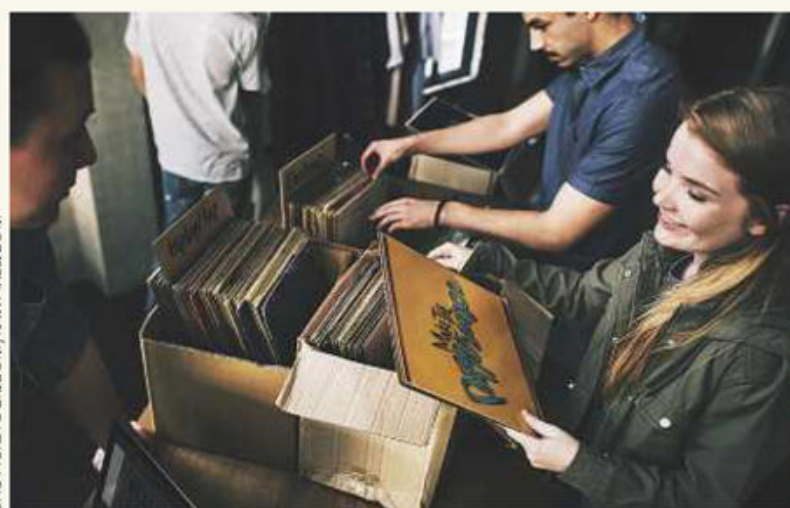
## COLLECTING MEMORIES

The offspring of a record-collecting father, my brothers and I each caught the bug early and amassed substantial collections. I once had an LP library that wrapped around three sides of a large room, a collection that's now shrunk to a handful of recordings that have never been released in any other format.

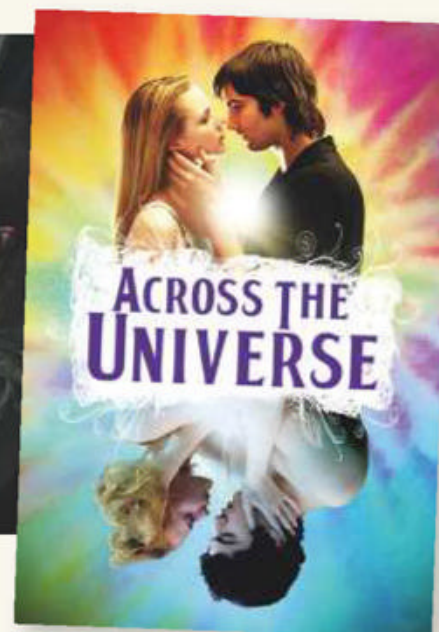
During the height of my LP period,

my brother Bryan and I often worked used-record shows, every couple of months dragging folding tables and crates bulging with vinyl to one rented hall or another. He specialised in rock and pop from the 1950s, '60s, and '70s; my area was primarily show tunes and movie soundtracks, because except for perpetual blockbusters like *West Side Story*, they were generally issued once during a show's popularity and therefore had some innate rarity.

We dealt with a lot of deeply informed fanatics who looked far beyond the superficial condition of the record and its jacket. Many claimed to decipher the small print and graphic design, refusing for example to buy an album whose serial number was in the upper right-hand corner of the jacket rather than the lower left. Or they preferred the red label over



ABOVE: Shoppers at a vinyl record fair and (right) the Beatles-soundtracked 2007 film *Across The Universe*



the green label when comparing two apparently identical records.

Some claimed to know if a pressing was from early in a production run (highly desirable) or late in the run (not so desirable). I delved into such minutia only insofar as it helped me communicate with potential buyers. Conditions being

otherwise equal, red and green labels were frankly all the same to me.

Reasons for collecting are as varied as the people who do it – some are 'completists' who want everything by a certain artist, composer, producer, or mastering

engineer. Or they are deep into some narrow niche of pop music.

The issue of originalism, which was never resolved, popped up often, and applied not only to physical products but also to the history of pop music itself – such as, when did rock begin?

Was it Bill Haley & His Comets, in the early 1950s? Or was it Louis Jordan, whose musical antics Haley copied? Was the Big Bang of rock the emergence of Chuck Berry? Little Richard? Elvis Presley? Or was it what Americans call 'The British Invasion' – groups such as The Beatles,

Stones, Dave Clark Five, *et al*? Did rock as we know it originate in the psychedelic era? Did it regain its fundamentals with punk rock in the mid to late 1970s? Or are The Clash and The Ramones rock's real originators?

Like the old theological issue of how many angels can dance on the head of a pin, such questions provoke much discussion without offering much illumination. In my opinion, the only true 'original' recording is the rough take before it goes to the mastering studio.

## ORIGINAL SIN

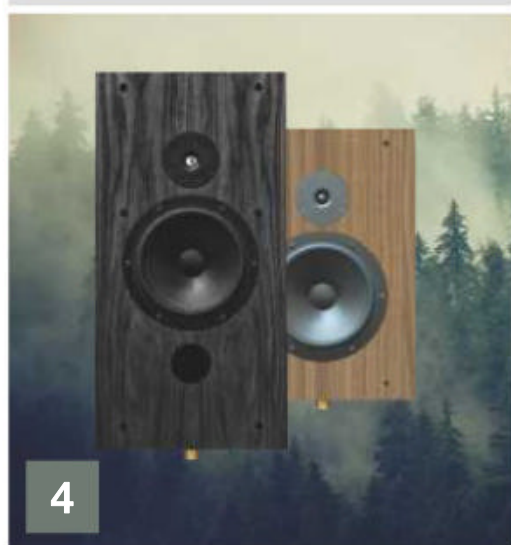
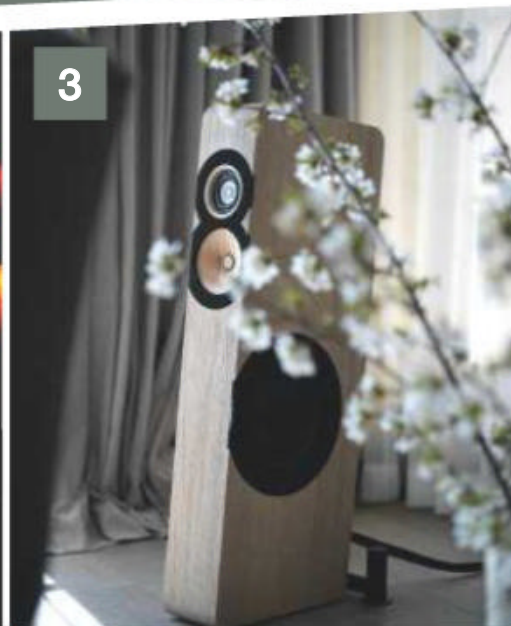
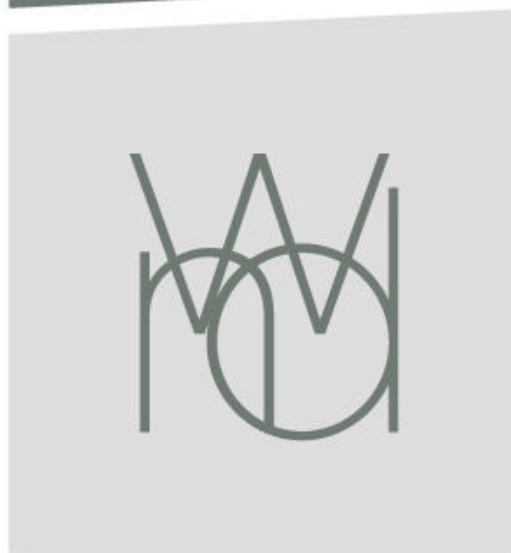
Originalism can also be quite an emotional issue. Among my favourite films is Julie Taymor's *Across The Universe*, a boy-meets-girl musical set during the Vietnam War. To my mind the most authentic film about that era that has ever been made, its soundtrack is all Beatles tunes, most of them in my opinion better than the originals. That is high heresy among fans of The Fab Four.

The DVD and Blu-ray are both in my collection, and when the soundtrack CD came out I eagerly bought it too, only to be disappointed that Evan Rachel Wood's lovely version of 'If I Fell' was inexplicably left out. To hear it, I have to cue up the film. ☺

'Some are  
"completists"  
who want  
everything'



# Exceptional Hi-Fi is always rewarding



## brands

1. 432 Evo
2. AGD
3. Boenicke Audio
4. Lu Kang Audio
5. Merason
6. Moonriver Audio
7. Silent Angel

For Brands that each retailer stocks and more information, please visit our website.

## retailers

**Art & Sound**  
www.artandsound.co.uk  
t. 0203 488 6261

**Absolute Abode**  
www.absolute-abode.im  
t. 240 408

**Audio Lounge**  
www.audiolounge.co.uk  
t. 0207 487 4080

**Audio Therapy**  
www.audiotherapyuk.com  
Tel: 07976 496218

**Audio-Philia**  
www.audio-philia.co.uk  
t. 0131 221 9753

**Audiocounsel**  
www.audiocounsel.co.uk  
t. 01457 875 555

**Audiologica**  
www.audiologica.co.uk  
t. 01403 336 339

**Brian and Trevors**  
www.brianandtrevors.com  
t. 0161 766 4837

**Kantata Audio**  
www.kantata-audio.co.uk  
t. 02892 607 882

**Kronos AV**  
www.kronosav.com  
t. 0343 5236 169

**Loud & Clear**  
www.loud-clear.co.uk  
t. 0131 516 7561

**Mike Manning Audio**  
www.mikemanningaudio.com  
t. 01935 479361

**Norvett Electronics UK (LLP)**  
www.norvett.com  
t. 01323 870 485

**O'Brien Hi-Fi Ltd**  
www.obrienhifi.com  
t. 020 8946 1528

**The Audio Room**  
www.theaudiroom.co.uk  
t. 01482 891 375

**The Little Audio Company**  
www.thelittleaudiocompany.co.uk  
t. 0121 638 0721

**The HiFi Gallery Ltd**  
www.thehifigallery.co.uk  
t. 01592 859 163

**VAL HiFi**  
www.valhifi.co.uk  
t. 0333 577 2005

SEE US AT



DE VERE STAVERTON ESTATE  
NORTHANTS, UK  
09-10 OCT '21

VISIT US IN THE OXFORD SUITE

Whole Note  
Distribution

0203 9115 549  
info@wholenotedistribution.co.uk  
www.wholenotedistribution.co.uk







## 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

# Fair DAP?

There's a nascent industry of mobile devices focused on accessibility, repairability and longevity. **Jim Lesurf** wonders if manufacturers of digital audio players should be following suit

**W**e all know how the hi-fi world loves a standards battle, and how CD got off the ground because there was no format war – competing manufacturers and content owners collaborating for once.

Having bought a Questyle Audio QP1R digital audio player (DAP) a few years ago, I now happily play my music via that into my headphones when it is convenient. It's a good addition to having an, erm, 'real' hi-fi system with loudspeakers and a comfortable listening chair.

In this respect I guess I've now started catching up to some degree with the many people who enjoy their music via a portable device and headphones, and who don't even have a traditional set-up. However, the comparison had me thinking about the quality of audio replay offered by the mobile 'devices' people carry around. Just how good is it?

### NEVER KNOCK MY NOKIA

I don't have a 'mobile phone' in the modern sense, so have no experience of their sound quality. Nor have I been able to do any measured assessment on them. OK, I admit I do have a mobile phone, but it is an ancient Nokia 3310 – an actual phone, not a handheld quasi-computer running one of the modern operating systems.

I confess I'm a bit deterred by the way those devices seem to take over the lives of some users, becoming welded to their hand and mind.

Also, my main interest would be in good audio. When I want to access webpages, work, etc, I find a full-sized monitor and desktop/laptop system makes more sense. I also tend to prefer hardware I can use for many years, and which can be modified or repaired to keep up with developments as needed. Such a product is more convenient for me, and perhaps

'The DAP  
I use sounds  
superb, but is  
a closed box'



**ABOVE: The FairPhone (left) and PinePhone Plasma Edition (centre) both promise upgradability, but lack the audiophile playback potential of the author's Questyle Audio QP1R DAP (right)**

better for everyone in the long run in terms of reducing landfill and waste.

However, recently I came across discussions of some specific approaches to mobile devices that are interesting, one from the company FairPhone, and another the PinePhone from tech start-up PINE64. These brands' models aim to be more user accessible, repairable, etc. In

addition, some now use systems like the Linux-based 'PostmarketOS', which can be installed to make fresh use of older mobile phones.

At the moment you need to be a bit of a geek to really have a go with some of these

things. But it set me wondering if these developments might also lead to flexible devices that could be tweaked in order to improve their audio capabilities as a DAP? They might also have appeal to users for other reasons – eg, being repairable and/or 'green' – and thus draw more people into experiencing high-quality audio, in the process sparking a new segment

and expanded audience for the sale and enjoyment of good audio kit.

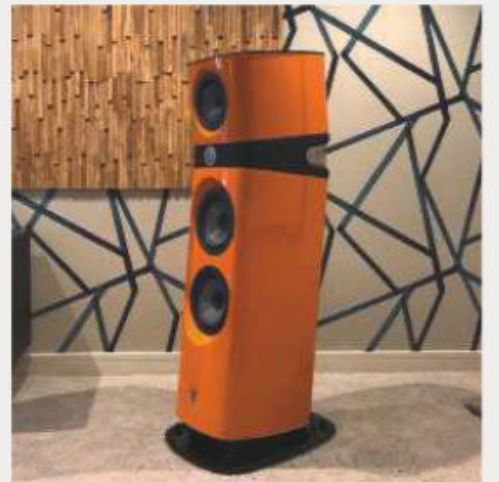
I suspect that – as things stand – the DAC and headphone amps in such devices won't come anywhere near to the quality of the best dedicated hi-fi DAPs. A quick look at some of the designs I could find information about indicated their audio codec chips tended to max at about 48kHz/24-bit, which from the viewpoint of serious audio is pretty basic. But that might not be true for them all and if signs appear that it is wanted by potential users, better codecs, headphone outputs and firmware could be adopted.

### SQUEEZE BOX

It would certainly interest me to find that a good DAP was repairable and upgradable. The one I use at present delivers superb sound, and can cope even with DSD. But it is a firmly closed box with storage expansion limited to 2x 200GB microSD cards. With a large music collection, a fair portion of it being hi-res, this becomes more of a squeeze than I like. So maybe this is an area to watch – or listen – out for. 🎧



## NEWCASTLE & CARLISLE SHOWROOMS



B&W 800 Series / Nautilus Dealers • Naim Statement  
Linn Klimax / LP12 experts • KEF Blade and Reference centre  
Chord Music Cables

Interest free credit • Parking • Atmos home theatres  
Part exchange considered • Ex demonstration deals available  
Lovely coffee, real people and great advice

naim



Bowers & Wilkins

KEF



### Carlisle

The Maltings,  
Shaddongate, CA2 5TE

E: [sales@petertyson.co.uk](mailto:sales@petertyson.co.uk)  
Mon - Sat: 9am - 5:00pm

01228 546 756



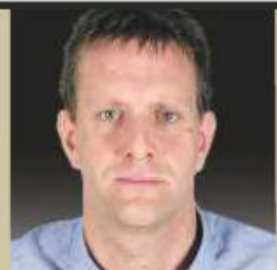
### Newcastle

Unit 6 Kingston Court,  
Kingston Park, NE3 2FP

E: [sales@petertyson.co.uk](mailto:sales@petertyson.co.uk)  
Mon - Sat: 9am - 5:00pm

0191 285 7179





## Adam Smith Hi-fi reviewer

Electronics engineer, music lover and former loudspeaker designer, Adam Smith is known to dabble with all audio formats, but is a committed vinyl fan at heart

# Fragile existence

After painful experiences with careless couriers and poor packaging, **Adam Smith** warns that the vintage turntable you've bought is only going to light up your life if it arrives in one piece

As any fan of acquiring classic hi-fi equipment knows, there are ups and downs to the whole process. The thrill of the chase or the securing of an item you've been wanting for a long time are exciting experiences. Then again, it's never good to be outbid, find an item isn't quite what you hoped it was, or hear those awful dozen words that are guaranteed to evoke despair: 'I used to have one of those but I threw it away'.

However, a couple of pictures sent by a friend this week reminded me of the most stressful aspect of buying any secondhand piece of equipment – death by courier. Sadly I seem to be at the receiving end of this more than most because my area of obsession just happens to be turntables. Even the most ham-fisted and clueless seller can usually manage to stick something like a preamplifier into a box in such a way that it has half a chance of reaching you intact. But a turntable? Sadly they have the highest attrition rate of any hi-fi item you can name.

### IT'S A HARD KNOCK LIFE

My friend's new purchase was a turntable. It started out as a rather lovely JVC QL-F6 with the promise of a mint Shure cartridge, and I agreed he'd stumbled upon a very sweet deal. Sadly, the



**ABOVE:** B&O's Beogram 2000 turntable from 1974 with the brand's Beovox 3702 speakers



**ABOVE:** Two images of the author's Yamaha GT-2000 turntable after 'a tough journey across the globe' caused considerable damage – including an almost-amputated tonearm

pictures he sent on its arrival showed a huge dent in the front, a large chunk broken out of the plastic underside cover and a big crack in the lid. The deck is based around a sturdy die-cast chassis so it must have taken quite a knock.

It's easy to blame couriers for this sort of outcome. We've all seen those 'secret camera' programmes where packages are flung into vans and delivery consists of throwing the item into a hedge, but experience suggests these events are rare. Also, most hi-fi has the distinct advantage of being heavy, so throwing it isn't always physically possible!

Regardless of this, the onus is on the shipper to make sure the item in question is packed well enough to survive. My golden rule is simple – once I've packed something, would I be prepared to lift it to chest height and drop it onto a hard floor? If not, then it's not packed well enough.

The other big problem with turntables is that it's not just the outside you have to consider. One of my first ever eBay purchases – a B&O Beogram 2000 turntable – was packaged in many layers of bubble wrap and housed in a sturdy box with plenty of corner protection –

all good. However, the seller had not removed the counterweight or secured the platter. As a consequence, that platter came off and went on a wrecking spree. The result was gouges all over the top plate, chunks out of the inside of the lid, the counterweight stub snapped and the headshell end of the arm smashed off.

This deck came from the UK but adding distance into the equation can make things far worse. My Yamaha GT-2000 was purchased in the UK as little more than a kit of parts after the previous owner imported it from Japan. It was badly packed and clearly had a tough journey across the globe as it arrived with the arm ripped out of the plinth, its motor seized due to the spindle taking a clout, and the lid little more than a jigsaw puzzle!

'There's only one way to guarantee a safe arrival'

### THE WHEEL DEAL

So if you fancy a classic turntable, take the time to check a seller knows what he or she is doing with the item you've just purchased. A few polite packaging tips are often surprisingly well received. Ultimately, however, there's only one way to properly guarantee safe arrival – jump into the car and collect it yourself. 🚗



# Soundsmith



**For 30 years we have designed and hand built  
the world's best Phono-cartridges**

Soundsmith cartridges are hand made using our proprietary Fixed Coil technology.  
If you would like to hear your vinyl with the jitter removed try one of our cartridges.

## Duevel

**Omnidirectional high-end loudspeakers**

Unlike conventional loudspeakers, Duevel's omnidirectional loudspeakers can be placed more flexibly in your living environment and will create a stunning sound-stage.



| Model      | Price (SRP) |
|------------|-------------|
| Planets    | £950        |
| Enterprise | £2,600      |
| Venus      | £4,000      |
| Bella Luna | £10,000     |
| Sirius     | £28,000     |
| Sirius BE  | £40,000     |

An affordable range of excellent high-end loudspeakers to fit with today's modern living environment.

**Dealers:** Audio Affair - 0121 224 7300  
Midland HiFi Studio - 01902 380083

*Signature*  
AUDIO SYSTEMS

Distributed by Signature Audio Systems, **call: 07738 007776**  
or by e-mail to: **info@signaturesystems.co.uk**  
**www.sound-smith.com**      **www.duevel.com**





## Steve Harris Contributor

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

# The restoration game

**Steve Harris** investigates the Plangent Processes system that's putting a digital touch on analogue recordings, and suggests vinyl lovers should have nothing to worry about

In the early days of CD, the late, great Tim de Paravicini turned the analogue-versus-digital argument on its head. He would tell us that an analogue tape recorder was really sampling the signal at the bias frequency of typically 100kHz or even 200kHz.

Tim also liked to point out that although CD boasted a dynamic range of 96dB, a vinyl record player could resolve signals down to much lower levels than its signal-to-noise figures implied. Its resolution, he said, was limited only by the molecular structure of the vinyl.

## RADICAL PROCESS

Much more recently, US pick-up designer Peter Ledermann of Soundsmith [see p68] also looked at analogue in digital terms. In a 2018 Rocky Mountain Audio Fest seminar titled 'Why Analog is Digital and How to Fix It', he told listeners that it was naive to imagine that the stylus of a typical moving-coil cartridge could really follow the contours of a record groove without losing contact.

In fact, he explained, the stylus was bouncing around and just sampling the groove each time it hit. He described the result as 'stylus jitter'.

As record players, tonearms and cartridges evolve, so do the mastering techniques that keep audiophiles fed with their favourite music on vinyl.

And in the US, Jamie Howarth's Plangent Processes system offers a radical way of restoring analogue tapes.

Howarth says the idea for Plangent Processes came to him in the early '80s, when he worked at New York's Howard Schwartz Recording, comparing different tapes using the company's Hewlett Packard digital frequency synthesiser and an early spectrum analyser. Looking at the latter, a 10kHz signal from the synthesiser would be a perfect spike. But

'Plangent's tech has won over many engineers'

the same signal recorded on the tape 'looked like a pine tree'. Also, Howarth noticed that if the tape was moved slowly across the head, he'd hear a whistling noise, which was the bias. He wondered why no-one had used the bias frequency as a reference to servo-lock the machine.

Years later, Howarth and colleagues succeeded in developing a system that would do this after the event, as it were. The Plangent Processes Playback System starts with a custom wideband playback head and amplification giving output flat to 1MHz for bias capture.

Having captured the audio and the very high-frequency content from the tape, Plangent then uses its proprietary DSP to correct errors ranging from long-term pitch errors to fast scrape flutter.

On the always-absorbing Steve Hoffman forum, Howarth told the story of a Plangent Processes demonstration given to major-label record executives in 2006. Most listeners heard the Plangent versions of 1960s stereo master tapes as an improvement, but one executive



**ABOVE:** Plangent Processes' digital mastering has been used for reissues of Bruce Springsteen's 1975 album *Born To Run* and Aretha Franklin: *The Atlantic Singles Collection 1967-1970*

preferred the non-Plangent sound of a Simon & Garfunkel track. And on an Earth, Wind & Fire piece, the Plangent treatment revealed precisely panned imagery that on the untreated master was swimming between the speakers: 'The exec preferred the version that swam'.

Since then, Plangent's technology has won over many engineers trying to get the best out of old tapes. It's even been used to remaster some 1949 wire recorder sessions by Woody Guthrie. Unlike tape recorders, the old wire recorders used only DC bias, so the time-base for speed correction was the residual 60Hz mains hum.

## ALL OF A JITTER

It's great that digital technology can at last correct the problems of existing analogue tapes, leading to better audiophile vinyl issues. But if we prefer vinyl irrespective of the recording's provenance, aren't we a bit like that record company exec who preferred the sound that swam between the speakers?

Do we love vinyl because it resolves almost down to molecular level? Or are we, sometimes at least, just being seduced by 'stylus jitter'? 🎧



## YOUR VIEWS

# Sound Off!

Correspondents express their own opinions, not those of *Hi-Fi News*. We reserve the right to edit letters for publication. Correspondents using e-mail are asked to give their full postal address (which won't be published). Letters seeking advice will be answered in print on our Sound Off pages, but due to time constraints we regret we're unable to answer questions on buying items of hi-fi or any other hi-fi queries by telephone, post or via e-mail.

## THE BIGGER PICTURE LOWTHER, KLIPSCH AND THE DOPPLER EFFECT

In the August issue of *HFN*, reader Charlie Haswell discussed the advantages of high-efficiency speakers with large cabinets. I certainly agree with his point of view having owned a pair of Lowther Fidelio loudspeakers. When used with an Audion 300B Silver Night SE amp the sound was astonishing. So also was the sound of these speakers when driven by an Audio Innovations SE 500 amp.

But Lowther speakers are a very strange breed and for the unwary can certainly have their downsides. In the US, Klipsch was another company producing speakers with large cabinets and the good news is that it still is, your review of the Klipsch Heresy IV [*HFN* Nov '20] being testament to this. One other company that comes to mind is Zu Audio, which produces 'old school' speakers in its factory in Utah and then sells these directly to the audiophile public.

*Remi Balestie, via email*

Steve Harris replies: Even the big Klipsch corner horns are small compared with the giant cinema speakers of the 1930s. I think Paul Klipsch used to say that he hadn't



**ABOVE:** The Klipsch Heresy IV speaker can trace its origins back to the late '50s

invented the horn speaker, he'd just fixed it so you could get into the room with it. Of course he did this by folding the horn and using the boundary walls as part of the horn. He also used to give out 'Klipsch's law', which states that 'Efficiency is inversely proportional to distortion'. By this he meant not harmonic distortion, which he said was not objectionable even at high amounts, but modulation distortion, including FM distortion due to the Doppler effect when a cone is producing relatively high and low frequencies at the same time.

In his Audio Engineering Society paper titled 'Modulation Distortion In Loudspeakers', he explained that this produces 'new frequencies which are inharmonically related to the original sounds and therefore detectable and objectionable in much smaller amounts' than harmonic distortion. In the preamble to this AES paper, he wrote 'Reduction of diaphragm excursions at low frequencies reduces FM distortion. Horn loading, properly applied, offers the greatest reduction, while simultaneously improving bass power output capability'.



**ABOVE:** Audion's 300B Silver Night SE amp at the 2019 Hong Kong AV Show

Send in your views to:  
Sound Off, Hi-Fi News, AVTech Media Ltd,  
Suite 25, Eden House, Enterprise Way, Edenbridge, Kent TN8 6HF  
or email your views to: [letters@hifinews.com](mailto:letters@hifinews.com) -  
please use 'Sound Off' in your subject field

## Paying tribute...

CHRISTOPHER BREUNIG PUT THE CLASS INTO CLASSICAL

Word has reached my ear that Christopher Breunig will shortly be vacating the position of classical music reviewer at *HFN* – and indeed that he's already handed over the Classical Companion feature to Peter Quantrill.

I just wanted to pay tribute to Christopher, whose reviews I've been reading with much pleasure and education for very nearly 50 years, and to say I'm going to miss him greatly. Thank you, Christopher, for a job done with class, style and deep knowledge over a very long period.

*Paul Graber, via email*

Paul Miller replies: Christopher has indeed seen sterling service in over a half-century at *HFN* but will not be hanging up his quill entirely as he continues to manage our music review pages.

I am also delighted to welcome Peter Quantrill to *HFN* – a *Gramophone* and *The Strad* regular, Peter has written for the Salzburg Festival, Warner Classics, *Opera* and *Pianist* magazines, and contributed to *Help Your Kids With Music* (Dorling Kindersley, 2015) and *1001 Classical Recordings* (Cassell, rev 2016).

Johnny Sharp, our most recent Rock reviewer, was on the *NME* staff in the '90s writing as 'Johnny Cigarettes'. He also writes for *Uncut*, *Classic Rock*, *Prog*, *Record Collector*, *The Guardian* and *The Times*.

## WhitWorld

OUR HI-FI WORLD THROUGH THE EYES OF WHITWORTH





## Koetsu budget alternative?

READER SEEKS THAT EUPHONIC MC SOUND WITHOUT THE WALLET WORRIES

I would love to buy a Koetsu MC cartridge but, to put it simply, I cannot afford one. What might give me their mellifluous sound for less than £1000? The tonearm used would be a Rega RB2000 [HFN Aug '15] while my turntable is a Roksan Xerxes 20 Plus.

*Dr Raz Shankar, via email*

Ken Kessler replies: Fortunately, there is no shortage of affordable MCs, but do not discount the contribution of the phono stage. Dr Shankar doesn't state which he is using, but I am assuming MC compatibility with his existing system.

For my money, the most 'mellifluous' and Koetsu-like MCs for under £1000 are the Denon DL103 (£299), Ortofon SPU Classic (£550) and the £799 EAT Jo N°5 [HFN Dec '18]. The Denon and the Ortofon models would even allow for the purchase of a phono stage such as



**ABOVE: 'A real honey...' Audio-Technica's AT-OC9XEB has a bonded elliptical stylus**

the Thorens MM-008 or Mobile Fidelity StudioPhono (both retail for £299) if needed, while staying under £1000.

Also worth considering if a bit less of that rosy-cheeked warmth is acceptable would be the Dynavector DV-10X5 [HFN Jul '09] at £549, while the Audio-Technica AT-OC9XEB at under £250 is a real honey.



**ABOVE: Roksan's Xerxes 20 Plus turntable [HFN Dec '11], pictured with Nima unipivot arm**

## Thinking inside the box

WHY A 24-BIT RECORDING ISN'T ALWAYS SUPERIOR TO A 16-BIT ONE

In his Opinion column in the August issue Jim Lesurf discussed the need, or otherwise, for increased digital bandwidth and suggested that 96kHz/16-bit should be a good standard. However, 16-bit resolution results in higher distortion and a lower dynamic range when compared to 24-bit. Therefore, in my view, 24-bit is of real benefit, especially for classical music.

*Denis Holliday, via email*

Jim Lesurf replies: It's a common misunderstanding to assume that 16-bit

always means more distortion than 24-bit. Dither, for example, is routinely employed to ensure that digital recordings can be made with low correlated distortion.

Similarly, a technique known as 'noise shaping' can be used to reduce noise in the audible region to well below the level of plain 16-bit recordings. In general this means that the audible noise level tends to be set by what was being recorded.

In short, although a specification of 24-bit may appear to be more impressive, a lot of what that contains is wasted bits of noise, bloating the file. The 24-bit box is often bigger than its contents [see p94]!

## JITTERBUG

USB Filter



### Can a £39 insect make all your CD files sound better than Hi-Res?

Yes and no: Using the same equipment and a quality DAC, a 24/96 file (for example) will always sound better than a CD 16/44.1 file ... but, even a single JitterBug will often allow a CD file to be more musical and more emotionally stimulating than a Hi-Res file without the benefit of a JitterBug.

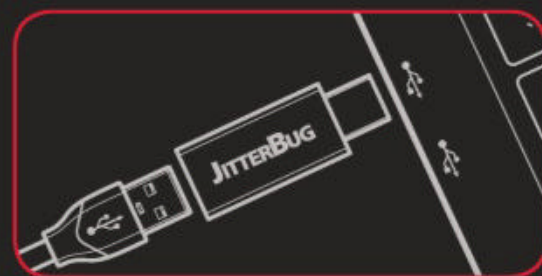
**Noise** is the problem. Real noise—the kind you can't hear directly. Most often, the word "noise" is used to describe tape hiss or a scratch on a record, but these sounds aren't noise; they are properly reproduced sounds that we wish weren't there.

**Problem noise** is essentially random, resonant or parasitic energy, which has no meaning. It can't be turned into discrete sounds, but it does compromise signal integrity and the performance of everything it touches.

**JitterBug's dual-function** line-conditioning circuitry greatly reduces the noise and ringing that plague both the data and power lines of USB ports, whether on a computer, streamer, home stereo or car audio front-panel USB input.

A single JitterBug is used in between devices (i.e., in series) as shown below. For an **additional "wow" experience**, try a second JitterBug into another USB port on the same device (such as a computer). Whether the second port is vacant, or is feeding a printer or charging a phone, JitterBug's noise-reduction ability is likely to surprise you. No, the printer won't be affected—only the audio!

While a JitterBug helps MP3s sound a lot more like music, high-sample-rate files have the most noise vulnerability. Try a JitterBug or two on all your equipment, but never more than two per USB bus. There is such a thing as too much of a good thing.



audioquest.





website: [www.jordanacoustics.co.uk](http://www.jordanacoustics.co.uk)

tel 01202 911 886 email [ask@jordanacoustics.co.uk](mailto:ask@jordanacoustics.co.uk)



Designed by acoustic engineers with over 30 years of experience, this cutting edge brand delivers incredible audio performance, technology and a fantastic user interface.



Premium-Performance Network Streamer

**HiFi Rose RS-150**  
**£3,899**



**0% FINANCE EXAMPLE\***  
Initial 20% deposit of **£779.80**, then  
**£173.29** per month for **18 months\***

In-store and  
available for  
demo.



High-Performance Network Streamer

**HiFi Rose RS-250**  
**£1,949**



**0% FINANCE EXAMPLE\***  
Initial 20% deposit of **£389.80**, then  
**£129.93** per month for **12 months\***



HiFi Network Media System (all-in-one)

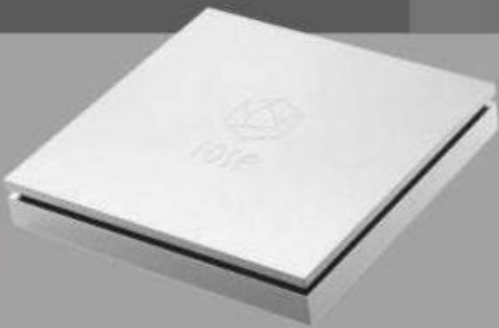
**HiFi Rose RS-201E**  
**£1,749**



**0% FINANCE EXAMPLE\***  
Initial 20% deposit of **£349.80**, then  
**£116.60** per month for **12 months\***

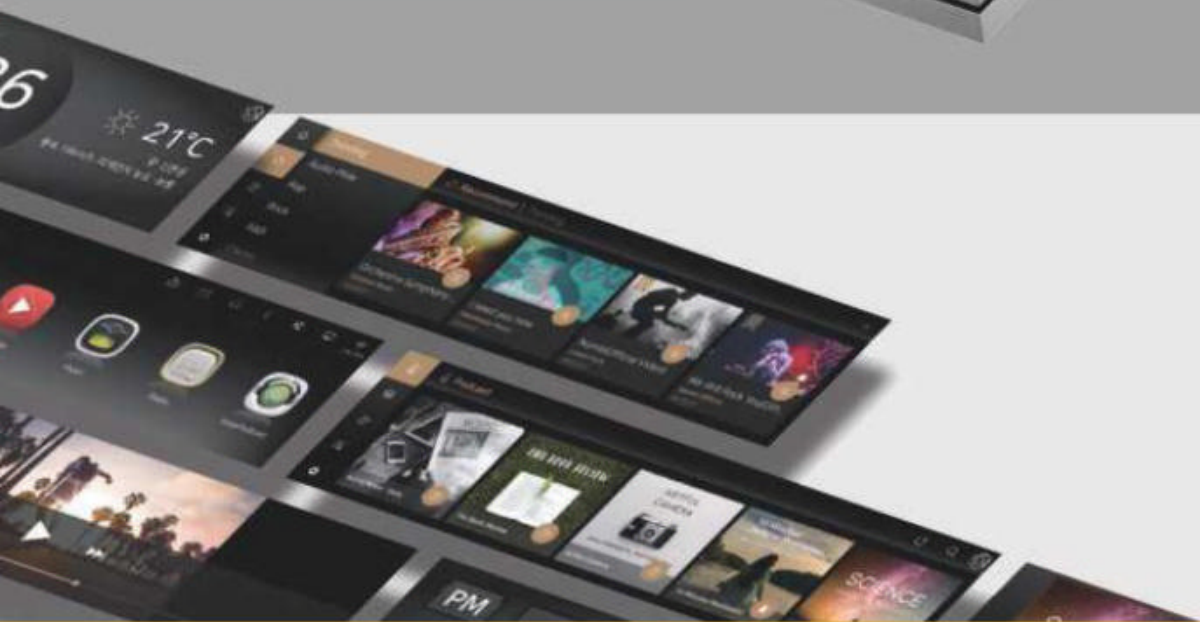
CD playback and ripping features

**HiFi Rose RSA780**  
**£349**

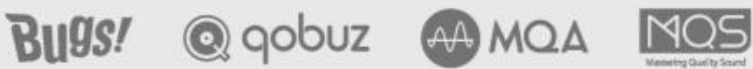


**The perfect companion to any  
HiFi Rose player**

The RSA780 CD Drive can not only be used for CD playback but also CD ripping, where users can connect to the ROSE OS application or any computer to conveniently import their favourite songs from CDs onto their HiFi Rose player with just one touch.



**The HiFi Rose streamers/systems  
support the following and more...**



**\*0% Finance examples above are subject to status & conditions**



## It's hi-fi – after a fashion

DO CHANGING TASTES AFFECT THE WAY WE RATE OUR AUDIO EQUIPMENT?

In the late '70s and early '80s, just about any Japanese turntable was believed to be inferior to a British one – apart from the now-legendary Pioneer PL-12D. The same applied to loudspeakers (the Yamaha NS-1000 comes to mind). Some of that, perhaps, was simply due to prejudice against equipment not made in the UK. But it was also down to fashion. The appearance and sound of a component had to conform, or else it was dismissed as at best quirky, at worst plain rubbish. But then, a few years later, this previously dismissed rubbish was re-evaluated (like ABBA or '70s prog rock) and was suddenly found to have been genius all along.

Fads and fashions come and go, so bling may be all the rage when it comes to how kit looks at one particular time, yet a year or two down the line more conservatively styled components may be hailed as wondrous. Even if they sound inferior. My point? We sometimes hear in our hi-fi what we're expecting to hear rather than what's actually present. Then, as fashion changes, our appreciation of our kit can change too, despite the fact that the equipment itself remains unaltered.

Maybe 'single-ended' will be a minor backwater in the amplification world in a few years' time, only of interest to a few select souls to whom



**ABOVE:** The NS-1000 was the first of Yamaha's beryllium-driver loudspeakers

almost nobody will listen to. And then, one day, the pendulum may swing back – or even swing off at some odd tangent – and more re-evaluations will be made. Such is progress...

*John Malcolm, via email*

Tim Jarman replies: While the Pioneer PL-12D was never more than a budget model, the next step up from a Garrard SP25, other Japanese turntables were taken seriously during the period you mention. The massive Trio L-07D, Sony TTS-8000 [HFN Sep '14] and the Technics SP-10 (to name but three) were highly respected, their principal downside being that of cost.

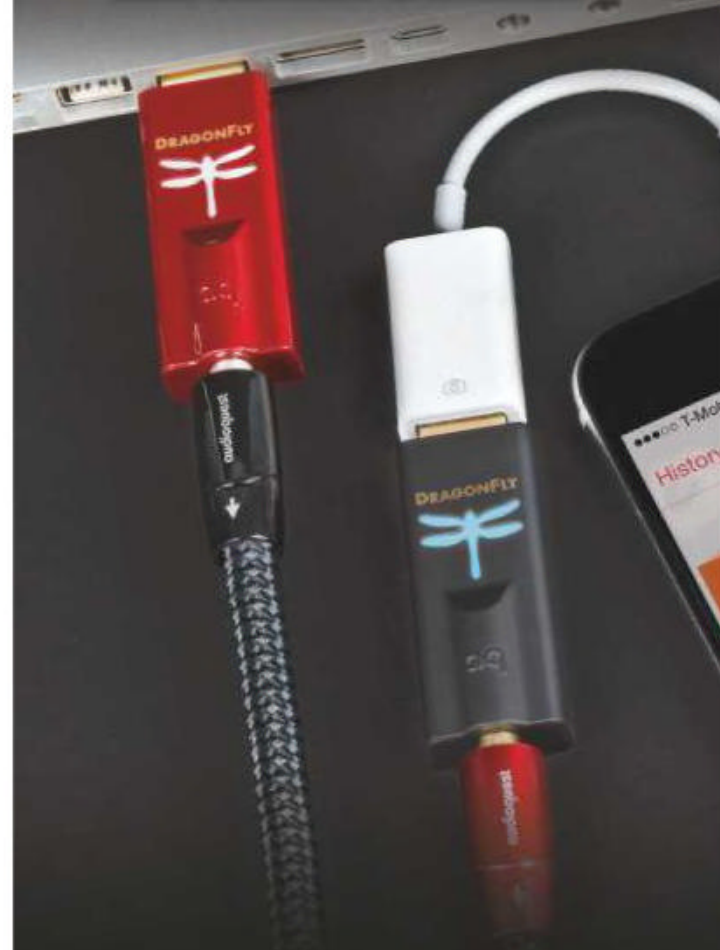
Speakers were a different matter, for other than the Yamaha NS-1000 [HFN Oct '18], full-size Japanese models were not available in the UK in any real quantity so few had the chance to see or hear them. Your central point is correct, though. Every dog has its day (even the PL-12D!).



**ABOVE:** The belt-driven Pioneer PL-12D was released in 1973, and while a budget deck it redefined the turntable market

**New DragonFlies!  
£89 Black & £169 Red**

**Powerful, Immersive  
Sound from Computers  
and Mobile Devices!**



Four years ago, AudioQuest shook the hi-fi world with our first DragonFly DAC-Preamplifier-Headphone Amp—the rare audio product that brought more compelling sound to *all* music lovers, playing high-res files to MP3s on perfectionist systems and modest laptops.

Now, the new DragonFly Black and DragonFly Red exceed their predecessor in every way, delivering more beautiful music, boasting software upgradability, and providing compatibility with **Android** and **Apple iOS** mobile devices.

While **Black** offers more clarity, depth and category-defining value than ever before, the take-no-prisoners **Red** provides even more finesse, resolution, torque and more than enough power to drive even the most demanding headphones.

The word is out: DigitalAudioReview.net's John Darko calls DragonFly Red and Black "the finest examples of everyman hifi to ever grace these pages. Their value quotients explode the dial!"

Let the joyful experience begin!

**audioquest**



# The best looking hi-fi ever?

BRITISH AMPS MEET DANISH DESIGN AS ONE READER HIGHLIGHTS HIS STYLE STARS

One of the sections in the magazine I particularly look forward to when my copy of *Hi-Fi News* arrives is the Vintage Review. Over the years it has featured a lot of the kit I lusted over as an impecunious teenager and the September issue was no exception, this time turning the spotlight on the B&O Beomaster 6000 4Channel receiver.

I have to confess that I've never listened to any B&O equipment at any great length (though my grandfather had a system in his retirement flat) but I always liked its clean, Scandi design. Back in my younger years, the received wisdom was that B&O was a genuine hi-fi brand but that you would pay 10% extra for the components' looks on top of the listening experience.

However, the real reason I am writing is to ask whether your vaults contain a review of the Lecson AC1/AP3 pre/power amplifier? I can still remember my jaw dropping when this pairing hit the hi-fi press. I've only ever seen one for real (in the reception at Meridian some 20 years ago) and if the company was ever to do a retro version, I'd order one without audition. To my eyes, it might be the best looking hi-fi ever.

As I write I am listening to probably my all-time favourite recording, which is Emerson Lake & Palmer's *Brain Salad Surgery*, at an unfeasibly high volume on headphones before dinner. I saw the band in the 1970s at the Empire Pool in London on the Welcome Back My



**ABOVE:** Cover of Lecson's 1976 brochure shows the AC1/AP1 pre/power duo while (right) the combo was the subject of an Audio Milestones feature in *HFN* Aug '11

Friends tour when I was aged 14. I've also seen Keith, Greg and Carl on solo tours within the last decade.

Still, my vote for one of my favourite bands ever has to go to Status Quo, whom I've seen four times since the 1970s. Music is what uplifts many – and, I expect, every fellow reader of *HFN*. My message to them is: turn it up (when your partner says it's OK to do so) – or invest in a really good pair of 'phones.

*Mike Locke, via email*

Paul Miller replies: Mike, you might be surprised to discover we launched our unique 'Vintage Review' series way back in



AUDIO MILESTONES

AC1/AP1 • PRE/POWER AMPLIFIER • LECSON • UK

## Lecson AC1/AP1

It's difficult to imagine now the sheer impact this pre/power duo had when released in 1973. Yet it was born into a world in which wooden-cheeked amps ruled and the Armstrong 521 had just won a Design Council Award. **Steve Harris** has the story...

**I**n the status-conscious early 1970s, if you wanted a trendy looking turntable, there was the Transcriptors (HFN May '11). If you wanted stunning speakers, you could get Gale 401s. But most amplifiers were ugly or just mundane. At least, they were until 1973, when the Lecson AC1 and AP1 burst upon the scene.

It was a landmark, the Lecson pre/power combination won a Design Council Award for its young creators, Allen Boothroyd and Bob Stuart. Later, of course, they would go on to found Meridian Audio, and win two more of those awards.

**FIRST PROJECT**  
The milestone here is that this was the first project that Allen and I did together," says Stuart, "and next year is our 40th anniversary of designing products together. That's a long time! We've worked together longer than most marriages."

While Bob Stuart was responsible for the innovative electronics in the original Lecson products, it was Allen who created the dramatically different look.  
"I did a mechanical engineering degree at Manchester, then a Masters' degree at the Royal College of Art in London," he explained in an HFN interview many years ago. "I finished there in 1970 and then I worked in a London design consultancy called Hulse Chadwick & Partners, who were a multi-disciplinary design group, principally architects, furniture design and some product design – in fact Hulse Chadwick, the boss of it, was a noted product designer of his day. We did all the Wilkinson Sword stuff. I left really because of impending negotiation, in that there were three children in the business, and decided that my last home lay elsewhere. I was asked by some friends in Cambridge to set up an industrial design unit at Cambridge Consultants."

Cambridge Consultants Ltd had been founded in 1960 by the late Tim Eastart, with fellow Cambridge graduate David Southward, to "put the problems of Cambridge University at the disposal of the British industry."

"Which I did. This had been designed by Gordon Edge at Cambridge Consultants, I did a piece of consultancy work, and that became the P50. Because the P40 had a couple of Achilles' heels, with a rather difficult preamp stage. The volume control was very strange. To cut a long story short, that's how I met David Southward."

**FRESH START**  
But Cambridge Consultants had been struggling financially and in January 1972 became part of a big American consultancy group, Cambridge Audio also came under new ownership and David Southward left.

"There was quite a scattering of Cambridge Consultants at that time, including Mo signal, who left to start Monitor Audio," Stuart recalls. Anyway, David Southward contacted me again and said he wanted to start a new audio company to make an amplifier, and was interested in doing the design. I said, well, yes, OK. And he brought in Allen Boothroyd as a consultant, because he said that we should do it with very good industrial design. That's how Lecson

**BELOW:** The AC1 was originally shipped with its sup-panel made from stages of glass and its case by double-sided tape. Later, a purpose acrylic top was used. The AP1 featured a foot-tall aluminium case with fins to dissipate heat.

**LEFT:** Allen Boothroyd and Bob Stuart. Next year the pair celebrate 40 years of designing products together.

to do electronic switching. The variable controls were actually sliders made by Perry & Giles – the volume, the treble and the bass – but all the other switching was electronic. We used magnets and reed switches. It was totally discrete. It came from that era of circuitry. It was a nice circuit, when there wasn't such a thing as a microprocessor!"

"The AP1 power amplifier was quite radical too, because it was a totally complementary discrete amplifier design. Which was not done then because it was so difficult to get NPN and PNP transistors that matched. It was quite a nice circuit, which we evolved over the years. We eventually abandoned it, but we did use something rather similar to start with at Meridian."

**ABOVE:** The first page of the AP1/AP2 instruction manual (above right) showing 'a typical stereo installation' using the amp.

**BELOW RIGHT:** Bob Stuart (second from left) looks on as Allen Boothroyd shakes hands with the Duke of Edinburgh after the pair receive a Design Council Award.

**BELOW:** 'A miracle of electronic engineering,' is how this 1976 ad for the Lecson pairing puts it. To the left is pictured the H1 speaker, launched along with the amps.

**RIGHT:** The AC1 preamplifier was obviously quite radical because of the way it looked. It was a visual idea. It was made possible because I'd worked out some techniques.

**MAGNETS AND REEDS**  
Breath-takingly different as it looked, the AC1 was a carefully thought-out and very comprehensive preamplifier. There were two MM phono inputs ('PI' for 'pickup' in 1970 terminology), 'MAG' for a tuner and two further 'ALX' line inputs, all selected by moving the far left slider. All signal-carrying sockets were DIN, and the manual gave painstaking instructions on how to avoid the usual matching, connection and grounding problems with these. Tape outputs were provided on the remaining pins of both the ALX input sockets. ALX 2 &



**ABOVE:** B&O's Beomaster 6000 4Channel receiver packed an SQ decoder for quadraphonic sound while its cosmetics would later see it displayed in the New York Museum of Modern Art



# My modern Marantz

HOW WILL THIS READER'S CURRENT AMP COMPARE WITH A '70S FAVOURITE?

Looking back through past issues of *Hi-Fi News* I was intrigued to note that Editor PM mentioned the Leak Stereo 30 Plus and Ayre AX-5 Twenty amplifiers in the same paragraph while reviewing the latter [*HFN* Sep '20]. I always wonder how modern and older amplifiers compare, which is one reason why I enjoy the Vintage Review section of the magazine, even though these are standalone tests.

Back in 1970, I bought a Sony TA-1010 amplifier, which was quite expensive compared with other 30W models around at the time. It was my first 'proper' amp and sounded good between my Connoisseur BD1 turntable and Goodmans Minister speakers. It was also very well built.

Move forward to April 2020 and my purchase of a Marantz PM6004 amplifier to drive my Stirling Broadcast speakers. So modern is this amp that it comes with a remote control handset – a first for me!

I was pondering how the little Sony amplifier, now long since sold, would perform with a pair of modern speakers when a TA-1010 became available. I took a chance and bought it, as it was in very good condition.

After wiring it up to my AR XA turntable and little Stirling Broadcast speakers, I sat back and listened to how it sounded. The TA-1010 was much better than expected. Yes, it was 'warmer' than the Marantz PM6004 and somewhat indistinct in the bass. The detail I was hearing wasn't up with the PM6004 either. But I noticed that it didn't take long for my ear to adjust to the overall



**ABOVE:** Contemporary Sony UK ad for the TA-1010 amplifier gives an RRP of £59.15.0

presentation. In short, while no match for my new modern Marantz amp, the Sony didn't disgrace itself either. All I need now is a pair of Goodmans Ministers loudspeakers...

*Martyn Miles, via email*

Tim Jarman replies: The limitations of the TA-1010 are its low power (2x15W) and the fact that speakers are AC-coupled to its output transistors via a pair of large capacitors. This latter detail explains the lack of bass precision you have noted. This is inevitable since the amplifier's output impedance increases significantly as the signal frequency falls.

The next generation of DC-coupled amps was just around the corner when the Sony TA-1010 was new. In fact the company's slightly more upmarket TA-1144 [*HFN* Feb '17] was already so-equipped, as was the then soon-to-be-announced miniature TA-88 [*HFN* Apr '12]. A well designed DC-coupled amp can compare more favourably with modern equipment, which in many cases will be built following similar principles.



**ABOVE:** The Marantz PM6004 amp (below) appeared in 2011

**EXTREME?**

**IT IS NOW!**

**audioquest.**



# If music be the food

SOTM Special Edition Bundle — save over £800!



power supply  
**sPS-500**

+

network player  
**sMS-200ultra NEo SE**

+

usb hub / regenerator  
**tX-USBultra SE**

BUNDLE RRP £3585 >>>> **BUNDLE OFFER PRICE: £2772**  
+ bonus gift worth £350! (call/email for details)



"Finally, but far from least, there's the ability to thunder with authority off just 25 quality watts..."  
**Srajan Ebaen | 6moons**

Audio Physic **Midex**  
loudspeakers **£8695**



Luxman **L-595 SE** (ltd edition)  
integrated amplifier **£11000**

ONLY 300 WORLDWIDE—we have 1 more !



JBL **4309 £1799**

JBL **4349 £6995**



Revel **F226BE**  
loudspeakers **£6995**

Call/email for our v. special mega-saving deal on these awesome 3-way dual 6" floorstanders. **SAVE £BIG !!**

ASK ABOUT OUR UNIQUE **RISK-FREE 30 DAY HOME TRIAL**

express UK wide delivery  
5★ customer service on **REVIEWS.io**





# of love, serve up!...



Aqua **LinQ** / Aqua **La Scala Mk2 Optologic**  
network interface / optologic dac **from £5160 / £6230**



Electrocompaniet **ECP 2 MKII**  
phono stage **£1999**



JBL **SA750**  
integrated amplifier **£2749**



HiFi Rose **RS150B**  
music system **£3899**

**eliteaudiouk.com | 0800 464 7274**

[info@eliteaudiouk.com](mailto:info@eliteaudiouk.com)

## CHECK OUT OUR EBAY STORE !

We have a HUGE selection of  
ex-demo, ex-review, nearly new  
and used high-end audio items  
—at MASSIVE discounts over rrp!

**\*ALL WITH OUR 12 MONTH WARRANTY\***

some examples (available as going to print):



AudioValve **ECLIPSE**  
pre-amp rrp £4450 eBay **£2299**



Anthem **MRX 1140**  
av receiver rrp £4199 eBay **£2999**



Michell **GYRO SE**  
turntable + tonearm + cartridge  
rrp £5145 eBay **£2699**

[ebay.co.uk/str/Elite-Audio-UK](https://ebay.co.uk/str/Elite-Audio-UK)



# Sony CDP-502ESII CD player

This machine marked a step-change in Sony's assault on the early CD player market as the company ditched its own DAC in favour of a third-party solution. How will it sound? Review: **Tim Jarman** Lab: **Paul Miller**

**T**he components in Sony's ES series represented what the company regarded as the most advanced designs available. They were top of the range, and aimed at those who were prepared to pay a little extra to obtain the best possible performance.

Launched in 1966 with the TA-1120 integrated amplifier and discontinued in the late 1990s, the ES series was always at the forefront of what Japan had to offer. It was inevitable, then, that Sony would introduce an ES CD player as soon as it was feasible. And when it came there were two models: the range-topping CDP-701ES and the slightly more affordable CDP-501ES.

## SINGLE PLAYER

Both were based on the major parts of the company's – and world's – first ever CD player from 1982, the CDP-101 [HFN Jan '12]. Yet while impressive to look at, neither convincingly improved on the capabilities of the original machine.

Part of the problem with the CDP-501ES was its reliance on a single channel, time-shared DAC and the lack of a digital filter. Compared to the sophisticated dual DAC and digitally filtered units being made by Philips and Marantz, Sony was way off the pace, although clever marketing managed to disguise this from many buyers. Things improved in the autumn of 1985 when Sony revamped its top-end



**ABOVE:** Buttons galore, but it all makes logical sense. The three illuminated 'Play Mode' keys are particularly well thought out and useful

players, dropping the CDP-701ES in favour of a two-box pairing – the CDP-552ES (a complete CD player but used as a transport here) and DAS-702ES DAC. This two-box combo caused quite a stir, but at £2000 its appeal was limited. Meanwhile the CDP-501ES was joined by the CDP-502ES which looked essentially the same as the '552 (and '502ESII to come), but was a far more important product. At just under £700 it was still expensive but not excessively so, and as a result it became a strong seller to keen listeners.

Slim and beautifully finished in silky black anodised alloy, the CDP-502ES certainly looked the part. It was solid and heavy, weighing in at 8.5kg, its rigid

steel chassis with plenty of copper plating contributing to this. Much work had been done to the functional parts of the player, with all traces of the CDP-101 design now gone. Intriguingly, a new type of laser pick-up was used, moved not by dawdling racks and gears but by a high-speed linear motor.

## DO THE SHUFFLE

This was a similar method to that used by Philips, but when deployed in a straight line (rather than an arc) and in conjunction with Sony's three-beam laser optics it resulted in a remarkably rapid access time to any point on the disc. Less than two seconds to play any track from any starting point was a typical figure. To complement this, the old tray mechanism with its noisy, grinding motors was supplanted by a new layout which was both fast and near silent. And these refinements made a new



**LEFT:** 'Unilinear Conversion' was a slightly ambiguous term applied across many different Sony CD players of this era. Note handy 'Timer Start' facility to the left of the headphone socket





option possible: shuffle play, which enabled the machine to select tracks on a disc in random order. This feature would soon become universal, but was seldom as well executed as it was on the Sony CDP-502ES.

Other special facilities included a direct-entry numerical keypad for track selection and the option of a variable-level line output, controlled by a motorised potentiometer on the player's front panel. Both of these features were also to be found on the remote control handset – itself an unusual feature for a CD player at the time.

The CDP-502ES had at its heart a 2x oversampling digital filter. At a stroke this relieved a problem associated with early players like the CDP-101 that required a steep 'brick wall' analogue filter to deal with aliasing distortions. The 2x sample rate allowed a far more 'relaxed' filter to be employed.

Although well received, the CDP-502ES was not as sophisticated in every area as it first appeared. The DAC was still time-shared, meaning that an

unavoidable phase error existed between the left and right channels. The digital filter effectively halved this effect, but at high frequencies it was still substantial.

### SERIOUS UPGRADES

In the year that followed its launch, the CDP-502ES looked even less competitive. This was because Philips introduced the CD

650 and Marantz unveiled the CD-65, both of which employed dual 16-bit DACs and 4x oversampling.

Sony's response was the CDP-502ESII we have here. Outwardly almost identical, this machine addressed the shortcomings of the original

version with some serious upgrades. Gone was the single Sony CX20152 DAC to be replaced by dual Burr-Brown PCM53s [see PM's Lab Report, p125]. This led to a redesign of all the supporting circuitry too, including the introduction of some novel techniques. One was the use of an internal optical link between the digital filter and

'Burr-Brown  
DACs replace  
the single  
Sony chip'

**ABOVE:** Generic styling but so well executed the machine remains attractive. The high-speed action of the disc tray complements the Sony CDP-502ESII's rapid track access time

DAC, allowing the use of split ground planes and power supplies to be optimised.

Despite this wholesale revision of the unit's DAC system the fascia legend 'Unilinear Converter System' remained. This moniker was used indiscriminately across the Sony range at the time and appears to have meant little. Once again the machine was highly acclaimed, both for its excellent ergonomics and fine audio performance.

To complete the system Sony offered its 444ES series of matching components. While all worthy products in their own right, none is as fondly remembered as the CD player, which found a home in mixed systems of all levels as well as Sony's own.

### ON THE BUTTONS

Looking at it today, it's hard not to love the CDP-502ESII. Sony knew better than anyone how to detail and finish its products to make them instantly

desirable and this player looks the absolute business. The layout of the fascia is superbly executed too. Yes there are no fewer than 45 knobs, switches and buttons populating what is a fairly small area on the front, but this is still a simple machine to use.

I especially like the illuminated 'play mode' keys which offer the ability to play the disc normally ('continue') or to just play a single track and then stop ('single') without the need to programme anything in. Today's touchscreen menus and generic remote control handsets with their tiny buttons are no substitute for doing it properly!

**LEFT:** Service manual, and the datasheet for the family of Burr-Brown DAC chips used in this model (right). The use of dual PCM53 DACs made the '502ESII a serious proposition







あなたと私たちは違う  
'You and I we're different.'



Beautiful high performance  
hi-fi components made in Japan.  
Shop now: [www.Oyaide.co.uk](http://www.Oyaide.co.uk)



**RIGHT:** An interior view of the player with lots of copper plating in evidence. Note the L/R channel DACs within its largely 'dual mono' analogue circuitry [lower left]

The high-speed track access system may have lost some of its capability to amaze over the years but it still remains technically impressive, especially if you are used to the leisurely gaps between pieces normally associated with 1980s players. It takes something of the calibre of the Technics SL-P1200 [HFN Aug '13] to beat it, which is high praise indeed.

I remain to be convinced about the usefulness of Shuffle Play though. I've never used it in any player I've owned and I don't know anyone else who does. However, I did find the Auto Delay function of benefit. This inserts a short gap between tracks which masks the sometimes unnaturally short intervals between selections that can occur when you program in your own sequence. It also makes it much easier for the music search systems in tape decks to work if you transcribe a CD (to which you own the copyright, of course) onto a cassette.

The variable output presents the option for direct connection to a power amplifier in a truly minimalist CD system in which you'd even get the luxury of remote control for the volume – no preamplifier required.

## TIM LISTENS

I found the CDP-502ESII to be a great improvement over any previous Sony CD player. Its strength is the way it is able to lock solo vocals at the centre of the soundstage and do so in a way that is full of vigour and verve. This is something the CDP-101, etc, could never really achieve. Tonally it tends towards dryness, especially when compared to a Philips/Marantz player

**BELOW:** The Sony CDP-502ES (left) which used a Sony DAC, and views of the CDP-502ESII from the catalogue emphasising the comprehensive remote and new linear motor-driven optical unit



of the same era. This leads to an enhanced sense of speed and drive, and while this means it isn't an especially relaxing player to listen to, when the music requires energy the CDP-502ESII really shines.

Belinda Carlisle's 'Lay Down Your Arms' from the album *Real* [Offside CDV 2725] enjoyed an extra degree of bite and edge that was clear to hear, the super quick delivery of the Sony CDP-502ESII never seeming to impede the natural flow of the recording. The integrity of the soundstage was also well up to standard on this track. The best balance is typically achieved when the player is used in a rich-sounding or slightly bass-heavy system, or where you can experiment with speaker positioning to boost the bottom end.

*'When the music needs energy this player shines'*

Calmer musical styles also revealed the CDP-502ESII to be a machine of real quality, Suzanne Vega's *Solitude Standing* [A&M CD395136-2] proving a real pleasure to listen to throughout. Being critical, I

did notice some fuzziness around lines in the unaccompanied vocal of 'Tom's Diner'. 'Ironbound' demonstrated a similar effect, although the instrumentation, the percussion in particular, was beautifully rendered –

explicit without being over bright.

## ALL CLEAR

In isolation one could convince oneself that the CDP-502ESII was the equal of any player, but compared with some period rivals the sound could be described as a little bland and two-dimensional. Even







Hi Fi World "Best Valve Amplifier" NEW Stereo 40 MK IV £2599

Bluetooth Option Available  
NEW HP205D DHT Headphone Amplifier £2999

New Upgraded Model. Now With Headphone Socket

High Definition With The Relaxing Sound Of WE Vintage Directly Heated Triodes



See our full range of  
Loudspeakers  
Amplifiers  
Pre-amplifiers  
Phono stages at:  
iconaudio.com



Stereo 300 MK II £4199

MB90 MK IIm Monoblock Power Amplifiers many features

Sublime Sound From Vintage 300B Triodes



Stereo 25 MKII from £1499



Stereo 30se £2599



PS1 MKII MM/MC £1649

Simplified ST40 30W UL, HQ Headphone Socket

Single Ended Pure Class A, 28W UL, 18W Triode

Our fantastic value pure valve phono stage. MC and MM



PS3 MKII MC/MM £2899



HP8 MKII £999



NEW ST 60 MK IV £3999

Pure Valve Phono Pre-amplification At Its Best!

Smooth non-fatiguing Triode Sound, Match 8-600 Ohms

Outstanding Performance 80w UL, 50w Triode

Buy direct from us or through one of carefully chosen dealers or distributors:

|   |  |   |  |
|---|--|---|--|
| <b>Audio Affair</b><br>Birmingham, B9 4AA<br>Tel: 0121 224 7351<br>Web: www.audioaffair.co.uk                     | <b>SMC Custom Installations</b><br>Shrewsbury SY1 3TJ<br>Tel: 01743 234945<br>Web: smccustominstalls.co.uk | <b>Shropshire Hi Fi</b><br>Westbury SY5 9QP<br>Tel: 01743 232317<br>Email: shropshirehifi1td@gmail.com                  | <b>Analogue Seduction</b><br>Whittlesey Peterborough<br>Tel: 01733 350878<br>Web: www.analogueseduction.net    |
| <b>Audio Gold</b><br>Crouch End, London<br>Tel: 0208 341 9007<br>Web: www.audiogold.co.uk                         | <b>Wilkinsons Hi Fi</b><br>Nelson, Lancashire<br>Tel: 01282 612901<br>Web: www.wilkinsons.tv               | <b>Canada: Audioarcan</b><br>Barrie, Ontario, Canada<br>Tel: +1 249 880 5040<br>Web: www.audioarcan.com                 | <b>Australia: Decibel Hi Fi</b><br>Coopers Plains QLD 4108<br>Tel: 0486 022 877<br>Web: www.decibelhifi.com.au |
| <b>Germany: TCG Handels GmbH</b><br>Nordhorn 45831, Germany<br>Tel: +49 (0) 5921 78849.27<br>Web: www.tcg-gmbh.de | <b>USA: Music Direct</b><br>Chicago IL 60660 USA<br>Tel: +1 800 449 8333<br>Web: www.musicdirect.com       | <b>Spain: Union Musical Casa Werner</b><br>Barcelona 08010, Spain<br>Tel: +34 933 021 792<br>Web: www.werner-musica.com | <b>WANTED!</b><br>HIGH QUALITY DEALERS<br>IN MOST<br>AREAS/COUNTRIES   |

Thinking of buying valve amplification?

You are welcome to contact us regarding compatibility or other questions. We are small & friendly and helpful!  
With many years experience of valves in Hi Fi

**B GRADE & EX-DEMO BARGAINS!**

Technically perfect Fully Guaranteed. Audition in our Leicester showroom. Most models available. See our website, email or ring for availability. Subject to availability\*. Prices vary.



## VINTAGE HI-FI



**ABOVE:** Two sets of single-ended outs were provided on RCAs – one fixed level, the other variable. Subcode out was a forerunner of the industry-standard digital output

though the soundstage it projects is both solid and uniform over the area it covers, I couldn't escape the sense that it was firmly bounded by the loudspeakers and could not be coaxed to extend beyond them.

This even applied to tracks seemingly mixed with the studio console's 'stereo wide' button pushed-in, as these also remained constricted. 'Woman In Chains' by Tears For Fears lacked its usual spacious ambience, both left to right and front to back. As if to compensate for this, the outstanding clarity of Oleta Adams' vocals, helped no doubt by a subtle presence lift, was something that I couldn't fail to admire.

This was clearly a well-designed and deliberately 'voiced' machine, but careful system matching is required to hear it at its best. Comparisons with the Technics SL-P1200 are unavoidable given the technical similarities of the two as both use 2x oversampling digital filters, dual Burr-Brown DACs (PCM53s in the Sony, PCM54s in the Technics) and linear motor-driven optical blocks. They sound remarkably similar too, but the '1200 has the edge in terms of dimensionality, as well as vocal smoothness and detail. These are academic arguments though, and I would be happy with either.

### BUYING SECONDHAND

If buying a CDP-502ES today – of either iteration – the main concern is the health of the laser, which is reasonably durable but difficult to obtain as a replacement part. As with the Philips players of this era, the optical unit came as a part of the complete transport assembly (type BU-1C). But unlike Philips this was only used in a small number of different models. Before condemning it though, it is wise

to check that the transport lock underneath isn't engaged, since this gives similar symptoms to a failed laser. Elsewhere in the mechanism, the beautifully engineered drawer mechanism can seize up with age but careful re-lubrication of this normally provides a cure.

As for the electronics, the Japanese habit of securing some of the components and wiring with adhesive can generate random and confusing faults when the material used ages and becomes conductive and/or corrosive. Removing all traces of this adhesive should be the first

course of action when dealing with a defective machine.

Finally, the design of the player's cabinet allows for generous ventilation around the DAC and analogue circuits but

the slots are rather large. The upshot is that these particular Sony models seem unusually prone to collecting dust, cat hair, tinsel, hair grips, jewellery fragments and various other small objects which play havoc with sensitive electronic circuits. Needless to say, it is vital to keep this area of the machine clean and free from contamination. ⚡

### HI-FI NEWS VERDICT

Desirable for many reasons, the CDP-502ESII was a step-ahead machine in many ways for Sony. Worth seeking out in preference to the original version, it is a superbly finished design that represents a point when Sony's CD players really came of age. By reputation it is durable too, so could be enjoyed in regular use. Just remember to match it with a system that's not shy on bass in order to hear it truly shine.

Sound Quality: 81%

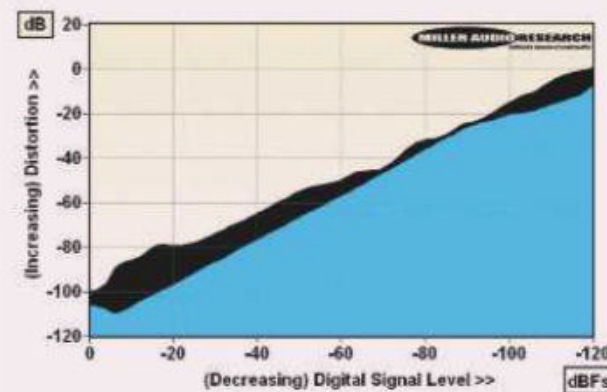


## LAB REPORT

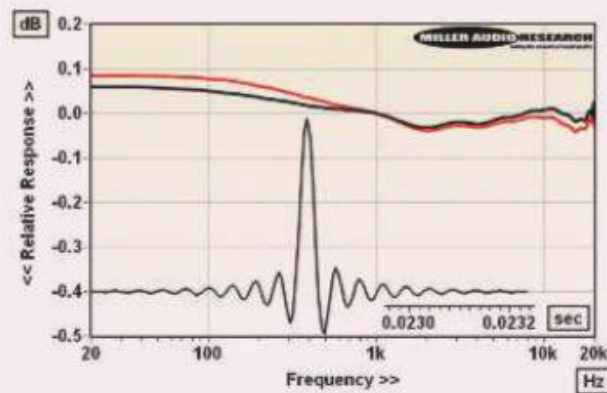
### SONY CDP-502ESII (Vintage)

In common with its CDP-552ESD model, and in contrast with the preceeding CDP-502ES which used Sony's CX20152 DAC, the mkII CDP-502ES from 1986 used neither Philips nor Sony DACs but a pair of monolithic PCM53JP-V converters from Burr-Brown. These 16-bit DACs were deployed with Sony's CX23034 2x oversampling filter to form what it described as its 'Unilinear Converter System'. The impulse response [inset, Graph 2] shows the pre- and post-ringing associated with this linear-phase 2x digital filter while the frequency response with its mild +0.06dB bass shelf and  $\pm 0.02$ dB HF ripple is still significantly flatter than that achieved by Sony's earlier-generation players that used the PCM53P DAC [HFN Feb '21]. Combined with Sony's 'GIC' analogue filter, the stopband rejection is a full 87dB while distortion at the peak (0dBfs) output of 2V is very low (especially for the era) at  $\sim 0.0004\%$  right across the 20Hz-20kHz audio range. There are disc players and outboard DACs that don't achieve that kind of figure at 20kHz some 35 years later!

The low-level linearity and trend of distortion vs. digital level offered by the PCM53JP DAC is also markedly improved over the PCM56P, although the fact that THD is generally lower at 20kHz than 1kHz (0.009% vs. 0.013% at  $-30$ dBfs) is as much a function of the analogue filtering pinching off digital harmonics above 25kHz or so [see Graph 1, below]. The player's linearity is good to  $\pm 0.5$ dB over the top 100dB of its dynamic range, and with a 101dB A-wtd S/N ratio this corresponds to a resolution of some 16.5 bits. Jitter, meanwhile, is moderate at 430psec and while free of PSU sidebands is almost entirely data-induced in nature. Subjectively this is not especially ideal but, back in 1986, it's not something we (or Sony) could measure. PM



**ABOVE:** Distortion versus 16-bit CD digital signal level over a 120dB range (1kHz, black; 20kHz, cyan)



**ABOVE:** Time domain (note pre/post-echoes) and frequency responses on expanded scale (0.1dB/div)

### HI-FI NEWS SPECIFICATIONS

|   |                       |
|---|-----------------------|
| Maximum output level / Impedance          | 1.98Vrms / 945-960ohm |
| A-wtd S/N ratio                           | 101.2dB               |
| Distortion (1kHz, 0dBfs/-30dBfs)          | 0.00045% / 0.009%     |
| Distortion & Noise (20kHz, 0dBfs/-30dBfs) | 0.00034% / 0.0013%    |
| Frequency response (20Hz-20kHz)           | +0.06 to -0.03dB      |
| Digital jitter                            | 430psec               |
| Resolution @ -90dB/-100dB                 | +0.2dB / +0.6dB       |
| Power consumption                         | 11W                   |
| Dimensions (WHD) / Weight                 | 430x85x335mm / 8.5kg  |



# Some like it hot

John Atkinson heats up his listening room with a Class A amp from Krell

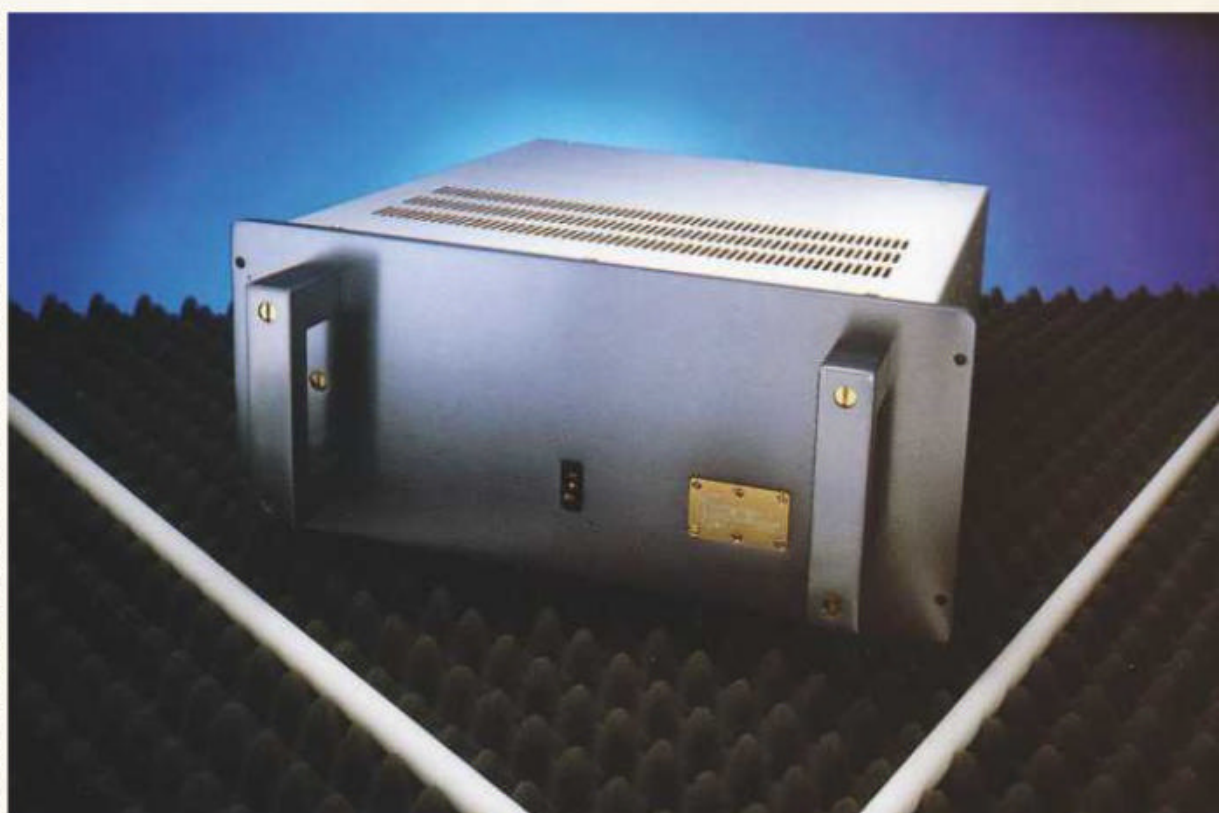
Hi-Fi  
News  
Aug 1983

Each month  
HFN will bring  
you an article  
from our vast  
archive of  
features and  
reviews from  
yesteryear

It used to be said that the only true way to learn was to find out something for yourself, then it will stick when all book-learning has long since been shed. This was drummed into me when I was working on the development of LEDs (green ones, to be precise).

Having grown a diode junction on a crystal slice of gallium phosphide, the simplest way to see if, indeed, it was a junction, was to put some volts across it to examine its characteristic. Unlike a resistor, current doesn't immediately flow through a diode junction when a voltage is applied. Instead, as the potential is slowly raised, for a while effectively nothing happens.

However, as the threshold voltage is reached, the diode starts to conduct and current increasingly flows until we have a normal linear relation between voltage and current. When I moved on to transistors, it came as no surprise that in exactly the same way, there



**ABOVE:** The Krell KSA-50 cost £1250 on release in 1983 and was the trickle-down alternative to the 100W/ch KSA-100

existed a threshold base-emitter voltage below which a transistor will not turn on. This voltage, around 0.1V for germanium and 0.6V for silicon types, is the 'cut-in' voltage.

## THE CLASS PROBLEM

What did come as a surprise was the fact that amp designers were quite happy to use the, then relatively new, transistors in such a manner that they were being turned on and off by the signal. This meant that they were taken through this gross nonlinearity in their transfer characteristic on every cycle.

I should take a short detour here in order to explain more fully. The output stage of a power amplifier in its simplest form

consists of a valve or transistor used as a voltage follower with a gain of one: the signal is amplified by a previous stage to the appropriate high voltage and the voltage follower delivers this high voltage to the load from a suitably low source (output) impedance.

The output stage therefore acts as a *current* amplifier and in order to handle the signal without distortion, the device must be operated in a

linear portion of its characteristic, *ie*, well above the cut-in voltage. The device therefore has to carry a standing bias current in order to place it in this linear region and conduct all of the time. This is termed Class A operation.

In practical power amplifiers, this output stage consists of two voltage follower transistors with the

load connected to the point between them. This is often termed push-pull operation as one device literally 'pulls' the load while the other 'pushes'.

However, rather

than have both pulling and pushing all of the time, it would seem to make sense to have one device just handle the positive halves of the waveform, and the other handle the negative halves, each being turned off completely when the other is conducting. With this approach, there is no need for a standing bias current and the devices only conduct current when a signal is being amplified.

**'Class A is only 50% efficient at its theoretical maximum'**





The advantage of this 'Class B' operation are obvious. A Class A circuit, because it conducts all of the time, even when there is no signal, is very inefficient, the wasted power being dissipated as heat, implying a power supply larger than would be dictated by the demands of the signal alone and requiring an effective method of dissipating the heat. Even when a signal is being handled, the theoretical maximum efficiency only approaches 50%. A Class B circuit, however, doesn't waste any power when there is no signal and can reach a maximum efficiency of 78.5% when handling a signal, meaning that the amplifier can be lighter (and cheaper).

## UP THE JUNCTION

But – and this is a very large 'but' – Class B operation is turning those devices off and on continuously; and in the case of transistors, swinging each of them through that non-linear region around and below their cut-in voltage. The result is that every time the signal crosses from positive to negative, distortion is introduced. This 'crossover' distortion consists of very high order harmonics and is very audible. It is also independent of level, so as the signal decreases, distortion increases as a percentage of that signal.

And there other factors not present with Class A. The first is thermal stability. The voltage or emitter follower output stage, as already described, is effectively a current amplifier. But the current gain of a transistor is dependent (in a non-linear manner) on junction temperature: if that fluctuates, the current amplification of the transistor will be modulated by the temperature change. In Class A, the transistor is in thermal equilibrium: effectively it carries the same current whether signal is present or not.

In Class B, however, because no current flows with zero signal, to some extent the current gain, governed by the thermal time-constant of the transistor, will be modulated by the signal. In the extreme case, this is the definition of thermal runaway, where current gain and junction

temperature pull each other up by their bootstraps until the transistor fails catastrophically. Below that level, it is yet another distortion to be looked after by the universal panacea of negative feedback.

As well as the current gain, the base-emitter cut-in voltage of the transistor is related to temperature. For changes in ambient temperature, this is normally compensated by keeping a diode in the bias circuit in close thermal contact with the power transistor. But for rapid Class B large-signal-related changes in junction temperature, such a diode will not be near enough to compensate in time and the result could be a shift in the operating conditions of the transistor, again with the possibility of signal related non-linearity.

With Class A operation, the relative thermal stability and the fact that the transistors are not operated near the cut-in voltage renders it immune to this kind of effect.

## CONSTANT STRESS

Finally there are the effects of the power supply. Probably to oversimplify, the output transistors can be regarded as variable switches between the power supply reservoir capacitors and the load, and if this is the case, changes in power supply conditions might be thought to have a major effect on sound quality.

With Class A operation, the power supply is under constant stress whether signal is present or not. As long as the maximum signal voltage swing remains below the troughs of the ripple, the power supply is regulated (but without the

isolation from the mains provided by a 'real' regulator, of course).

With Class B, the demand on the power supply is entirely signal-related. If the power supply is regulated, or at least of a low enough impedance across the audio band to minimise any such effects, then there should be no problems. But if the power supply is the first area to be compromised in the need to keep costs down, as it often appears – after all, why go to the expense of a transformer, capacitors, etc, capable of giving the current required at maximum signal voltage if only rarely will it be needed – signal-modulation of such factors as power supply impedance may well occur.

With a Class A design, where, as Geoffrey Horn once put it, 'the output [devices] dissipate more Watts when silence reigns than when the entire LSO lets fly with all they have', if the power supply is compromised, it just can't cope and hum and noise join in, not just with the LSO, but with the silences.

**BELOW:** Contents page from the Aug '83 issue (left) reveals the Krell KSA-50 was part of a wider look at Class A, which also included tests of the Marantz Ma-5 and Sm-10 amps. Period ad (right) lists the models in Krell's Class A range along with the PAM 1 preamp

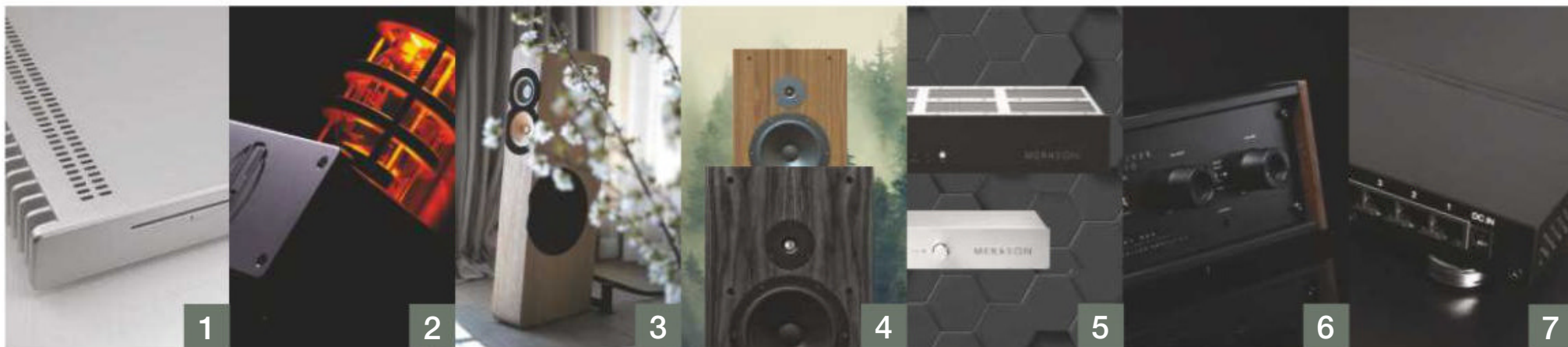
## KRELL KSA-50

In recent years there has been a resurgence of interest in Class A power amplifiers in the USA. In 1980, designer Dan d'Agostino, who had been involved with the Dayton Wright electrostatic loudspeakers, set up a company to manufacture a 100W stereo Class A amp with the emphasis on high quality, both of sound and of construction. In fact, Dan has a reputation for never using an inexpensive component if a better but more expensive one would serve. Despite this lack of commercial *realpolitik* – or perhaps because of it – the Krell amps sold and the range rapidly expanded to include 200W mono and 50W stereo power amps, both still Class A, and a dual mono preamp.

Absolute Sounds started to import the Krell power amps into the UK early this year and, being of a parsimonious nature, I asked if I could review the least expensive £1250, 50W KSA-50. It's large and heavy – 63lb – for a 50W amp, approximately six times the size of the Quad 405 and is immaculately finished in dark







## brands

1. 432 Evo
2. AGD
3. Boenicke Audio
4. Lu Kang Audio
5. Merason
6. Moonriver Audio
7. Silent Angel

For Brands that each retailer stocks and more information, please visit our website.

## retailers

**Art & Sound**  
www.artandsound.co.uk  
t. 0203 488 6261

**Absolute Abode**  
www.absolute-abode.im  
t. 240 408

**Audio Lounge**  
www.audiolounge.co.uk  
t. 0207 487 4080

**Audio Therapy**  
www.audiotherapyuk.com  
Tel: 07976 496218

**Audio-Philia**  
www.audio-philia.co.uk  
t. 0131 221 9753

**Audiocounsel**  
www.audiocounsel.co.uk  
t. 01457 875 555

**Audiologica**  
www.audiologica.co.uk  
t. 01403 336 339

**Brian and Trevors**  
www.brianandtrevors.com  
t. 0161 766 4837

**Kantata Audio**  
www.kantata-audio.co.uk  
t. 02892 607 882

**Kronos AV**  
www.kronosav.com  
t. 0343 5236 169

**Loud & Clear**  
www.loud-clear.co.uk  
t. 0131 516 7561

**Mike Manning Audio**  
www.mikemanningaudio.com  
t. 01935 479361

**Norvett Electronics UK (LLP)**  
www.norvett.com  
t. 01323 870 485

**O'Brien Hi-Fi Ltd**  
www.obrienhifi.com  
t. 020 8946 1528

**The Audio Room**  
www.theaudiroom.co.uk  
t. 01482 891 375

**The Little Audio Company**  
www.thelittleaudiocompany.co.uk  
t. 0121 638 0721

**The HiFi Gallery Ltd**  
www.thehifigallery.co.uk  
t. 01592 859 163

**VAL HiFi**  
www.valhifi.co.uk  
t. 0333 577 2005

## Whole Note Distribution

0203 9115 549 | info@wholenotedistribution.co.uk | www.wholenotedistribution.co.uk



# VICKERS HI-FI

*High Fidelity Specialists*

Since 1967



- ▶ Visit our Stylish New 7,500 sq ft. Store at... ▶ **Unit 8 Concorde Park,**  
Amy Johnson Way, Kettlestring Lane,  
**Clifton Moor, York**  
SatNav: YO30 4WT  
Tel: 01904 - 691600
- ▶ Free Customer Car Park ▶ Wheelchair Friendly
- ▶ Superb Air Conditioned Demonstration Rooms
- ▶ Loaded with Quality Hi-Fi Equipment at all price levels
- ▶ Awesome amplifiers, Gorgeous speakers, Classy furniture
- ▶ Independent Advice, Qualified Staff, Great Offers
- ▶ Easy Online Ordering from... [www.VickersHiFi.com](http://www.VickersHiFi.com)
- ✓ TRUSTPILOT ★★★★★ "Excellent"
- ▶ Open by Appointment 11am - 5pm 6 days: Mon. to Sat.

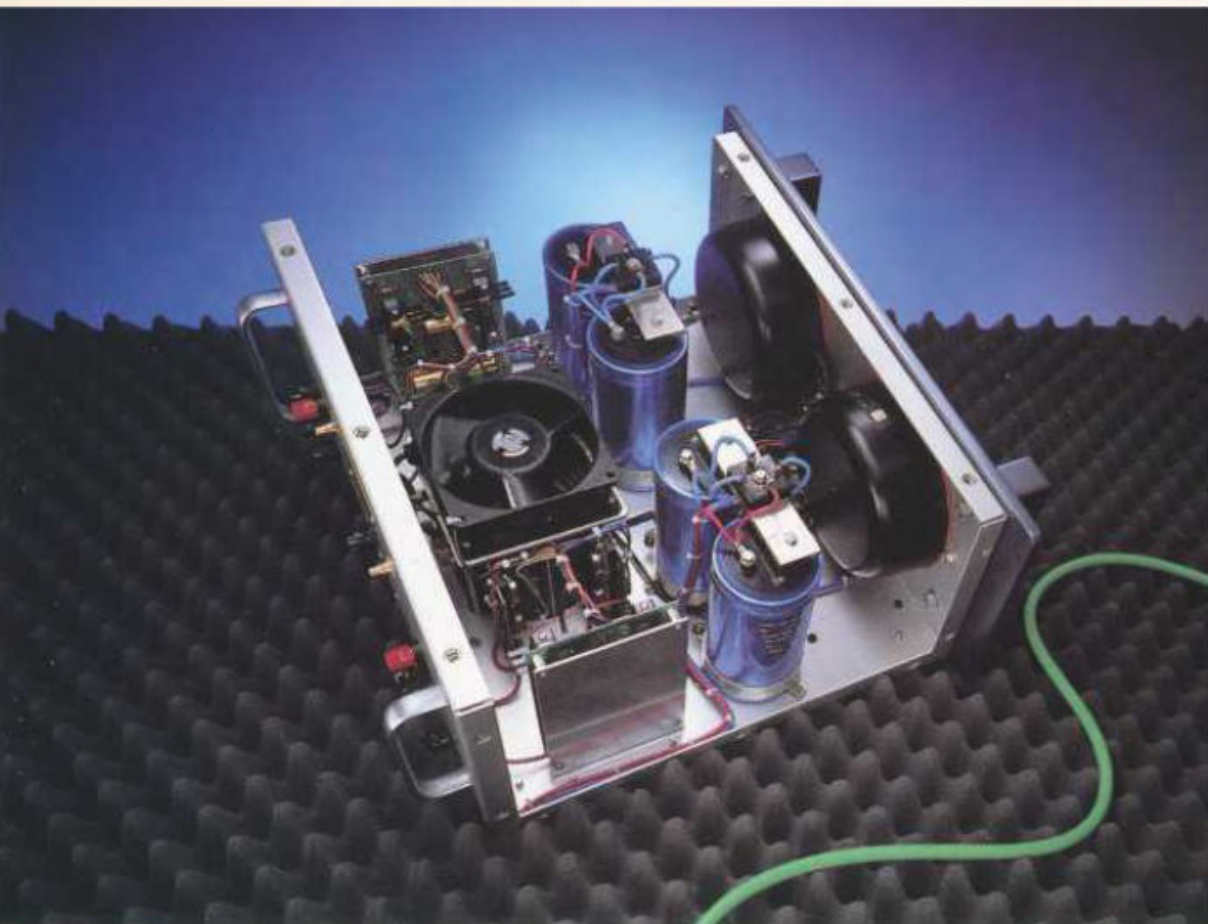
**0% FINANCE AVAILABLE**



audiolab ARCAM CYRUS DALLI marantz ROKSAN  
JBL AURALiC clearaudio MONITOR AUDIO PATHOS mark Levinson  
ProAc Pro-Ject UNISON RESEARCH QUAD MUSICAL FIDELITY REL ACOUSTICS LTD



## FROM THE VAULT



grey, with the gold-plated chassis screws made a styling feature. Signal input is via a pair of gold-plated phono and output via heavy-duty binding posts. And that about wraps up the amp's external features.

Internally, each channel is completely separate, from the transformers (the very latest version of the amplifier uses big Avel Lindberg toroids) through to the output terminals, the only common components being the contact-breaker-type mains switch on the front panel and the (almost) silent fan. At the core of each channel's power supply are a pair of 40,000µF computer-grade electrolytics, with the earth point between them formed by a plated solid-copper bus-bar bolted to the terminals, which also serves as a heatsink for the bridge rectifier.

### CLASS A ALL THE WAY

Behind the supply caps are the two fully complementary amp boards, with military-spec components being used throughout. Overall negative feedback is a low 15dB, and the four pairs of output devices, two in parallel for each channel, are mounted on a forced-air heatsink arrangement, the slow-running fan drawing air past the power supply and exhausting through the base.

*'As for the cannon, they were in the next village!'*

And that's it: apart from rail fuses for each channel, series speaker fuses, and thermal shutdown in case of overload, there is no active protection circuitry. There isn't even an output choke, commonly found in nearly all power amps to define the EHF bandwidth and thus prevent instability with highly capacitive loads, confident enough is Dan d'Agostino in the well-behaved nature of his amplifier.

In its literature Krell makes great play of the fact that, whereas nearly all

Class A amps actually degenerate to Class A/B before reaching their rated output, the Krell amps stay in Class A all the way. I measured the KSA-50 as having a standing current of around 1.8A, which means it will deliver 50W into an 8ohm load without turning off output devices.

The specification is not pretentious regarding distortion – better than 0.1% THD and 0.1% IMD – but is impressive regarding power output. The design intention was to make the KSA-50 as near a


**LEFT:** Remove the lid and the hefty toroidal transformers are revealed along with the four huge capacitors, two per side. To the rear can be seen the large fan which keeps this Class A amp cool

voltage source as possible, the 50W 8ohm output doubling to 100W into 4ohm, and redoubling to 200W into 2ohm. (Below 1ohm, fuses will start blowing.) Considering the paper presented to the Audio Engineering Society in March by Matti Ojala *et al*, showing that the dynamic impedance of real loudspeakers can be as little as 20% of a static 8ohm, this would be expected to have a beneficial subjective effect. So, what exactly *did* the Krell sound like?

### SOUND QUALITY

The basic system used with the Krell amp comprised either Celestion SL6 or Rogers LS7 speakers, on Celestion stands coupled to the floor through the carpet with ¾in wood screws, at one end and a Valhalla'd Linn Sondek/Ittok combination at the other. Pick-up was a Koetsu Black, and to bring the effective mass of the Ittok nearer to optimum for the Koetsu, I followed the advice of Kevin Maxfield (Jefferies Hi-Fi, Eastbourne) and super-glued an additional mass ring to the rear of the tonearm's counterweight.

My choice of preamp, meanwhile, was initially a Meridian 101B, but this was soon replaced by an Audio Research SP-7 as the Meridian was dominating the sound quality.

The character of the Krell sound fell into three readily identifiable areas. Most immediate was the tremendous dynamic range. If this was a 50W amp, then it seemed to have a good 6dB edge over nominal 100W Class B designs before the sound unacceptably hardened. At low levels, too, musical strands could still be readily identified. 

**BELOW:** Opening pages of the original review from *HFN* Aug '83 shows graphs for 'Non-linear turn on of forward-biased P-N junction' (left) and 'Crossover distortion' (right)





# WHAT IS AVAXHOME?



# AVAXHOME-

the biggest Internet portal,  
providing you various content:  
brand new books, trending movies,  
fresh magazines, hot games,  
recent software, latest music releases.

Unlimited satisfaction one low price

Cheap constant access to piping hot media

Protect your downloadings from Big brother

Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages

Brand new content

One site



# AVXLIVE : ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>



# The integrated amp + dac that streams anything you can throw at it...

Electrocompaniet **ECI 6DX MKII**  
integrated amplifier/dac/streamer



Electrocompaniet:  
Award-winning products to sweeten the sound of your music.



ELECTROCOMPANET  
If music really matters™



TRY IT OUT—WITH OUR RISK-FREE  
**30 DAY HOME TRIAL**

[eliteaudiouk.com](http://eliteaudiouk.com) | 0800 464 7274

# Audio Venue

bespoke audio visual consultants

## Serving Berkshire & London

Trade ins and interest free  
credit available

27 Bond Street, Ealing, London W5 5AS  
T 020 8567 8703 E [w5@audiovenue.com](mailto:w5@audiovenue.com)

36 Queen Street, Maidenhead, Berkshire SL6 1HZ  
T 01628 633 995 | E [info@audiovenue.com](mailto:info@audiovenue.com)

**audiovenue.com**

**BRANDS INCLUDE** Anthem, Arcam, Audeze, Audio Research, Audiophile Base, Audioquest, Auralic, Astell & Kern, Dagastino Inc, Bowers & Wilkins, Chord, Classe Audio, Control 4, Devialet, Esoteric, Focal, Hana, JL Audio, Kaleidescape, KEF, Koetsu, Krell, Luxman, Mark Levinson, Martin Logan, Michell Engineering, Musical Fidelity, Naim Audio, OPPO, PMC, Primaluna, Proac, Project, PS audio, Quadraspire, Questyle, Rotel, Ruark Audio, Sennheiser, SONOS, Sonus Faber, Spectral Furniture, Vertere Acoustics, Wilson Audio, Yamaha, and many more...

## Rothwell

Phonostage & step-up transformer specialists for over 30 years

The first phonostage from Rothwell was unveiled back in 1990. In those days even the concept of an outboard phonostage was unknown to most audiophiles, though of course it's commonplace now. There were very few, if any, on the market then, and the first Rothwell phonostage was well ahead of its time. It was a valve design with a separate and substantial power supply, and it had adjustable load resistance and capacitance – ideas which were adopted only years later by others. 30 years on, Rothwell phonostages are still different from the many me-too offerings. All the designs, from entry-level to the top-of-the-range, are totally discrete transistor circuits without any op-amps at all, and they're all still made in the UK. The Signature One even features onboard step-up transformers, which is pretty rare amongst even the most expensive phonostages in the world.



And step-up transformers for low output moving coil cartridges have been a speciality for over 30 years too.

When the world seemed to have turned its back on the transformer, we kept the faith. Now many vinyl aficionados believe that a good step-up transformer is the only way to get the best performance from a LOMC cartridge. If you don't agree, we even make a moving coil headamp (aka a pre-preamp) which can be battery or mains powered. You won't find many of those anywhere else in the world. We even offer step-up transformer for high output moving coil cartridges. You won't find many of those anywhere else either.

[www.rothwellaudioproducts.co.uk](http://www.rothwellaudioproducts.co.uk)

Thanks to Doug Brady HI-FI for their continuing support and for the use of their show room featured in this picture.



## TRUE PATH AUDIO

A new destination Hi-Fi shop  
with an outstanding range of  
highly regarded brands



Now Open

mark  
levinson  
by HARMAN

LUXMAN

avantgarde  
ACOUSTIC

aurender

Aavik

θ  
AUDIOVECTOR  
Handmade in Denmark since 1979

MARTIN LOGAN

LINN

Please visit our website for details  
**[www.truepathaudio.co.uk](http://www.truepathaudio.co.uk)**



## FROM THE VAULT

Tonally, the balance was light, almost ethereal, with a wide subjective bandwidth and excellent low frequency extension. Celestion SL6s are not speakers a bass guitar aficionado would automatically hook up, but when driven by the Krell amp, they did seem to go down an awful long way. In comparison with the Naim 250, which is its natural UK competition, the KSA-50 was described as having a more civilised and cooler sound, analogous to the difference between hot swing of the '40s and the cerebral bebop which replaced it. I can only agree.

The midrange was different to nearly all transistor amps I've used in being reminiscent of a valve design in its clarity. I have recently been trying a Van Alstine modified Dyna Stereo 70, and although the tube amp had poorly extended/controlled bass and rolled-off top when compared to the KSA-50, the Class A amp's sweet midband was very similar to that of the Stereo 70.

### WINDOW BOX

However, the most important characteristic of the KSA-50 was its stereo presentation. Lateral definition was, as expected from a dual-mono design, as sharp as the edge of a new scalpel blade, but complementing this was a delicacy of depth discrimination I had never before heard from box speakers. If the object of stereo is to open a window into another acoustic, then the Krell power amp allowed moving-coil speakers to open up the end of my listening room as though they were electrostatic designs.

The beginning of Andreas Vollenweider's electronic harp LP [American CBS FM37793] consists of naturally recorded woodland birdsong. With the Krell amp, I was *in* the wood, with a pheasant squawking some 20m ahead of me. The crapgame in the Decca *Porgy & Bess* sounded as though the dice were actually rolling across the floor of a large bare room adjoining mine, and at the end of Act One of the Colin Davis *Tosca* – my favourite despite the somewhat matronly Caballe in the title role – the wall behind the speakers disappeared.

Here the effect was to put me in the church almost

close enough to smell the wax on Scarpia's moustache as he twizzled the ends. And as for the cannon from the castle of Sant' Angelo, they were in the next village!

This layering of images even worked in mono. The 1932 Elgar violin concerto recording, with Menuhin and the composer conducting the LSO, was revealed as having more depth than the recent DG digital from Itzhak Perlman. And to play the sadly neglected Checkmates' version of 'Proud Mary' was to discover anew the way Phil Spector had captured, in *mono*, the atmosphere and acoustic of a large hall revivalist meeting.

### CONCLUSION

The KSA-50 is the best power amp I have tried in my system. Its clarity, depth and sheer neutrality, coupled with apparently effortless dynamics, got the best out of all the speakers with which it was used. But a power amplifier, no matter how good, does not make a system alone and the KSA-50 was simply too good at revealing inadequacies in the ancillary equipment to hand. Perhaps an Audio Research SP-10 preamp, at £3500, would do it justice, and Krell itself has a no-holds-barred preamp on the way.

But if you do have pockets deep enough to think about a £1250 power amp, then they will have to be deep enough to cope with the fact that the rest of your system may well have to be rethought. Yet if you're that discriminating... and the KSA-50 did warm up my listening room nicely in the early part of what passed for an English summer! ☺

**BELOW:** More pages from the original review show the mono Marantz Ma-5 amplifier (left), which offered switchable Class A operation. As John Atkinson revealed later, he bought the Krell KSA-50 review sample with money he'd been saving up to buy a car!



Also in *HFN* this month in 1983

**DISAPPEARING RECORD SHOP**  
Brian Whitehead on the state of classical record retailing.

**AN OPEN LETTER**  
Basil Lane looks at the gulf opening up between the needs of 'real' hi-fi and the commercial requirements of big business.

**CLASSICAL GLASS**  
Ken Kessler re-visits a classic name from the tube era, the M-O Valve Company.

**THE IMPORTANCE OF DITHER**  
'Dither' is one of the buzzwords of the moment, but is everyone sure of what it means? Martin Colloms looks at the retrieval of information below the apparent threshold of digital recorders.

**A JAPANESE ELECTROSTATIC**  
Ken Kessler auditions the Stax ELS-F81, a force/area drive speaker from a company known in the UK for its headphones.

**NINE TONEARMS**  
Martin Colloms looks at UK models from £60 to £400: the Alphason HR100S, Zeta, Helius Orion and Scorpio, Hadcock Sound Tracer, Syntex LEI and PU3, Mission 774SM and 774LC.

**NUGGETS**  
Alvin Gold on loudspeakers from Technics, Wharfedale and AR.



# AUDIO DESTINATION

## Where Music Matters

Moon | VPI | Norma | Kudos  
Entreq | REL | AudioQuest  
Totem | Auralic | Hegel  
and more....

01884 243584

info@audiodestination.co.uk  
www.audiodestination.co.uk



## hi-finews

THE HOME OF REAL HI-FI  
& Record Review

### EDITORIAL TEAM

Editor • Paul Miller  
Art Editor • John Rook  
Features Editor • Patrick Fraser  
Reviews Editor • Chris Breunig  
Test & Measurement • Paul Miller

### PHOTOGRAPHY

Andrew Sydenham

### MANAGEMENT TEAM

Group Editor • Paul Miller  
Group Art Editor • John Rook  
Subscriptions Manager • Beth Ashby  
Chief Executive • Owen Davies

### ADVERTISEMENT TEAM

Advertising Sales • Sonia Smart  
Tel • 020 4522 8220  
sonia.smart@hifinews.com

### SUBSCRIPTIONS

New, renewals and enquiries...

UK: Tel • 0344 243 9023

(Calls are charged at the same rate as standard UK landlines and are included as part of any inclusive or free minute allowances. There are no additional charges with this number)

USA/Canada: Tel • (001) 866 647 9191

Rest of World: Tel • +44(0)1604 828 748

Email: [help@hfn.secureorder.co.uk](mailto:help@hfn.secureorder.co.uk)

### WE LIVE AT...

AVTech Media Ltd,  
Suite 25, Eden House, Enterprise Way,  
Edenbridge, Kent TN8 6HF

UK and Overseas:

Tel • +44 (0) 1689 869 840

[www.hifinews.co.uk](http://www.hifinews.co.uk)



When you have finished with this magazine please recycle it.



HI-FI NEWS & RECORD REVIEW, ISSN 2042-0374, is published monthly with an additional issue in October by AVTech Media Ltd, a division of MYTIMEDIA Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent TN8 6HF, UK. The US annual subscription price is 70GBP (equivalent to approximately 100USD). Airfreight and mailing in the USA by agent named Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. US Postmaster: Send address changes to HI-FI NEWS & RECORD REVIEW, Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Subscription records are maintained at dsb.net, 3 Queensbridge, The Lakes, Northampton, NN4 7BF. Air Business Ltd is acting as our mailing agent.



## WANT TO ADVERTISE IN HI-FI NEWS?

Print\*Digital\*Online

Please contact:

**Sonia Smart**  
**020 4522 8220**  
[sonia.smart@hifinews.com](mailto:sonia.smart@hifinews.com)



**To help ensure accuracy, your classified advertisements must be submitted by email or post...**  
Please email your entries to: [letters@hifinews.com](mailto:letters@hifinews.com)

## 2. AMPLIFIERS

**TRICHORD** Research D400 monoblock pair. 400W per channel, Hypex Class D with massive linear power supply and discrete input stage. Serviced and upgraded by Trichord. Cost £3500 new, now £1750. Tel: 07796 021637. Email: [kevingalda@btinternet.com](mailto:kevingalda@btinternet.com)

**LINN** Classic amp, £395; Roksan Kandy 2 amp, £395; Rotel RA-971 amp, £85; AVI Neutron IV speakers, £295. May swap. Tel: 07792 55555

**MUSICAL** Fidelity B1 amplifier. Very good condition and still sounds great. Refurbished by the manufacturer. £150 ono plus postage. Tel: 07984 200904. Email: bellq8682@gmail.com

**ANK** EL34 integrated valve amplifier. Built by myself (ex Pye, EMI and Cossor) and features C-core output transformers, Mundorf silver/oil capacitors, choke-regulated PSU, many Audio Note parts, and four JJ 6CA7 output valves (spare new EL34s included). In as new condition. Collection from Woodford Green area. Happy to demo. £1500 ono. Tel: 07905 853744

**ICON** Audio MB845 Mk1  
monoblock amplifiers. Upgraded  
to SE version with new Mundorf  
capacitors. New 845 valves on one  
amp. Boxed. Great, powerful sound.  
Sensible offers. Tel: 07717 752288.  
Email: captain\_b99@yahoo.co.uk

### 3. CABLES

**CRYSTAL** Cables Dreamline Plus speaker cables, 2.5m with spade connectors. Mint condition, complete with original packaging and certificate of authenticity. This is a current model with a UK RRP of £17,600. Terrific build quality and performance, only selling to upgrade to a newer model. £5750 ovno. Email: [paullawrence824@yahoo.com](mailto:paullawrence824@yahoo.com). Tel: 07966 507873

## 4. CD/DVD PLAYERS

**MARANTZ** CD-94 CD player,  
£400. Tel: 07948 275212

**MARANTZ** SA-7S1 SACD player. Owned from new, complete with remote, manual, accessories, receipts and original packaging. In

absolutely mint condition with very low usage as a secondary player.  
£1250. Email: jbf175@gmail.com.  
Tel: 07971563212

## ELECTROCOMPANIST

EMP 3 multifORMAT optical-disc player (SACD/DVD-A/Blu-ray Audio/HDCD/Redbook CD) with remote control. HDMI, analogue RCA multichannel outputs (up to 7.1), balanced stereo outputs. Demo available on request. Buyer collects from Cambridge, UK. Offers from £749. Tel: 07967 978854. Email: [gordon\\_n\\_davies@yahoo.com](mailto:gordon_n_davies@yahoo.com)

**ESOTERIC** K-01X CD/SACD  
player, perfect condition, very little  
use, boxed with all accessories  
and manuals. Pictures and  
demonstration on request, £8250  
ovno. Email: [neilpage37@yahoo.com](mailto:neilpage37@yahoo.com).  
Tel: 07516 506639

**CYRUS** Stream Xa streamer/  
DAC. Owned from new with all  
original packaging. Just serviced and  
upgraded by Cyrus at their standard  
charge of £300. Excellent condition.  
£495. Email: [cliffdarnall@mac.com](mailto:cliffdarnall@mac.com).  
Tel: 07950 068162

**MARANTZ** CD17 KI Signature CD player. Black finish, captive mains lead, gold-coloured remote control handset. Lovely condition. Owned from new. Excellent sound. Happy to demonstrate player. Collection only, based in the Norwich area. £250 ovno. Tel: 01603 568423 or 07973 671915

## 5. DACS

**CAMBRIDGE** Audio 851D  
DAC in black. Has been upgraded  
by Trichord Research with Crystek  
Femto Clocks, superior op-amps and  
upgraded headphone stage. Beats  
stock unit hands down! £695.  
Email: [kevingldg@btinternet.com](mailto:kevingldg@btinternet.com).  
Tel: 07796 021637

## 7. SPEAKERS

**B&W** 683 S2 loudspeakers. Only six months old. £400 the pair.  
Tel: 020 8882 5703

**MAGNEPAN** 1.7i, off white, oak trim. Complete and boxed, comes with custom oak and chromed feet. Excellent condition. Info/pics available. Buyer must collect. £2000. Email: [taffmon@hotmail.com](mailto:taffmon@hotmail.com). Tel: 07810 825673

**REL** Stampede subwoofer, cherry veneer, vgc, all leads, £250.  
Tel: 07986 003422

## 8. TUNERS

**TECHNICS** ST-8080 FM/AM  
tuner. Black, good cosmetic  
condition for its age and sounds  
super. £75 ono. Tel: 07985 975546

**GOODMANS** 150 tuner/amp, 75W per channel. Teak case and black fascia. Getting on in years but a heavyweight performer. Make me an offer. Tel: 07710 453050

## 9. TURNTABLES

**TOWNSHEND** Rock turntable, Cello MC cartridge, Pink Triangle turntable, Audio Note AN-S6 transformer, M2 pre phono, Audio Note Neiro monoblocks, Snell III loudspeakers, interconnect and speaker cables, SME 3009. May split or swap. Greater London. Tel: 07944 909209

**THORENS** TD124 MkII turntable, chassis only, £800. Linn Basik LVX arm, £140. Tel: 07988 081094

**PINK** Triangle PT1 turntable in excellent condition. Pink lid, and with Linn/Rega and SME armboards. £450. Collection only. Mission 774SM tonearm (GB tools), very good condition. £450. The PT1 is collection only. Tel: 07305 871175

**SME** 10 turntable for sale. Excellent condition, and boxed. £1850. SME Series IV. Unused since being serviced by SME in May. Upgraded with new internal wire and FD-IV fluid damper (black). In absolutely 'as new' condition. Boxed and with all tools and instructions. FD-IV instructions also included. £3050. Tel: 07305 871175

## 11. SYSTEMS

**B&W** DM601 S2 speakers and Apollo stands, Onkyo CD C-7030, Aiwa cassette AD-F810, Sony tuner ST-S261, Rotel RC-850 preamp and two RB-850 power amps (bridge or bi-amp). All reasonable offers considered. Modest value, so carriage not economical. Buyer collects from Stockport, Cheshire. Tel: 0161 368 5549

## 12. MISCELLANEOUS

**SENNHEISER** HD 660S  
headphones. New condition.  
Unwanted gift. Delivery possible.  
£300. Tel: 01277 233183

**GRYPHON** Black ST spikes  
(set of four) complete with wooden  
box, perfect condition, £180. Email:  
markuffington@outlook.com.  
Tel: 07539 446070

**HFN/RR** back issues. Virtually complete set from 1976 to date, including Annual Reviews when they were published. A treasure trove of history and hi-fi information for more than 40 years. I'll sell them as a job lot for about £0.50 per copy. I now need the space so make me an offer please. Tel: 07710 453050

## 13. WANTED

**NET AUDIO** or Amplabs tape adapter board for Quad 33 amplifier.  
Tel: 01344 776445

**YAMAHA** CDX-5050 CD player  
or laser. Tel: 01531 631337

**SONUS FABER** Amati  
Anniversario Homage, Guarneri  
Memento, Amati Futura, Guarneri  
Evolution or Serafino Tradition  
in red. Speakers must be in mint  
condition. Tel: 01269 595271

## PLACING AN ADVERTISEMENT IN THE HI-FI NEWS CLASSIFIEDS SECTION

**Fill in your advertisement copy here...**

Please write the product category number that best suits your equipment in the first square. The product categories are: 1 – Accessories; 2 – Amps; 3 – Cables; 4 – CD/DVD players; 5 – DACs; 6 – Software (CDs, records etc.); 7 – Speakers; 8 – Tuners; 9 – Turntables; 11 – Complete Systems; 12 – Miscellaneous; 13 – Wanted

We will insert the telephone number you want to appear in your advertisement(s) as many times as is needed. You only need to fill it in once and it only counts as one word – even if you run multiple adverts.

|  |  |  |                            |  |  |  |
|--|--|--|----------------------------|--|--|--|
|  |  |  |                            |  |  |  |
|  |  |  |                            |  |  |  |
|  |  |  |                            |  |  |  |
|  |  |  |                            |  |  |  |
|  |  |  |                            |  |  |  |
|  |  |  |                            |  |  |  |
|  |  |  |                            |  |  |  |
|  |  |  |                            |  |  |  |
|  |  |  | Tel (to appear in advert): |  |  |  |

Please post this completed coupon to Hi-Fi News magazine, MyTimeMedia Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, TN8 6HF, or email your advert to [letters@hifinews.com](mailto:letters@hifinews.com)  
Hi-Fi News accepts no responsibility for description or condition of items advertised.



# Great savings

when you subscribe to *Hi-Fi News* today

NOVEMBER 2021 WWW.HIFINEWS.CO.UK

# hi-fi news

THE HOME OF REAL HI-FI

**65 YEARS**  
of Product  
Reviews &  
Features

**& Record Review**  
World exclusive

## BLACK & WHITE

**B&W's 801 D4 flagship is a clear-cut winner!**

**Jadis Diapason Luxe**  
Glittering Gallic tube amp

**Cambridge Evo 150**  
All-in-one streaming solution

**Roksan Attessa**  
New deck with a twist

**Sony CDP-502ESII**  
Classic CD spinner celebrated

**Plus...**  
Exposure, Chord,  
MartinLogan &  
SoundSmith

**INVESTIGATION**  
**All that jazz**  
Our foundation guide  
to building a jazz library

**VINYL RELEASE** Metallica's '91 *The Black Album* on 180g LP

**CLASSICAL COMPANION** Riccardo Muti, Conductor • **STUDIO TOURS** SARM Music Village, London

**FROM THE VAULT** Krell KSA-50 Class A power amp • **READERS' CLASSIFIEDS** Hi-Fi bargains galore

UK £5.50 Aus \$13.99

9 771472 256264



**IN EVERY ISSUE** Exclusive high-end equipment reviews, vinyl, CD and hi-res downloads rated, show reports, your letters, in-depth investigations, vintage tests and so much more...

**SUBSCRIBE TODAY**

**SUBSCRIBE SECURELY ONLINE**



<http://hfn.secureorder.co.uk/HIFI/HFN2021>

**DIGITAL ONLY  
SUBSCRIPTIONS  
AVAILABLE  
ONLINE...**

TERMS & CONDITIONS: Offer ends 31st December 2021. \*This digital discount is only available when you subscribe to the print + digital package. You can still get a great discount on the digital package, please visit the URL stated above for more information. Please see [www.hifinews.co.uk/terms](http://www.hifinews.co.uk/terms) for full terms & conditions.



Save 34%

PRINT +  
DIGITAL  
SUBSCRIPTION  
£54.05



## PRINT + DIGITAL SUBSCRIPTION

13 Issues *delivered to your door*

*Great savings* on the shop price

*Download* each new issue to your device

A *75% discount* on your Digital subscription

Access your subscription on *multiple devices*

Access to the *Online Archive* dating back to January 2008

Save 34%

PRINT  
SUBSCRIPTION  
£45.75



## PRINT SUBSCRIPTION

13 Issues *delivered to your door*

*Great savings* on the shop price

Never miss an issue

## hi-finews SUBSCRIPTION ORDER FORM

### DIRECT DEBIT SUBSCRIPTIONS *UK ONLY*

**Yes, I would like to subscribe to *Hi-Fi News***

☐ *Print + Digital*: £54.05 annually (Save 34%)

☐ *Print Subscription*: £45.75 annually (Save 34%)

### YOUR DETAILS *MUST BE COMPLETED*

Mr/Mrs/Miss/Ms..... Initial..... Surname.....

Address .....

Postcode ..... Country .....

Tel ..... Mobile.....

Email ..... D.O.B .....

### I WOULD LIKE TO SEND A GIFT TO:

Mr/Mrs/Miss/Ms..... Initial..... Surname.....

Address .....

Postcode ..... Country .....

### INSTRUCTIONS TO YOUR BANK/BUILDING SOCIETY

Originator's reference 422562



Name of bank.....

Address of bank.....

..... Postcode .....

Account holder.....

Signature..... Date .....

Sort code ..... Account number .....

**Instructions to your bank or building society:** Please pay MyTimeMedia Ltd. Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with MyTimeMedia Ltd and if so, details will be passed electronically to my bank/building society.

Reference Number (official use only) .....

**Please note that banks and building societies may not accept Direct Debit instructions from some types of account.**

## CARD PAYMENTS & OVERSEAS

**Yes, I would like to subscribe to *Hi-Fi News*, for 1 year (13 issues) with a one-off payment**

#### UK ONLY:

☐ *Print + Digital*: £56.05 (Save 31%)

☐ *Print*: £47.75 (Save 31%)

#### EUROPE & ROW:

☐ *EU Print + Digital*: £77.29

☐ *EU Print*: £68.99

☐ *ROW Print + Digital*: £88.29

☐ *ROW Print*: £79.99

*Inclusive of £2 card surcharge*

### PAYMENT DETAILS

☐ Postal Order/Cheque ☐ Visa/MasterCard ☐ Maestro

Please make cheques payable to MyTimeMedia Ltd and write code HFN2021 on the back

Cardholder's name.....

Card no: ..... (Maestro)

Valid from..... Expiry date..... Maestro issue no.....

Signature..... Date.....

**TERMS & CONDITIONS:** Offer ends 31/12/2021. AV Tech Media collects your data so that we can fulfil your subscription. We may also, from time to time, send you details of AV Tech Media offers, events and competitions but you always have a choice and can opt out by emailing us at [unsubscribe@hifinews.com](mailto:unsubscribe@hifinews.com). Please select here if you are happy to receive such offers by Email ☐ Post ☐ Phone ☐. We do not share or sell your data with/to third parties. Details you share with us will be managed as outlined in our Privacy Policy here <http://www.mytimemedia.co.uk/privacy-policy>.

CALL OUR ORDER LINE

Quote ref: HFN2021

0344 243 9023

Lines open Mon - Fri - 8.00am - 8.00pm GMT & Sat - 9.30am - 3.30pm GMT

Calls are charged at the same rate as standard UK landlines and are included as part of any inclusive or free minutes allowances. There are no additional charges with this number. Overseas calls will cost more.

**POST THIS FORM TO: HI-FI NEWS SUBSCRIPTIONS, MY TIME MEDIA LTD, 3 QUEENSBRIDGE, THE LAKES, NORTHAMPTON, NN4 7BF**

Please visit [www.hifinews.co.uk/terms](http://www.hifinews.co.uk/terms) for full terms & conditions

HFN2021



# hi-fi news Dealer Directory

**Radlett Audio**  
Sensible hi-fi since 1973

- Rega
- Harbeth
- Croft
- Hegel
- Luxman
- Michell
- EAR



Saffron Walden [www.radlettaudio.co.uk](http://www.radlettaudio.co.uk)  
01799 599080 [radlettaudio@hotmail.co.uk](mailto:radlettaudio@hotmail.co.uk)

**IAN HARRISON HI FI**

**HEADPHONES:**  
**SENNHEISER, BEYER, ERGO, GRADO, PSB, AUDIOQUEST, AUDEZE, ULTRASONIC, FOCAL**

**HEADPHONE AMPLIFIERS:**  
**CREEK, FIDELITY AUDIO, GRAHAM SLEE, ICON AUDIO, LEHMANN, PROJECT, SUGDEN**

**PLEASE PHONE OR EMAIL ENQUIRIES TO:**  
[ian.harrison@mercian.myzen.co.uk](mailto:ian.harrison@mercian.myzen.co.uk)  
**TEL: 01283 702875**

Stockists of:  
• Arcam • B&W • Focal  
• Linn • Naim • PMC  
• Rega • Rotel and MORE

**Infidelity**  
INDECENTLY GOOD HI-FI

9 High Street, Hampton Wick,  
Kingston upon Thames,  
Surrey KT1 4DA

Tel: 020 8943 3530  
Open: Tues - Sat 10am - 6pm  
[www.infidelity.co.uk](http://www.infidelity.co.uk)

CEDIA CUSTOM ELECTRONIC DESIGN & INSTALLATION ASSOCIATION

**hifi lounge**  
here to listen...

Visit us in the Beautiful  
Bedfordshire Countryside  
for all your Hi-Fi needs



[www.hifilounge.co.uk](http://www.hifilounge.co.uk)  
**01767 448121**  
[www.highendheadphones.co.uk](http://www.highendheadphones.co.uk)



UK's only dedicated  
demo facility for  
high-end  
headphones

**highend headphones**  
COMING TO THE MUSIC...

new location, better facilities,  
same people.  
hey, two out of three isn't  
bad!

arcam | chord | focal | innuos | kudos | linn | levinson  
| melco | naim | pmc | rega | russell k | + + +

**signals**  
hi-fi for grown-ups

01394 672464 / 672465  
[www.signals.uk.com](http://www.signals.uk.com)

**IAN HARRISON HI FI**

|                  |      |                |      |
|------------------|------|----------------|------|
| <b>HARBETH</b>   |      | <b>MICHELL</b> |      |
| MONITOR 40.2     | £POA | ORBE           | £POA |
| SUPER HL5PLUS    | £POA | ORBE SE        | £POA |
| MONITOR 30.1     | £POA | GYRO           | £POA |
| HLC7ES-3         | £POA | GYRO SE        | £POA |
| P3ESR            | £POA | TECNODEC       | £POA |
| 40th ANNIVERSARY | £POA | TECNOARM       | £POA |
| MODELS           |      | ACCESSORIES    | £POA |

**FREE UK DELIVERY!!**

[ian.harrison@mercian.myzen.co.uk](mailto:ian.harrison@mercian.myzen.co.uk)  
**TEL: 01283 702875**

**TRANSPARENT TRANSCRIPTIONS**



PROFESSIONAL LP TO HD  
DIGITAL TRANSCRIPTIONS

FULL DETAILS & EXAMPLES: 01582 450896  
[owen.clingan@btinternet.com](mailto:owen.clingan@btinternet.com)

**The Audiophiles Clinic**  
SOUNDING GOOD

REEL TO REEL EXPERTS  
ANY • BRAND • MODEL • AGE

[www.audiophilesclinic.co.uk](http://www.audiophilesclinic.co.uk)  
& VINTAGE AUDIO SPECIALISTS  
[petronel@audiophilesclinic.co.uk](mailto:petronel@audiophilesclinic.co.uk)

**TO ADVERTISE  
HERE  
PLEASE CALL**

**Sonia Smart**  
**020 4522 8220**



For over 15 years, Audiography has created hundreds of adverts  
for Hi-Fi Manufacturers, Distributors and Dealers all over the world.  
**Why not get in touch to see how Audiography can help you.**

**audiography**

Advert/Brochure/Web Design, Product Photography, Social Media and more

[www.audiography.co.uk](http://www.audiography.co.uk) | 07590 900 320



To advertise in this section  
please call Sonia Smart on 020 4522 8220

## Is this your problem?



loud



too loud



way too loud

It's a common problem. The usable range of the volume control is all down at the bottom end and fine control at low listening levels is either difficult or impossible. The noise floor may be audible, too. There is a simple and effective solution – the **Rothwell In-Line Attenuators**. They can be used with pre/power or integrated amps to cure the problem of excess gain and bring sonic benefits with even the most expensive equipment.

01204 366133

[www.rothwellaudioproducts.co.uk](http://www.rothwellaudioproducts.co.uk)

## Here's your answer



"this accessory is heartily recommended"  
*Gramophone*

£39/pair

020 7226 5500

[www.grahams.co.uk](http://www.grahams.co.uk)



"One of the five best hi-fi shops in the world"

ARENA Magazine

**Grahams Hi-Fi**  
Canonbury Yard  
190a New North Road  
London N1 7BS

## IAN HARRISON HIFI SALE! UP TO 40% OFF!

TEL: 01283 702875 [ian.harrison@mercian.myzen.co.uk](mailto:ian.harrison@mercian.myzen.co.uk)

ACAPELLA  
ACOUSTIC SIGNATURE  
ACOUSTIC SOLID  
AIR TIGHT  
ALPHASON  
AMG  
ANTHEM  
ATACAMA  
BENCHMARK  
BENZ MICRO  
BEYER  
BLACK RHODIUM  
BLUESOUND  
CABASSE  
CARTRIDGE MAN  
CREEK  
CUSTOM DESIGN  
DECCA LONDON  
EAR YOSHINO  
EMT  
EPOS  
ERGO  
FOCAL  
FIDELITY AUDIO  
GOLDRING  
GRADO  
GRAHAM  
GRAHAM SLEE

HANA  
HARBETH  
HELIUS  
HIFI RACKS  
ICON AUDIO  
IKEDA  
INSPIRE  
IXOS  
KUBALA-SOSNA  
LEHMANN  
LUXMAN  
MICHELL  
MOERCH  
MOTH  
MUNARI  
MUSIC HALL  
MUSIC TOOLS  
MY SONIC LAB  
NAGAOKA  
NORSTONE  
OPERA AUDIO  
ORIGINE LIVE  
ORTOFON  
PARASOUND  
PEERLESS  
PRO-JECT  
PSB  
PURE SOUND

Q ACOUSTICS  
QED  
QUAD  
QUADRASPHIRE  
REED  
ROKSAN  
ROTHWELL  
SENNHEISER  
SOUNDSMITH  
SOUNDSTYLE  
SRM TECH  
SUGDEN  
SUMIKO  
SUPRA  
T+A  
TAYLOR ACOUSTICS  
THORENS  
TOM EVANS  
TRACK AUDIO  
TRICHORD  
VALVET  
VAN DEN HUL  
WHEST AUDIO  
WIREWORLD  
ZENSAI  
ZYX

### SPECIAL OFFERS!!

|                             |      |
|-----------------------------|------|
| VAN DEN HUL MC10 SPECIAL    | £725 |
| ORTOFON                     | £POA |
| ORTOFON QUINTET RED         | £210 |
| MICHEL ORBE                 | £POA |
| MICHEL ORBE SE              | £POA |
| WHEST AUDIO TWO.2           | £POA |
| WHEST AUDIO THREE SIGNATURE | £POA |
| WHEST PS40RDT               | £POA |
| EAR/YOSHINO                 | £POA |
| BLACK RHODIUM               | £POA |
| PRO-JECT                    | £POA |
| PROJECT PHONO BOX DS        | £150 |
| GOLDRING                    | £POA |
| BEYER                       | £POA |
| LEHMANN AUDIO               | £POA |
| SENNHEISER                  | £POA |

PLEASE PHONE TO CONFIRM PRICE & AVAILABILITY PRIOR TO ORDERING.  
ALL GOODS ARE BRAND NEW & BOXED WITH FULL U.K. GUARANTEES.  
NO EX-DEM OR EX-DISPLAY GOODS. NO GREY IMPORTS. GOODS ARE NOT  
SUPPLIED ON APPROVAL. SORRY NO GENERAL CATALOGUES  
PLEASE PHONE OR WRITE FOR SPECIFIC REVIEWS, BROCHURES OR PRICES.  
\* CALL FOR DETAILS ESTABLISHED 1986

MAIL ORDER ONLY FROM: IAN HARRISON, 7 MILL HILL, REPTON, DERBY, DE65 6GQ  
TEL: 01283 702875 9am-9pm INCLUDING SUNDAYS

# Ailsa

DESIGNED &  
HANDMADE  
IN SCOTLAND



Our high-precision Achromatic RCA and Z plugs are designed to have minimal impact on the signal – with virtually nothing added, nothing taken away – resulting in improved sound quality.

Now standard on Element, Equator, Hyper & our new Ailsa cables.

Ailsa  
Achromatic  
RCA

### ACHROMATIC

LOW - MASS  
NON-MAGNETIC  
COLD - WELD  
CONNECTOR

**ATLAS**  
the performance connection  
[atlas cables.com](http://atlas cables.com)



## LAST WORD

# OFF THE LEASH!

KEN KESSLER TELLS IT LIKE IT IS...

**Ken Kessler**, swapping out accessories for vinyl replay, turns his gaze towards turntable mats



Further to my October column about hi-fi housekeeping I found another budget LP weight. This clocks in at 290g and sells for a comical £8.94, including postage and VAT. Aah, the wonders of Amazon! No, I've never heard of Garsentx, but its alloy record weight proved an even better addition to the EAT B-Sharp turntable [*HFN* Jul '20] than the slightly lighter GH Acoustics one that I tried before.

### ON THE MAT

I was not seduced by it simply because the thing is finished in black and looks a lot sexier than one in silver. It has a slightly different shape which is easier to grip, but otherwise they're almost the same, both with central spirit level and 50Hz/60Hz, 33/45rpm strobe rings. It kills me to say this, but I have to admit to hearing a slight increase in bass extension with the newer weight, but I do mean *slight*.

It was clear enough, though, via the MoFi One-Step edition of Paul Simon's *Still Crazy After All These Years*, but I've no intention of starting a craze for A/B-ing weights or clamps. Their saving grace is that they are so inexpensive that you can afford to experiment.

More worrisome is that different LPs react differently to weights and/or clamps, so you might – as I do – keep two or three nearby with which to play around. But be warned: what follows about mats is just as imprecise

and maddening. Swapping mats is nothing new, and I recall extreme audiophiles experimenting with them many decades ago. Felt, however, has been the default mat ever since Linn popularised it nearly 50 years ago. The EAT B-Sharp comes with a thin felt mat, which is the ideal choice for most users, but equally it invites swapping.

### IT ALL DEPENDS

Thin felt or not, empowering the accessories industry are devoted adherents to rubber, thicker felt, foam or sponge, glass, acrylic, leather, suede, cork, Sorbothane (eg, the old Mission mat), carbon fibre, and no doubt others I've forgotten. Compounding choosing the best for your needs, though, is the realisation that 1) all of them sound different, 2) the results change from deck

to deck, and 3) even the LP can change your findings – and not just its weight or thickness. In other words, mats are both LP- and turntable-dependent, just like pucks. Before you start cursing, how is this any different from extreme

Japanese audiophiles who keep different cartridges to play different record labels?

Completely excused from playing with mats (if less so with weights) are two sorts of deck. Those with vacuum hold-down are ineligible as their platters require the necessary openings for vacuums to operate. The other type precluded from mat

swapping are those with either integral mats or platter top surfaces which are so carefully specified that putting any other mat on top would completely undermine the integrity of the design. I recall, for example, that the original Pink Triangle's platter was carefully conceived in order to complement the behaviour of the vinyl it supported. Thus, putting any material between it and an LP was counterproductive.

But back to platters which *do* accept aftermarket mats, without mentioning any of the specific record decks I used because I do not want this to sound like research with repeatable or absolute findings. This is simply a suggestion for optimising or fine-tuning an LP-centric system which – fortunately – won't break the bank, as might upgrading whole components, cartridges, or cables. As with the weights, countless mats are available for under £15.

I tried two different turntables with glass platters, using felt, cork, and rubber mats. Now you'd think that whichever was the best on Deck A would be best, too, on Deck B because both have glass platters of nearly the exact same thickness. Sorry, but that wasn't the case. One would tighten up, the other would sound thick or woolly.

I then defied logic and applied a solid, hard mat to each deck, armed with two thicknesses of Funk Achromat, and was staggered in one case to hear it emphasise the deck's strengths, while having little effect on the other. Swapping the thin for the thick and vice versa altered the results.

### KEEP TRYING

I'm not here to make retailers' lives any more miserable than they already are circa 2021. They have enough challenges as it is. But the only way you can know if a mat (or puck) is right for you is to try it out. Without wishing to seem profligate, I would reiterate that the majority of mats I've tried are under £15, and buying a couple shouldn't break the bank for most of you.

On the other hand, if you purchased an expensive mat and it didn't work out, *and* you kept the packaging, then perhaps you might get a refund or a credit. I'm not finished with this topic, so stay tuned for more of this *mishegas* anon. ☺

'Mats are both LP- and turntable-dependent'

Yearbook  
issue on sale 22<sup>nd</sup> OCT

### IN THIS SPECIAL ISSUE:

- Hardware: Finely-honed reviews of 2021's outstanding equipment
- Music: Our critics reveal the best LPs, CDs, SACDs and hi-res downloads of 2021
- Vintage: Unique 're-reviews' of the best in vintage hi-fi
- Opinion: Our columnists discuss an unforgettable year in music and hi-fi
- Show Blog: Our pick of the pre-pandemic hi-fi show standouts!





P S A U D I O

Pioneering world class audio products

# It's a new dawn.



Hand made in Boulder, Colorado | 2000va output | 13 outlets (4 high current)

## **PS Audio's DirectStream P20. The finest mains regenerator in the world.**

20 years ago PS Audio invented the mains regenerator. In pursuit of perfection, the DirectStream P20 combines patented architecture with a DSD engine. This delivers the cleanest, lowest-noise sine wave of any regenerator in the world.

**For an exclusive home demonstration...**

please contact your nearest PS Audio dealer at [www.signaturesystems.co.uk/dealers](http://www.signaturesystems.co.uk/dealers).

**Distributed by Signature Audio Systems | 07738 007776 | [www.psaudio.com](http://www.psaudio.com)**





THE FEELING OF EXCELLENCE



**absolute sounds**

+44 (0)20 89 71 39 09   info@absolutesounds.com   absolutesounds.com

For Your Nearest Dealer Please Visit The Absolute Sounds Website

---