

# hi-fi news

& Record Review

**Exclusive**

**26**  
PAGES  
of Music  
Reviews &  
Features

## RED HOT TUBES

VAC's Master Preamp & Signature 200 monoblocks



**FEATURE**

**Here comes the fun...**

**28 must-hear albums on release in 2021**

**Studio  
Tour**

**Behind the  
scenes at AIR**

**JBL 4349**

**'70s inspired 'compact'  
horn loudspeakers**

**PS Audio Strata**

**New integrated is Stellar!**

**Hegel V10**

**Phono pre from the Fjords**

**VPI Prime 21+**

**New spin on a top turntable**



• **OPINION** 12 pages of letters & commentary • **VINYL RELEASE** Guns N' Roses *Greatest...* 180g 2LP set  
• **CLASSICAL COMPANION** Richard Strauss *Der Rosenkavalier* • **FROM THE VAULT** SME 10 turntable  
• **VINTAGE REVIEW** Philips CD10 portable disc player • **READERS' CLASSIFIEDS** Hi-Fi bargains galore

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# SME

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**ABOVE:** Wallets out! The upcoming year promises to bring a bonanza of new album releases, on all formats too. See p24

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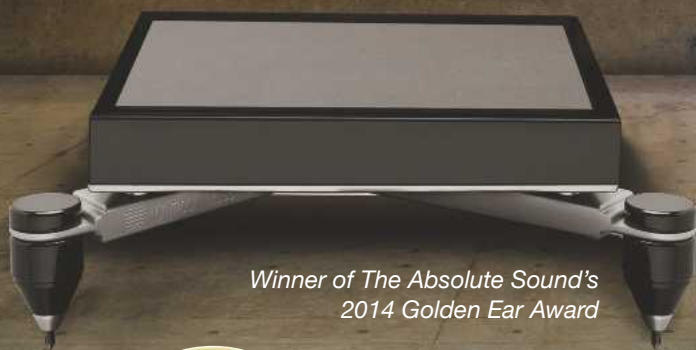
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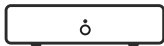
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## Stellar M700 Power Amplifier Monos (pair)

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## Stellar Phono Preamplifier

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**"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**



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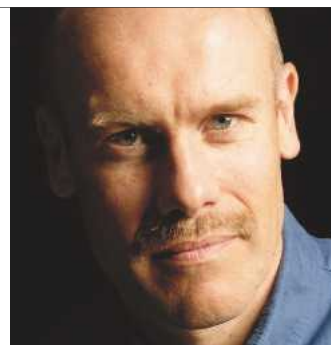
**RIGHT:** Tucked away in this luxurious little box is the DL-A110 – anniversary edition of Denon's iconic DL-103 MC, complete with detachable headshell, p58



**RIGHT:** Compatible with (nearly) every output tube on the planet, PrimaLuna's EVO 300 integrated is at least two amps in one. Read how on p66



Another month under the cosh of 'the thing that shall not be named' has not prevented us from curating another fabulous collection of hi-fi hardware to take our minds off what's beyond the front door. Our cover star this month comes courtesy of Florida's Valve Amplification Company, better known as VAC. *HFN* readers who've travelled to overseas shows (remember them?) may well have seen, and marvelled at the sound, of designer Kevin Hays's amazing tube amplifiers. I certainly had, so the moment this 'audiophile-to-the-core' brand landed on our shores I was especially keen to get its big pre/power combo into our listening room, lab and photo studio.



While we continue to live our hi-fi lives somewhat vicariously, here at *HFN* we're doing our very best to take you places beyond the reach of Lockdown. This month, ex-Melody Maker/*NME* top brass Steve Sutherland (now editor of our sister title *Hi-Fi Choice*, of course) takes us

**'At *HFN* we're taking you places beyond the reach of Lockdown'**

The Master Preamplifier and Signature 200iQ power amps – tested and auditioned in monoblock guise here [see p40 onwards] – proved every bit as compelling as I recall from VAC's related amplifiers at Chicago's Axpona event in 2019 (with VPI and Gershman Acoustics if memory serves). And, with fingers, toes and everything in between crossed, you'll have the chance to hear these amps for yourself – plus others from the VAC family – during our Hi-Fi Show *Live* on Oct 23-24th at Ascot later this year [see [www.hifishowlive.com](http://www.hifishowlive.com)].

behind the scenes of AIR studios, all the way from the Caribbean holiday island of Montserrat to the Grade II listed Lyndhurst Hall in Hampstead, North London. It's quite a story [p88]!

There's also more to anticipate, and set your musical chops salivating, in our guide to everything from brand new albums to curated box sets [p24]. There's no shortage of big and brilliant releases coming your way in 2021, so keep reading *Hi-Fi News*, keep listening to your hi-fi and, above all, keep safe...

**PAUL MILLER GROUP EDITOR**

**MUSIC:** Assisted by Brian Eno, U2's *The Joshua Tree* has proved a true Vinyl Icon (p82), while Steve Sutherland celebrates the riotous Guns N' Roses' *Greatest Hits*, now out on 180g LP (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



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



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**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



# Totally tubular

## AUDIO RESEARCH'S STRIPPED-DOWN REF AMP

Cut from the same cloth as the Reference 160S [*HFN* Feb '20], but with a reduction in tube complement and lower 80W rated power output, Audio Research's Reference 80S (£14,998) is the latest premium valve amplifier to roll out of the company's Minnesota facility. Available in natural silver and black finishes, its styling and build follow the 160S template with an all-aluminium chassis, incorporating a bottom-mounted speed-switchable fan, and front panel dominated by twin 'GhostMeters'.

Inside, the fully-balanced '80S uses a quartet of KT150 tubes (with triode and ultralinear operating modes) in conjunction with proprietary auto-biasing that adjusts for tube age and variations in AC line voltages. It also boasts a four-layer circuit board to suppress noise. 'Music,' says Audio Research, 'is projected against a jet-black background'. 12V trigger input/outputs and an RS232 control terminal



are provided alongside XLR and single-ended inputs, and 4/8/16ohm output taps.

**Audio Research Corp, Minnesota, USA,**  
020 8971 3909; <https://audioresearch.com>

## Mola Mola Kula

### MAKUA AND TAMBAQUI BLENDED INTO AMP



For its first stereo integrated, boutique brand Mola Mola has adopted the wave-like chassis aesthetic of its Makua preamp [*HFN* Aug '17], adding a bespoke power supply and 150W/8ohm (300W/4ohm) Class D output stage. Factory fitted with XLR and RCA inputs, the £9999 Kula (Hawaiian for 'school') can be upgraded with Mola Mola's MM/MC phono board (£1799), plus a custom upsampling DAC stage (£5999) – derived from the company's Tambaqui [*HFN* Nov '19] – adding USB, optical and AES inputs, plus Bluetooth and status as a Roon Ready endpoint. The Kula is supplied with a remote, but fuller facilities – including setting phono stage parameters and DAC status – can be accessed via Mola Mola's iOS/Android app. **Mola-Mola, The Netherlands, 0800 0096213; [www.mola-mola.nl](http://www.mola-mola.nl); [www.sounddesigndistribution.co.uk](http://www.sounddesigndistribution.co.uk)**

## HI-FI NEWS' NUGGETS

### BOENICKE IS BACK

Following a short hiatus, Basel-based loudspeaker brand Boenicke Audio returns to the UK courtesy of Whole Note Distribution. Never afraid to push the boundaries in materials, components and bespoke tuning aids, Boenicke's is a collection of speakers that promises to 'capture the tone and harmonics of a live performance'. Prices start at £4895 for the W5 and rise to £39,995 for the range-topping W13 SE+. [www.boenicke-audio.ch](http://www.boenicke-audio.ch)

### FALCON Q7 KIT

Second in Falcon Acoustics' 'Complete@Home' series of loudspeaker kits for home assembly, the Q7 model features Falcon's B110 bass/mid and T27 treble drive units and pre-wired Falcon 23.2 crossover together with a graded Baltic ply birch cabinet. Designed in the same factory as Falcon Acoustics' LS3/5a, and 'voiced' in similar fashion, the Q7 employs a slightly larger cabinet to boost its bass extension. [www.falconacoustics.co.uk](http://www.falconacoustics.co.uk)

## Little devil

### IFI AUDIO'S IDSD DIABLO HEADPHONE AMP

Adding a distinctive red finish to emphasise its position at the top of iFi Audio's battery-powered DAC/headphone amp lineup, the £900 iDSD Diablo has been 'built for purists', it says. To this end the specification eschews some of the extra features of iFi Audio's more affordable devices – including wireless Bluetooth and the proprietary XBass LF boost – while pledging a 'riveting musical ride' via its dual DSD/MQA-capable Burr-Brown DAC architecture and balanced analogue outputs. Type-A USB and S/PDIF inputs are joined by a 4.4mm balanced line-level output for connection to an external amp, while headphone users (both 6.35mm and 4.4mm jacks are provided) are offered tailored outputs via Turbo, Normal and Eco settings. A 5V DC iPower plug-top PSU is also included.

**iFi Audio (Abbingdon Global Group),**  
01900 601954; [www.ifi-audio.com](http://www.ifi-audio.com)





## High-Definition Imaging

NEW HDI LOUDSPEAKER SERIES FROM JBL ROLLS OUT THE STYLE

Billed as delivering the 'iconic JBL sound' from cabinets with a more modern aesthetic, the American outfit's HDI Series comprises the £4000 HDI 3800 and £3000 HDI 3600 two-and-a-half-way floorstanders, and £1500 HDI-1600 standmount. All three deploy a 1in compression driver with High Definition Imaging horn 'for exceptional high-frequency detail and uniform directivity' – the HDI 3800 pairs it with three 200mm aluminium-coned woofers, while 165mm units feature on the slimmer floorstander and two-way standmount. Bass-reflex designs with rear ports and braced, curved enclosures, the HDI Series is available in satin grey oak, satin walnut (pictured) and high gloss black.

**Harman Luxury Audio Group,**  
**01223 203200;**  
**www.jblsynthesis.com**



## Piega deals its Ace

SWISS BRAND'S MOST AFFORDABLE ALL-ALLOY SPEAKERS

Piega has replaced its entry-level Tmicro loudspeaker series with Ace, a three-model aluminium cabinet range again featuring the Swiss company's preferred AMT tweeter. First to launch are the Ace 50 floorstander (£1980), Ace 30 bookshelf (£980) and home cinema-centric Ace Centre (£590), which all feature a single 24x36mm AMT-1

treble driver, and one or more proprietary 'Maximum Displacement Suspension' 120mm bass/mid drivers. Both the '30 (Piega's smallest speaker) and '50 measure a slender 140mm wide and taper to a depth of 160mm. Finish options are natural aluminium, anodised black and gloss white. **Piega SA, Switzerland, +41 44 725 90 42; www.piega.ch**



## DAC's magic!

CAMBRIDGE AUDIO'S FLAGSHIP DAC WITH MQA SUPPORT

Promising 'a performance bigger than the box', Cambridge Audio's DacMagic 200M is the brand's new flagship DAC/headphone amplifier and first to be compatible with MQA. Aimed at both rack and desktop use thanks to a compact 215x52x191mm (whd) steel/alloy 'Lunar Grey' chassis, the £500 200M integrates Bluetooth 5.0 in addition to USB-B, coaxial (192kHz) and optical (96kHz) digital inputs. Outputs are offered on balanced XLR/unbalanced RCA stereo and a 6.35mm

headphone socket, the latter tethered to a Class A/B amp rated up to 300mW/32ohm and now benefiting from a reduced output impedance. The DAC stage's ES9028Q2M converters, in balanced/dual mono configuration, support 768kHz/32-bit PCM and DSD512 via USB (an upgrade on the company's previous DacMagic Plus). Fast, Slow and Short Delay digital filter options are included to taste.

**Cambridge Audio Ltd, London,**  
**0203 514 1521;**  
**www.cambridgeaudio.com**



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## 2021 ALBUMS

# Here comes the fun...

From brand new albums to curated box sets, there's no shortage of big and brilliant releases coming your way in 2021. **Steve Sutherland** sorts the reality from the rumour



Everyone knows that 2020 was a tough one for musicians. Pretty much all tours, festivals, gigs and clubs were banjaxed and retail shops where their records were sold were being locked down as non-essential businesses. Meanwhile, many pressing plants were halted and recording studios closed due to issues with social distancing. It was bleak.

Very bleak. But the upside is that 2021 is packed to the brim with prospective new releases, some long-delayed, some cooked-up in the downtime inflicted by the pandemic.

So, with an eye on the future and a hopeful song in our hearts, we've interrogated the release schedules and discovered an armful of albums that are due to cheer us up over the next few months.

### AC/DC TBC

Release date: Unknown

OK, don't hold your breath on this one but the news from the AC/DC camp is that, despite having released their 17th LP, the mighty *Power Up*, only last November, there's plenty more where that came from.

The band lost co-founder Malcolm Young in 2017 to dementia, singer Brian Johnson had to temporarily retire due to deafness, and drummer Phil Rudd was under house arrest on drug possession and other

charges. But none of that could keep these titans of rock quiet for very long.

And now, according to Johnson, 'Most of *Power Up* came from ideas before 2008's *Black Ice*, when Malcolm and Angus would sit together for five days a week and run through ideas. Malcolm was meticulous, he'd write down everything and when exactly they'd done it; categorise it. There's more than enough for another album, probably two'. What will they sound like? Oh, pur-lease!!!

### DANNY BROWN TBC

Release date: TBC

Way back in 2011, Detroit rap giant Danny Brown released *XXX*, the free-download album that made him famous all around the world. The title was a sort of triple entendre: for sex, for drugs, and for Brown's age because, at 30, he was relatively old in his field to be a newcomer. Brown will turn

40 this year, and he's recently been teasing online that he'll commemorate the occasion with a sequel to *XXX*.

His last album was actually his fifth, 2019's excellent *unknowhatimsayin?* which was executive produced by the legendary Q-Tip from American hip-hop group A Tribe Called Quest. No further updates on the newbie as we went to press, but we're well excited!



### EDGAR BROUGHTON BAND Speak Down The Wires – The Recordings 1975-1982

Release date: 29th January

Survivors of '70s festivals and once-were/wannabe hippies will do well to snag themselves this new, remastered 4CD 'clamshell' box set featuring the albums *Bandages*, *Parlez-Vous English?* and *Superchip*. Your purchase will include an illustrated booklet and poster and is priced at £23.99. Altogether now: 'Out Demons Out!'



### JOHN CARPENTER Lost Themes III: Alive After Death

Release date: 5th February

The legendary movie director and soundtrack composer John Carpenter is releasing a new album of non-soundtrack music – his first in nearly five years – titled *Lost Themes III: Alive After Death*. Apparently, it closely follows the concept behind the first *Lost Themes* album from 2015, which Carpenter described as 'a soundtrack for the movies in your mind'. The first single from *Lost Themes III* is called 'Weeping Ghost'. Whooooo!





## ALICE COOPER

### Detroit Stories

Release date: 26th February

A celebration of Cooper's hometown, *Detroit Stories* features contributions from other famous locals such as MC5's Wayne Kramer, The Detroit Wheels' Johnny 'Bee' Badanjek and The Motor City Horns. Bob Ezrin produces.

Cooper claims Detroit was the 'birthplace of angry hard rock... a haven for the outcasts. And when they found out I was born in East Detroit... we were home'. The album is promised in various formats including CD, CD and DVD digipak, a CD box set (with CD and Blu-ray) and a double LP vinyl set.



## LANA DEL REY

### Chemtrails Over The Country Club

Release date: TBC

After issuing her spoken word album *Violet Bent Backwards Over The Grass* last July, Lana Del Rey's seventh album proper was originally set for release last September and was going to be called *White Hot Forever*. When Covid caused production delays at the pressing plant the project was shifted and now her follow-up to the stunning *Norman F\*\*\*ing Rockwell* is slated to be called *Chemtrails Over The Country Club* and will feature 'Let Me Love You Like A Woman', most likely 'White Dress/Waitress' and maybe the song 'Dealer'.

## THE CURE

Title: TBC

Release date: TBC

'Ten minutes of intense doom and gloom', is what Robert Smith promises the closing track on the forthcoming Cure LP will sound like. It's the band's first since *4:13 Dream*, 13 years ago. 'Our whole idea for 2020 was finishing off the album we started last year, me finishing off a solo album, and also finishing digitising decades of stuff in order to make a film about the history of the band.'

As we go to press, The Cure album is being completed

under the working title *Live From The Moon*. Smith says: 'I think I'm more of a balanced individual than I was ten years ago. I've experienced more of life's darker side, for real. Before I used to write about stuff that I thought I understood. Now I know that I understand it.'

'That's probably why the album itself is a little bit more doom and gloom. I feel I want to do something that expresses the darker side of what I've experienced over the last few years – but in a way that will engage people.' Plenty of reasons to be cheerful then.

## DRAKE

Certified Lover Boy

Release date: TBC

On the 24th of October last year, Drake's 34th birthday, he posted a minute-long video announcing that his sixth LP, the follow-up to his 2018

album *Scorpion*, would be out sometime in January 2021. We still don't know much more about it at the time of going to press except that it will feature 'Laugh Now Cry Later', which was released as a taster single back August 2020.

## GARBAGE

Title TBC

Release date: TBC

'We have a new record being mixed as we speak', was the news from Garbage singer Shirley Manson a few months back during lockdown. 'We've got three more songs to go and then we're done. And then we'll concentrate on the artwork and start planning for next year... Thank God for that.'

It's the only thing keeping us sane.' Five years on from their last long-player, *Strange Little Birds*, Manson says the newie is, 'Sort of cinematic-sounding', while containing some 'pretty personal' lyrics. 'It's a little softer, and more expansive, like "No Horses" [a standalone single, released back in 2017]. There are also some Roxy Music influences in there.' Garbage remade and remodelled.

## GIRL IN RED

Title TBC

Release date: TBC

Lauded Norwegian singer/songwriter Marie Ulven aka Girl In Red is due to release her long overdue debut LP in 2021. Talking to the *NME*, she said: 'I can't work on this album any more. I can't wait for it to be out in the world, rather than just on repeat while I analyse all the things that I want to change about it...'

'A lot of it is me saying, "I need to stop this s\*\*t, I've figured out what I'm doing and I know what's not helping me to be a happy person". There's

not a specific sound because every song documents a feeling I've had, and those feelings have all been very strong. I can't bleed them all into this thing that sounds the same because they're so distinct.'

'It's cohesive, and I'm playing a lot of piano. I'm not a good piano player, but I like it. You can hear that it's been very present in my life. I like to play something that people don't connect with because they're always like, "bedroom pop, guitar girl, lo-fi" – all of those words in one sentence. Now I'm like, "Y'all don't know what's going to happen!"'

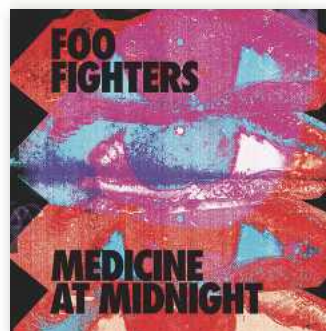


## CURVED AIR

The Albums, 1970-1973

Release date: 29th January

Why not get your prog on with his new 'clamshell' 4CD boxed set featuring the excellent quartet of Curved Air's albums recorded between 1970 and 1973 – *Air Conditioning*, *Second Album*, *Phantasmagoria* and *Air Cut* – along with bonus tracks 'It Happened Today' (single version), 'What Happens When You Blow Yourself Up' and 'Sarah's Concern', which were all originally issued as singles. It's priced at £23.99.



## FOO FIGHTERS

Medicine At Midnight

Release date: 5th February

'Do we make some sleepy acoustic album as we ride off into the sunset of our career?' Dave Grohl joked recently. 'Or do we make a f\*\*\*ing party record?' Whaddayou reckon? The Foo's tenth LP is set to be a stormer. It was finished a full year ago but Covid put the brakes on rolling out the whole shebang. Until now, that is. 'We can't go out and play shows right now, but the music is worth hearing'. [*HFN* review coming May '21].





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## GOAT GIRL

### On All Fours

Release date: 29th January

London post-punkers Goat Girl are releasing their second LP through Rough Trade this January, preceded by a single called 'Sad Cowboy'. 'It centres around the idea of losing grip on reality and how often this can happen', the band's lead vocalist and guitarist Clottie Cream explains. 'When you're within a world that constantly makes you feel as though you're living out a really bad dream, disillusionment is inevitable.'



## DANIEL LANOIS

### Heavy Sun

Release date: April

Famous for his production collaborations with Brian Eno, U2, Peter Gabriel and Bob Dylan, 11-time Grammy winner Daniel Lanois is on a mission. His goal with *Heavy Sun* is 'to remind people not to let the world steal their joy, to remind them that even during a global pandemic, it is our responsibility to protect our spirits and find ways to keep on dancing, keep on singing, keep on teaching, and loving'.

## KID CUDI

### Man On The Moon III

Release date: TBC

Cleveland, Ohio rapper Kid Cudi has recently teased his next album online, suggesting it will be *Man On The Moon III*, so completing his Man On The Moon trilogy, which he began in 2009 with his studio debut *Man On The Moon: The End Of Day* and continued the next

year with *Man On The Moon II: The Legend Of Mr Rager*. When it arrives, it will mark his first solo studio album since 2016's *Passion, Pain & Demon Slayin'*.

This coming year may also see the release of the Kid's *Enter Galactic* LP, apparently the soundtrack to a Netflix 'adult-focused animated music series' which Cudi has co-created with the actor Kenya Barris.

## THE KILLERS

### Title TBC

Release date: TBC

While they've only just released their sixth LP, *Imploding The Mirage*, The Killers are swiftly planning a follow-up in 2021. 'You know every time someone makes a record they say they have 50 songs and they're going to release another record right away? Well, we really are,' says frontman Brandon Flowers. 'We're going to release

another one in about ten months. We've already gone back into the studio.

'I'm not writing a quarantine album or anything like that. You start hitting your stride when you're finishing a record. You're writing lyrics, mixing everything, you're in it – then you go on tour. It's interesting to not be going on tour [due to Covid] and having any of that stuff taking up my brain. I just went right back to the piano.'

## LONDON GRAMMAR

### Californian Soil

Release date: 12th February

Indie pop trio London Grammar say their new LP, their third in all and first since 2017's *Truth Is A Beautiful Thing*, is about singer Hannah Reid's experiences of misogyny in the music industry. She elaborates, 'Misogyny is primitive, which is why it's so hard to change. But it's also fearful. It's about rejecting the thing in yourself which is vulnerable or feminine.'

Yet everybody has that thing. This record is about gaining possession of my own life.

'You imagine success will be amazing. Then you see it from the inside and ask, "Why am I not controlling this thing? Why am I not allowed to be in control of it? And does that connect, in any way to being a woman? If so, how can I do that differently?"' The album follows two singles released in 2020, 'Baby It's You' and the new album's title track.

## JOHN MAYALL

### First Generation 1965-1974

Release date: 29th January

Best sit yourself down for this one because *First Generation* is a 35CD – yup, 35 – box set from the Brit blues maestro featuring remastered studio albums, unreleased recordings, previously unheard live gigs and more. Starring Eric Clapton, Peter Green, Mick Taylor and Harvey Mandel, the humungous set includes three CD singles, eight previously unreleased discs including live sets from Windsor 1967, Gothenburg

1968, Berlin 1969 and San Francisco 1970 plus 28 unreleased BBC tracks.

*First Generation* is limited to 5000 copies and comes with a 168-page hardcover book with many rare photos and images of memorabilia. There's also a full gig listing for the era, a fan club book of letters and correspondence, two replica posters (the album *Ten Years Are Gone* and 1968 tour poster), a replica press pack for *John Mayall Plays John Mayall* and a photo individually signed by the great man himself.



## TOMMY JAMES & THE SHONDELLS

### Celebration – The Complete Roulette Recordings 1966-1973

Release date: 29th January

This 6CD box set contains all the original albums released by the Michigan pop maestros including *Crimson And Clover*, *Mony Mony* and *Crystal Blue Persuasion* (the latter featured extensively in the Netflix series *Breaking Bad*). Bonus tracks include all the band recordings that never featured on the original LPs, some never available before on CD.



## MOGWAI

### As The Love Continues

Release date: 19th February

Their first studio album since 2017's *Every Country's Sun*, *As The Love Continues* was recorded at Vale Studios in the UK, with producer Dave Fridmann working remotely from the US due to the Covid pandemic. It features the single 'Dry Fantasy', released on download last October, plus ten other tracks which include 'To The Bin My Friend' and 'Ceiling'. A deluxe version will be available featuring a 12in bonus disc of six demos previously unreleased.

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## RADIOHEAD

TBC

Release date: TBC

This one's a longshot, but Radiohead's Ed O'Brien has announced that the band reconvening to make a new album 'will definitely happen'. He has been reported as saying that they were having 'online meetings' and 'talking about stuff', adding that 'when it

feels right to plug back into Radiohead, then we will'.

O'Brien was circumspect about the band's follow-up to their last album, 2016's *A Moon Shaped Pool* but said: 'That last record was a lot of old songs, which explains the different eras of Radiohead that it might have sounded like...' As for anything new? 'I can't say what or when', he replied.

## RED HOT CHILI PEPPERS

TBC

Release date: TBC

Guitarist John Frusciante, who recently rejoined the band, revealed that RHCP are planning an album this year. There are no titles or suggestion of a release date yet but Frusciante said: 'We were rehearsing for a couple of months and then the quarantine started, so we

stopped rehearsing for a couple of months and then we went back. We're moving ahead now and writing new music'.

Drummer Chad Smith confirmed the news: 'Having John come back is a new shot of energy. It's been ten years, but during that time we all continued to grow as people and as musicians'. Smith also mentioned Rick Rubin as a potential producer.

## SLEAFORD MODS

Spare Ribs

Release date: 15th January

The band's sixth album was recently previewed by the 'Mork N Mindy' single which singer Jason Williamson described as 'the sound of the central heating and the dying smells of Sunday dinner in a house on an estate in 1982. Concrete, dinted garages, nicotine. Where beauty mainly

exists in small cracks on the shell of your imagination'.

Additionally, Williamson's perspective on the album was: 'Our lives are secondary under a system of monetary rule... Much like the human body can still survive without a full set of ribs we are all "spare ribs", preservation for capitalism, through ignorance and remote rule, available for parts'. One of the tracks is called 'Fishcakes'.

## TEENAGE FANCLUB

Endless Arcade

Release date: 5th March

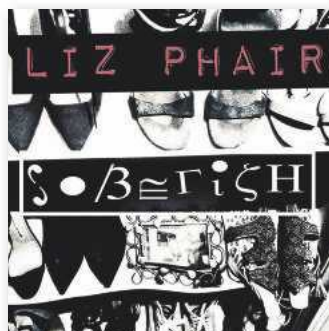
'I think of an endless arcade as a city that you can wander through, with a sense of mystery, an imaginary one that goes on forever...' says Teenage Fanclub's Raymond McGinley.

*Endless Arcade* will be the Scots' tenth LP, of which McGinley reveals: 'The process is much the same as it always has been. In 1989 we went into a studio in Glasgow to make our first LP. Francis [MacDonald] starts setting up his drums, the rest of us find our spots around him and off we go. Thirty years later Francis is setting up his

drums in Clouds Hill Recordings in Hamburg. A few hours later we're recording the first song. We don't conceptualise, we just do it. Each of us are thinking our own thoughts, but we don't do much externalising. We just feel our way into it'.

'I think some of the playing is a bit freer and looser than on recent albums', adds TFC's Norman Blake. 'The whole process of making this album was very invigorating. Everyone in the band contributed a lot and the song arrangements came together really quickly.'

It'll come in translucent green, yellow or clear vinyl, CD and a limited-edition cassette.



## LIZ PHAIR

Soberish

Release date: TBC

The Connecticut singer/songwriter Liz Phair will release her first album in over a decade in 2021. Originally meant to appear last summer, *Soberish* has been described thus: 'There is so much personality oozing from every song, she sings better than ever, and the record is a total blast from beginning to end'. Once it's out and the gig circuit's back up, Phair plans to tour with Alanis Morissette.



## STING

Duets

Release date: 29th March

Postponed from November due to manufacturing issues arising from the pandemic, *Duets* is a compilation of collaborations Sting has shared over the years. It features 17 songs including 'It's Probably Me' with Eric Clapton, 'My Funny Valentine' with Herbie Hancock, 'Don't Make Me Wait' with Shaggy, 'Whenever I Say Your Name' with Mary J Blige, 'We'll Be Together' with Annie Lennox, 'Fragile' with Julio Iglesias and one brand new one, 'September', recorded with Zucchero. The album comes on both CD and vinyl.



## NANCY SINATRA

Nancy Sinatra: Start Walkin' 1965-1976

Release date: 5th February

This 23-track collection features many of Sinatra's collaborations with singer-songwriter Lee Hazlewood, including 'These Boots Are Made For Walkin'' and 'Some Velvet Morning'. Remastered from the original analogue tapes, it's available as a CD housed in a 64-page hardcover book, and a vinyl edition with a 24-page booklet, pressed on, but of course, Sugar Town pink vinyl.



## NEIL YOUNG

Archives Vol II 1972-1976

Release date: 5th March

Young's *Archives Vol II* box set, released last year, sold out its 3000 print run in less than 24 hours and so he's decided to issue another, revised version in 2021 with a smaller book. Listed as a pre-order on Amazon in the US right now, it's almost \$100 cheaper. The 10CD box set features 132 songs including 'Letter From 'Nam', 'Come Along And Say You Will', 'Goodbye Christmas On The Shore' and 'LA Girls And Ocean Boys'. ☺

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# MUSIC PLAYBACK

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**RIGHT:** From left to right (clockwise) Jimi Hendrix in '68, promo shot of Pink Floyd from the mid '60s, The Beach Boys play *The Ed Sullivan Show* in 1964, Love's single 'My Little Red Book' from 1965, Kraftwerk pictured in 1977, the T Rex single 'I Love To Boogie' from 1976 and Deep Purple in the early '70s



**BELOW:** The book *Inspirations* by Michael Randolfi, Mike Read and David Stark was published by Sanctuary in 1999 [ISBN 1860743005]

## Strange inspirations

Johnny Black uncovers the unlikely beginnings of celebrated songs



Many moons ago, raking around in a secondhand book emporium, I came across a dog-eared but irresistible tome called *Inspirations*. Written by Michael Randolfi, Mike Read and David Stark, it offered up the inspirations behind popular songs, including the taxi cab accident which inspired Leo Sayer to write his 1974 hit 'One Man

Band' and the phone call behind The Cure's 1997 single 'Wrong Number'. As someone who loves to know what songs are about, I plunged in with delight but, fascinating though it undeniably was, very few of the inspirations really surprised me.

The author Phil Cousineau once defined inspiration as 'a message-in-a-bottle from the distant shore, a window into the other world... It comes when you least expect it'. Possibly it is, but in most instances I can think of, it's a much more down-

to-earth phenomenon, the outcome of experiencing something very real in our everyday lives, something that jolts the mind off its usual path and onto a previously unexplored byway.

### HIGHWAY REVISITED

We're familiar with the notion that every nook and cranny of love's winding pathways – love lost, found, deceived and so on –

has inspired countless songwriters to put pen to paper. Ever since the song 'Greensleeves' found popularity in the late 16th century, songwriters have bewailed the miseries caused to them by their failed romances.

I'd venture that more songs have been written around this theme than any other. However, every once in a while in my extensive meanderings through the backwaters of popular music, I have stumbled across

inspirations which genuinely took me by surprise. So bear with me while I scrape some of my favourite unlikely song inspirations out of the dim recesses of my brain.

It's no surprise when a song in one style inspires other songs in the same style, but when Kraftwerk, the pioneering electronic band that turned rock on its head in 1974 with 'Autobahn', admitted that the track's inspiration came courtesy of a fizzy surf pop smash from a decade



**RIGHT:** The single version of Kraftwerk's 'Autobahn' was released in 1975 and taken from the band's studio album of the same name. It was inspired by The Beach Boys' 'Fun, Fun, Fun'



earlier lasting just two minutes, my gob was comprehensively smacked. 'Autobahn' was a metronomic, almost hypnotic representation of a journey along a German highway – the album version lasted 22 minutes – complete with door slams, engine noises and honking horns, set to churning synthesised riffs and doppler shifts. Its lyric 'Fahren, Fahren, Fahren auf der Autobahn' was delivered in robotic Teutonic voices devoid of expression.

### TICKLED PINK

But, as the Krafties' Ralf Hutter pointed out, 'A hundred years from now, when people want to know what California was like in the '60s, they only have to listen to a single by The Beach Boys'. Specifically, their 1964 classic, 'Fun Fun Fun', told of a teenager driving around Southern California looking for thrills and, in precisely the same way, 'Autobahn' was conceived as a sound picture of driving in Germany ten years later.

Kraftwerk's Wolfgang Flur has recounted how a fan pointed out that, 'the way we speak "Fahren", which means driving, sounds like the English word, "fun". "Fahren fahren fahren", 'Fun fun fun'".

Strange though The Beach Boys influence on Kraftwerk might seem, it's no less weird than the tale of how MOR pop songmeister Burt

**RIGHT:** Pink Floyd in the 1970s and with Syd Barrett (centre) on the sleeve of their 1967 album *Piper At The Gates Of Dawn*, which featured the track 'Interstellar Overdrive'

**TOP RIGHT:** Burt Bacharach pictured in 1972. He co-wrote the Love song 'My Little Red Book' that inspired Syd Barrett to write 'Interstellar Overdrive'

**BELOW:** Surf's up... The Beach Boys pictured at Zuma Beach in California in July 1967 and (right) their 1964 single 'Fun, Fun, Fun'



What Jenner didn't realise was that, although Love mostly wrote their own songs, 'My Little Red Book' had been composed by the hit songwriting duo of Burt Bacharach and Hal David, responsible for such MOR classics as 'Do You Know The Way To San Jose' and 'I Say A Little Prayer'. To this day, however, Burt still doesn't have a co-writing credit for 'Interstellar Overdrive'.

If anybody really understood the mechanics of precisely how inspiration works, they would, of course, bottle it and earn millions but the simple truth is that nobody knows exactly how, where or when inspiration is going to strike.

### NIGHT SHIFT

There are instances, however, where inspiration seems uncannily closely aligned with plagiarism but,

even in those cases, the path from the original inspiration to the subsequent copy can trample over stylistic barriers with ease. Who would have suspected, for example, that Deep

Purple's 1970 proto-metal hit 'Black Night' had its origins in a pop hit by teen heart-throb Ricky Nelson?

Here's how it happened. Back in 1962, young Ricky released a version of the 1934 Gershwin-composed standard 'Summertime'. Nelson's version opened with a distinctive guitar lick played by top sessioneer James Burton. That lick made its transition into a heavy rock style in the 1966 American hit '(We Ain't Got) Nothin' Yet' by The Blues Magoos, and just four years later Deep Purple incorporated it into 'Black Night', which peaked at No 2 in the UK singles charts, giving the band their first major hit. ➔

Bacharach unwittingly inspired Pink Floyd's first electronic space rock epic, 'Interstellar Overdrive'.

The Floyd's manager at the time, Peter Jenner, spent time during 1966 in LA where he absorbed as much as he could of the psychedelic rock that was developing there. He was particularly impressed by the band Love and a song they'd recorded called 'My Little Red Book'. Back in England, Jenner told the Floyd's Syd Barrett about the song. 'I just hummed the main riff', he explained later. 'Syd then picked up his guitar and followed what I was humming, chord-wise. The chord pattern he worked out he went on to use as his main riff for "Interstellar Overdrive".'

**'Rockabilly fans tried to burn Bolan's new record'**



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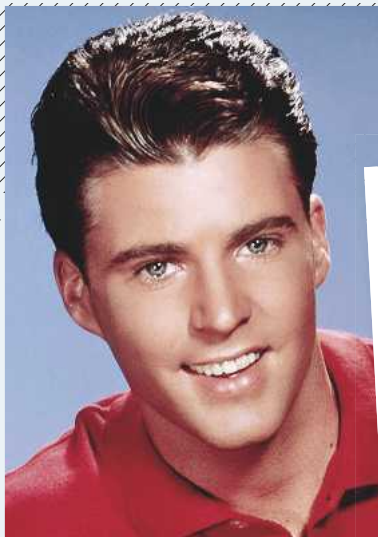
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Similarly, it was a 1956 country music hit – ‘Teenage Boogie’ by Webb Pierce – which inspired glam-rocker Marc Bolan to create ‘I Love To Boogie’ 20 years later for his band T Rex. Despite originating in radically different musical genres, the two songs are so similar that London-based rockabilly fans protested by attempting to burn copies of ‘I Love To Boogie’ in a pub on London’s Old Kent Road.

## GIVING UP THE GHOST

Country music – long despised by many rock fans – sneaks in all over the shop in terms of giving musical inspiration to rock artists. One of the best instances I can recall was the 1949 cowboy classic ‘Ghost Riders In The Sky’, made famous by popular baritone Vaughn Monroe, which underwent a monumental transformation in 1971 to become the psychedelic jazz rock epic ‘Riders On The Storm’ by The Doors.

Doors’ keyboardist Ray Manzarek has explained that the band’s guitarist, Robbie Krieger, was idly picking out the melody of ‘Ghost Riders In The Sky’, in The Doors’ workshop studio. The others started to sing the opening lines, ‘An old cowpoke went riding out one dark and windy day’, but they didn’t get much further before vocalist Jim Morrison called out, ‘Hey, I got lyrics for that!’. The words Morrison had



**ABOVE:** Teen heart-throb Ricky Nelson in a publicity shot from the mid ‘60s (left), heavy metal pioneers Deep Purple and their 1970 hit single ‘Black Night’ (centre) and Marc Bolan on stage in 1973

**BELOW:** Vaughn Monroe caught on camera in New York in 1947 (left), The Doors in 1971 (centre) and their single ‘Riders On The Storm’ released the same year

written became the lyric to ‘Riders On The Storm’, a spiritual cousin of ‘Ghost Riders’, but stylistically so far removed that it was effectively a completely new creation.

Another source of inspiration for songwriters has been newspaper stories and headlines. It’s often told how The Beatles’ ‘A Day In The Life’ was inspired by a newspaper item about the untimely death of Guinness heir Tara Browne, and how Don McLean’s song ‘American Pie’ came about after the singer read a headline announcing the death of Buddy Holly.

Even music critics themselves can inspire writers to compose significant songs. In mid-1958, jazz scribe Steve Race had written

## INVESTIGATION



a feature in pop music weekly *Melody Maker* celebrating what he hoped would be the demise of rock ‘n’ roll. Race’s words so infuriated teen rock ‘n’ roll fan Ian Samwell that he quickly put together a song asserting that rock ‘n’ roll was no passing phase and declaring ‘ballads and calypsos they got nothin’ on, real country music that just drives along’.

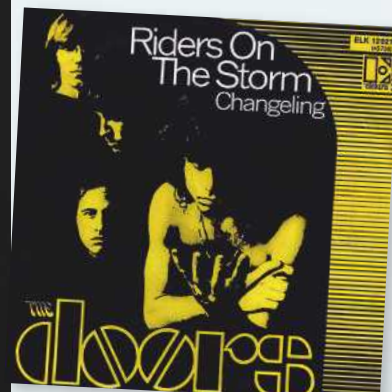
## BIZARRE NOTION

Samwell’s song, ‘Move It’, was recorded by Cliff Richard later that same year, and went on to become the first convincing British rock ‘n’ roll hit. No less an authority than John Lennon of The Beatles subsequently stated that ‘Before Cliff and The

Shadows, there had been nothing worth listening to in British music’.

Arguably, the late disgraced former American record producer Phil Spector might have disagreed with Lennon, because the spark that set off his entire career came from a pre-Cliff British performer. ➔

“Hey, I got lyrics for that!” shouted Jim Morrison





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In a sleeve note to one of his own albums, Spector wrote, 'I first got my interest in music from listening to "Rock Island Line" by Lonnie Donegan'. It's a bizarre notion, but well-documented as a matter of fact. Logically, Spector, being an American, should have come across the 1937 version of 'Rock Island Line' by Lead Belly, but it wasn't until British skiffle king Donegan released his treatment in 1955 that Spector connected with it. This was because Donegan's version charted at No 8 in the US *Billboard* Top 10.

## ON THE WALL

Spector liked it so much that he got his first guitar as a result, and performed the song Donegan-style in a talent contest soon after. It's not too much of a stretch to argue that, without Lonnie, Spector might never have gone on to invent his famed Wall Of Sound recording technique, and umpteen unforgettable hits by The Ronettes, The Crystals, The Righteous Brothers and Ike And Tina Turner might never have happened.

The moment that inspires a song doesn't have to be of historical significance or even momentous in any way. Take, for example, the bitterly cold New Year's night of December the 31st, 1966, when The Jimi Hendrix Experience



## INVENTIVELY INSPIRED

With so many instances of inspiration arising from the complexities of romance or from one inspirational song giving rise to another, it's easy to overlook that there's also a hard science aspect to this business of brainstorming.

When Leonard Keeler ushered in the age of lie detection by trialling the first Keeler Polygraph machine for the Scientific Crime Detection Laboratory at Chicago's Northwestern University, he might have imagined, correctly, that his pioneering work would inspire hundreds of detective fiction novels. But he certainly couldn't have predicted that in the years to come *Sleeper* (1996), *The Reverend Horton Heat* (1988) and *Mya* (2000) would all release songs entitled 'Lie Detector'.

## DIAL A DISC

Inventions have indeed frequently inspired songwriters. When Samuel Morse was granted a patent for his Morse code on June the 20th, 1840, his intention was to speed up international communication, not to inspire ABBA to write their international hit single, 'SOS'. Nevertheless, Morse code has inspired quite a clutch of pop songs. The 1967 hit 'Western Union' by The Five Americans used a guitar approximation of Morse code's dots and dashes to add urgency to its tale of love gone awry, the opening riff in Rush's 'YYZ' (1981) is Morse for those letters, and the fade out sound at the end of The Clash's 'London Calling' (1979) is a sample of the Morse letter V. Samuel Morse would, however, certainly not



**ABOVE:** 'Lie Detector' by The Reverend Horton Heat and (right) ABBA in 1979



have been amused by psychedelic-folk pioneers Pearls Before Swine whose song 'Oh Dear Miss Morse' (1967) included the 'f-word' sung in Morse code.

It's hard to imagine that any invention has inspired more pop songs than the one most usually attributed to Alexander Graham Bell – the telephone. Bell was awarded his patent in 1876 and, while there were probably earlier examples, the 1940 hit 'Pennsylvania 6-5000' by the Glenn Miller Orchestra, was one of the first phone-oriented numbers (pun intended). Wikipedia lists over 80 phone-related songs including

'Chantilly Lace' (1958) by The Big Bopper, 'I Just Called To Say I Love You' (1984) by Stevie Wonder, and Adele's 'Hello' (2015).

One of my faves remains the super-chilled 'Call Me' (1966) by Chris Montez, but if after reading this, you get a killer idea for a phone-based pop smash, please don't call me and I promise I won't call you.

**LEFT:** Stevie Wonder's 1984 hit single 'I Just Called...' and 'London Calling' by The Clash with its Morse code outro



**TOP LEFT:** Cliff Richard and The Shadows arrive in The Netherlands in 1962

**LEFT:** Jimi Hendrix plays live on stage in London in February 1969

played at The Hillside Social Club in Folkestone, Kent. After the show, the trio retired to the nearby home of bassist Noel Redding's mother.

## DOG STAR

A roaring fire burned in the grate, with the family's huge Great Dane sprawled in front of it. Hendrix asked Redding's mum, Margaret, if she would mind him standing in front of the fire, thus unintentionally creating a key line, 'Let me stand

next to your fire', which would become a vital part of Hendrix's next composition, 'Fire'. When the song was recorded some time later, Hendrix threw in an improvised line, 'Move over Rover and let Jimi take over', just before the instrumental break, as a more direct reference to the Redding family dog.

Fear not, we're not about to launch into a litany of songs inspired by dogs and/or cats but, take it from me, there are hundreds. ☺

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# VAC Master Preamplifier/ Signature 200iQ

Steeped in valve lore, this iconic tube brand extends the 'voicing' of its products right down to the choice of passive components and hand-wiring. We test a stack of VAC!

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

**W**ith the Valve Amplification Company, *aka* VAC, now 30 years old, it qualifies as a stalwart of the 'third wave'. The first was, of course, the original golden age generation of Marantz, Quad, McIntosh and others of the 1940s and 1950s, while the second wave hit in the early 1970s with Audio Research, EAR and other tube revivalists. VAC arrived at the point when tubes were demonstrably here to stay, Kevin Hayes founding the company with his father in 1990. He was, and remains, resolutely focused on the high-end, as this pairing's £69,000 cost attests.

That, it must be noted, includes the addition of the optional MM/MC phono stage at £12,000 on top of the Master Preamplifier's £28,000 base cost. Here we are using a brace of Signature 200iQ amps at £14,500 apiece, in monoblock guise, while VAC also offers the dearer Statement line should you have, say, a Russian oligarch's disposable income.

## POWER TRIO

These are not products to install without close study of the owner's manuals. The power amplifier(s) feature a host of speaker terminals, feeding off separate output transformer secondaries and I suggest you turn to editor PM's deeper discussion of the implications [see boxout, p42].

Also on the back of the Signature 200iQ is a toggle switch to choose between stereo and mono operation, the amplifier rated at 100W/ch or 200W in mono mode. The stereo/mono toggle is located between balanced XLR and single-ended RCA inputs, with the selector for these connections parked between the valves on top [just

visible on our overhead shot, p42]. Ah, but back to the speaker terminals!

The company provides three ranges of impedance, with only one set of inputs and speaker outputs used in monoblock mode. As I tried these with three wildly differing speaker types, including LS3/5As [*HFN* Dec '18], Wilson Sasha DAWs [*HFN* Mar '19] and Magnepan LRS (Little Ribbon Speaker), I adhered to PM's recommendations. It will take only a swift listen for users with one pair of speakers, noting especially the treble behaviour. I also detected minor changes at the extreme bottom end, but the giveaway will be the upper registers. The other aspect of set-up to mention here

is that each 457x222x439mm (whd) amp weighs some 100lb. And I have back issues.

## MASTER COMMANDER

This amplifier comes with four 6SN7s and four KT88s, but the latter can be replaced with KT120s or KT150s if so desired (the big tubes may need the cage removed due to their height). This is abetted by the amp's complex auto-bias system – the 'iQ' in the model

name – which monitors and maintains the correct bias, but which adds a couple of other confidence-inspiring features. One is monitoring tube condition and the other is protection of the amplifier.

*'This sound  
proclaimed  
freedom from  
constraint'*



**RIGHT:** Preamp features a (very costly) ALPS HQ PRO volume pot [top left] with a 6922EH tube line stage [centre] and transformer-coupled outputs [bottom]. There are six 12AX7B triodes on the optional phono board [green, far right]



**RIGHT:** The pre/PSU and two mono'd power amps – totalling 110kg – are stacked for illustrative purposes only! Display turns red when the pre is muted by turning one of the four smaller, heavily-chromed knobs. Tube status is shown by LEDs inset into the power amp's fascia

These functions use the LEDs below the front panel meter, one per tube. Green indicates a weak valve, calling for imminent replacement, while red shows that a tube is drawing excessive current. The circuit will switch off the amp before a failed tube can do any damage. The meter is there to examine the current of each tube, when used with the 'test' knob on the right; the left knob is power on/off, and it also switches off the meter light if so desired.

As for the two-chassis Master Preamplifier, this, too, has a fully-loaded back panel that also demands a study of the owner's manual. The front is self-explanatory, with the massive volume control and source selector dominating, while smaller knobs deal with mute, logo illumination on/off, power on/off and 'cinema' for the bypass stage if integrated into a home theatre system. The logo lights up red when the preamp is switched on but muted, and blue when it's operating.

Inside are one 6922 double-triode per channel for the 'zero-feedback' Class A line stage, the optional phono stage adding six 12AX7s. The phono section justifies its £12k cost by providing selectable MC load impedances of 470, 300, 250, 200, 150, and 100ohm and MM loading of the standard 47kohm, plus 30k, 25k, 15k, and 10kohm, all chosen via a rear panel rotary. You can connect a pair of decks, via single-ended RCA or balanced XLRs, and a toggle selects between the two of them.

## MOTOR SKILL

This will accommodate just about any analogue source you might wish: line inputs 1/2/3 are single-ended, but 4/5/Cine provide single-ended and balanced, with a toggle switch to select either for each. Input 6 becomes phono when the module is fitted, or line level without it. There are also four sets of main outputs, two each of XLR balanced and RCA single-ended, which are also selected by yet another toggle.

VAC supplies an all-metal remote for volume control and mute [see p45], and here we find another area where the cost is justified. I called Kevin Hayes in Florida, who explained, 'In order to make it possible to adjust the volume remotely, it was necessary to engineer a motor drive system, which is mounted on rubber isolation bushings. Our direct cost is about \$1000 just for this volume control, and



it's there for only one reason: we use it because it sounds the most like music!'. Meanwhile, the belt-driven control is the admired ALPS HQ PRO. 'This is a precision-made unit with four shielded decks, and it is purely mechanical and manual.'

Hayes also revealed that his philosophy was triggered by a mix of inherited expertise from a father with engineering experience, his own audiophile tendency and genuine mystification at the variance between what he heard and what the magazines of the era described. He was

also flummoxed by the discrepancies in performance with various speakers, so in 1986 he began to design what would become the first VAC amp.

To explain the copious amounts of hard-wiring, he said he chooses to 'utilise many "old school" techniques if/when/where there are good reasons to do so. In comparison to printed circuit boards and ribbon cables, the extensive use of point-to-point, hand-wiring designs allows us many more degrees of freedom in the selection of conductor material, size, ↻



## PRE/POWER AMPLIFIER



**LEFT:** Top view of Signature 200iQ power amp with cage removed, showing pairs of 6SN7 triodes and KT88 output tubes behind VAC's huge, proprietary speaker-coupling transformers [see boxout, below]

geometry, and insulating dielectric, all of which have profound implications for the "voice" of the component'.

He also prefers mechanical switches 'with very pure contact materials and high contact force. These deliver a superior level of sonic detail and naturalness relative to the now-common use of relays or FET switches for signal routing, and also have lower levels of distortion, microphony, and stray capacitance. As a side benefit, they allow the control knob to indicate the setting directly, rather than

requiring a display readout'. And if further justification of the cost is required, Hayes told us, 'I personally audition each and every VAC instrument, be it new, updated, or repaired, and only approve them for shipment when they sound as they should'.

### IT'S A KNOCKOUT

With so many inputs begging to be tried, in both single-ended and balanced modes, I played CDs and SACDs via the balanced outputs of three different DACs, and open-reel tape via RCAs and XLRs (my Otari

is balanced-output-only). None of my tonearms terminate in XLRs, so phono listening was undertaken only via the Master Preamp's single-ended inputs. I tried three MCs and two MMs, and my reaction each time around was that this is a true vinyl-lover's set-up.

What threw me was starting my sessions with open-reel tape, and the wide-open Broadway performance of *Fiddler On The Roof* [RCA FTO-5032]. Before even focusing on the sound, whether the sublime violin work or Zero Mostel's distinctive vocals, my attention was grabbed by the sense of space. The recording is huge-sounding regardless of the system, and really does convey the notion of a massive theatre. It's almost a distraction, but a rewarding one.

Via this VAC set-up, this stage bordered on the cavernous. Performer placement was so precise that you could trace any movement (and I do not claim to know how 'live' was the recording session) with the smoothest of lateral transitions. If you're a soundstage and imaging obsessive, this will knock you out. But it begged a comparison I was dying to make: I dug out the same recording on LP [RCA LSO-1093], despite my declared prejudice in favour of tape.

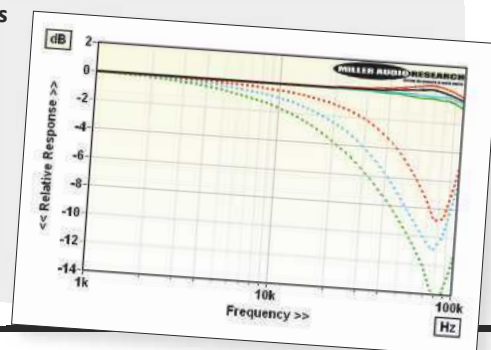
Here the Master Preamp's phono stage was going to be challenged not to better the sound via 7½ips open-reel tape – that is simply not possible – but to see how much it could close the gap. The A/B comparison was an ear-opener, because

## TAP DANCING

A choice of 8ohm and 4ohm (and perhaps 16ohm or 2ohm) transformer taps are typically offered on the rear of many tube amplifiers, optimising power delivery into higher and lower impedance speakers, respectively. The secondary windings in VAC's output transformers are configured in parallel when in mono mode, halving the specified 4-8ohm, 2-4ohm and 1-2ohm taps. This influences the available power [see Lab Report, p45] and, in this instance, the high frequency response realised by the chosen tap/speaker combination.

The right match will result in a very flat and extended response – remarkably so for a tube amp – [solid traces, inset Graph] while mis-matches can provoke a treble roll-off [dashed traces]. So, if you have a speaker with an impedance trend that's generally higher than 4ohm, then the 4-8ohm tap will realise the best result at  $\pm 0.0\text{dB}/20\text{kHz}$  and  $+0.7\text{dB}/68\text{kHz}$  into 8ohm [solid black trace], and  $+0.05\text{dB}/20\text{kHz}$  and  $+0.6\text{dB}/68\text{kHz}$  into 4ohm [red trace]. However, drive a

'4ohm' speaker via the 2-4ohm tap in mono mode and the response droops to  $-1.2\text{dB}/20\text{kHz}$  [dashed red trace] just as a very low impedance '2ohm' speaker falls to  $-2.4\text{dB}/20\text{kHz}$  [dashed blue trace]. '1ohm' speakers are spectacularly rare but, should you own vintage Apogee Scintillas, then driving them via the 2-4ohm taps yields a soft  $-3.8\text{dB}/20\text{kHz}$  [dashed green trace]. To achieve the best results with very low impedance speakers then VAC's 1-2ohm taps are essential – reaching out to  $-0.6\text{dB}/100\text{kHz}$  with 2ohm loads [blue trace] and  $-0.9\text{dB}/100\text{kHz}$  into 1ohm loads [green trace]. PM





the VAC phono stage is so lush, rather than hygienically forensic, that it was more of an exercise in degrees of analogue excellence. In other words, it tested the cartridges as much as it did LP-vs-tape.

### CRY FREEDOM

Let's just say that this was the closest I've heard yet of an LP approaching the utter command of a tape. The inherent

**BELOW:** Rear of Signature 200iQ power amp hosts balanced (XLR) and single-ended (RCA) inputs, stereo/mono configurations and choice of 1-2ohm, 2-4ohm, 4-8ohm speaker outputs

**ABOVE:** Inside the Signature 200iQ power amp showing tube PSU board [top] and L/R audio boards [bottom]. Again, note full-sized components and comprehensive hand-wiring

weaknesses of vinyl (no, I'm not gonna launch into that diatribe) were minimised such that the TechDAS TDC01 Ti MC [HFN Sep '14] displayed remarkable dynamic swings and attack I hadn't accessed before. Allied to the inherent silkiness and warmth of the VAC Master Preamp, with the seemingly limitless power reserves of the Signature 200iQ, it was a sound that proclaimed freedom from constraint, with

## KEVIN HAYES

During our review, editor Paul Miller took the opportunity to talk with VAC's co-founder and guiding light, Kevin Hayes. We discussed Kevin's studied application of what – to the casual observer – might look like a nest of multi-coloured point-to-point wiring [see left] to 'fine-tune' the performance of both pre and power amp, before moving swiftly on to the enviable power output achieved by the Signature 200iQ's seemingly modest array of tubes. Are these running particularly hot?

'With respect to overall power, it's generally been forgotten that very soon after the inception of the KT88, nearly 70 years ago, the GEC/Genalex data sheets showed a 100W/pair operating point in its application circuits' says Kevin. 'In practice, we find that some pairs of KT88s will exceed 100W. The KT88 delivers exceptional sound under these conditions and, in our circuits, average tube life is quite good – typically 6000-8000 hours.'

VAC's custom output transformers are also core to the amp's 'real world' performance. 'In stereo mode the taps are effectively for 2, 4 and 8ohm; in mono, a parallel operating configuration, they are effectively 1, 2 and 4ohm. So, in mono mode [as tested here] the maximum power, lowest distortion, and widest freq. response occur into a 4ohm load on the top tap, which is labelled "4-8".'

'Most audiophiles will try more than one tap to see which best suits their loudspeaker (with its varying impedance curve), so we label the taps with a range rather than a single number'. PM





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## 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*

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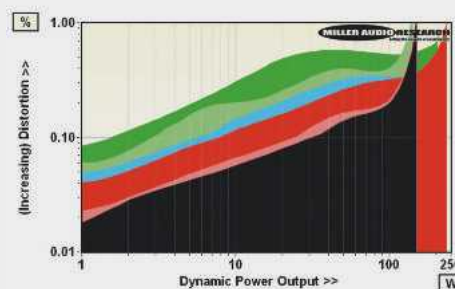


## LAB REPORT

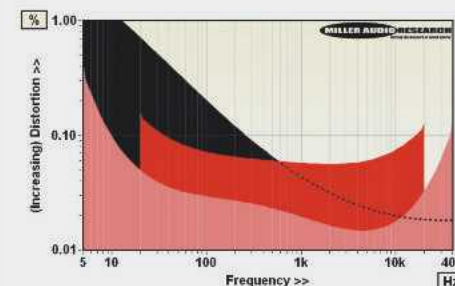
### VAC MASTER PREAMP/SIG. 200IQ

VAC's Signature 200iQ is a hot number in terms of performance and temperature! In practice, hotspots of 85°C were measured on the top surface of the perforated grille above the KT88s, so adequate ventilation is essential. These KT88s are given no quarter, all four tubes achieving a mighty 145W/8ohm and 205W/4ohm in mono mode via the 4-8ohm tap (or a lower 145W/4ohm via the 2-4ohm tap). There's some headroom for increased dynamic output too [see Graph 1], with 151W/8ohm and 235W/4ohm sourced via the 4-8ohm tap, and 232W/2ohm and 210W/1ohm available via the 2-4ohm tap (or 140W via the 1-2ohm tap). The response is also affected by choice of tap [see boxout, p42]. Also, as expected, distortion increases at very low and high frequencies [see Graph 2], from 0.016%/1kHz to 0.05%/20Hz and 0.035%/20kHz (re. 0dBW), and with level from 0.016%/1W to 0.063%/10W and 0.21%/100W (re. 1kHz) – all comfortably below the level of most contemporary loudspeakers.

The great 'strength' of the Signature 200iQ is its combination of +24dB gain (balanced in) with a very wide 94dB A-wtd S/N ratio (re. 0dBW) – a quality it shares with the equally 'low noise' +9dB gain/98dB S/N ratio (re. 0dBV) achieved by the partnering Master Preamplifier. The latter shares a similar broad-spectrum spread of distortion harmonics with the 200iQ, although these are higher at low frequencies (0.7%/20Hz) before decreasing with increasing frequency to just 0.011%/20kHz [black trace, Graph 2]. The response is usefully extended, rolling gently away below 100Hz to -0.7dB/20Hz (and -2.9dB/5Hz) while reaching out to ±0.0dB/20kHz and -3.6dB/100kHz. PM



ABOVE: Dyn. output vs. THD into 8ohm (4-8ohm tap, black), 4ohm (4-8ohm tap, red; 2-4ohm tap, pink), 2ohm (2-4ohm tap, blue) and 1ohm (2-4ohm tap, green; 1-2ohm tap, br. green). Max. current is 14.4A



ABOVE: THD vs. freq. for Master preamp (0dBV output, black) vs. Sig. 200iQ amp (1W/8ohm, pink; 10W, red)

### HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	145W / 205W (4-8ohm tap)
Dynamic power (<1% THD, 8/4/2/1ohm)	151W / 235W / 232W / 210W
Output imp. (20Hz–20kHz, pre/power)	45ohm / 0.76–0.78ohm
Freq. resp. (20Hz–100kHz, pre/power)	–0.7 to –3.6dB / +0.7 to –0.4dB
Input sensitivity (for 0dBV/0dBW)	358mV (pre) / 178mV (power)
A-wtd S/N ratio (re. 0dBV/0dBW)	98.2dB (pre) / 93.9dB (power)
Distortion (20Hz–20kHz, 1V/10W)	0.011–0.68%/0.056–0.15%
Power consumption (idle/rated o/p)	240W/345W (94W, preamp)
Dimensions (WHD, Pre/Power)	457x109x368/457x222x439mm



ABOVE: Outboard PSU [bottom] includes an extra transformer and umbilical to feed the optional MM/MC phono board included in our Master Preamp [top, right]. Six line inputs are available, inc. one direct (HT) and three with balanced (XLR) options. Dual preamp outputs are offered on RCAs and balanced XLRs

even the bass nearing the unleashed capabilities of tape. The biggest giveaway, if you're curious, was deeper stage depth with tape, but vinyl playback was still dazzling.

With the remastered version of The Doors' *Morrison Hotel* [Rhino/Elektra R2 627602], Morrison's voice was revealed to possess subtlety and nuance that also approached the open-reel tape [Elektra X5007], and the gap was smaller because the latter was 3¾ips. I was utterly seduced by the sinuous, supple guitar work, the VAC pairing exhibiting a way with textures that I'm sure would enable aficionados to identify the make of strings used by Robby Krieger on 'Maggie M'Gill'.

### HUMAN BEHAVIOUR

The vinyl set also contains the CD, so that, too, was exploited to show format differences, but there will be no CD-bashing here as the VAC amps have an ameliorative effect on digital. Yes, even streaming.

Probably the most overwhelming display of the system's prowess via vinyl came with the admittedly-magnificent One-Step release of Patricia Barber's *Café Blue* [Impex IMP6035-1]. Because this is a lean recording with just

Barber on piano and a guitar/bass/drums trio, recorded with subtlety, the VAC system simply glowed – and I don't mean the light from the valves. Fed material that oozes finesse, the VAC pre/power neither enhances nor constrains: it simply lets the music breathe.

I do realise that seems a contradiction if I've described the VAC combination as tending toward the warm, but that is a sensation of an arguably moot nature, rather than a readily-identifiable sonic artefact like 'dry bass' or 'crisp transients'. They just seem more human, more lifelike than many over-etched, kick-you-in-the-gut amplifiers, and nowhere was it more evident than on Barber's arresting handling of 'Ode To Billy Joe'.

If you crave intimacy, especially if you are partial to vocals, you need to hear this set-up through LS3/5As, however incongruous that might seem. Then again, what they do with the Wilson loudspeakers... ☺

### HI-FI NEWS VERDICT

A hint of schizophrenia here, but purely positive: I love the balance between old school and modern. VAC has lavished these units with cost-no-object niceties like that step-driven volume control, while eschewing new valve types in favour of venerable KT88s. The sound reflects this with detail and scale to match the best of solid-state, yet with luscious warmth to never let you forget it's a tube affair. Or a love affair...

Sound Quality: 90%



LEFT: VAC's heavyweight alloy remote offers control over the motorised (belt-driven) volume control and mute, but not input selection

## VPI Prime 21+

A 2021 refresh of VPI's most popular turntable also sees a 'plus' option with bespoke moving-coil from Audio-Technica and RCA tonearm cable sourced from Nordost

Review: **Adam Smith** Lab: **Paul Miller**

**B**y no means a newcomer to the audiophile LP-spinning scene – the brand is some 40 years young – VPI's recent range expansion has doubtless been further fuelled by the worldwide 'vinyl revival'. In addition to its diverse collection of tonearms, and innovative turntables including the direct-drive HW-40 Anniversary [*HFN* Apr '19], there are now two additions to VPI's 'Prime' series in the form of the Prime 21 and Prime 21+, priced at £4500 and £6500.

Both decks are now fitted with a gimbal-bearing tonearm, in place of the uni-pivot we saw in the original Prime [*HFN* Jun '15], while the '+' variant also includes an A-T built MC pick-up and custom RCA tonearm lead created for VPI by Nordost. More on these luxurious extras later, after we loop around the backstory...

VPI was founded by Harry and Sheila Weisfeld in Cliffwood, New Jersey, where it remains headquartered to this day, making all its products in the USA and sourcing materials from as close to home as possible. When Harry retired in 2013, his son Mat took over as president, and the original Prime turntable was his first design in this new role. The aim was to create a deck that remained true to the company's heritage but which would also benefit from Mat's fresh thinking.

### PRIME NUMBERS

So these new models are the latest to carry the Prime name – the '21' suffix denoting the year they were formally launched, even though both decks were first unveiled in 2020. On first acquaintance they don't look hugely different from the existing Prime turntable, but there are a number of key mods to be found under the skin. The main chassis is still made

of MDF, but where the original had a steel plate attached to its underside, the Prime 21 and Prime 21+ feature a 3mm-thick aluminium plate bonded to the top for greater strength and, it is claimed, better control of resonances.

Meanwhile, a walnut finish is now available for the base in addition to the original black, and the feet used are the same as those found on the company's aforementioned HW-40 Anniversary model. These contain integral elastomer pads for isolation and are adjustable to assist in levelling the deck.

As in the original Prime, a single belt drives a 9kg aluminium platter, which is topped with a thick felt mat. Speed change from 33.3rpm to 45rpm is achieved by swapping the belt between steps on the motor pulley, while the belt itself sits in grooves around the platter's edge, eliminating any tendency

for it to ride up and down. The motor pod has also been beefed up to further dampen unwanted vibrations, and this weighs in at 2.4kg, its shiny aluminium outer shell hiding improved internal motor circuitry.

### DELIGHT TO USE

The pod sits to the left of the new design, although with no placement jig from

VPI, it's left to the user to experiment and discover the location that offers optimum belt tension and speed stability [see PM's Lab Report, p49].

The base for the new 10.5in arm is pre-fitted for ease of set-up. The arm

itself makes use of the company's tried-and-trusted 3D printing technology for its tube [see PM's boxout, p47], the uni-pivot bearing traded for a more conventional

*'It'll dig out the merest hint of gold in those LP grooves'*



**RIGHT:** Freestanding AC motor (with new internal PCB) drives the 9kg alloy/steel platter with a rubber belt around its periphery. MDF chassis is now braced with a painted, 3mm-thick alloy top-plate



gimbal in response to feedback from customers. Nevertheless, this 'user-friendly' arm still features the same on-the-fly VTA adjustment found on its stablemates. It's a delight to use, even if some extra cue damping would help – the cueing lever can drop the stylus into the groove a tad abruptly if you're not careful!

A fine lead-out wire loops over to a connection box on the rear of the arm base, and although VPI suggests this can be twisted to fine-tune the anti-skating force this is hardly necessary as the arm also includes a perfectly serviceable – and adjustable – thread-and-lever bias mechanism. In addition to all of the above, the Prime 21+ also comes with a VPI Weisline interconnect cable made by Nordost, and a VPI Shyla cartridge (which is named after Mat's daughter).

The Shyla is built by Audio-Technica to VPI's specification and boasts a few specific modifications over the ART-9 series upon which it is based. VPI was keen to re-voice

the MC's midrange, and this is realised in tweaks to the coils, the cantilever suspension and internal damping. The stylus is a line contact type, mounted on a 0.26mm-diameter boron cantilever.

VPI claims its deck can be set up in under 20 minutes but once you factor-in the time to fine-tune VTA and bias – not to mention experimenting with motor placement – well, it took me nearly an hour. Still, this also reflects the deck's great flexibility! I should also mention that the supplied metal tonearm-alignment jig puts the typical paper/plastic efforts to shame, while the screw-on steel/Delrin record clamp is a precision-built accessory.

### SOMETHING SPECIAL

Connected to my Anatek MC-1 phono stage, Naim Supernait amplifier [*HFN* Oct '07] and PMC Twenty5.24 loudspeakers [*HFN* May '17] it took barely a half-side of an LP for me to realise this turntable really is something quite special. The Prime 21+

**ABOVE:** Seen here with black vinyl finish, the Prime 21 is also available in walnut. The 21+ features superior adjustable feet from the HW40, a new 10.5in arm and AT-ART9 MC with revised coils and suspension damping

instantly announces itself as a big and confident performer, but one never hurried or likely to be flustered in its music-making. Neither is it heavy-footed in its unaffected sense of ease and solidity, no matter what kind of material you throw at it.

This presentation is part-and-parcel of the deck's confident-sounding bass, which is typically deep, solid and rich. The Prime 21+ is more than able to rattle ornaments when required, but feed it an intricate bass line and it rises to the challenge magnificently, resolving fine low-end details with precision even with challenging – read over-complex – recordings.

The big bass notes on 'Roulette' from Night Flight's eponymous debut LP [CRC Records CRC07V] were warm and fulsome, while the introductory piano had a fine sense of realism. Samuel Holmes' vocals sounded as compelling as I could have wished for as the Prime 21+ set him up in his own space within a realistic acoustic.

### RICH PICKINGS

As the track builds to a peak just prior to the guitar solo, the soundstage is nothing if not crowded, and I have heard more than one turntable throw in the towel at this point, failing to maintain the earlier ease and spaciousness. Not so here as the Prime 21+ maintained the prevailing atmosphere while also reminding me of the recording's limited audiophile potential...

More generally, I'll admit to having a slight nagging feeling that the Prime 21+ sounded a little richer than I'm used to. There's a subtle upper-bass bloom that seemed to persist whether I used the ➔

## PRINTING HI-FI

While digital audio has progressed at a pace thanks to improved silicon and the increased sophistication and elegance of proprietary software, the advancement of hi-fi *hardware* continues to rely as much on new materials and manufacturing. For tonearms, the biggest leap in design was heralded by the introduction of SME's one-piece diecast magnesium Series V tonearm [*HFN* Jun '86] and Rega's more affordable RB300 in 1983 [Audio Milestones, *HFN* Nov '12]. But while it took two years to develop the diecasting for Rega's silicon alloy tube and bearing housing, back in 2013 VPI's Mat Weisfeld was able to swiftly prototype and produce a variant on the 'jointless' tonearm using a 3D printer. The latter technology has evolved to build solid models of modestly complex shapes and is perfect for rapid prototyping before committing to full-scale production. Because 3D printing extrudes the material outwardly – here using a high-temperature laser to build layers of a non-crystalline epoxy resin – VPI's headshell, tonearm tube and counterweight extension can be created as a single arm wand. Ironically, the process is still quite time-consuming so expect to see VPI quietly dropping the '3D' appellation as its polymer tonearm tubes are produced more efficiently, and in greater volume, in the future by injection moulding. PM

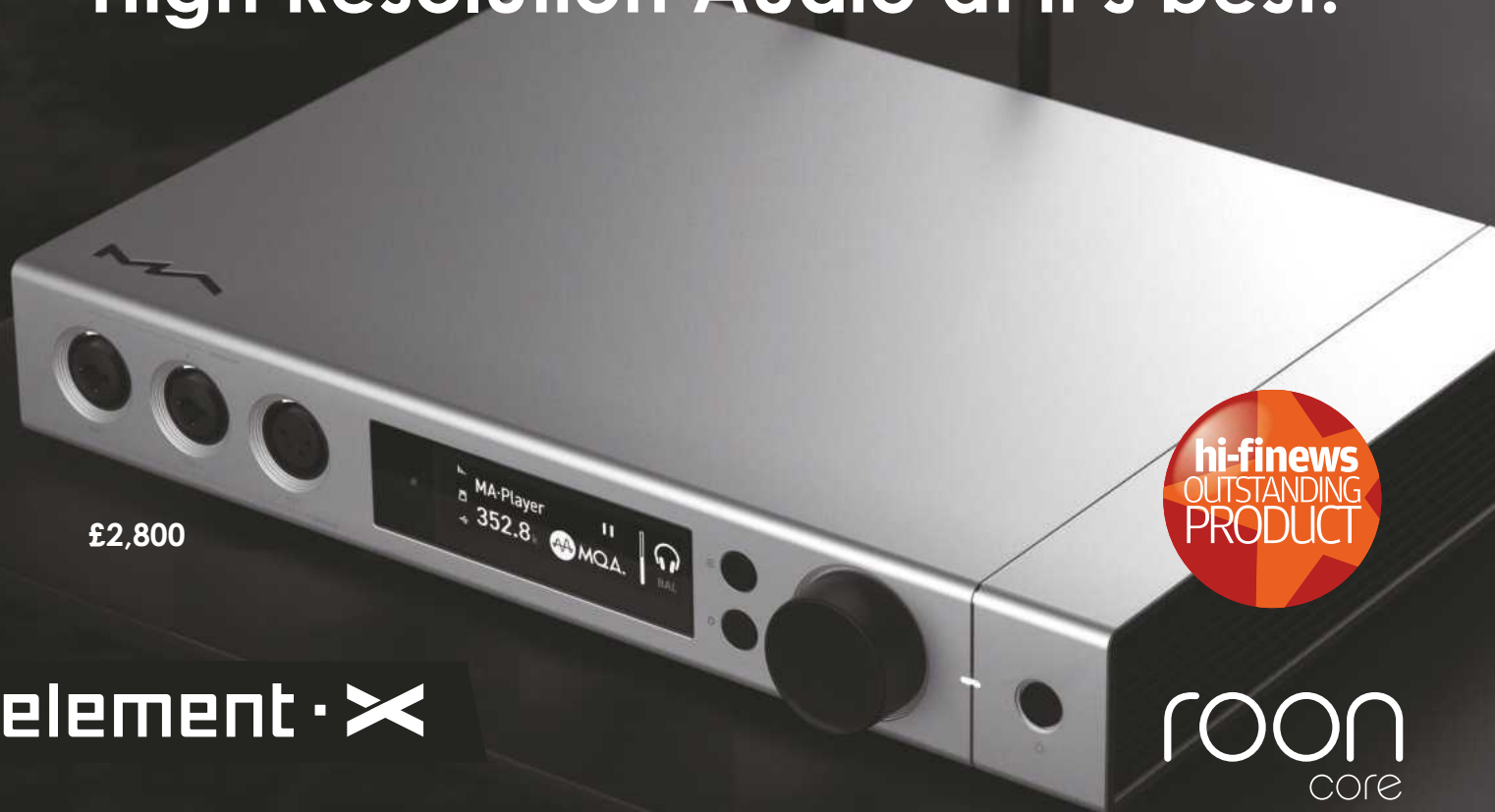


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## TURNTABLE



**ABOVE:** Exposed arm wire loop plugs into a junction box via a LEMO connector while the adjustable tower allows for arm height and VTA to be optimised on-the-fly. The Prime 21+ comes with a Nordost/Weisline RCA tonearm cable

clamp, or not, or whether I swapped out the mat for alternatives. This is a suggestion of 'character' rather than an unwelcome imposition, and never intruded on the musical performances that captured my attention over weeks of listening.

Otherwise, the ability of the Prime 21+ to find the best in less than stellar recordings is a great strength – if there's just the merest hint of a gold nugget deep in your record's grooves, it will dig it out. And when you feed the deck a truly fine recording, it comes fully to life.

### STRONG AND STABLE

'Your Heart Is As Black As Night' from Melody Gardot's *My One And Only Thrill* [Verve 1796787] was electrifying, Ms Gardot's vocals sounding both husky and intimate. Equally, the backing double-bass enjoyed a firmness and resonance that evoked the sense of a real, palpable instrument in the room. This impression was reinforced by a strong and stable central image and deep – very deep – soundstage that flooded out between and behind my PMC floorstanders. So while the Prime 21+ might not throw the sound forward of the speakers with any degree of exaggeration, the atmosphere it creates between and behind them is cavernous.

Gerry Rafferty's 'On A Night Like This' from *North And South* [London Records LONLP55] had me grinning from ear to ear. Rafferty's voice was strong and focused, but best of all was the backing percussion. This bounds around behind the main instruments like an excited puppy. Bongos on the

right? Check. Kick-drum slightly left of centre? Absolutely. The Prime 21+ captured these elements with ease and highlighted them, albeit with subtlety, making it a delight to follow their appearance as the track unfolded. The bass line also had a pleasing presence, underpinning the song in a fluid and easy manner.

Finally, I swapped the Shyla cartridge for my regular Clearaudio MC Essence [HFN Aug '17]. The Clearaudio pick-up's excellent bass tightened up the lower registers very slightly, even though it didn't disguise the deck's signature upper-bass warmth. It also revealed a little more treble sparkle than the Shyla, at the expense of the latter's rich midband quality and its more general sense of cohesion. Clearly, VPI has voiced its cartridge well – the Prime 21/tonearm/Shyla trio making for a compelling one-stop vinyl-playing solution for the enthusiast on the upgrade trail. ☺

### HI-FI NEWS VERDICT

While its assembly and set-up might not be as brisk as VPI would imply, and there are a few quirks to be encountered along the way, once up and running the Prime 21+ is a magnificent-sounding turntable package. It brings out the best from less-than-perfect recordings while also ensuring your well-produced LPs will shine. What's more, the custom-made Shyla cartridge complements it superbly.

Sound Quality: 85%

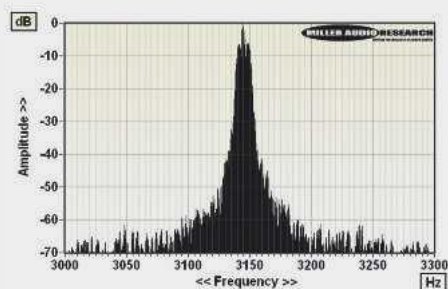


## LAB REPORT

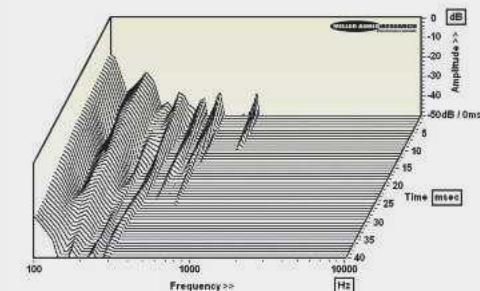
### VPI PRIME 21+

While the Prime 21/21+ features a reinforced alloy/MDF chassis, its 9kg alloy platter, 24-pole AC-synchronous motor and inverted bearing (with hardened stainless shaft, chrome ball/PEEK thrust pad and phosphor bronze bushing) are familiar VPI staples derived from the original Prime model [HFN Jun '15]. As a result there are no particular surprises when it comes to wow and flutter or rumble. The former is a moderate 0.07% (peak-weighted) with a slightly higher 0.04% low-rate wow than we measured with the Prime [Graph 1, below] – a figure highly influenced by the motor position and belt tension. Absolute speed accuracy was –0.18% (centre pulley groove) while rumble, measured through its bearing, was substantially improved over the Prime with DIN-B wtd figures of –70.4dB (through-groove) and –69.6dB (through-bearing).

The partnering 10.5in arm features a '3D printed' tube and integral headshell mounted into a robust gimbal bearing assembly that combines a very low <10mg friction, in both planes, with no detectable play. The lightweight polymer tube material contributes to a low/medium 11g effective mass but it does not confer quite the same rigidity we saw with the variable cross-section geometry of the longer '3D printed' 12in JMW Fatboy tonearm [HFN Apr '19]. The 130Hz primary bending mode measured for that arm is reduced to a lower 85Hz here [off the X-axis, Graph 2] with harmonic and twisting modes at 170Hz and 300Hz, and more rapidly dissipated modes at 400Hz, 500Hz and 890Hz. The main 85Hz mode is very strong but the other resonances are generally better damped in this polymer/resin tube than, for example, most carbon-fibre types. PM



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



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

### HI-FI NEWS SPECIFICATIONS

Turntable speed error at 33.33rpm	33.27rpm (–0.18%)
Time to audible stabilisation	3-4sec
Peak Wow/Flutter (Peak wtd)	0.04% / 0.03%
Rumble (silent groove, DIN B wtd)	–70.5dB (–70.4dB with clamp)
Rumble (through bearing, DIN B wtd)	–69.6dB
Hum & Noise (unwtd, rel. to 5cm/sec)	–56.1dB
Power Consumption	6W (1W standby)
Dimensions (WHD) / Weight	535x190x400mm / 17.5kg

# JBL 4349

Styled after its classic 1970s studio monitors, but equipped with patented 21st century horn and compression driver technology, the 4349 is a not-so-compact fun factory

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

**A**merican loudspeaker company JBL has a 75-year history – and the work of founder James Bullough Lansing dates back even further. For *HFN* readers, who are in the know, it might seem odd that the brand is now more popular on the UK high street for its extensive range of affordable Bluetooth speakers and wireless headphones. Luckily for us the company still maintains a 'serious' side, and it's from there that its two-way 4349 monitor hails. A wide-baffle speaker with a compression mid/treble driver and 300mm woofer, it can trace its heritage all the way back to the company's first creations – and couldn't be more different from a pair of budget earbuds.

Priced just shy of £7000, the 4349 is the most recent

addition to JBL's Studio Monitor series, a seven-strong range that pledges the 'same exceptional dynamics and accuracy that producers and engineers employ in leading studios', which begins with the £1500 4306 bookshelf model and culminates in the £12,000 4367 floorstander. It's not a member of JBL's Classic lineup [see boxout, p51] yet is still described by the company as having a 'retro design'.

## BIG LOVE

How retro? Well, finish options for the satin wood veneer are conventional walnut or black walnut, rather than all-the-rage gloss white or light grey, and aside from a cutaway on the edges of the front baffle, the 4349 is vehemently rectangular. Those with a penchant for the speaker stylings of the 1970s will be in their element.

It's also large. Some retailers refer to it as a 'compact bookshelf' (JBL goes for 'compact monitor'), but as it stands 74cm tall and 44cm wide you'd need an impressively hefty bookshelf to accommodate it – and even then it likely wouldn't hold the 4349's 36kg weight. Better that you stump up the £320 for

JBL's low-profile, open-frame JS-120 stands which lift the enclosures off the floor and tilt them back at the listener. The general aesthetic is purposeful, so if you whip off the grille to appreciate the size of the bass unit, and legacy blue baffle finish, you'll also expose the push-fixing holes.

## DOUBLING DOWN

For the treble, JBL is using its in-house D2415K unit – the 'D' standing for dual as the device uses

two 1.5in ring diaphragms made of Teonex polymer, two voice coils and two motors, resulting in an 'incredibly efficient design'. The

diaphragms are mounted with a phase plug behind a protective mesh grille, which is all that's visible in the recessed centre of the speaker's HDI (High-Definition Imaging) horn. This mathematically-honed waveguide is a brand speciality, also found on JBL's HDI series of floorstanding and bookshelf loudspeakers.

**RIGHT:** JBL's precision-moulded Sonoglass horn supports a 38mm compression driver with HF and UHF trims [see Lab Report, p53]. Bass is handled by a substantial, reflex-loaded 300mm pulp-coned woofer

The 4349's bass driver is a lightweight but rigid paper pulp cone with a 3in voice coil and substantial suspension. Designed for very high output with low distortion, it's tuned via a pair of front-facing bass-reflex ports down to a claimed 32Hz [see PM's Lab Report, p53]. Keeping it in check is an enclosure with 1in-thick walls and internal V-shaped bracing. The crossover network uses 'air-core inductors, wire-wound resistors and low-ESR metallised-

'It steers clear of being a mere "party speaker"'





film capacitors, and incorporates separate 'HF and UHF' attenuators that are accessed between the loudspeaker's horn and grille. These provide gentle passive tuning of the 4349's treble output [see grey traces, Graph 1 in PM's Lab Report].

Otherwise, JBL's recommendations for optimal performance include placing the 4349s between 1.8m and 2.4m apart, toeing them in if you insist on going wider. A 50cm clearance from side walls is also suggested, but with the speakers' ports front-facing they seem less fussy about their distance from rear walls.



### FEEL THE WEIGHT

Take a quick look at a pair of 4349s and you'll probably form an idea of how they sound. What else should one expect from a two-way combining a 300mm woofer and a cavernous horn than deep bass, candid highs and an in-your-face presentation? And, to an extent, you'd be right – the

## HORN HERITAGE

Established in 1946 in Los Angeles, JBL also has ties to Hollywood royalty – founder James B Lansing, in his previous company Lansing Manufacturing, developed the compression unit and bass driver of the Shearer Horn, a loudspeaker favoured by movie studios and a recipient of a 'Scientific and Technical' Academy Award in 1936. Similar designs lifted JBL off the launchpad nine years later, finding their way into use as studio monitors as the country's music industry exploded, and adopted by audiophiles at home. Breakout models included the 4320, the forebear of the brand's current Studio Monitors series, and the L-100 – its best-selling speaker, reborn in 2018 as the L100 Classic [HFN May '19] and again this year in a Classic 75 limited edition. And who could forget the Paragon, a 2.7m-wide single-chassis stereo speaker-cum-sideboard that was in production from 1957 to 1983? Weighing 390kg and featuring twin horn-loaded 380mm bass drivers, it's unlikely to be resurrected. But we can dream...

4349 does all these things if you want. Yet it steers clear of being just a 'party speaker', marrying a dynamic, wideband ability with rich resolution and a nature that's kinder than you might anticipate. First, though: the obvious stuff. Where

the 4349 stands – or squats – head and shoulders above much of the floorstanding competition is in terms of bass weight.

'There's no replacement for displacement', goes the old saying, and JBL's woofer certainly does shift air, bringing a level of physicality to the listening experience if your music warrants it. Trance track 'We Come 1' by Faithless [Outrospective; Cheeky Records, 74321 850832] thumps and pulses passionately, but equally impressive is the presentation of Prince And The New Power Generation's funkfest 'Cream' [Diamonds And Pearls; Tidal 44.1kHz], a track that's as much about a sense of groove as anything else. Here the major-key bassline bounces along, supported by punchy percussion, in a manner that's almost visceral.

### MONITOR MODE

Ostensibly, these speakers seem happy running off low power but not having a SET tube amp to hand, I settled on a modest but capable AXA35 from Cambridge Audio [HFN Sep '19] and was surprised by how easily the speakers hung off it. However, pushed hard, this combo found the 4349 prone to a brash edge, the sound of notes being squeezed out rather than dancing into play under their own steam.

'Excitable', from Def Leppard's *Hysteria* [Phonogram 830 675-2], benefited from the 4349's dynamic approach, sounding broad and deep. Yet only when bringing in a beefier, price-matched integrated, in the shape of Audia Flight's FLS 9 [HFN Feb '21], was I rewarded with a tighter, leaner feel to the 4349's bass delivery, a better grasp of instrumental subtleties and a more nuanced top-end. However sensitive the speakers are, only the big amp enabled them to show off their fullest potential.

I also felt compelled to address the 'accuracy' that is the notional calling card of any speaker designed with one foot in



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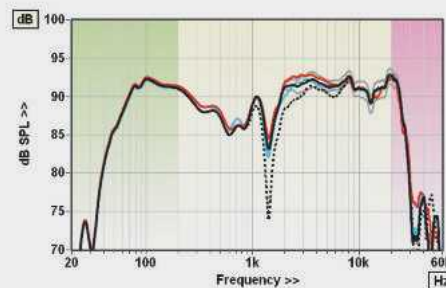
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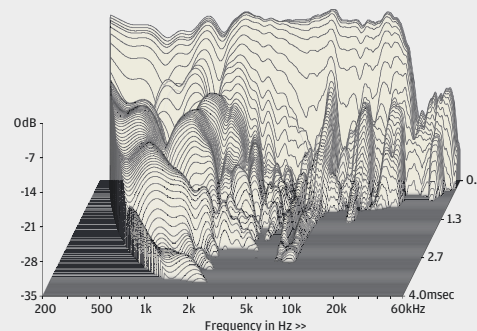
### JBL 4349

Where you sit may prove vital in getting the very best from JBL's 4349. Avoid the temptation to 'look' directly into the throat of the horn for there's a substantial -14dB notch at the ~1.4kHz crossover [dashed trace, Graph 1]. The midrange output is better integrated at a distance, but the most uniform forward response, and reduced exposure to the horn resonances [see waterfall, Graph 2], is achieved listening between the horn and woofer [Graph 1] even though the response errors are still high at  $\pm 4.2\text{dB}$  and  $\pm 4.5\text{dB}$  (but a far 'flatter'  $\pm 0.9\text{dB}$  from 2kHz-10kHz). The HF trim operates above 2kHz and the UHF above 4kHz, the compound effect of the +1dB and -1dB settings illustrated by the two grey responses [Graph 1]. The influence of the snug-fitting bass grille is not substantive [blue trace] while the 300mm pulp-cone woofer delivers reliably low distortion bass (just 0.2%/90dB SPL/1m) whether exposed or hidden. The reflex alignment is slightly 'peaky' [green shaded area, Graph 1] with a steep roll-off below 100Hz, augmented by ports tuned to 35Hz, yielding a diffraction-corrected -6dB extension of 45Hz (re. 200Hz).

With that mid/treble horn on show there's hope of high sensitivity and JBL's 4349 does not disappoint, achieving 89dB/1kHz/1m and 90dB from 500-8kHz, despite the switchback in response. JBL's nominal 8ohm impedance is accurate, the 4349 presenting a very 'easy' minimum of 7.5ohm/118Hz, well away from the highest (though not especially 'high') phase angles of  $+47^\circ/371\text{Hz}$  and  $-49^\circ/74\text{Hz}$ . There's a 6ohm dip at an ultrasonic 30kHz, but this will not be troublesome – so the 4349 is an easy enough load for triode tube aficionados! PM



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



ABOVE: Horn resonances are present at ~4-8kHz while the strong 1.4kHz mode occurs at the crossover point

## HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83V – 1kHz/Mean/IEC)	89.1dB / 89.5dB / 87.4dB
Impedance modulus: minimum & maximum (20Hz–20kHz)	7.5ohm @ 118Hz 47ohm @ 60Hz
Impedance phase: minimum & maximum (20Hz–20kHz)	-49° @ 74Hz +47° @ 371Hz
Pair matching/Resp. error (200Hz–20kHz)	1.45dB/ $\pm 4.9\text{dB}/\pm 4.2\text{dB}$
LF/HF extension (-6dB ref 200Hz/10kHz)	45Hz / 27.5kHz/26.2kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.2% / 0.3% / 0.9%
Dimensions (HWD) / Weight (each)	737x445x343mm / 38kg

**LEFT: Bi-wire/bi-amp-compatible 4mm speaker terminals come courtesy of JBL's split 1.5kHz crossover. Note the wood-finish veneer wraps to the rear of the cabinet**

with, for example, Lu Kang's Spoey230 [HFN Dec '20], but JBL's horn waveguide lived up to its promise of avoiding overt directionality.

While its midrange tone and detail are commendable, bass and sparkle remain the stars of the show, leaving the 4349 never quite sounding as 'in love' with the music as you might want

for the price. But a counterpoint to this is the sheer dynamism on offer. This speaker never failed to respond to transients, enjoying the rock 'n' roll theatrics of The Dead Weather's '60 Feet Tall' [Horehound; Tidal 44.1kHz], while bringing a surging, room-filling scale to John Williams' 'Theme From Jurassic Park' [Jurassic Park Original Motion Picture Soundtrack; Tidal 44.1kHz]. And 'dynamic' is a useful catchall for the 4349's general demeanour. There's a thrilling energy here, coupled to a surprising nimbleness considering JBL has used one 300mm bass unit where other companies might have opted for a smaller twosome. ☺

## HI-FI NEWS VERDICT

The 4349 is unlikely to convince horn sceptics they should jettison their three-way floorstanders, as the sonic signature of this two-way doesn't depart from the established JBL template. They sound big, with abundant energy to match, and are backed-up with delectable bass handling. They aren't sniffy about what you power them with, either. Fans of the form factor, with low-power tubes, will surely lap them up.

Sound Quality: 80%

0 - - - - - 100



the studio monitor camp. As much as I tried to provoke the 4349 into enveloping me with cloying warmth – via the likes of Pink Floyd's 'Wish You Were Here' [Eponymous; Tidal Master] – it refused to play ball, preferring to leave the grit and texture of instruments unpolished.

## STARS OF THE SHOW

Considering the 1.5kHz crossover point between the high-frequency driver and bass unit – high for a 300mm woofer – I was worried the drivers would pass each other by like ships in the night. But following JBL's placement recommendations and sitting a little further back than I might normally, they seemed to mesh together well enough.

The Rolling Stones' country-tinged ballad 'Wild Horses' [Sticky Fingers; Polydor 376 483-9] sounded sweet and lucid in the midrange, Keith Richards' 12-string acoustic guitar adding a shimmering gloss to Mick Jagger's emotive vocal delivery. Meanwhile, Charlie Watts' drumming arrived at the start of the chorus with just the right amount of punch.

Using the JS-120 stands yielded a better soundstage, although even without them these short-form speakers don't just throw their efforts at your carpet. There's less of a sense of expansion beyond the cabinet edges than I experienced



# PS Audio Stellar Strata

Dubbed PS Audio's 'finest all-in-one music component', the Strata combines network streaming, USB and other digital audio inputs with a 'Gain Cell' pre and ICEpower amp  
 Review: **Mark Craven** Lab: **Paul Miller**

**B**rowse the catalogue of Colorado's PS Audio and you'll find both monstrous and slimline monoblock amps – the BHK Mono 300 [*HFN* Jul '16] and Stellar M1200/M700 [*HFN* Jan '21 and Apr '20], respectively – together with stereo power amplifiers, streaming DACs, integrated amps and preamps. And then there's the Stellar Strata, which in some ways is a distillation of PS Audio's diverse product line and tech into one box.

Living up to its enticing 'just add speakers' status, the standard-width (432mm) metal-chassis Strata – available in either black or silver – combines an analogue preamplifier, wired/wireless streaming module, 384kHz/DSD-capable DAC and Class D amplification rated at 100W/8ohm (and 150W/4ohm). It also accommodates private listening via its full-size headphone output and associated Class A amp, which is rated at 300mW/300ohm. Meanwhile PS Audio aims to simplify your enjoyment of streamed music via its Connect app (free for Android and iOS devices) – and all this functionality is wrapped in a slender, 75mm-tall unit, and given a £2995 price tag.

There is something obviously missing from the Strata's spec sheet, however: a built-in phono stage. And for good reason as PS Audio also sells the Stellar Phono [*HFN* Feb '20], although as this is priced at £2500, vinyl-loving Strata buyers may well end up looking elsewhere. Other features of the competition, such as Bluetooth integration or room EQ, are also absent.

## DÉJÀ VIEW

Styling follows the by-now familiar Stellar template, the series representing the company's near entry-level with only the bijou £800 Sprout100 integrated ranged below. Indeed, the casework here is nigh-on identical to that of the M700

and M1200 monoblocks, and S300 stereo power amplifier, save for the necessary inclusion of a volume control, the front-panel interface and aforementioned headphone output. As such, it looks neat and tidy, if a little conservative.

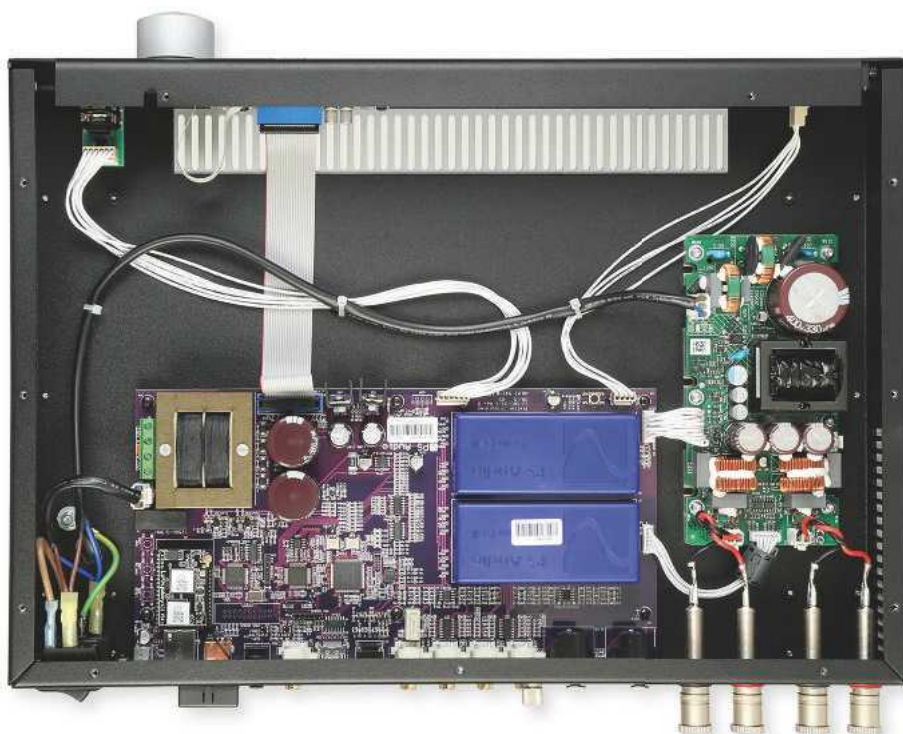
Rear panel inputs are separated into digital and analogue banks, the former offering two coaxial, one optical, USB-B and an I<sup>2</sup>S terminal for connection to, for example, PS Audio's PerfectWave SACD transport. The analogue selection comprises three pairs of unbalanced RCA and one balanced XLR input. Sandwiched between is an RCA output for connection to an active subwoofer or external amp, and an auxiliary RCA input set to a fixed volume for use with an AV processor in Home Theatre Bypass mode.

Under the hood, the Strata features an ICEpower Class D amp module [see PM's boxout, p55], fed by PS Audio's fully balanced 'Gain Cell' preamp. Used across the Strata range, this blue block [see inside shot, below] aims to better the

performance of a conventional volume control. It uses a combination of IC op-amps and discrete FETs configured into a mixer, but instead of combining (mixing) two audio feeds, it employs a variable DC feed to steer the audio up or down in level. How well this works is heavily influenced by the matching of the transistors in each half of the cell [see *HFN* Apr '20].

## TAKING CONTROL

The Strata's remote handset [p57] shows PS Audio has been paying attention to developments in the wider consumer electronics world, as it has a distinctly un-hi-fi feel to it. Eschewing the trend for aluminium bricks with minuscule buttonry, it's sleek, compact and delivers sensibly placed volume controls, access to digital filter and phase tweaks, and direct keys for inputs. The only blot on its copybook is the numerical labelling of these latter buttons, which means you'll need to remember, for example, that input #7 is optical and input #9 is streaming. Yes, you can rename the



**RIGHT:** PS Audio's variable gain op-amps [blue boxes] drive an ICEpower 200AS2 Class D amp module [far right], incorporating a switchmode PSU. LinkPlay network and XMOS USB solutions, plus an ESS DAC, service the digital inputs



inputs displayed on the Strata itself, but not on the remote control...

The amp's front panel window shows the current volume (and can be dimmed entirely if you want), but it's also the interface for accessing deeper features, including Wi-Fi set-up, balance control, and trims for headphone output and input volume. Making adjustments is somewhat fiddly while the small display – barely an inch tall – means close inspection is required. The same limited visibility applies to track metadata or the sample/bit-rate information that is displayed with streamed sources.

I'll also admit to being a little wary of the PS Connect app, as posts on the company's online forum suggested there have been teething issues since it launched last summer. However, once the Strata was connected via wired Ethernet (it repeatedly

drew a blank with my Wi-Fi network) the Android app automatically located the amp, and just a couple of minutes later I was playing music from my Tidal account via a user-friendly interface.

The app also allows for playback from Qobuz, Amazon Music and other services, plus network shares or locally stored files. It's a solid control option for smart device owners, but not without niggles, chief among them being its incompatibility with Tidal's hi-res content. It also allows a very coarse volume control from your 'phone, which should be treated with care.

*'It made easy work of Sir George's layered production'*



#### PUNCHING UP

I was intrigued to hear how the Stellar Strata would fare in comparison to the company's M1200 monoblocks [HFN Jan '21]. Would the reduction in power output

**ABOVE:** Sharing the same two-piece case as the other 'Stellars' the low-consumption Strata amp is elegantly simple. Volume is offered directly but the remote [p57] handles all other functions

and step-down in ICEpower technology be apparent? The answer was yes, but in many ways the Strata sounded like a fairly close relation of its power-only partner, showcasing a penchant for well-rounded, nuanced bass and rhythmic agility with my reference B&W 705 S2 standmounts.

With some material it was less purposefully dynamic, but still impressed in punch-for-pound terms [or, as PM puts it in his Lab Report, p57, it's 'more powerful than it looks']. Both the preamp and DAC stages proved musically minded, too – listening sessions never ran the risk of fatigue, thanks to a smooth approach even while the Strata's depth and breadth of soundstaging, and precise unpicking of instruments, suggested a forensic nature.

The Beatles' 'I Want You (She's So Heavy)' from *Abbey Road* [Tidal Master], is a

track that feels like a deliberately dark and dour riposte by John Lennon to the jolly, Ringo Starr-penned 'Octopus's Garden' that precedes it. PS Audio's one-box certainly made easy work of Sir George Martin's multi-dubbed production, ensuring bass, guitar, drums,

vocals and Moog synthesiser effects were well separated and easy to focus on.

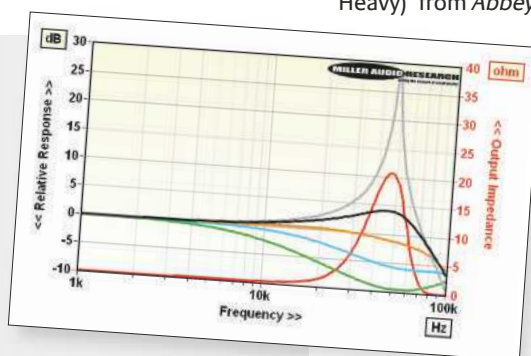
Yet it sounded live and organic too, avoiding adding a slick sheen to Lennon's strained vocals or the chaotic, sensory overload of its extended outro. I pushed the volume higher (the remote, happily, is very responsive) and the Strata's sound retained its clarity and smoothness despite the added pressure to perform.

Segueing straight into *Abbey Road*'s 'Here Comes The Sun', the amp felt right in its element, particularly with the delicate acoustic guitar that kicks the song off, ➔

#### FIRE AND ICE

There's no shortage information on PS Audio's website about the proprietary building blocks employed in the Stellar Strata – its 'Gain Cell' op-amp receiving comprehensive discussion – but 'ICEpower', once a B&O technology, and 'Class D' are nowhere to be found. Which is a pity because, evidently, PS Audio has selected these OEM modules for use as the beating heart of its amplifiers for reasons of performance. So why not celebrate the fact?

In practice, PS Audio's choice of ICEpower's '200W/4ohm' 200AS2 stereo Class D amplifier for the Strata brings with it far greater parallel with the Stellar M700 [HFN Apr '20] than the M1200 monoblock [HFN Jan '21] which features ICEpower's latest 'Edge' version of its technology. So it's the M700 and Strata that retain the familiar foibles of 'traditional' Class D amplifiers. Here the module's inductive output filter [the two coils, lower right of inside shot, p54] causes a rise in output impedance at ultrasonic frequencies [up to 21ohm/48kHz, red trace, inset Graph] that impacts on both distortion and response with changes in loudspeaker load. Unloaded, the Strata (ie the 200AS2) has a phenomenal resonance/response peak of +29dB/49kHz [grey trace, inset Graph]. Into 8ohm [black trace] it rises to +1.8dB/20kHz before peaking at +4.2dB/46kHz, but is 'flatter' into 4ohm at +0.3dB/20kHz [orange] before drooping to -2.2dB/20kHz into 2ohm [blue] and -5.7dB/20kHz into 1ohm [green]. So the treble response of the Strata may depend very heavily on your choice of partnering loudspeaker. PM



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## NETWORKED AMPLIFIER



**ABOVE:** Three line ins (two on RCAs, one balanced on XLR) are joined by an HT bypass, preamp output and speaker outputs on 4mm terminals. Digital ins include wired/wireless Ethernet, USB-B, optical, two coaxial and PS on an HDMI socket

which rang out clean and distinct. There was an appreciable spread to the sound, the image pushed toward me with George Harrison at its centre, and it did this without losing its sense of cohesion.

Using the streaming 'Bridge' input enables experimentation with PS Audio's digital filter trio – 'Slow Roll-off Linear Phase', 'Fast Roll-off Minimum Phase' and 'Fast Roll-off Linear Phase'. The manual states that 'Slow' is the default because the company found it the 'most musical sounding'. As my own A/B comparisons with the fast roll-off alternatives yielded little obvious difference, I was happy to take its word for it. Other sources, speakers – and ears – might beg to differ.

### FUNKY FEELING

After a sojourn into headphone listening proved the driving ability of the Strata's onboard amp, it was back to my B&Ws. Nik Kershaw's 'Wouldn't It Be Good' [*Human Racing*; 44.1kHz/16-bit, via the PS Connect app] caught out the Strata with its triumphant brass chords and swinging dynamics – this track never quite seemed to open up fully, a characteristic also evident across other material.

Yet the strengths of PS Audio's Class D power plant remained in evidence here, not least in the propulsion of the melodious bassline and the weight of the kick-drum.

**LEFT:** Plastic remote offers control over the analogue and digital inputs, volume, mute, absolute phase, HT bypass and choice of three digital filters



Mark Ronson's 'Uptown Funk' [*Uptown Special*; Columbia 88875053102] saw the amp digging gleefully into the staccato rhythms, bringing a touch of warmth to the instrumentation, and not burying the faint wah-wah guitar licks. The Strata's ability to keep pace with the overdriven energy of Exodus's 'Salt The Wound' [*Blood In Blood Out*; Nuclear Blast 27361 33002] also revealed its value as a good all-rounder. True, neither of these tracks are likely to be deemed 'demo-worthy', but they sounded elevated here to another level.

The amp saved its best 'til last, however, with the SACD of Lyn Stanley's wonderfully-recorded *Live At Studio A* [ATM 3019]. A jazzy redux of Bruce Springsteen's 1985 boogie 'Pink Cadillac' was conveyed with the intimacy intended, right from the opening '1, 2, 3, 4...'. The feel of studio space was well articulated, while brushed cymbals, double-bass and tinkled piano keys provided a feather-soft bed for Stanley's idiosyncratic vocal delivery.

In the hands of a lesser amp, this recording can easily lose its charm, which isn't so much the notes being played as the way they're delivered. Here it sounded effortless. ☺

### HI-FI NEWS VERDICT

There are degrees of 'all-in-one', and PS Audio's Stellar Strata isn't as well featured, easy to use or as glamorous as some rivals. Yet get down to the nitty gritty of actually listening to music and this compact Class D amp delivers the goods. Buoyant bass, a rich midrange and well-managed treble are joined by three-dimensional soundstaging, plus that extra layer of nuance that makes it routinely captivating.

Sound Quality: 82%

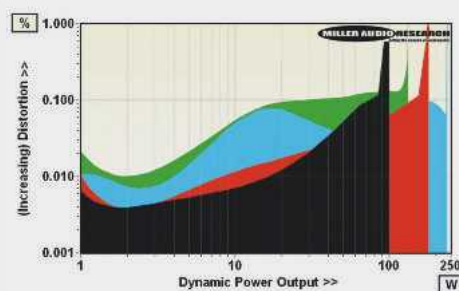


## LAB REPORT

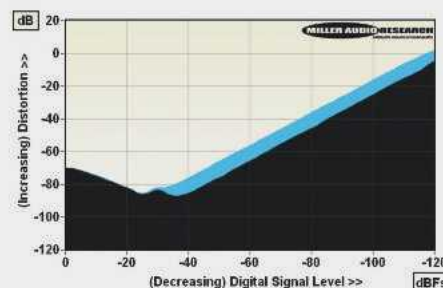
### PS AUDIO STELLAR STRATA

A key feature of all Class D amps, particularly those running from switchmode PSUs, is very high efficiency (~85% here) and cool running from, typically, a very slim chassis. So the Stellar Strata is more powerful than it looks, matching its 150W/4ohm rating at 110W/8ohm and 175W/4ohm, the Class D architecture yielding little or no difference under dynamic conditions at 100W, 180W and 235W into 8, 4 and 2ohm, falling to 135W/1ohm as a result of its 11.6A current limit [see Graph 1, below]. The trend of gently rising distortion of 0.003%/1W to 0.0085%/10W and 0.035%/100W is slightly lower under continuous conditions but the steep increase in THD vs. frequency from 0.0075%/1kHz to 0.055%/10kHz and 0.12%/20kHz (all 10W/8ohm) is a function of the amp's output filter. The latter also influences frequency response and sensitivity to speaker loading [see boxout, p55] but the 81dB A-wtd S/N ratio (re. 0dBW), while lower than 'average', is still a few dB ahead of other, similar, Class D amplifiers.

The performance of the ESS 9016K2M-based DAC stage and 'Gain Cell' preamp is indirectly influenced by the ICEpower amp because various functions are powered directly from the latter's switchmode supply. Tested at the '77' volume position (2.1V output re. 0dBfs), the A-wtd S/N is a generous 105dB but jitter is very high indeed via all inputs at 6500psec and 3100psec (48kHz and 96kHz/24-bit, respectively). THD falls to a minimum of ~0.004% over the top 40dB of its dynamic range through mid and high frequencies [Graph 2, below] but increases to ~0.1% at low bass frequencies. Response depends on choice of filter (fast/slow linear phase and minimum phase) at -0.3dB/20kHz, -3.3dB/20kHz and -0.4dB/20kHz, respectively. PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 11.6A



**ABOVE:** Distortion vs. USB 24-bit digital signal level over a 120dB range at 1kHz (black) and 20kHz (blue)

### HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	110W / 175W
Dynamic power (<1% THD, 8/4/2/1ohm)	100W / 180W / 235W / 135W
Output impedance (20Hz–20kHz)	0.11–1.50ohm (98ohm, line)
Freq. resp. (20Hz–20kHz/100kHz)	+0.0 to +1.8dB/–6.8dB
Digital jitter (USB at 48kHz/96kHz)	6500psec / 3100psec
A-wtd S/N ratio (re. 0dBW/0dBfs)	81.1dB (Analogue) / 105.1dB (Dig)
Distortion (20Hz–20kHz; 10W/–3dBfs)	0.007–0.12% / 0.13–0.03%
Power consumption (idle/rated o/p)	17W / 240W
Dimensions (WHD) / Weight	432x76x305mm / 9.5kg

# Denon DL-A110

Still in production since 1964, and instantly recognisable to audiophiles across the globe, Denon's classic DL-103 moving-coil pick-up gets the Anniversary treatment  
 Review: **Ken Kessler** Lab: **Paul Miller**

**D**on't let the model name confuse you if our pictures assault your memory bank: this £499 Denon DL-A110 phono cartridge is the best-selling, much-loved sexagenarian DL-103, only with a slick headshell and packaging plush enough for a wristwatch. This anniversary offering joins Denon's AVC-A110 AV amp, PMA-A110 integrated amplifier and DCD-A110 SACD player [*HFN* Dec '20], the quartet marking the company's first-century-plus-10. (Oddly, there's no record deck...)

For this special edition, and for the casual observer, the only thing changed is the presentation. Instead of a minimalist cardboard box and plastic case, the DL-A110 comes in a velvet-lined leather box, oozing luxury. Inside is the familiar low-output, 9g moving-coil classic – originally conceived for professional/FM broadcast use – with its aluminium cantilever, spherical stylus and the best-ever body for alignment.

Why doesn't every cartridge have a bold white line down the front to aid in setting azimuth, and slab sides for easy reading on a protractor? Of course, there are differences in performance with this latest model, not least a boost to output level, if for no other reason than materials (magnets) and running production changes have necessarily evolved over nearly 60 years [see PM's Lab Report, p61].

## IN HAND

Allowing for celebratory license, Denon tells proud owners that this cartridge was 'meticulously hand-spun in the Denon Audio Works factory in Shirakawa, Japan just as it was in the 1960s [see inset

picture, p59]... maintaining the original headshell design'. For the DL-A110 kit, this lightweight silver-graphite universal headshell is aimed at true anachrophiles, Denon safely assuming that these enthusiasts, especially in Japan, will be using arms equipped with the bayonet fitting first seen on Ortofon's SPU in 1958, and later adopted by myriad tonearm manufacturers.

## CODE BREAKER

Ortofon eventually enabled its SPUs to work in fixed-headshell arms by

releasing the shell-less N-suffix models, recovering business lost to customers who did not use Ortofon arms, Acos Lustres, SME 3009s/3012s, or others with the bayonet mount. But, despite the fact that the DL-A110 can be

removed from the headshell, it remains a pain to connect and screw into place.

While I appreciate that the anniversary headshell here is a cool and desirable part of the package, I would posit that most modern vinyl users spending circa-£500 on an MC will own fixed-headshell tonearms. Flat Earthers converted the faithful a lifetime ago into accepting that no tonearm with a removable headshell could provide the same rigidity.

Regardless of that argument, I'm guessing there will be customers for this who will do what PM and I had to do to review it: remove it from the headshell. But

**LEFT:** Following on from Denon's standard DL-103 and the more recent DL-103R [*HFN* Jul '09], this Anniversary model has its copper coil windings shielded from dust by a snug-fitting, clear plastic wrap



**ABOVE:** No fancy materials here as a tried-and-tested double-walled aluminium cantilever is fitted with a solid diamond stylus featuring a 0.5mm spherical tip

disconnecting the cartridge leads reveals that Denon still does not colour-code its pins. Perhaps it assumes the majority will stay pre-fitted and pre-wired to the shell, so why bother? But hands up, those who have memorised the red/green/blue/white identification of  $\pm$ L/R pins. And even if you do remember them, the back is hard to read if you lack macro vision, or access to the photo taken by PM on p61.

## GOING SPARE

If that wasn't enough to make me rue Denon's decision to leave the original DL-103 utterly untouched, there's worse. This will ring a bell with any retailer who sold a load of these back in the day – and the DL-103 was hugely successful. It's an inescapable fact that the slotted sides for the mounting screws are the absolute worst cartridge fixing set-up this side of the red plastic clip used by Deccas.



If using the DL-103 in DL-A110 guise as a pre-fitted item, this isn't an issue: the screws are perfect for it. Unfortunately, our sample (all samples?) didn't come with spare nuts-and-bolts for easy mounting in fixed headshell arms. Trust me: the space at the bottom of the cartridge body calls for long screws with tiny heads, or if using them with the screws going down through the tonearm slots, for equally tiny nuts.

Even if you have a bunch of them – I found some that worked, from another cartridge – you simply cannot tighten them to reasonable levels without deforming the DL-103's body. Having fitted dozens of DL-103s in my retail days, I knew the drill but it would have improved the experience if Denon had made the DL-A110 with colour-coded pins and closed, modern-diameter lugs.

For you purists shouting 'Heresy!', I don't see anyone complaining about other classics of pension age still on the market and which have been updated or refined with restraint: Klipschorns, the McIntosh MC275, London cartridges (*née* Deccas), the aforesaid Ortofon SPUs, *etc.* Rant over because, at a mere 57 years young, the Denon DL-103 remains an all-time great.

## PARTY LIKE IT'S 1964

Adding to the celebrations, for those who absolutely want the DL-A110 version to mimic the original, I compared the individual factory printouts for the newcomer with that for my vintage DL-103 – both undertaken with TRS-1005 test records, at 20°C and 2.5g downforce. And wow, were they close with near-superimposable response traces and claimed output levels that seem barely to have changed – 0.35-0.37mV for the oldie

**RIGHT:** Bulky, no-nonsense construction is nothing if not purposeful, while the slot at the front of the body, and vertical white stripe, are a boon to quick and easy cueing



and 0.37-0.39mV for the DL-A110. In practice, and not unexpectedly, the DL-A110 reveals itself to be somewhat slicker [see PM's Lab Report, p61].

For me, this made little difference in use: the Denon DL-A110 may be a low-to-mid output MC design, but it's not an awkward device and I tried it without issue through four phono stages, ranging in price from £399 to £1500. It responds to fine tuning, and the ideal load was set by ear, depending on the phono stage. Suffice to say the DL-A110 responds to experimentation with load settings, starting at 100ohm, most obviously with absolute levels, bass snap and treble attack.

What doesn't bear messing with is either the tracking force or VTA, the latter just perfect when the top of the cartridge is absolutely parallel to the LP. The first album I played

rewarded me with one of those flashbacks – nostalgia, not acid – to the days when a DL-103 was my most prized cartridge. What I was looking for was that gloriously wide soundstage, and, boy-oh-boy, did I get it. The trial-by-yardstick was Charles Mingus' *Ah Um* [Mobile Fidelity UD1S 2-010 One-Step], which was recorded five years before the DL-103 was born.

## SPACE NEEDLE

It was actually a bit embarrassing, because I bought into the propaganda about spherical styli and upgraded a DL-103 for the elliptical DL-103D [see boxout, below] but even the challenge of this amazing pressing did not suggest for a moment that the pick-up's groove tracing was amiss. The

DL-A110 retains all the silkiness and air that I recalled, though side-by-side playback with my own elderly DL-103 revealed that the latter had aged. The fresh 'DL-103 in the DL-A110 box' delivered detail with the authority of much newer designs, if not quite to the forensic levels afforded by more radical stylus profiles.

Where this monumental jazz release served best was in allowing the DL-A110 to demonstrate beyond any doubt that the DL-103 template can recreate space with authority matched by few other designs. It has always been thus for this listener, even better with the DL-103D, and it could have been made just for playback of a small, intimate jazz ensemble. I wish Marantz's Ken Ishiwata were still with us to confirm whether or not that was standard fare on Japanese FM radio 50 years ago. While the Denon DL-103 was never a ➔



## HALF CENTURY AND COUNTING

Hand-assembled throughout its long production lifetime [see inset picture], the DL-103 is a true hi-fi icon that begs to be used in 'period' systems with BBC monitors, EMT turntables and other vintage kit. While the charcoal-grey-bodied DL-103 with spherical stylus is the definitive purchase from a purist viewpoint, its entry into the consumer sector (like the LS3/5A and others that also made the leap to hi-fi) has generated numerous variants, most recently the DL-103R with 6N copper wiring [HFN Jul '09]. Perhaps the most successful and desirable of these spin-offs was the DL-103D with mushroom-coloured body, launched in the mid-1970s. Its design addressed those consumers who were put off by conical styli and the 2.5g tracking force. The DL-103D offered an elliptical stylus, lower tracking force and higher compliance, and it – along with the DL-103S with Shibata tip – was the first of over a dozen models that Denon would release in the wake of the original. Standouts for collectors included the DL-103 Gold to mark the DL-103's 20th anniversary, and many with special wiring such as the DL-103C1 with LC-OFC coils and the DL-103GL Gold Limited with 4N-purity gold coils.



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## CARTRIDGE

**RIGHT:** Open lugs will accommodate a variety of mounting hardware but – frustrating for some – after well over 50 years of production, Denon still does not colour code its cartridges' contact pins!

paradigm of absolute refinement, arguably limited by the stylus shape, it was always an involving cartridge good for long sessions.

The piano on this LP had sparkle consistent with the last cartridge I used, the DS Audio Grand Master at 25x the price, or 100x with Grand Master PSU and equaliser [*HFN* Feb '21]. It was not as extended nor as fast – I didn't expect it to be – but in its own way it was as satisfying, especially if one maintains a sense of context, which any reviewer must.

### ON THE LEVEL

Along with the Ortofon SPU of even hoarier vintage, the DL-A110's sound surpasses its price category because it is a prime example of why some of us prefer moving-coils. It has airiness, body and authenticity for which it sacrifices the surgical precision of the best moving-magnets. Think of it like valves versus solid-state, and the Mingus LP exploits this.

More of a trial, then, would be a pure studio creation that doesn't go for a live feel, and there was nothing better than Whitesnake's *Love Songs* [Rhino R1 1643449]. Powerful guitar work with crisp attack, bellowing rock god vocals and other excesses were handled with both grace and assurance, attesting to the need for a broadcaster's cartridge to handle everything equally.

Through LP after LP, from the seductive vocals of Carly Simon



on her 1972 album *No Secrets* [Speakers Corner ELEKTRA75049] to the gravelly singing of Dr John on *The Sun Moon & Herbs* from 1971 [Speakers Corner ATCO SD33-362], the DL-A110 was an exercise in equanimity and consistency. Is this a bad thing, that such an affordable cartridge is also a great leveller?

There is but one matter we must address. The DL-A110 *sans* headshell and packaging is still available as the DL-103, as is the DL-103R, and both sell for less than the DL-A110. If you can use the headshell, and enjoy the prestige of owning a 'special', then buy the DL-A110. Otherwise, consider the DL-103 on its own for £269, or the DL-103R [*HFN* Jul '09] with 6N copper for £349. Whichever option you go for, you *will* love it. ☺



**ABOVE:** The DL-A110 is supplied with an 'exclusive' silver-graphite headshell – total weight, with hardware, is 18.5g

### HI-FI NEWS VERDICT

What can I say? You could have dug out back issues for reviews of the Denon DL-103 from decades ago, and all that's changed is the price – and it's still a bargain. This is as close to time-travel as it gets, an opportunity to buy a legendary component that's as fresh as it was 57 years ago. It still has all the smoothness, the magic, the soundstage that made it good enough for Japanese FM radio. Thank you, Denon!

Sound Quality: 85%



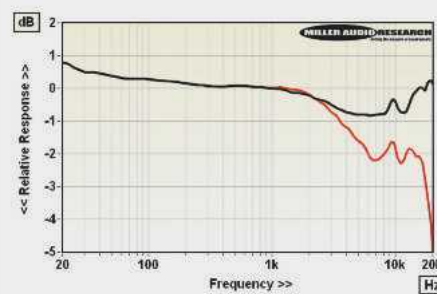
## LAB REPORT

### DENON DL-A110

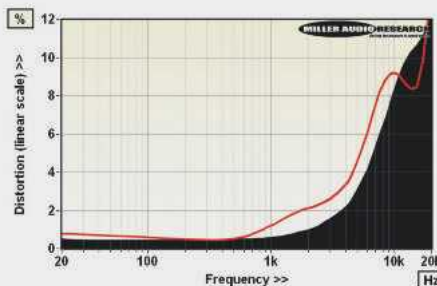
This iconic MC design offers a useful 0.55mV/200ohm output (re. 1kHz/5cm/sec) – albeit with a moderate 0.85dB channel imbalance in our sample – which is some 3dB higher than the rated 0.39mV that came with the certificate. The reference response also supplied with each DL-A110 shows a slightly 'smoother' top-end than realised here with separate lateral (L+R) and vertical (L-R) cuts [black and red traces, Graph 1]. The mild resonance seen at 9.5kHz may be a reflection of that long, double-walled alloy cantilever's finite stiffness. Interestingly, the peak is far less obvious on response traces measured using a stereo cut where the MC mechanism is moving in both planes simultaneously. Answers on a postcard to the usual address...

There's also a slight generator asymmetry, the left channel having a milder treble – dipping to –2dB/10kHz and –5dB/20kHz [right channel illustrated in Graph 1]. Distortion is moderate, the unequalised figure amounting to 2.2% at 1kHz/5cm/sec (0dB) while the RIAA equalised trace increases from 0.5-12% (lateral) and 0.6-12% (vertical) across 20Hz-20kHz at –8dB [see Graph 2]. Nevertheless it's clear to see that the peak in distortion is deferred to very high frequencies just as its 'character' is well matched across the stereo soundfield.

Tracking is aided by the high 2.5g downforce, achieving ~75µm via both channels, respectively, and keeping hold of a high +15dB groove modulation (re. 315Hz/5cm/sec) at ~0.3% THD. VTA is spot-on at 18-20° but the dynamic compliance is very low at ~8cu, suggesting it is best matched with medium-to-high mass tonearms if the resonant frequency is to be pushed down below 12Hz. PM



ABOVE: Frequency response curves (–8dB re. 5cm/sec) lateral (L+R, black) versus vertical (L–R, red)



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/weight	Moving-coil / 8.5g
Recommended tracking force	22-28mN (25mN)
Sensitivity/balance (re. 5cm/sec)	550µV / 0.85dB
Compliance (vertical/lateral)	8cu / 13cu
Vertical tracking angle	18degrees
L/R Tracking ability	75µm / 75µm
L/R Distortion (–8dB, 20Hz-20kHz)	0.85–11.5% / 0.50–12.1%
L/R Frequency resp. (20Hz-20kHz)	+0.9 to –4.5dB / +0.9 to –0.9dB
Stereo separation (1kHz / 20kHz)	33dB / 25dB

## Hegel V10

For a brand that once suggested it was never going to produce a phono stage, the vinyl revival has proved an irresistible force. So is Hegel's V10 firing on all cylinders?

Review: **Adam Smith** Lab: **Paul Miller**

It's always welcome when individuals or companies offer up their future plans. If not, we'd never have known that Sean Connery was to abandon James Bond after 1971's *Diamonds Are Forever*, that Ferrari would not be launching an SUV and that Norwegian hi-fi manufacturer Hegel had no intention of ever making a phono stage. Of course, Connery *did* return to his role of suave super-spy in 1983's *Never Say Never Again*, Ferrari's Purosangue SUV is due later this year, and here I am writing about Hegel's £1350 V10 phono stage.

I cannot speak for Connery or Ferrari, but I *can* tell you that Hegel's about-turn was due to a combination of factors. Firstly, several projects were in full swing at the company's Oslo HQ, but all were digital in nature so the 'analogue guys' were a little light on work and looking for a project. Secondly, there's that small matter of the vinyl revival putting more than a little pep back into the LP-spinning market.

### TAKING A DIP

The V10 has its roots in a simple phono amplifier company founder Bent Holter designed for his own use some 15 years ago. This has now evolved into a well-specified unit able to cater for both MM and MC cartridges and which offers unbalanced inputs plus unbalanced RCA and balanced XLR outputs.

Power is provided by an external PSU, slightly bulkier than the average 'wall wart' and custom-designed for the V10 to sport two separate 18V feeds. This includes a Y-shaped lead with dual plugs that connect into a pair of recessed sockets located in a void underneath the chassis of the V10 itself [see pic, p65]. This void also acts as a physical barrier between the PSU regulation inside the front of the amplifier and the audio/RIAA circuitry, which is located to the rear [see pic, opposite].

**RIGHT:** PSU regulation [left] is separated from the J-FET based +20dB MC gain stage [right, centre] and MM/MC RIAA eq stage [right, top and bottom]. The latter employs a mix of discrete transistors and IC op-amps

Setting-up the V10 to best match the gain and loading requirements of your pick-up is achieved via two rows of DIP switches [see detail, p65]. Yes, these are fiddly things at the best of times, but the approach is not uncommon in phono preamps and it's an efficient – read least costly – route to offering a comprehensive range of options. In this instance Hegel is using ten DIP switches per channel.

Of these, the first two toggle a subsonic filter that operates below 20Hz, while the third and fourth bring added boosts of +5, +10 or +12dB to the standard MM and MC gains. The latter are specified as +34dB and +54dB, respectively, through the unbalanced outputs, while the balanced outputs increase this to +40dB and +60dB [see PM's Lab Report, p65].

The fifth, sixth and seventh switches select load capacitances of 100, 147, 200, 220, 247, 320, 420 or 467pF for the MM

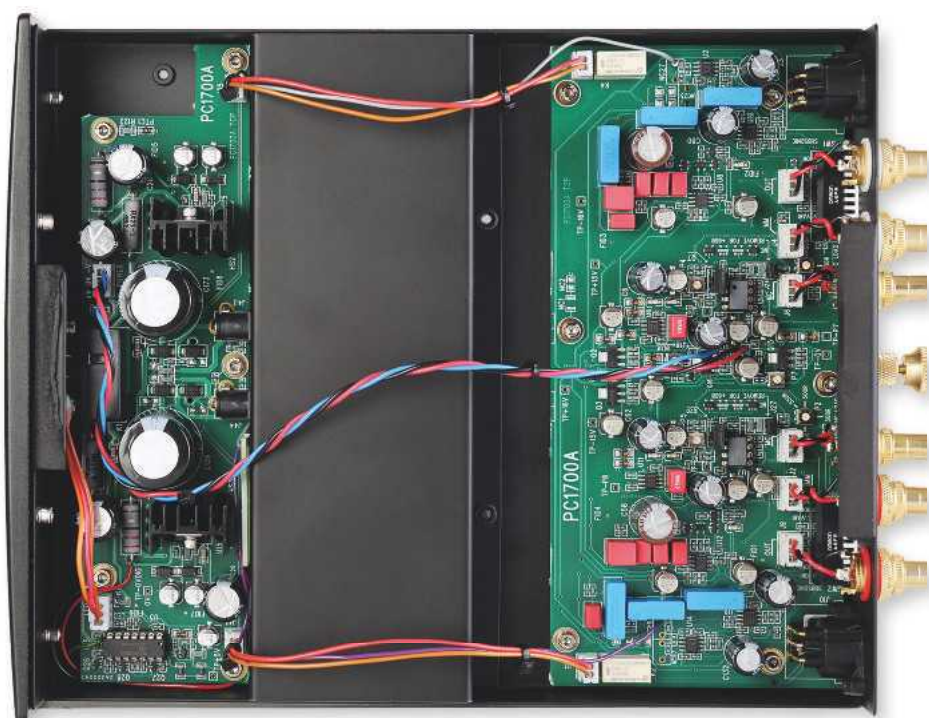
input, while the eighth and ninth select a 100 or 300ohm input impedance for the MC section. Finally, the last switch toggles between the MM and MC phono inputs.

### SWITCH TRIALS

These settings are supplemented by internal controls and links that can add a further +6dB gain to both MM and MC sections and extend the MC loading options from 50 to 500ohm. Hegel says these adjustments are best left to a dealer, however.

While the flexibility is certainly commendable, the configuration of these DIP switches, and the MM/MC inputs, is not without its foibles. For example, while there are separate MM and MC inputs, and switches to select them, the MC headamp connects directly into the MM section so it's not possible to have connections made to both sockets simultaneously.

*'CMFT' is a  
riot of guitars,  
shouty vocals  
and expletives'*





**RIGHT:** Functional but elegant Norwegian styling belies the complexity of the rear panel [p65]. The V10 is powered via an outboard 2x18V/5VA AC supply that connects under the chassis



Then there's the complexity of the DIP switch permutations – illustrated by Hegel's screen printing on the underside of the box [see p65]. Puzzlingly, a pair of switches rather than a single one is employed to select the subsonic filter – this leaves two permutations (both DIP switches in the 'On' or 'Off' positions) that are disallowed and clearly labelled 'Do Not Use'. I refrained from finding out what would happen if I selected either non-state, but surely it would be simpler if just one switch were fitted, where 'on is on' and 'off is off'?

Similarly, the pair of MC impedance switches also has a 'Do Not Use' state. Given that it's all too easy to accidentally flick the small switch adjacent to the one you intended, this isn't an ideal arrangement. Furthermore, the left and right banks of DIP switches are mirror-imaged so the MM/MC toggle is number 10 on the right channel but number 1 on the left. Frankly, you'll need a lot patience, a slim flat-blade screwdriver and a good

pair of reading glasses to successfully get to grips with the V10's 'user interface'. If you do find your blood pressure rising then turn to Hegel's beautifully presented user manual where the striking pictures of, I presume, the Norwegian countryside should have a suitably calming effect!

### SMOOTH TALK

The moment my Clearaudio MC Essence cartridge [HFN Aug '17] nestled into the groove it was clear Hegel has yet another winner on its hands, the V10 joining a long list of fine-sounding separates from this brand [see HFN Oct '18, Aug '19, Oct '20]. The unit itself is very quiet, with background noise and hum all but absent, just as vinyl roar and surface noise are subtly suppressed, allowing fine detail to shine through without confusion.

Nevertheless, while the V10's overall balance is certainly on the smooth side,

it's not short on transparency. So while cymbals and percussion never stray towards hardness or sibilance – sounding slightly softer than I might have expected – they still sound both clean and distinct. In fact, I'd be hard pushed to name another phono stage at this price that manages to sound so smooth in its presentation and yet so insightful at the same time.

I was also impressed by the sense of space and ambience the V10 revealed in ostensibly familiar recordings. Front-to-back image depth was very good and, no matter whether the material was live or studio-based, each instrument and backing vocalist was well defined within the soundstage and easy to focus on if desired.

That said, I would have preferred a little more solidity centre stage as one or two particularly potent vocalists sounded less edgy, perhaps slightly more diffuse, than usual. 'Raising Venus' from Malia and Boris Blank's *Convergence* LP [Universal 374 593-2] usually has Malia standing in front of my loudspeakers with unnerving precision. With the V10 as a moderating influence, she was pushed a little further back and I found myself adjusting the location of my listening seat by small amounts in order to restore her immediacy.

### NAILED IT

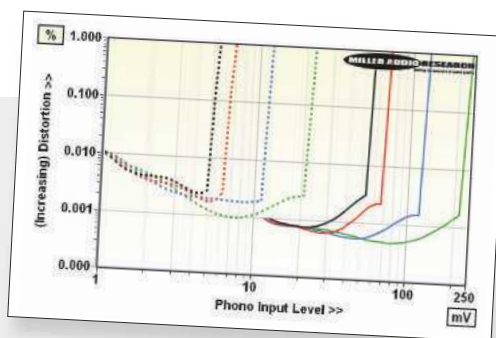
Bass freaks, on the other hand, will love the Hegel V10's deep and tuneful lower registers. The backing synth bass to Ava Max's 'Who's Laughing Now' from her *Heaven And Hell* LP [Atlantic 0075678645921] bounded along with appropriate pace and impact, each note clearly separated from the next. Although this is a seemingly simple pop track, I have heard more than one set-up make a muddle of it. Not so the V10 – it nailed it!

Meanwhile, the bass guitar on 'Haunted Love' from Tal Wilkenfeld's *Love Remains* LP [BMG 538450142] was rendered with an appealing ease and fluidity that underpinned the vocals masterfully. This particular track can sound a little too stark and uninvolved when heard on some systems, but the V10 knitted the two ➔

## MAKING HEADROOM

The evergreen 2M Red from Ortofon [HFN Oct '08], one of the highest output MMs available, produces a very healthy 6.7mV (re. 1kHz/5cm/sec). Furthermore, with extreme LP groove excursions (up to +18dB), it'll go on to deliver peak outputs of some 50mV into the V10 and other phono preamps. Now, any phono stage with insufficient input headroom will clip and send a burst of distortion that's boosted through your system from these mere millivolts to the tens of watts – or more – feeding your loudspeakers.

The higher the phono stage's gain setting, the lower the input headroom – in the V10's case its maximum +73dB MC gain represents a boost of x4467, so even with its massive 24V (balanced) output it only requires an input of 5.4mV to clip the output stage. This is why it's important to carefully select the optimum gain for your choice of cartridge. Fortunately the V10 has more than enough headroom for every type of pick-up – the inset Graph shows the point at which it clips when set at the default +40dB MM gain [green trace], plus the additional +5dB [blue], +10dB [red] and +12dB [black] settings, offering 238mV, 123mV, 71mV and 56mV of input headroom, respectively. MC pick-ups are treated to similarly generous margins: the default +60dB MC gain [dotted green], +5dB [dotted blue], +10dB [dotted red] and +12dB [dotted black] options representing maximum MC levels of 22mV, 12.5mV, 6.8mV and 5.4mV, respectively. **PM**



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## LAB REPORT

### HEGEL V10

When Hegel's chief designer, Bent Holter, set about maximising the versatility of the V10 design there was an acceptance that this came at a cost: users would need to negotiate fiddly little DIP switches to select between the various options. The +20dB extra gain that separates MM and MC inputs, and their respective 0dB, +5dB, +10dB and +12dB 'fine gain' settings are all selected via DIP toggles, as are the subsonic filter and the various impedance (MC) and capacitance (MM) loads on offer. Hegel claims +40dB, +45dB, +50dB and +52dB gain for its MM input and +60dB, +65dB, +70dB and +72dB for MC, values that are closely matched on test at +40.3dB, +45.8dB, +50.8dB and +52.8dB for MM and +60.6dB, +66.1dB, +71.1dB and +73.0dB, respectively, for MC (all RCA single-ended in/XLR balanced out).

In practice, the lowest MM gain setting offers a 9.69mV sensitivity but the +5dB option with its 5.16mV sensitivity and very healthy 123mV input headroom [see boxout, p63] will be the best 'default' for high output MMs. Similarly, the 'MC +5dB' setting – a sensitivity of 494µV with an input overload limit of 12.5mV – is ideal for the vast majority of 'coils. Moreover, this excellent range of sensitivities, coupled with at least 27dB of headroom at each step, is complemented by useful A-wtd S/N ratios of 79dB (all MM gain settings) and 78dB (all MC settings).

RIAA equalisation is also very flat and extended out to 100kHz within ±0.25dB, its steep subsonic filter amounting to -3.5dB/20Hz and -13dB/12Hz [see Graph 1]. If you have big, reflex-loaded speakers then this sub filter should be engaged. The RIAA-eq'd distortion [Graph 2] is slightly higher at bass frequencies, although 0.005% is still 100-1000x lower than any vinyl front-end! The minimum of 0.00028%/5kHz is spectacularly low. PM



**ABOVE:** Separate RCAs are provided for MM/MC inputs, selected via a DIP switch, alongside other toggles for gain, loading and subsonic filtering – see detail [inset]. RIAA eq'd outputs are offered on RCAs and balanced XLRs

and detail. It's just that occasionally it would be nice to hear this phono stage let its hair down and party.

This demeanour is broadly consistent across both MC and MM inputs, the latter tested in earnest with an Ortofon 2M Black cartridge [HFN Mar '11]. Of course, bearing in mind that Hegel's MC headamp feeds directly into the MM/RIAA stage, this continuity might be expected, even if it doesn't always happen that way. In my book this is a real strength, the Hegel V10 having a predictable see-through smoothness that you can rely on to reveal the qualities of both MM and MC cartridge types.

In this case, I heard the superlative top-end clarity of the 2M Black's Shibata stylus, but was also aware of the extra depth and imagining ability of the Clearaudio MC. So, if you have a 'starter phono stage' and are looking for a new MM/MC preamp that reveals more of the positive qualities of your vinyl-spinning front-end, the V10 makes for a very tempting upgrade. ☺

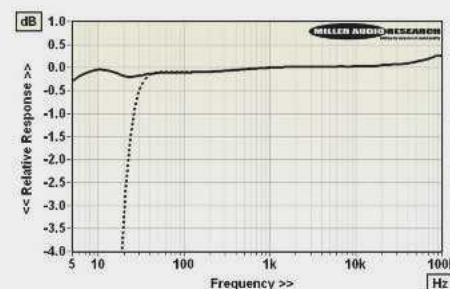
aspects of the performance together immaculately, and in doing so made for a captivating listen.

### REAL STRENGTH

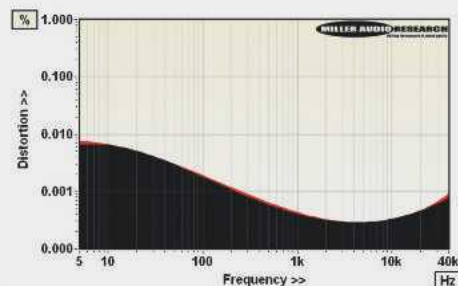
Switching to more complex and raucous material proved to have its ups and downs. 'CMFT Must Be Stopped' from Corey Taylor's *CMFT* album [Roadrunner Records 075678647598] is a riot of guitars, shouty vocals and expletives. While the V10 had no issue in separating all the elements here, the overall effect was a little polite – not an adjective I would usually use to describe the lead singer of Slipknot! However, similar material showed that the V10 is rarely caught out and really is a master of separation



**ABOVE:** The DIP switch permutations for input, loading, gain and subsonic filtering are illustrated under the case, beneath a void for the dual PSU inputs



**ABOVE:** RIAA-corrected frequency response (subsonic filter, dashed) from 5Hz-100kHz at 0dBV via MM



**ABOVE:** Distortion extended frequency via MM input re. 0dBV (5Hz-40kHz, black, left; red, right)

### HI-FI NEWS VERDICT

Hegel may have chosen to bide its time but the company's first phono stage has been well worth the wait. Yes, the DIP switches used to set gain and loading are fiddly and less than intuitive, but the breadth of options offered is very generous, extending the V10's reach across a very wide range of MMs and MCs. Its sound, too, is both smooth and gloriously insightful, and clearly 'voiced' to partner Hegel's other electronics.

Sound Quality: 85%

0 - - - - - 100

### HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm / 33-550ohm
Input sensitivity (re. 0dBV)	9.7/5.2/2.9/2.3/0.9/0.5/0.28/0.23mV
Input overload (re. 1% THD)	238/123/71/56/22/13/6.8/5.4mV
Max. output (re. 1% THD) / Imp.	23.9V / 96.5ohm (20Hz-20kHz)
A-wtd S/N ratio (re. 0dBV)	79.4dB / 76.9dB (MM/MC)
Freq. resp. (20Hz-20kHz/100kHz)	-0.19dB to +0.05dB / +0.29dB
Distortion (20Hz-20kHz, re. 0dBV)	0.00024-0.0049% (MM)
Power consumption	5W (1W standby)
Dimensions (WHD) / Weight	210x60x280mm / 2.2kg



# PrimaLuna EVO 300

For the inveterate enthusiast, PrimaLuna continues its tradition of user-tweakable amplifiers with the EVO 300, an ode to tube traditions – but with modern surprises

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

It's important to accept how language evolves, particularly when reviewing an amplifier with a name that is a contraction of 'evolution'. PrimaLuna calls its current lineup EVO, as it represents the next step in the advancement of its valve amps, and the 40W-rated £3798 EVO 300 integrated represents the mid-point in a 13-model range. This is a line-only model, available in gloss black or silver, but with a £170 MM phono stage module that can be retro-fitted into an enclosure under the main chassis (not fitted to our sample). Of course, enthusiasts have plenty of alternatives here with the likes of Thorens' MM-008 [*HFN* Feb '21] costing only £220 and offering both MM and MC inputs.

A fine headphone amp is built-in, a switch on the right selecting headphone or speaker output, the latter via 8ohm and 4ohm transformer taps. As for 'digital', the EVO 100 DAC [*HFN* Jun '20] exists because founder Herman van den Dungen believes integrated DAC solutions swiftly become obsolete. 'This would cause the re-sale value of the amp to crash', he says.

## FEATURE FEAST

All the EVO 300 lacks is balanced inputs, which you do get with the EVO 300/400 power amps and the EVO 400 preamp [*HFN* Apr '20]. Otherwise, it's a feast of features. PrimaLuna uses costly point-to-point wiring, socketry is top quality, and operation is self-explanatory, save for the 'high bias' and 'low bias' switch on the right side. 'High' is selected for KT120s and KT150s, 'Low' for EL34s, KT88s, etc. Apart from niceties like remote control [p69] and slick auto-biasing, this would not baffle an audiophile circa-1965 who had been plucked from a listening room and transported to 2021.

What makes PrimaLuna's philosophy a joy for tweekers starts with the mono/stereo switching to be found on the amp's

rear panel. The EVO 300 can be turned into a monoblock when upgrade-itis hits; one just adds an EVO 300 power amplifier. If both are left in stereo mode, they would suit true bi-amplification.

Next – and I loved this, as one who often needs to try both – the remote does more than level and source setting: it enables the luxury of comparing the sound of triode and ultralinear modes from the hot seat without first reaching for the volume control. You'll hear a small gain in level with the move from the former to the latter, and the two deliver the signature sounds of each type – old hands know what to expect [see PM's boxout, p67]. PrimaLuna's 'Adaptive AutoBias' facility, though, is the most important

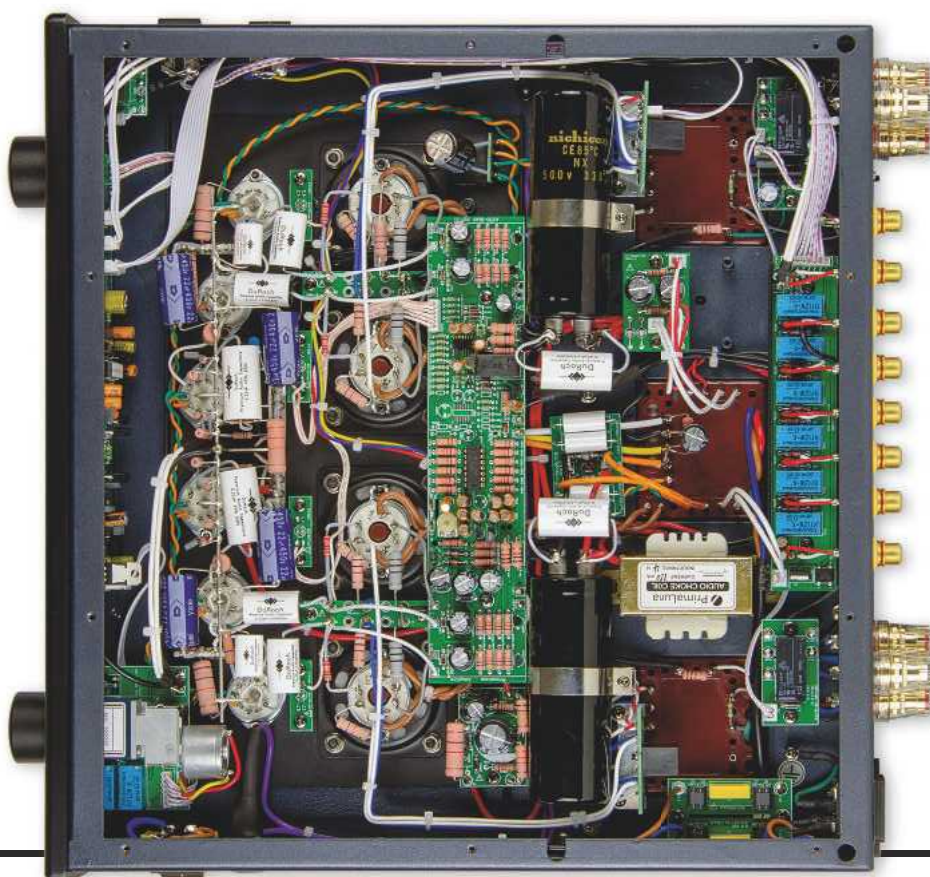
feature regarding owner liberation, making this a dream for the perpetually curious.

## ROLL CALL

EVO amps can deal with any of the these without the need of an AVO meter: 6L6G, 6L6GC, 7581A, EL34, EL37, 6550, KT66, KT77, KT88, KT90, KT120 and the latest KT150. (The EVO 100 integrated cannot accept KT150s.) For the review, we stayed with EL34s.

It takes around a minute from switch-on for the red LED to change to green, leaving mute mode. LEDs above it glow green or red for ultralinear or triode, visible from across the room, so if you don't trust your ears, you will still know which mode you're in. The level change is not as great as you might

*'This liquidity pegged the EL34's nature to perfection'*



**RIGHT:** Underneath the EVO 300 reveals its high quality tube bases [left], Teflon-insulated point-to-point wiring, AutoBias circuitry [centre] Takman resistors [flesh-coloured], DuRoch caps [white] and choke-regulated 417V PSU [right]



**LEFT:** The EVO chassis has rotaries for volume and input selection. Three 12AU7 double-triodes are used per channel while a wide range of power tubes are accommodated by PL's proprietary auto-biasing (EL34s are fitted here)

the astonishing Broadway recording of *Fiddler On The Roof* [RCA FTO-5032; open-reel tape]. Here 'stage depth' has real meaning: the air and space

think, but I doubt you'd miss it. Even with conservatively-driven EL34s [see PM's Lab Report, p69] the EVO 300 had no trouble driving LS3/5As, Magnepan's hungry LSR panel, or Quad's S1. What the option to fit other valves provides, in addition to the prospect of more power, is a very neat way to fine-tune the sound to suit one's tastes.

## BLAST FROM THE PAST

Even from cold, the EVO 300 sounds cuddly and non-aggressive. It delights me to report that the experience with EL34s was akin to finding a virgin Radford STA-25 or Dynaco Stereo 70, both of which used that valve. Those with a taste for higher-powered American amps would need no encouragement to try this with 6550s or

KT88s to emulate a McIntosh MC275. My own observations confirmed that the EL34s in the EVO 300 retained all the familiar traits. Christine McVie's voice throughout Fleetwood Mac's box set *1969-1974* [Warner/Reprise R2 5960060] enjoyed a gorgeous liquidity which pegged that tube's nature to perfection. The EL34's bass was more rounded than the snappier sound of a KT88 or, even more so, a 6550.

Listening to Mick Fleetwood's powerful drumming on the live version of 'Black Magic Woman/Oh Well' on the box set's live CD from 1974, the EVO 300 created a massively wide soundstage, his percussion panning across the front of the listening room. Stage depth was exceptional, wall-to-wall and especially convincing with

recreated by the EVO 300 transforming the listening room into a facsimile of a real theatre. And you could even hear footfalls.

Suffice it to say, even if tube swapping was not an option with this amp, I would have no complaints about how generously the EL34-equipped EVO 300 fills the room, even via the diminutive Falcon Acoustics LS3/5As [HFN Dec '18]. Such random thoughts play right into the hands of PrimaLuna, who rightly boast how much you, the listener, are being given control over the sound. Trust me: changing tubes to tweak your amp is infinitely preferable to tone controls, experimenting with cables or, worse, graphic equalisers. (Heaven forbid they should ever be revived...)

Depending on where you source tubes, or if you own a stash, keeping spare quartets of valves is never a wasteful thing. Moreover, PrimaLuna makes much of the amp's warning system that tells you if a tube has failed, so a stock of valves is a practical consideration, while the potential for experimentation is audibly rewarding.

## PURE SOUND

But back to the tubes good enough for Arthur Radford and David Hafler. Mickey Katz's recordings for Capitol, *Strictly Kosher – The Singles Collection 1950-1962* [Jasmine JASCD 825] and Johnnie Ray's *The Singles Collection 1951-61* [Acrobat Music ACQCD7115], same vintage but recorded for Columbia, proved perfect fodder for mono listening, as did The Honeycombs' *Have I The Right* [RPM QRPMBX548].

Aside from anticipating a perfectly-located, between-the-speakers image, mono recordings remove the trial of listening for stereo imaging, allowing you to focus more on the pure sound. These possess something which seems to have been lost since the early 1970s. It's best ➞

## TRIODE ON THE SIDE

If HFN readers care to pop over to PrimaLuna's US website [[www.prima-luna-usa.com/triodeultralinear](http://www.prima-luna-usa.com/triodeultralinear)] they'll discover the brand is very realistic about the limitations of triode mode operation. This includes low power output, limited bandwidth, higher distortion and output impedance, despite the 'elegance' of SET amplifiers retaining a cult status among audiophiles prepared to select from a limited pool of very high sensitivity loudspeakers.

PrimaLuna, in common with other progressive brands, offers switchable ultralinear (UL)/triode modes on its integrated and power amps. Indeed, with its 'AutoBias' facility and ability to accommodate almost any choice of pentode or tetrode, PrimaLuna's EVO series is one of the most flexible in this regard. The EL34 pentodes fitted here are perfectly suited to triode adaption – the control and suppressor grids are disconnected (or linked to the cathode) while the screen grid is coupled to the anode (plate) typically via a 100ohm resistor. This is performed on-the-fly with relay muting to protect ears and speakers!

High quality output transformers are specified, along with moderate use of feedback, squeezing the amp's output impedance down from the 5-8ohm seen in other designs [HFN Feb '21] to 2.86-3.65ohm in UL and 2.28-2.68ohm in triode mode (20Hz-20kHz). However, while this certainly confers better bass control, it will still influence the overall system response according to the impedance trend of the attached speaker. Into a non-reactive 8ohm load, the UL mode offers a more uniform -0.1dB/10kHz to -0.35dB/20kHz treble response against the slightly 'sweeter' -0.25dB/10kHz to -0.85dB/20kHz of triode mode. PM





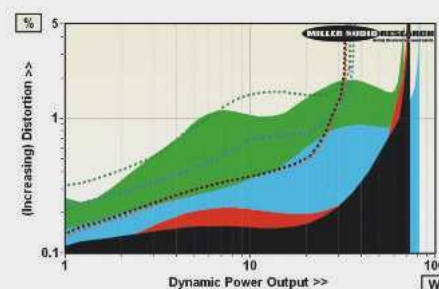
For more information please contact your local specialist retailer or visit **auralic.com**



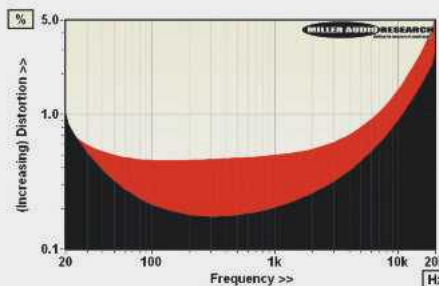
## PRIMALUNA EVO 300

PrimaLuna typically runs its power stages at a conservative anode/screen voltage (417V here), sacrificing a potentially higher power output for improved tube life – a sensible compromise for enthusiasts eager to minimise downtime and running expenses. The EL34-equipped version tested here is rated at 2x42W in UL mode and 24W in triode mode [see boxout, p67], although its literature suggests both 1% and 2% THD. In practice the clipping point is fairly sharply defined so there's little extra power at a 2% limit – 2x55W in UL and 2x28W in triode modes into 4/8ohm loads via the 4/8ohm taps, respectively. All test results for triode mode are in parentheses, below. Furthermore there's sufficient headroom to accommodate 69W (32W), 69W (33W), 80W (35W) and 64W (33W) into 8, 4, 2 and 1ohm loads via the 8, 4, 4 and 4ohm taps, respectively [see Graph 1, below].

Overall gain is only about 0.8dB lower in triode mode (+36.3dB vs. +37.1dB) – possibly sufficient to influence quick A/B listening comparisons – but the triode setting also benefits from a 3dB boost to an already generous A-wtd S/N ratio (88.8dB vs. 85.8dB, re. 0dBW). Negative feedback is typically reduced to increase the gain of triode mode at the expense of distortion, but the difference is not large here – 0.082-0.55% in UL to 0.13-0.48% in triode mode at 1W/8ohm (20Hz-20kHz), and 0.17-2.9% in UL to 0.45-5.6% in triode mode at 10W/8ohm [see Graph 2]. I discuss the impact of the EVO 300's moderate 2-3ohm output impedance (via 8 and 4ohm taps) on frequency response in my boxout, although both modes exhibit a +2.5dB 'bump' at a subsonic 5-6Hz, so you might care to plug the ports of big, reflex-loaded loudspeakers if you choose to spin some vinyl! **PM**



ABOVE: Dynamic power vs. THD into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads (dashed lines – triode mode)



ABOVE: Distortion versus frequency for EVO 300 at 1W/8ohm (Ultralinear mode, black; triode mode, red)

## HI-FI NEWS SPECIFICATIONS

Power output (<2% THD, 8/4ohm)	55W (27W) / 55W (28W)
Dynamic power (<2% THD, 8/4/2/1ohm)	69W / 69W / 80W / 64W
Output impedance (20Hz-20kHz)	2.86-3.65ohm (2.28-2.68ohm)
Freq. response (20Hz-20kHz)	+0.2dB to -0.35dB (to -0.8dB)
Input sensitivity (for 0dBW/42W)	79mV / 511mV
A-wtd S/N ratio (re. 0dBW/42W)	85.8dB (88.8dB) / 102dB (105dB)
Distortion (20Hz-20kHz, 10W)	0.17-2.9% (0.45-5.6%)
Power consumption (Idle/Rated o/p)	160W / 295W
Dimensions (WHD) / Weight	386x206x404mm / 31kg



ABOVE: The EVO 300 offers five line inputs, an HT bypass, tape out and sub/mono line outs with a trio of 4mm speaker outputs per channel fed from 8ohm and 4ohm transformer taps, respectively. Optional MM phono module is not shown here

described as a silkiness or sheen, and it characterises Capitol, Columbia, RCA, Mercury and Decca recordings of 50-60-plus years ago.

While RCA and Mercury devotees base their love on classical and strings, Katz and Ray were backed by the last vestiges of big bands and both Columbia and Capitol knew how to record brass and, especially for Katz's recordings, clarinet. Both types benefit from the innate sweetness of the EL34, and the EVO 300 added an unexpected bonus, revealed by these vocals.

## A REVELATION

Allowing for the aging of the components, if not the vintage circuitry of classic amps, the EVO 300's sound was a touch cleaner and more open. This was especially noted with Katz's and Ray's vocals, both having distinctive sounds: Katz's was nasal and jokey, given the comedy nature of parodies, while Ray's was angsty and acrobatic. If you are of the school that values that almost indefinable quality of 'conveying emotion' as much as

concrete elements like transient attack, this uncanny realism in the voices will tickle you. And it will also deliver another unforeseen revelation for forensic listeners.

LEFT: PrimaLuna's system remote offers transport controls for its CD players, input select, volume and mute for its amplifiers plus ultralinear/triode switching for the EVO 400 and 300 models



Because these recordings were of the same vintage, with known recording hardware, the transparency of the EVO 300 – categorically *not* found in vintage amplifiers to this degree – will delight you if you're a student of early record labels. I am not schooled in classical, so I can't tell you which of Mercury, Columbia, Decca or RCA did the best with symphony orchestras, but you will definitely hear the 'Capitol sound' versus 'the Columbia sound'.

It's more complex than studio versus studio, eg, you also have to factor in Mitch Miller versus Nelson Riddle, but the pleasure of discovery is there. The EVO 300, in stock form, was a revelation. But, oh, to have the time to indulge in trying every one of the tubes it can accommodate.

And The Honeycombs? So chunky was the pounding, overegged-by-Joe-Meek drumming on the title track and 'Just A Face In The Crowd' that I suddenly lost the urge to swap out the EL34s for 6550s. For the weight of the drums alone, you can declare that this amp rocks. Whatever the tube. ☺

## HI-FI NEWS VERDICT

By now you've gathered that the PrimaLuna EVO 300 is just the ticket for seasoned audiophiles with under-£4k budgets, and no desire to be constrained. Using it is a blast, especially if you have the will and the skill to try various valve types and (like me) revel in remote switching. The best news? The sound will satisfy anyone who loves vintage tube gear but doesn't want to risk 40-year-old circuitry. It's a triumph!

Sound Quality: 85%





# Ferrum Hypsos

A novel technical exercise looking for a solution or an innovation that's in the vanguard of an entirely new breed of hi-fi accessory? We test the sophisticated Hypsos DC supply  
Review & Lab: **Paul Miller**



Of all the true 'hi-fi accessories' power filters, conditioners and regenerators are arguably the most popular. (I do not count cables in this category because they are 'necessaries' and your system will not function without them.) Cleaning-up your AC mains power has long proven its benefits, but what of the low voltage DC supplies – the so-called 'wall-warts' – that come packaged with so many of today's

small form-factor DACs, headphone amps, phono stages and even turntables? Many of these are relatively unsophisticated switchmode blocks with basic rectification and regulation, and are sources of RF and other noise in their own right. Replacing these with a robust, fixed-voltage linear PSU makes sense, as brands like Sbooster have already demonstrated to good effect.

Ferrum, built by HEM, an established design and manufacturing outfit based in Poland, is going one step further with its Hypsos – a very flexible user-configurable DC PSU that operates over a 5V-30V range and includes pre-loaded (voltage) values for over 100 existing DC-powered products.

Housed in a robust black alloy case with 'rust' coloured ornamentation and illuminated logo, the

**ABOVE:** OLED display and rotary encoder is all that's required to view the DC output status and navigate Ferrum's comprehensive product listing, or set and/or manually adjust the output

Hypsos combines a substantial toroidal transformer feeding a microprocessor-governed switchmode supply with, in turn, fully discrete regulation [see pic, below left].

## FEATURES GALORE

The switchmode supply operates at around 1MHz so Ferrum uses spread spectrum modulation (SSM) to 'smear' the switching frequency and any associated EMI/RF. Residual noise is now that much easier for the regulators to deal with – it's possible to defeat the SSM via the Hypsos's detailed but intuitive set-up menu, but I cannot see any good reason for doing so.

Another defeatable feature is its '4T sensing' or four-wire connection that extends the regulation of its DC supply to the very tip of the supplied 2.1mm and 2.5mm-jack umbilicals rather than the output socket of the Hypsos. Again, leave this switched on unless you are daisy-chaining the Hypsos to feed multiple products, for example.

Some wall-warts, specified up to a high 5A, have scrawny flying leads and can suffer a voltage drop under load – not so with the Ferrum Hypsos which is rated up to 6A continuous (or 80W, whichever occurs first) before protecting its output.



**LEFT:** AC mains input includes EMI/RF filtering [lower right] while 100VA transformer [top right] feeds switchmode PSU with discrete regulation [left]. ARM processor [top left] includes flash memory for all pre-stored settings



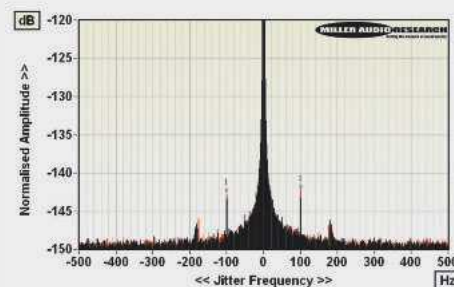
## LAB REPORT

### FERRUM HYPPOS

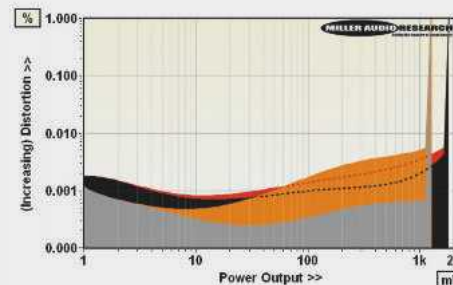
A first for *Hi-Fi News* – but testing a DC supply is not dissimilar to testing a digital server: the impact of the ‘front-end’ is most usefully assessed by examining the *difference* it makes to the performance of the kit downstream. I looked at compact DAC solutions requiring 5V to 12V DC feeds but, in short, differences were negligible to none. By way of illustration of the many that I tested, the maximum (fixed) output, A-wtd S/N, –10dBfs THD and jitter for iFi Audio’s 5V/2.4A NEO iDSB [p72] remained 4.285V, 109.7dB, 0.00016% and 550psec, respectively; for Cambridge Audio’s 12V/2.0A DacMagic 100 [HFN Jun ’12] this was 2.310V, 108.8dB, 0.0005% and 255psec; for Mytek’s 12V/1A Brooklyn Bridge [HFN Dec 19] this remained 6.06V, 112.8dB, 0.00007% and 14psec; and for Chord’s 12V/0.5A Chordette Qute EX this was 3.05V, 111.4dB, 0.0008% and 8psec.

Chord, like iFi Audio, has a fine grip over its products’ PSU filtering and regulation, however primitive the supplied wall-wart. So there’s a difference of less than 1psec in the  $\pm 100\text{Hz}$  noise manifest in the Qute EX’s jitter spectrum, in favour of the wall-wart on this occasion [Graph 1, below]. Real differences only start to emerge with products that have a higher current demand – specifically DAC/headphone amps or products fitted with small triode tubes – and if the wall-wart’s connecting lead is thin. Here the benefit of Ferrum’s 4T connection is revealed. Pro-Ject’s Tube Box DS2 phono stage [HFN Jul ’20] has a 18V/1.0A wall-wart, and while the 75mV/1kHz input overload margin was unchanged, the A-wtd S/N ratio did improve from 84.1dB to 85.0dB with the Hypsos in tow (MM input, 40dB gain).

In practice, the most reliable improvements were obtained with high output DC-powered headphone amplifiers. Arcam’s 12V/2.0A rHead [HFN Nov ’16] is indicative for while there’s no difference in the maximum 1260mW/32ohm power output, the A-wtd S/N is stretched from 96.1dB to 96.7dB and distortion squeezed from 0.0015% to 0.0003% (100mW/32ohm) with the Hypsos. Into very low headphone loads there’s a slight boost from 1790mW to 1810mW/8ohm and improvement in THD from 0.0013% to 0.0010% (100mW/8ohm). So there you have it – the Ferrum Hypsos gets a win [see Graph 2]! PM



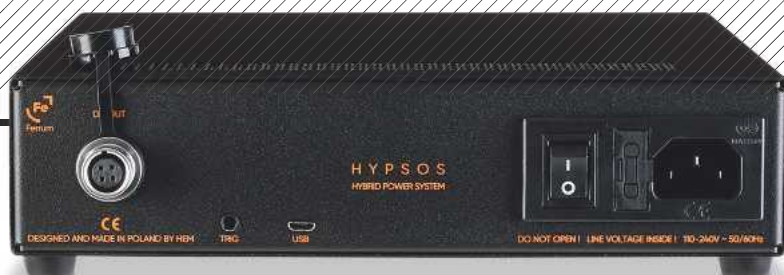
ABOVE: High res. 48kHz/24-bit jitter spectra for Chord Qute EX (black, standard PSU; red, with Hypsos PSU)



ABOVE: Arcam rHead o/p into 8ohm (red, standard PSU; black, Hypsos); 32ohm (orange, standard; grey, Hypsos)

### HI-FI NEWS SPECIFICATIONS

DC voltage range (unloaded)	5-30V ( $\pm 5\%$ )
Maximum current (loaded)	6A
Power consumption (unloaded)	7W
Dimensions (WHD) / Weight	216x58x228mm / 2.9kg



ABOVE: Four-pin DC output enables sensing return connections on the supplied 5.5x2.5mm and 2.1mm-jack plug-equipped cables. Micro-USB is for firmware updates while the 3.5mm trigger socket supports synchronisation with other hi-fi separates

At the time of writing, the Hypsos’ flash memory hosts the details of over 100 DC-powered products. You simply scroll through the menu listing and select your product, and if it’s not included you can read the DC voltage off the back of your product’s wall-wart and manually enter the value, again, via the menu. There’s also a fine ‘sweet spot’ tuning of  $\pm 5\%$ ...

All of which brings me to the elephant in the listening room – for though the Hypsos protects its own output against over-voltage/over-current it cannot accommodate every possible ‘user error’. You’re given a ten second countdown before any new DC voltage is enabled, but if you cook your favourite compact hi-fi then know that you’re also kissing its guarantee goodbye.

### DISTILLED DC

Suitably cautioned, then how to ‘review’ Ferrum’s Hypsos? Certainly not on the basis of one or two subjective experiences. I pressed the Hypsos into service for a couple of months, testing [see Lab Report] and briefly auditioning over 15 different 5V-18V DC-powered products in the quest for a universal verdict. If only it were that simple!

Feeding a series of new and legacy USB, S/PDIF and network-attached DACs from iFi Audio, Arcam, Pro-Ject, Mytek and Chord among others revealed, to a greater or lesser extent, an improvement in the general smoothness, liquidity and ‘easiness’ of the sound with, again, a more consistent uplift with SSM engaged. Backgrounds were just that bit darker, the atmospheric piano-noodling of Don Gruisin’s *Out Of Thin Air* [Octave Records OCT 0001; DSD64] betraying the suggestion of extra depth.

Pro-Ject’s Stream Box S2 Ultra [HFN Oct ’18] network player, also

benefited from the Hypsos’s touch, the sound – almost regardless of the attached DAC – enjoying a reduction in low-level grain. Defeating SSM will likely increase levels of circulating RFI and this, in turn, might be interpreted as extra ‘edge’ or detail. Of course, the absence of measured change merely indicates I was missing the target with my choice of tests!

### GETTING AHEAD

Not so with iFi Audio’s ZEN DAC headphone amp [HFN Jul ’19] or Arcam’s purely analogue rHead [HFN Nov ’16], auditioned with cans ranging from Oppo’s PM-3 [HFN Jul ’15] to B&W’s P9 Signature [HFN Mar ’17].

Here I’d hit upon measurable differences that may, arguably, correlate with the added tonal richness and authority heard at modest playback levels. So *The Dark Knight* – the opening suite from Hans Zimmer’s *Symphonic Celebration* [Sony Classical 1907589 90521; 48kHz/24-bit] – now thundered all the more convincingly with the Hypsos ‘conducting’, illuminating the ambience of the Vienna Konzerthaus to rousing effect. ☺

### HI-FI NEWS VERDICT

Compact hi-fi separates powered via plug-top ‘wall-warts’ typically – though not exclusively – fall into our ‘Budget Esoterica’ category, so the attraction of a circa-£1000 supply upgrade might seem largely... academic. If, by contrast, you are absolutely wedded to your choice of small form-factor headphone amp, DAC, phono pre, etc, then the subjective impact of Ferrum’s Hypsos absolutely should not be discounted.

Sound Quality: 80%



‘It includes pre-loaded values for over 100 products’



# iFi Audio NEO iDSD

Launched with a typically dazzling array of acronyms, the NEO iDSD is nonetheless a more focused DAC/pre/headphone amp, equipped with the latest 'hi-res' Bluetooth  
 Review: **Andrew Everard** Lab: **Paul Miller**

Seemingly there's no stopping Southport-based iFi Audio: it just keeps on trotting out new digital products, all aiming to fill a gap in the market – or create a new gap to fill. Indeed, while writing this review I was unsurprised to see another new launch pop up, in the form of the bright red iDSD Diablo [see News, p22].

The £699 NEO iDSD featured here, however, comes from a different strand of the company's offering, slotting in well below the £2499 flagship Pro iDSD [HFN Sep '18] in the desktop DAC/headphone amp/preamp market. It may be little more than a quarter the price of that range-topper, lacking its switchable valve/solid-state output stage and digital filters, but it doesn't take long to discover the NEO iDSD is a highly appealing component, whether used on the desktop to drive headphones or slotted into a full-on hi-fi system.

Packed into its slender form is not just a DAC/headphone amp configuration, of the kind the company is rolling out across most of its products, but also the choice of balanced XLR and single-ended RCA line/preamp outputs. And while it's not as tiny as some of iFi Audio's offerings, the NEO iDSD is still compact – just 21.4cm wide and a shade over 4cm tall – and has the usual sense of quality and precision about its build that's a hallmark of the brand.

## NEAT FEATURE

What's more, for those planning a life on the desktop for their new acquisition, it comes with a little stand, made of the same high-quality aluminium as the NEO iDSD's casework, allowing the unit to be stood on end, thus giving it a space-saving footprint. Do that, and the OLED display – which covers file format, sample rate, input selection and volume – rotates 90° to the correct orientation. OK, we've already

seen this on hi-fi products from the Denon Design series and latest compact NAD amplifiers [HFN May '18], and of course, re-orientating displays have long been taken for granted on smartphones and tablets, but it's still a neat feature.

The NEO iDSD's input provision and format compatibility ensures wide-ranging flexibility: coaxial and optical digital ins are provided, along with a 'stacked' USB-B port for connection to a computer. There are Windows drivers available for download from the iFi Audio website, but none are needed for Mac or Linux. In addition, there's Bluetooth wireless connectivity, described by the manufacturer as 'bleeding-edge' (but then there's a lot of such language in the publicity material) in its application of the latest Qualcomm QCC5100 module.

This chipset handles not just AAC/SBC/aptX and aptX HD, but also aptX Adaptive, aptX LL, the LDAC format used by Sony devices and Huawei's HWA/LHDC. In other words, if your portable device can output

hi-res audio wirelessly, then the NEO iDSD will be sure to accept it.

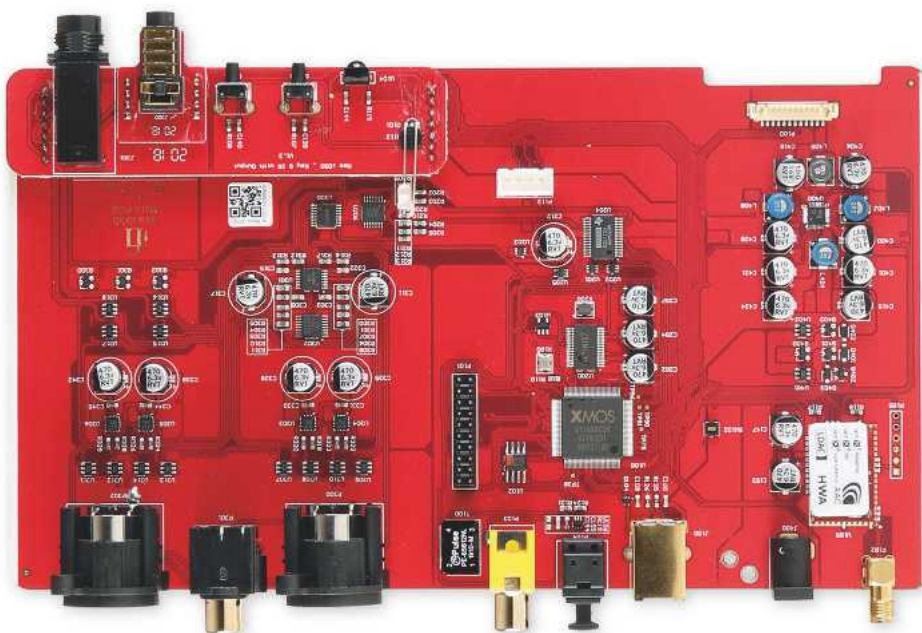
## POWER UPGRADE

Otherwise the highest resolutions are only possible over the NEO iDSD's USB-B connection, extending to 768kHz/32-bit PCM and DSD512, thanks to the Burr-Brown DSD1793 DAC, which is already widely used across the iFi Audio range. The

NEO iDSD also offers MQA decoding, but the digital implementation here is simpler than that in, say, the Pro iDSD, with the latter's various filter and upsampling options left out here in the cause of simplicity, and economy.

Meanwhile, the front-panel headphone outputs, which run to a standard 6.35mm unbalanced socket, and 4.4mm Pentaconn for balanced working, are fed via a digitally-governed 'analogue' volume control, as are the variable-level line outputs. This single rotary on the NEO iDSD also combines with the two little buttons on the fascia – for input selection/Bluetooth pairing

*'It's shorn of much of the faffing about – sorry, flexibility'*



**RIGHT:** Optimised layout with Qualcomm QCC5100 Bluetooth [far right] and Xmos USB hub [centre] feeding a Burr-Brown DSD1793 DAC [above] and IC op-amp-based balanced line [lower left] and headphone [upper left] outputs



and power – to also switch between fixed and variable mode, mute the output, and adjust the brightness of the display. Finally, the NEO iDSD comes with iFi Audio's 5V iPower plugtop supply, with the option of upgrading to the company's £99 iPower X.

## POWER PLAY

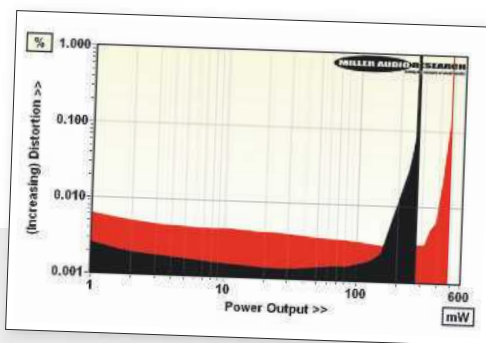
In operation, this DAC/headphone amp swiftly reveals two things – one is that it's exceptionally simple to use, shorn as it is of much of the faffing about – sorry, flexibility. Just hook it up, and it works. In our review of the flagship Pro iDSD, I commented that 'this is one of those "need to know what you're doing" products – there's no fast or easy way to get the most out of it, and some aspects of its set-up need work'. The NEO iDSD is much more of a 'plug and play' prospect, and even without a direct comparison with the range-topper, it's clear this newer, and much more keenly-priced model sounds very good indeed, whether used with high-quality 'phones or connected into a main system.

I tried it as a desktop system, feeding a range of headphones encompassing various technologies from planar magnetic to moving-coil, with both balanced and

unbalanced connections, and also fed its unbalanced outputs in fixed-level mode into the inputs on my Naim Uniti/Neat Iota desk system, fed from my 2020 Mac mini computer. Meanwhile, in my main system it was used in both line and variable output modes to good effect, again fed from another Mac mini. Both computers were controlled using Roon, and operated by the Roon app on an iPad, with music sourced from my NAS library in a variety of formats right up to the NEO iDSD's limits.

I also explored a range of files streamed wirelessly over Bluetooth from Apple and Samsung phones with impressive results. I'm still not sure I'd choose a phone and the NEO iDSD as my only means of playing music, but at least the set-up proved both viable and musically enjoyable.

Used with headphones including my tried-and-tested Oppo PM-1 [HFN Jul '14] and Focal Spirit Pro [HFN Dec '15], as well



## IFI'S EDGE

Although the NEO iDSD plays second-fiddle to iFi Audio's costlier Pro iDSD model which offers a higher 450mW/32ohm output [HFN Sep '18], the more affordable newcomer harbours a couple of very useful performance advantages. Sure, the maximum single-ended headphone output is 3.25V versus 4.2V for the Pro iDSD, and the power output is a little lower too at 269mW/32ohm [black trace, inset Graph]. The headphone output also clips at full '0dB' volume with a maximum 0dBfs digital input, so '-1dB' should be your maximum setting, and this with the least sensitive headphones available should you value your hearing... The advantage offered by the NEO iDSD comes with its better voltage/current balance, the latter able to support a full 486mW into the very lowest 8ohm loads at 1% THD [red trace, inset Graph]. The second improvement offered by the NEO iDSD comes in the form of its low 300mohm (0.3ohm) source impedance which minimises signal loss and also renders its response largely immune to the variations in headphone load. By default its response mirrors that of the line outputs [see Lab Report, p75] while, importantly, residual noise is suppressed and the A-wtd S/N extremely wide at 107dB, so hiss and hum will still be low with sensitive headphones. PM

**ABOVE:** The OLED display indicates audio format, sample rate, input and volume, with the rotary also used to set brightness and mute. Single-ended 6.35mm and balanced 4.4mm Pentaconn headphone sockets are included

as B&W's P9 Signature [HFN Mar '17] and Philips Fidelio X3, it was clear that this unit offers excellent clarity, and more than enough power to drive even demanding loads to levels way beyond wise or sensible while retaining poise and dynamics.

It also showed the benefits in terms of grip and resolution of balanced headphone working with the Oppo and Philips 'phones, though not without a spot of scrabbling through my 'adapters box' to find connectors to hook up that 4.4mm Pentaconn to 2.5mm plugs, four-pin XLRs and more. I want to make a plea for some standardisation for balanced headphone connections, as we have with the 3.5/6.35mm connector for unbalanced working. I have found balanced operation to be worthwhile when headphones offer it, but getting the right connectors will make you ☺

**RIGHT:** The NEO iDSD can be set vertically onto a supplied aluminium stand – the display flips through 90°







# QKORE GROUND UNIT



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- Alan Sircom, Hi-Fi+ Magazine

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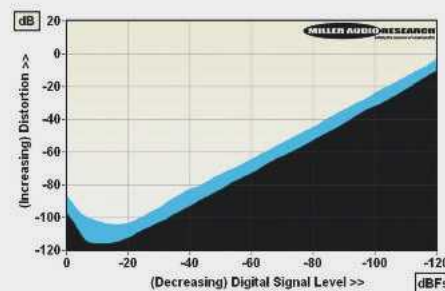
## DAC/HEADPHONE AMP

## LAB REPORT

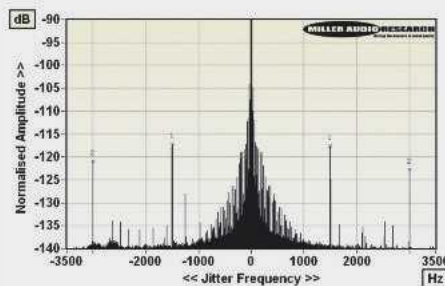
### IFI AUDIO NEO iDS D

With a peak level (0dBFS) digital input the NEO iDS D clips at full volume so, in practice, the maximum variable output via the balanced XLRs is 5.6V with the volume at '–1dB'. This is still substantial and more than sufficient to drive any power amplifier, aided by a moderate 50ohm source impedance and wide 110dB A-wtd S/N ratio. Hand-in-hand with this low noise comes excellent low-level linearity, the single DSD1793 DAC achieving a resolution of  $\pm 0.2$ dB over a full 100dB dynamic range. The fixed (balanced) volume setting is not far behind, yielding a maximum 4.28V output (re. 0dBFS) at 0.0012–0.0045% distortion, falling to a minimum of 0.00014–0.0002% at –20dBFS [see Graph 1, below]. While the latter is impressive, the cloud of low-level sidebands detected on the jitter tests was unexpected [see Graph 2, below]. This complex pattern has sidebands at  $\pm 33$ Hz,  $\pm 66$ Hz,  $\pm 99$ Hz, etc, amounting to some 550psec – not debilitating by any means but atypical of iFi Audio's latest form.

For this stripped-down DAC, iFi Audio makes a feature of its minimalism, eschewing the switchable digital filters that are included in its costlier Pro iDS D model [HFN Sep '18]. By default, the NEO iDS D comes with iFi Audio's GTO (Gibbs Transient Optimised) digital filter, although alternative algorithms can be loaded as firmware updates if preferred. On test this looks like a limited-tap linear phase filter offering a balance between a modest 53dB stopband rejection, symmetrical pre/post ripples in the time domain and an extended response that's flat to –0.14dB/20kHz, –0.8dB/45kHz and –2.6dB/90kHz (48kHz, 96kHz and 192kHz media, respectively). The performance of the headphone amplifier largely follows suit – sharing the same digital front-end [see boxout, p73]. PM



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



ABOVE: High resolution 48kHz/24-bit jitter spectrum revealing low-level, low-rate 33Hz sidebands

### HI-FI NEWS SPECIFICATIONS

Max output/Imp. (<1% THD, DAC)	5.60Vrms / 50ohm (balanced)
Maximum output (headphone)	3.25V/600ohm / 269mW/32ohm
Headphone Output Imp. (20Hz–20kHz)	0.24–0.75ohm (single-ended)
A-wtd S/N ratio (DAC / headphone)	109.5dB / 107.5dB
Distortion (20Hz–20kHz, DAC/headph.)	0.0012–0.0045% / 0.005–0.048%
Freq. resp. (20kHz/45kHz/90kHz, DAC)	+0.0 to –0.14dB/–0.8dB/–2.6dB
Digital jitter (48kHz / 96kHz, DAC)	550psec / 555psec
Power consumption	3W
Dimensions (WHD) / Weight	214x41x146mm / 1kg



ABOVE: Digital inputs are shared across coaxial, optical and USB-B sockets alongside wireless Bluetooth 5.0. Balanced (XLR) and single-ended (RCA) analogue outputs may be configured for fixed or variable operation, the latter offering higher output

a valued customer of many an accessory vendor! Anyway, the iFi NEO iDS D certainly makes a strong case for using a dedicated headphone amp rather than just the socket on your amplifier.

Playing a set such as bassist Brian Torff's live *Manhattan Hoedown* [now remastered on 2XHDA1192; DSD128] the speed and definition apparent on his subtle, precise playing of the upright bass is thrilling, as is the interplay with pianist Jim Roberts. And when you change tack to a recording with really low electronic bass, such as Jean-Michel Jarre's *Welcome To The Other Side* 'virtual concert' [Sony; 48kHz/24-bit download], the NEO iDS D's combination of attack, detail and sheer weight is striking right from the dramatic opening chords.

### REAL FUN

It even proceeds to control the weighty-sounding B&W headphones to deliver taut rhythms as it slams into 'Oxygene 2', with those panning effects J-MJ seems to love so much. So, yes, this compact unit will drive hard and clean when required, to the extent that some caution is suggested [see PM's boxout, p73] before you get too carried away with your headphone levels.

However, it's also all about detail and refinement, as is clear with the glorious recent Pittsburgh

Symphony Orchestra/Manfred Honeck recording of Beethoven's 9th [Fresh!/Reference Recordings, FR-741; 192kHz/24-bit], which mixes that massive scale with the finest of touches in the instrumental timbres as it builds to its great choral climax.

Job done on the headphone front, then, but the NEO iDS D also delivers when used in the system-rack, whether at line-level into a conventional amp or preamp, or straight into power amplification. I had real fun with it both into my main system and also feeding a pair of elderly Marantz MA-22 monoblocks driving my Neat Iota Xplorer speakers [HFN Jul '18].

In this context the 'credit card' remote iFi Audio supplies [see below] completed this somewhat eccentric but engaging 'small but perfectly formed' system. In practice it went on to power out everything from Eva Zaïcik's exuberant *Royal Handel* recital [Alpha Classics ALPHA 662; 192kHz/24-bit], with a glorious balance between voice and the accompaniment of Le Consort, to The Foo Fighters' slamming *Medicine At Midnight* set [RCA 978836] with the right mix of control and snarl. ☺

### HI-FI NEWS VERDICT

Whether you need a high-quality desktop audio/head-fi solution, or a slimline DAC to slot into your main system – or both – the NEO iDS D has much to commend it, from its powerful, weighty and controlled sound to its broad file format compatibility. Yes, it lacks some of the digital set-up options available elsewhere, instead going for a much more 'plug and play' approach, but then do you want to fiddle, or listen?

Sound Quality: 84%



LEFT: Flat and compact remote governs input selection, volume, mute and display brightness

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# Classical Companion

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

## Richard Strauss *Der Rosenkavalier*

A sensuously beautiful tribute to old Vienna, to the waltz and a fast-vanishing age of elegance. **Peter Quantrill** explores the opera's background and suggests recordings

The premiere of *Der Rosenkavalier* took place on the 26 January 1911, at the Royal Court Opera in Dresden. The success of the piece became an event in itself, perhaps the most glittering triumph in the history of opera. Special trains were laid on to ferry visitors from Berlin eager to attend extra performances. The work was immediately taken into the international repertory, and there it has remained.

From the distance of over a century, it is hard not to listen without hearing in this new comedy about old manners a last gasp of old Europe before WW1 swept it away. With the success of *Elektra* ringing in their ears, librettist Hugo von Hofmannsthal wrote to the composer Richard Strauss, proposing a second collaborative work.

The project was designed as a new *Marriage of Figaro*, drawing on English Restoration comedies and plays by Molière and Beaumarchais. The Anglo-German count and diplomat Harry Kessler played an instrumental role in cooking up the initial scenario, of Sophie, a

→ Carlos Kleiber returned to *Der Rosenkavalier* throughout his career and conducted it with unique insider knowledge

↙ Both film and audio records preserve the elegance of Renée Fleming, the Marschallin of our time



young girl from a nouveau-riche family, promised to an impecunious nobleman of noble breeding and no manners. He asks his cousin, the none-too-happily married Field-Marshal's daughter, to select an emissary for his silver rose, which is the traditional symbol of engagement. She chooses her 17-year-old lover, Octavian, played by a mezzo-soprano.

It was the more experienced composer who took over in shaping the dramaturgy of the second act and the opera's devastatingly emotional apex, at a time when the librettist regarded Ochs' ignominious exit as the opera's obvious conclusion.

*Der Rosenkavalier* is, of course, Octavian, the 'Knight of the Rose' – Strauss and von Hofmannsthal only gradually realised during their work that the opera's true central character was in fact the Marschallin. It is one of opera's greatest mysteries how a character absent from the entire second act and most of the third so dominates what *Der Rosenkavalier* is all about.

Hofmannsthal had feared that the weight of a post-Wagnerian orchestra would drown out the refinements of his meditation on time and age, marriage and solitude, but the peculiar appeal of *Der Rosenkavalier* lies in its unique ability to satisfy apparently conflicting imperatives. Strauss's score moves to the one-two-three pulse of the Viennese waltz, yet its harmonies often curdle into the sour cream of *Elektra*. An opera structured around the blinding revelation of love at first sight features no lead tenor and reaches its climax in a trio of three women (even if one of them is playing a trouser-role).

### LAVISH SPECTACLE

With *Ariadne auf Naxos*, their next project, Strauss and von Hofmannsthal raised meta-opera to an art form, but the lavish spectacle of *Der Rosenkavalier* already plays

with the essence of the genre as 'an exotic, irrational entertainment' of great cost. Even in its three-minute walk-on part for an 'Italian tenor', which was originally

conceived with Caruso in mind, *Der Rosenkavalier* requires, stages and rewards extravagance.

From early on, record companies have not stinted in fulfilling the opera's demands. A quick search on YouTube turns up the third-act 'Trio' and other excerpts from 1911, amounting to a composer-conducted 'original cast recording' – essential if rather dimly recorded listening. In still vivid sound (especially on the Naxos Historical remastering, 8110191-92), however, the first serious attempt to capture the opera on disc dates from 1933, abridged from three

'It holds one of opera's greatest mysteries'



PHOTO: HYUNDAICARDWEB

hours to 100 minutes but presenting most of the sweetest chocolates in the box and starring two of the composer's favourite singers, Elisabeth Schumann (as Sophie) and Lotte Lehmann (the Marschallin): songs of innocence and experience.

### CLASSIC CUT

For *Rosenkavalier* in studio stereo, we must waltz past several authentically cast stage performances in live, mono and variable sound, the best of them led by Straussian protégés Clemens Krauss and George Szell, to reach Erich Kleiber in 1954 [Decca 4671112, download only].

Decca's 'full frequency range recording' – still mono – doesn't prevent the Viennese strings sounding papery at this distance, or Maria Reining's Marschallin rather matronly. So we move on, like the Marschallin herself, and come to an undisputed classic of the post-war opera discography, which is the 1956 EMI recording by Herbert von



Karajan and producer Walter Legge. Now on Warner Classics [9668242], Legge's stage effects wear their years well and place the chemistry between Elisabeth Schwarzkopf's Marschallin and Christa Ludwig's Octavian front and centre.

Back to Decca for Georg Solti [4759988], on peak form in both *Elektra* and its knowingly retro sequel, and expertly produced by John Culshaw in Vienna with the celebrated studio *Ring* under their belts. Don't underestimate the greasepaint and sexiness of that selective Straussian Leonard Bernstein [Sony 88843058662, download only] with Ludwig now graduated to the Marschallin, though the whipped cream is sometimes piled on thickly by the conductor and Gwyneth Jones's Octavian is an acquired taste.

→ Karajan's 1956 recording for EMI is now available as part of the 'Deluxe Opera Classics' edition from Warner Classics

← Richard Strauss, even more revered in his time as a conductor than a composer



The opera's trickiest role is Baron Ochs: how to pitch his dialect-rich banter between coarse boorishness and stiff *hauteur*? Experienced live and in stagings which move beyond an exercise in Viennese nostalgia, Ochs comes into focus as a more rounded character with intimations of tragedy, more Sir John Falstaff than Baron Hardup. Octavian's cross-dressing deception as Mariandel, the maid who unmasks Ochs, becomes more than knockabout farce.

Strauss conductors of our own time such as Andris Nelsons, Sebastian Weigle and Franz Welser-Möst (see Essential Recordings) are also more inclined to reveal the glinting blade of *Elektra* beneath the rococo charm, following the peerless

example of Carlos Kleiber, for whom *Der Rosenkavalier* probably meant more than any other opera.

As the Sophie on his 1994 recording from the Vienna State Opera, Barbara Bonney recalled her audition for him a decade earlier. Sucking on a boiled sweet to combat nerves and a dry throat, she offered one to Kleiber, who took it and said, 'Oh, you are a nice young lady. I think I'll give you the job'. His conducting carried her through the opera, she said, 'as if I were on a silver tablet... Kleiber conducted with such verve that one only saw his flashing teeth and huge sweeping movements... It was glorious, and something I have never experienced with anyone else'. ☺

## ESSENTIAL RECORDINGS

### Philharmonia/Herbert von Karajan

Warner Classics 9029581745 (three CDs)  
Late in life, Schwarzkopf supervised the CD remastering of Legge's original mono tapes, now hard to find; the stereo is almost ageless.

### VPO/Karl Böhm

DG 4453382 (download only)  
Live at the Salzburg Festival, hardly note-perfect, but catching the conductor on fire and the cast in the most sexy, intense by-play.

### Bavarian SO/Carlos Kleiber (rec. 1973)

Orfeo C581083D (three CDs)  
The sweet but never cloying beauty of Lucia Popp's Sophie makes a perfect foil for Brigitte Fassbaender's tour-de-force as Octavian.

### VPO/Carlos Kleiber (rec. 1994)

DG 0730089 (two DVDs)  
Kleiber's second 'dream' cast, live at the Vienna State Opera, in sumptuous sound and vision, led by Felicity Lott's Marschallin.

### VPO/Franz Welser-Möst

C major 719404 (Blu-Ray)  
The cool beauties of Harry Kupfer's staging combined with the chamber-music delicacy of Welser-Möst's conducting, live at Salzburg.

### Metropolitan Opera/Sebastian Weigle

Decca 0743945 (Blu-Ray)  
Essential for Renée Fleming's farewell to the Marschallin and the exquisite ambivalence of Elina Garanca as Octavian/Mariandel.



# Vinyl Release

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW

## Guns N' Roses *Greatest Hits*

**Steve Sutherland** recalls a riotous night at the Tacoma Dome, resolved into a thrilling musical event, as the group's 1984 compilation album makes its vinyl debut

The cop to our left is on his radio, talking to back-up: 'I thought Vietnam was bad – you should see the casualty room. They're piled up in there. Piled up man!'

Where we are is backstage at Tacoma Dome. It's the 16th of July 1991 and we're in America gathering copy for a *Melody Maker* cover story that will eventually be published under the title 'White Riot!', the first line of which will read, 'The bomb goes off during "Welcome To The Jungle"...'.

In case you haven't guessed, it's Guns N' Roses, currently being billed by the media as 'The world's most dangerous band'. Only a few nights ago in St Louis, singer Axl Rose had spotted

someone in the crowd snapping photos. The security guards had refused to do anything about it, so he'd dived in and sorted it himself, before storming off stage.

### SMASH HITS

There had been a riot. According to the Maryland Heights Police Department, some 2500 fans invaded the stage and smashed the band's gear to smithereens. Sixty people had been injured. So when the cherry bomb launched from the Tacoma crowd explodes on the stage and the band downs tools and walks off, the next five minutes are tense to say the least. Eventually Axl

### 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...



returns, lectures the crowd in rock 'n' roll etiquette and the gig resumes.

Some 30 years down the line, it's still one of the most thrilling shows I've ever witnessed: pure punk rock at stadium level. At this point in their history, the Gunners' debut LP, *Appetite For Destruction*, has sold upwards of 16 million copies but all's not exactly rosy in their garden. W Axl Rose, up from Indiana with an excessive police record, has been hospitalised, fired by the band for going AWOL in Phoenix, reinstated and then arrested in Australia. In 1989, he'd announced the band was over, on stage in LA while supporting The Rolling Stones.

The reason? He said he was, 'sick and tired of too many people in this organisation dancing with Mr Brownstone' – a reference to one of the band's most infamous songs about heroin addiction.

The next night Slash, the guitarist, had worn a Betty Ford Clinic t-shirt and admitted his addiction in front of 83,000 people. The band had managed to stay together, but Axl's marriage to Erin Everly (daughter of Everly Brother Don) was on the rocks after two days, and one of his songs, 'One In A Million', was reviled by the press as racist and homophobic.

While Axl was busy being diagnosed as clinically depressive, Slash (aka Saul Hudson) was voluntarily detoxing in Arizona after a spell starring as the borderline alcoholic crown prince of the LA smack scene. At one point he was so wasted that friends would leave cards in his pockets so that anyone finding him passed out could phone to have him taken off the sidewalk.

Fellow guitarist Izzy Stradlin (aka Jeff Isabelle) shared Slash's propensity for narcotics and got himself arrested for relieving himself in the kitchen on a plane, while drummer Steve Adler couldn't stick the rehab and was replaced in 1990 by Matt Sorum, who'd played with The Cult. The last time anybody in the band had seen

'The band  
downs tools  
and walks off  
the stage'



➔ Guns N' Roses press shot from 1987 with singer Axl Rose (top right) and guitarist Slash (far right) while (opposite) Axl and Slash play on stage in Poland in July 2018





➔ Priced £22.00, the 180g 2LP vinyl reissue of Guns N' Roses' *Greatest Hits* is available to order online at [amazon.co.uk](https://www.amazon.co.uk)

Steve he was staggering around Hollywood wearing only one shoe.

Bass player Duff McKagan was barely in a better state. His marriage had collapsed and in three years' time his pancreas will have ruptured. Given just a month or so to live, he will clean up and survive.

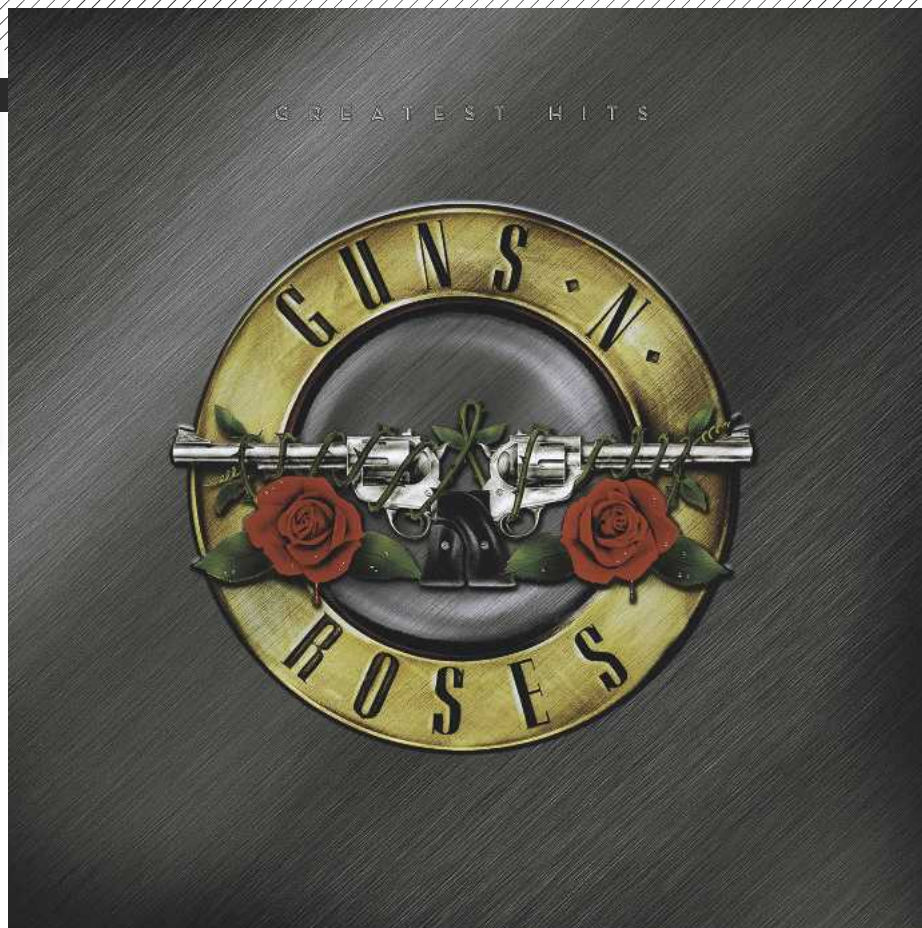
You can find all of this in the grooves of Guns N' Roses *Greatest Hits*, an album originally released on CD in 2004 and now on vinyl for the very first time. It was compiled by Geffen Records who were fed up with waiting for the protracted release of the long-promised *Chinese Democracy* album, which turned out, when it finally arrived in 2008, to feature only Axl from the original Gunners' lineup.

### FAILED LAWSUIT

Characteristically, *Greatest Hits* was launched into controversy when Axl, Slash and Duff – not even talking to each other at this point – filed a failed lawsuit to prevent its release on the grounds that it wasn't representative of the band.

Critics at the time were also piqued, mourning the absence of key Gunners' tracks such as 'Mr Brownstone', but for all that it's pretty outstanding, *NME's* review a voice in the wilderness, claiming: 'It's packed with pomp, spunk and circumstance, makes blokes want to fight and girls want to dance. What the f\*\*\* else is there?'

Tracks chosen judiciously include their signature swaggering anthems 'Welcome To The Jungle' and 'Paradise City', the wondrous, unimpeachable classic 'Sweet



Child O' Mine' (the group's 'Stairway To Heaven'), their ferocious cover of Bob Dylan's 'Knockin' On Heaven's Door', the pumped-up versh of Wings' 'Live And Let Die' which they totally own, 'You Could Be Mine' from *The Terminator 2: Judgement Day* movie soundtrack, and the Elton John Rocket Man-esque ballad 'November Rain'.

Less easy to understand are the inclusion of covers of The Dead Boys' 'Aint It Fun' and The Rolling Stones' 'Sympathy For The Devil' which don't really do much with the originals and will never feature near any fan's GN'R Top 20. Adding

to the original *Greatest Hits*

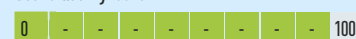
release, the new vinyl version includes the song 'Shadow Of Your Love', a Thin Lizzy inspired riff-heavy romp recorded in 1986 which was included on the 2018 box set of *Appetite For Destruction*. As 'Greatest Hits' comps go, this set will do nicely.

A few hours after the Tacoma gig, we're sitting with a gently sizzled Slash who explains the philosophy behind these tracks. 'If there's no magic, it's just dull. We're not trying to get some truth through. We're not trying to send out any f\*\*\*ing messages. This is just experience. Like it or not, it's us on vinyl.' ☺

### RE-RELEASE VERDICT

Originally issued in CD format in 2004 by Geffen Records, this *Greatest Hits* compilation reached No 1 in the UK albums chart. Now it's released on vinyl for the first time as a double LP with the track, 'Shadow Of Your Love', which when released as a single in 2018 hit No 5 on the Mainstream Rock chart. As well as the regular 180g black vinyl release, there is also a limited edition set on white and red splatter vinyl (£29.99 from the band's official site at [uk.gnrmerch.com](https://www.uk.gnrmerch.com)). HFN

Sound Quality: 85%



T H E J O S H U A T R E E U 2



## U2 *The Joshua Tree*

They went from post-punk hopefuls to stadium headliners in just five years, but keen to avoid repeating themselves the band turned to producers Brian Eno and Daniel Lanois to reshape their music, a strategy that resulted in one of the best selling records of all time

Words: **Mike Barnes**



It was relatively brief, but the cultural convulsion of UK punk in the late '70s prompted an upwelling of rock groups, leaner and hungrier than their predecessors. One of these began life in 1976 at Mount Temple Comprehensive School in Clontarf, a coastal suburb of Dublin. First calling themselves Feedback and then The Hype, before settling on U2, the group comprised four teenage friends: vocalist Bono Vox (real name Paul Hewson), guitarist The Edge (aka Dave Evans), Adam Clayton on bass and Larry Mullen Jr on drums.

Like many of their young peers they began as an amateurish combo, but their playing soon tightened up. They recorded two singles for CBS Ireland, which failed to chart in that country, but in 1980 Island Records offered them a deal and, in October of that year, released their debut album *Boy*, which was produced by Steve Lillywhite [HFN Jan '17].

## CHART SUCCESS

A sort of musical rite of passage from adolescence to manhood, the album received some good reviews. It was preceded in August by the lead single 'A Day Without Me', which didn't create much of a stir. But a second single 'I Will Follow' was released simultaneously with the album and its insistent guitar hook and a pop melody picked up UK airplay. It failed to chart here but more significantly it reached No 20 in the *Billboard* Top Tracks charts when released in the US in 1981.

*Boy* also charted in a number of countries including the US, and thereafter U2's rise was – to use a cliché – meteoric. A second album *October* (1981) just missed out on the UK Top 10 but its successor *War* (1983) reached the No 1 spot.

Although the rhythm section of Mullen Jr and Clayton were solid, if somewhat workmanlike, the band's appeal lay largely in Bono's

Side 1 of the original LP with gold image of a Joshua tree

The band pose for a press shot in 1991 (l-r) Adam Clayton, The Edge, Bono and Larry Mullen Jr

Bono as 'The Fly' on stage during the band's 1992 Zoo TV tour

Brian Eno, who helped produce *The Joshua Tree*, in 2008

Island Records promo shot of the band from the mid '90s



ANTON CORBIN



yearning, impassioned voice and The Edge's distinctive ringing guitar lines. Critic Barney Hoskyns referred to U2 as 'Dram-rock' and likened their melodramatic approach to that of Echo & The Bunnymen and The Associates. The Island Records press office took this on board and praised the group for their 'soaring and emotional rock style'.

To add to this, U2 were avowed Christians and included

some religious elements in their lyrics. 'Gloria' on *October* was far removed from the lustful calling card-in-song of that title Van Morrison had recorded with the band Them. Instead, with lines taken from Psalm No 30, it was an entreaty by Bono to enter God's kingdom. And on *War*, the band tackled political topics

like the Troubles in Northern Ireland and nuclear proliferation while '40' was based on Psalm No 40.

The 1983 *War* tour yielded a live album and a concert film *Under A Blood Red Sky*, recorded at a number of large venues in the US and Germany. By this time Bono – with his hair grown out into a rockstar

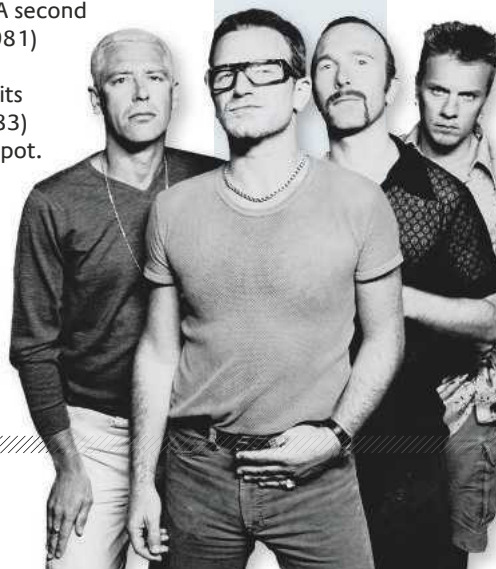
mullet – had taken to waving a huge white flag around on stage in a manner that suggested he had begun to take himself a touch too seriously. When he was asked to explain these

gestures, Bono likened them to 'an artist's broad brushstrokes', which did little to convince his critics.

## BLUSTERING ROCK

It's to the group's credit that they could see that, although they had been incredibly successful thus far, to carry on in this vein could lead to the trap of repeating themselves, playing blustering rock shows in large venues until the band fell out of fashion. Instead, they had the confidence that they could

'Eno had a plan to erase the tape by "accident"'



STEPHANE SEDNAOUI



# GRAVIS

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## PRODUCTION NOTES

For *The Joshua Tree*, U2 were keen to avoid the sterile environment of a commercial recording studio. They had recorded *The Unforgettable Fire* at Slane Castle, outside Dublin, and this time they rented Danesmoate, a Georgian mansion in Rathfarnham.

Daniel Lanois recalls that the predominant sound of the album was largely down to the loudness and the low midrange response of one particular room where the sessions were being recorded. A set of doors was removed and a glass panel installed to separate it from a temporary control room.

Preliminary work began at the mansion in January 1986, the group bringing in bags full of soundcheck and rehearsal tapes with a view to working up the material into demos. Recording sessions began in earnest in the August of that year, alternating between Danesmoate and The Edge's new house at Monkston.

The two producers worked in shifts of a week or two with Mark 'Flood' Ellis as engineer duties. Lanois recalls that he would always mix a track once it had been recorded, to



CINETECH

act as a reference. The final mixes by Steve Lillywhite were split between Monkston on an AMEK 2500 desk and Windmill Studios in Dublin on an SSL desk. *The Joshua Tree* was completed in January 1987.

Lanois recalls that the band had improved as musicians since *The Unforgettable Fire* and initially, progress was swift. But 'Where The Streets Have No Name' was a problem track. They worked on it for so long that Eno thought they had made the song worse than it was originally, then better, then worse again. Eno thought it would be easier to start from scratch and even planned to stage an 'accident' to erase the tape, but ultimately couldn't go through with it.

flourish artistically through change, and for their next album, 1984's *The Unforgettable Fire*, they did what no-one could have predicted. They turned to producers Brian Eno and Daniel Lanois, who had worked together on the ambient albums *Apollo* and *On Land*. Yet when he was first approached, Eno turned down U2's advances and needed convincing.

## A STEP FORWARD

Eno wasn't too impressed by U2's music and at first stated that he was no longer interested in producing other artists. Although he was renowned as a provocative ideas man and a lateral thinker in the studio, he was not convinced that he was the right person for the job. But Lanois was keen to get involved in some rock 'n' roll and Eno felt confident that his partner's expertise in the technical aspects of production would at least guarantee a good outcome. So he agreed..

U2 had enjoyed Eno's production work with Talking Heads (whom they had supported on some UK shows in 1980) and the band had also been struck by the ambience of Simple Minds' *New Gold Dream*. Bono told Eno that he was happy if the new recordings were 'unrecognisable' from previous albums.

One can only surmise that Island wouldn't have accepted some avant-garde art project. But although *The*

'After Live Aid they were on a roll and full of ideas'



ANTON CORBIN

*Unforgettable Fire* had less of a big rock sound and more subtle atmospheres drifting through it, with The Edge experimenting with guitar effects, it was still very recognisably U2.

Eno and Lanois were retained for its successor *The Joshua Tree*.

After playing Live Aid in 1985, U2's popularity went up another notch and they were on a roll, and full of ideas. The album's sound is sharper, more open, with a greater clarity and while it seems a little more conventional due to the stronger songwriting, it was as much of a

step forward as *The Unforgettable Fire*.

'Where The Streets Have No Name' starts with Eno's keyboard drift with The Edge using a system of delay units on his guitar to produce

flickering, rushing currents of notes. Combined with Clayton's speedy bass it produced a momentum that was far removed from standard rock mores.

## SOULFUL BONO

Bono now seemed less intent at yelling at the listener to witness some grand spectacle and more keen to engage with them, which yielded his most affecting vocal performances to date: hushed on 'Running To



Photo of the band in the Mojave Desert, used to promote the album

The group pose for a publicity shot in 1984

Eno and Daniel Lanois at the mixing desk during the recording of *The Joshua Tree*

The Edge playing his signature guitar, a Gibson Explorer, in Belfast in 2018





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# Alternate Format Discography

## ORIGINAL LP

The original LP was released in the UK in March 1987 on Island Records in a gatefold sleeve. It included a double-page insert, which opened out into a photo poster with lyrics on the rear [U26]. The initial US pressings, meanwhile, were on brown translucent vinyl [90581-1].

The Japanese version came out on Island/Polystar [R28D-2066]. It included the standard insert and an additional four-page insert with lyrics translated into Japanese together with a group biography and discography.



was supervised by The Edge. This appeared in a number of different formats, the basis being a double CD with 14 extra tracks including B-sides and session outtakes.

The version that came out in the UK and Europe was released by Island, Interscope and Mercury [1750947]. The 2CD plus DVD version includes a 17-song show from The Hippodrome De Vincennes, Paris, in 1987, and a documentary of that year's *Joshua Tree* tour [1750948].

As for the album's 30th anniversary, this was marked with a newly remastered US, UK and Europe deluxe edition double CD with a 1987 show from Madison Square Gardens from 1987.

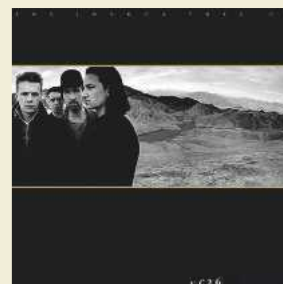
The European edition came in a digipak with a different, colour

photo from the Mojave Desert sessions and a 24-page booklet [Island, Universal, Interscope, 00602557482621]. The deluxe box-set adds a CD of B-sides and album session outtakes and a CD of remixes, a book and photographic prints [00602557482577].

## AUDIOPHILE VINYL

In 2007 the album was remastered for the UK on 180g vinyl over two discs, with an eight-page colour booklet [Island, Interscope, Universal,

1750949]. Finally, in 2017 a 7LP set equivalent of the 4CD box set was released in the UK, Europe and the US [Island/Interscope 00602557482485].



## CASSETTE

In the UK the cassette came in a black shell with a black, dark grey and gold insert in 1987, but with a different group photo from the LP's

[Island UC 26]. In the US the cassette had a Dolby HX Pro tape in a transparent shell.

## 8-TRACK

*The Joshua Tree* was also released on 8-track cartridge with a cream shell bearing the same photo used for the cassette, but with a blue border [Island, A8 90581].

## CD EDITIONS

Initial UK and US CDs were released in 1987, the cover featuring the 'cassette' group shot. The discs were silver with a black tree logo and the Island logo in blue [Island, CID U2 6]. The first significant remaster was the 20th anniversary edition, which



DERDRE O'CALLAGHAN



U2 in 2013 and (below) on stage in Kansas during the 2017 *Joshua Tree* tour, the highest-grossing tour of the year, earning \$316 million

Stand Still' and more genuinely soulful on 'Red Hill Mining Town', his delivery infused with gospel elements on the song 'I Still Haven't Found What I'm Looking For'.

## TWO AMERICAS

It was musically and sonically by far U2's most convincing statement and the music press, which included a fair number of naysayers, were generally impressed.

In his *NME* review John McCready wrote, 'The *Joshua Tree* will prove a better and braver record than anything that's likely to appear in 1987. It's the sound of people still trying, still looking, when all the world wants from them is volume and fireworks. U2 have long since dispensed with such things'.

Anton Corbijn's cover shot of the group in the Mojave Desert found them looking very serious indeed. The album's working title had been *The Two Americas*, the idea being to examine the mythical America and the modern reality. Bono sings of the 'Dream beneath the desert sky' that attracted Irish migrants in

search of a better life on 'In God's Country'. But on 'Bullet The Blue Sky', he references John Coltrane, fighter planes in Vietnam, burning crosses, the planting of the demon seed and apocalyptic rain 'pelted the women and children'.

Musicians have perennially been seduced by America, with some moved to comment on a country they don't fully understand, which can easily come across as a kind of cultural tourism. But *The Joshua Tree* sold over 10 million copies in the US alone, going on to sell a

massive 25 million worldwide. Not only did it top the US charts and stay there for a full 103 weeks, but in 1988 it won a coveted Grammy award.

It was also recognised by the US Library Of Congress as being of such cultural significance that it is preserved in the National Recording Registry. All of which suggests that with this album U2 had got the balance just right. ☺

"All the world wants is just volume and fireworks"





# Inside the Studio

BEHIND THE MUSIC WITH HI-FI NEWS & RECORD REVIEW



## AIR Studios London

From the Stones to the Sex Pistols, and early Pink Floyd... **Steve Sutherland** tells the story of one of the world's pre-eminent studios, beginning with its turbulent past

**I**t's the volcano that finally does for them. Hurricane Hugo, the tropical cyclone which struck in 1989 had been bad enough, of course, wiping out whole villages, cutting off all power supplies, tearing the roof off 90% of the buildings, killing ten and seriously injuring 89 citizens, and making 11,000 of the island's 12,000 population effectively homeless.

But there are those dreaming and planning to rebuild until the Soufrière Hills volcano erupts six years later, killing 19 people, devastating the south of the island and burying the capital, Plymouth, in five metres depth of mud underneath which lava still smoulders. More than half the population leave and the idyllic Caribbean holiday island

➔ View from the control room at AIR's Studio 1

➔ The Rolling Stones' album *Steel Wheels* and the band in 2012

of Montserrat, now a modern-day Pompeii, is pretty much finished.

### EXOTIC OPTION

One of the most notable fatalities in this unfortunate natural tragedy is AIR Studios, which had been built by Beatles' producer George Martin and opened in 1979. Martin had fallen in

love with the island when on holiday two years earlier and hatched the plan to establish a top-of-the-range recording facility in a temptingly exotic setting. Great idea. No-one argues. Its ten year tenure spawns 76 albums. The first is The Climax Blues Band's *Real To Reel* followed by such blockbuster recordings as



### KEY RECORDING TIMELINE



**1979**

The Climax Blues Band make the trip to Montserrat to record their 11th studio album *Real To Reel*



**1981**

Sheena Easton records her debut album *Take My Time* with producer Christopher Neil. It's a Top 20 hit



**1985**

Dire Straits decamp to Montserrat between Oct 1984 and Feb 1985 where they record *Brothers In Arms*



Dire Straits' *Brothers In Arms*, *Ghost In The Machine* and *Synchronicity* by The Police (they shoot the video for 'Every Little Thing She Does Is Magic' goofing around in the studio), Elton John's 'I'm Still Standing', Stevie Wonder and Paul McCartney's 'Ebony & Ivory' and the last LP to get done there before disaster strikes, The Rolling Stones' *Steel Wheels*.

Others who splash about in its pool, sup at its bar and try to get around to rolling some tape are Lou Reed, Arrow – who's 'Hot Hot Hot' is virtually the studio's anthem – Black Sabbath, Eric Clapton, Marvin Gaye, Supertramp and Duran Duran, living in tax exile, with whom I spend a glorious week in May 1983 while they struggle, and eventually fail, to lay down tracks for their third album, *Seven And The Ragged Tiger*.

## BIG PLAN

By 1986, the studio catalogue lists, 'a recently refurbished control room now featuring 60 channels by SSL with automation and TR and 12 fully integrated channels by Rupert Neve of Focusrite, two 32-track Mitsubishi X850 digital machines and 24-track Studer A800. Digital mixing on two Mitsubishi X86' among its assets. Today the whole place is a rotting shell, home to a plague of wasps.

But our story begins back in London in 1965. George Martin, in his pomp at the time, takes a risky and unprecedented step and decides to break away as a salaried employee of EMI's Parlophone, where he feels he's seen very little in the way of financial reward from his phenomenal Fabs productions, and forms the Associated Independent Recordings company.

He doesn't go it alone. He takes three of his pals with him. Ron Richards had been Martin's assistant at Parlophone and had discovered and produced The Hollies. John Burgess was another EMI associate. He'd worked in promotions with Frank Sinatra and Dean Martin, produced Adam Faith and John Barry, including the *James*

↑ Ruins of the studio in Monseratt pictured in 2013 (top) and (below) Duran Duran in the early '80s (l-r) – Nick Rhodes, Andy Taylor, Simon Le Bon, Roger Taylor and John Taylor

↗ AIR's founder Sir George Martin in the control room that looks onto the main hall at Lyndhurst. The desk is a 96-channel Neve 88R

↗ Kate Bush recorded 'Wuthering Heights' in Studio 2 at the Oxford Street site in 1977

→ The Police and their 1983 album *Synchronicity*, made at AIR in Montserrat



ANTHONY CRICKMAY

*Bond Theme*, and had a ton of hits manning the desk for Freddie & The Dreamers, Manfred Mann and Peter And Gordon among many others.

The last to join the gang was Peter Sullivan, a defector from rival label Decca who'd been at EMI earlier in his career, discovering Johnny Kidd & The Pirates and producing their brilliant No 1 single 'Shakin' All Over'. He'd also discovered Lulu and produced her first hit, 'Shout'. His biggest successes, though, had been in discovering Tom Jones for whom he produced 'It's Not Unusual', 'What's New Pussycat?', 'The Green, Green Grass Of Home' and 'Delilah' as well as Engelbert Humperdinck's 1967 hit ballad 'The Last Waltz'.



With this formidable clan assembled, Martin's big plan is to fund the production of new releases, relieving record labels of the cost, then sell them on, taking a royalty on their sales in return.

## EAT TO THE BEAT

It takes a while for the idea to catch on but, with their joint reputation, they gradually woo the day's top artists and record the likes of The Beatles *et al*, at Abbey Road, Chappells, Morgan, Lansdowne, IBC and Decca and other studios. Over the next few years they take enough to the bank to build their own production facility having scouted out a disused banqueting hall on the fourth floor of the Peter Robinson department store at 214 Oxford Street near London's Oxford Circus.

Opening under the banner, 'Built by producers for producers', and fuelled by 400 bottles of Bollinger, AIR kicks off on the 6th of October 1970 with a celeb-packed ➞



**1989**

Simply Red score their first No 1 album with *A New Flame*, working at AIR with producer Stewart Levine



**2014**

The strings for George Michael's No 1 album *Symphonica* are put to tape in the 'Live Room' at Lyndhurst



**2015**

It's a No 1 in seven countries for rock band Mumford & Sons with their third album *Wilder Mind*, recorded at AIR



# mighty small.



Measuring just 104mm wide, and with a volume of just 2.8L, the **Boenicke W5** loudspeakers harbour an astonishingly BIG sound. Discreet and beautifully styled, they are perfect for small desks or large rooms. That side-mounted bass driver is capable of 16mm linear excursion—generating a stunning amount of punchy bass.

It also hides a rear-firing off-axis miniature ambient tweeter—allowing for breathtaking sound-staging.



## BOENICKE

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two-day party; the first session in the inaugural Studios is The Average White Band's third album, under the aegis of newly-hired house engineers Chris Thomas and John Punter.

Studio rates are £35 per hour and AIR builds a reputation as the place to go to debut all the latest studio technology, such as 24-track recording, multi-track tie-lines between studios and a 56-channel mixing solution by Neve Electronics.

At first AIR comprises two studios – Studio One, the larger – boasts a phenomenal live sound, perfect for orchestral work, while Studio Two is initially most popular with bands. Bookings duly roll in and a couple more studios are added to meet demand. This is where Pink Floyd record *Meddle* (they shift from Abbey Road which only has 8-track to make use of AIR's 16-track), Queen make *Sheer Heart Attack*, Roxy Music fashion *For Your Pleasure*, Paul McCartney does 'Live And Let Die', The Sex Pistols knock out *Never Mind The Bollocks* with Chris Thomas producing and Kate Bush introduces herself with the wondrous 'Wuthering Heights'.

## CHURCH CONVERSION

All's going extremely hunky dory until the lease runs out in 1991 whereupon the business relocates to the Grade II listed Lyndhurst Hall in Hampstead, North London. Originally a church and missionary school, Lyndhurst Hall had been designed in the Romanesque style by the Victorian architect Alfred Waterhouse (designer of the Natural History Museum) in 1884. It was built specifically for congregational singing, and Martin enhances

this with a multi-million pound conversion of the church into a state-of-the-art studio facility.

## UP IN THE AIR

The new AIR Studios Lyndhurst opens in December 1992 with a gala performance of *Under Milk Wood* in the presence of HRH The Prince of Wales and, with its Live Room's rare capability to handle full orchestral and choral recording simultaneously, it specialises in producing movie, TV and computer game scores including *Love Actually*, *Harry Potter And The Philosopher's Stone*, *Wonder Woman*, *Casino Royale*, *Doctor Who* and many more.

Lyndhurst Hall, aka The Live Room

comprises some 300m<sup>2</sup> of hexagonal ground floor space, plus it features three tiered galleries, four isolation booths, a motorised acoustic canopy which looks like a spaceship, a Steinway Model D Concert Grand Piano, a 96-channel Neve 88R, and a Dynaudio 5.1 surround system.

'The acoustic canopy looks like a spaceship'

Inside the hall at Lyndhurst with its motorised acoustic canopy and three galleries

Studio 1 houses up to 45 musicians and is a flexible space with sliding doors

Pink Floyd play live on stage in 1973

Adele chose AIR to record tracks for her album 25

There are three other studios, known as the Triplex, stacked on top of one another in one of the church wings. Studio 1 on ground level covers 140m<sup>2</sup> and can host up to 45 musicians, boasts a versatile acoustic thanks to its moving wall, and offers use of a custom-built Neve console. Clients include Coldplay, Radiohead, Muse, Biffy Clyro, U2, Adele, Katy Perry and Dua Lipa.

Studio 2 markets itself as one of the best mixing rooms in the world due to its acoustic design and 80-input SSL 8000G. Van Morrison, George Michael and Nick Cave & the Bad Seeds are among the artists who have made use of the facility. Studio 3, equipped with a 48-fader AMS DFC Gemini desk, is the largest mixing room. It is dedicated to score mixes for film, TV and games.

## FOOD FOR THOUGHT

As the years pass, Chrysalis and Pioneer jointly take over the studio and sell it on to Strongroom's Richard Boote in 2006. He in turn sells the business in 2018 to Maxim Demin, a Russian businessman who also owns Bournemouth FC.

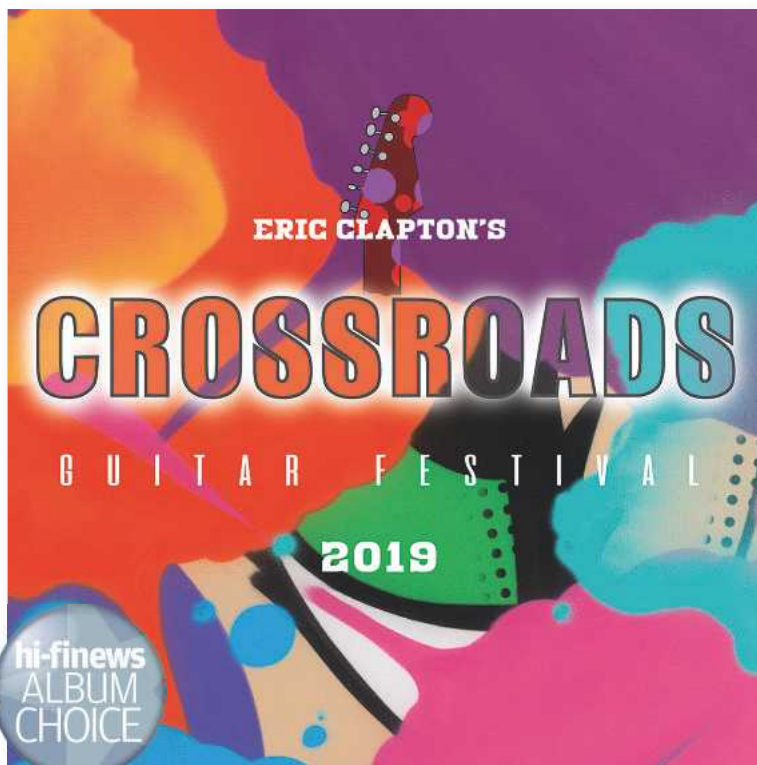
In case you were wondering, one of the artefacts rescued from the Montserrat studio is the wooden bar. It's been 'relocated' to the beachside Soca Cabana bar on the safe Northern tip of the island at Little Bay where you're encouraged to 'Drink at the bar of the stars'.

My abiding Montserrat memory? Duran Duran's Nick Rhodes advising me not to eat the Mountain Chicken on the studio meal menu. 'Why not?' I asked. 'Because it's frog'. ☹



MARTIN SARRI





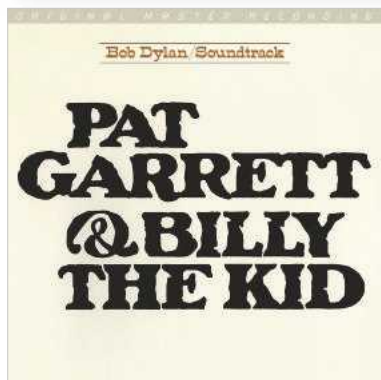
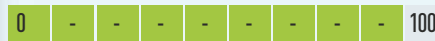
### ERIC CLAPTON & FRIENDS

Crossroads Guitar Festival 2019

Rhino R1 628789 (six discs)

Clapton's occasional fundraiser marked its 20th anniversary with yet another 'Who's Who' of guitar heroes. Its 42 tracks are spread over six LPs, and the live feel is what makes this set a perfect document of the event: the show was produced and mixed by Simon Climie, then mastered by the inimitable Bob Ludwig. Guests included Albert Lee, Billy Gibbons, Andy Fairweather Low, Bonnie Raitt, The Buddy Guy Band, Jeff Beck, Joe Walsh, John Mayer, Keb' Mo', Robert Cray, Sheryl Crow, Sonny Landreth, Susan Tedeschi and more, playing loads of blues numbers and covers of Eric-related milestones. Sales will benefit the Crossroads Centre in Antigua which treats drug addiction, so spring for a superb set. **KK**

Sound Quality: 90%



### BOB DYLAN/ORIGINAL SOUNDTRACK

Pat Garrett & Billy The Kid

Mobile Fidelity MFSL1-487 (180g vinyl)

You gotta love soundtracks which stand up on their own, independent of seeing the film, eg, *A Hard Day's Night* or *Performance*. I venture that, as good as was the film, this 1973 release ended up in more record libraries by people who didn't see it than did. After all, it includes 'Knockin' On Heaven's Door' – surely one of Dylan's finest, most elegiac masterworks – while the musicians form a roster of giants: Roger McGuinn, Byron Berline, Booker T, Jim Keltner, Russ Kunkel. As Dylan had, by this time, conquered the musical sub-genres which travel under the names of 'roots', 'Americana' and 'alt-country', it sounds more current now than 48 years ago. **KK**

Sound Quality: 90%



### WHITESNAKE

Love Songs

Rhino R1 643449 (two 180g discs in red vinyl)

As Spinal Tap-ish as the notion of 'Whitesnake' and 'Love Songs' may seem, this second in the 'Red, White & Blues' trilogy attests to the band's mastery of power ballads. Fans will love the remixes, the sound a tad more polished without losing power. Standouts in this hit-laden package include 'Now You're Gone', 'Midnight Blue', 'Is This Love' and 'The Deeper The Love', while two unreleased tracks ensure mandatory purchasing by completists: 'Yours For the Asking' and 'Let's Talk It Over'. The coloured vinyl pressings are excellent, but I have to admit to wry amusement at the inclusion of a lyrics sheet, as karaoke fodder this is not. **KK**

Sound Quality: 85%



### JACKIE WILSON

Whispers

Demon DEMREC685

As one who'd argue that Wilson just may be the greatest, most versatile male singer since recording began, I have to give this a thumbs-up for content. If you have ever heard Wilson – and not just this LP's No 11 (US) hit, 'Whispers (Gettin' Louder)' – you know he was a belter who tempered soul and funk with Motown-like sophistication, abetted by a vocal range that included the operatic. This is classic, mid-period Wilson, which, while showcasing that voice, makes you wish all the more he'd defected to Stax, Volt, Atco or any other label that didn't try to turn him into Sinatra. Northern Soul devotees will love this, especially the perfect facsimile sleeve. **KK**

Sound Quality: 85%







COMPACT DISC



SUPRAAUDIO



DVD



BLU-RAY



VINYL



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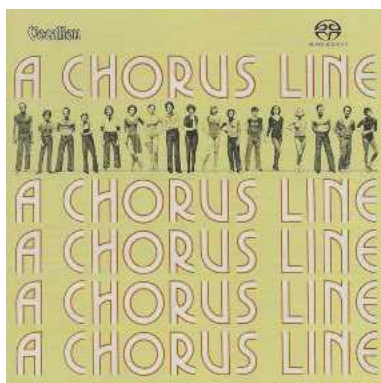


## JIMI HENDRIX Are You Experienced

Analogue Productions CAPP19782SA (SACD hybrid)

One forgets how weird, nay bizarre, was the stereo mix of this album in places, but the music transcends the extreme separation. This SACD – the sleeve and track listing follow the US issue – includes the stereo version on both layers, with the mono mix a bonus solely for the SACD layer. Hendrix's debut still sounds radical and otherworldly over a half-century on, and every track is magnificent, with a surfeit of what would become his signature tunes, including 'Foxey Lady' – yes, US spelling with an 'e'! – 'Purple Haze', 'Hey Joe' and my all-time Jimi fave, 'The Wind Cries Mary'. If you don't already own a copy, Analogue Productions' SACD will do the trick. *KK*

Sound Quality: 85%



## ORIGINAL CAST RECORDING A Chorus Line

Vocalion CDLK4640 (multi-channel SACD)

Although I loathe this kind of solipsistic Broadway self-indulgence, of which I am utterly alone in my detestation, it is a much-loved, *hugely* successful musical about stage performers. It is, however, a cut above anything ever done by Andrew Lloyd Webber, and the sound, well... if ever you needed incontrovertible evidence that stage scores and soundtracks are among the best-recorded albums of all, this will take your breath away. I'd like to say that there are musical high points, but there isn't one song on here that I can recall as one does the played-to-death ca-ca from, say, *Cats*, or deserving works from Lerner & Loewe, Rodgers & Hammerstein, *et al.* *KK*

Sound Quality: 85%



## VARIOUS ARTISTS Headphone Heaven Volume 1

STS Digital 6111194

Thirty-one tracks, of which 14 are music, make this a nice demo disc with all chosen to exploit headphone listening. The music includes big band, tango, harp, gospel, Great American Songbook and other genres; the opener is a left-right channel check, and tracks 16-31 are nicely recorded sound effects. However (and I am growing as irritated by this as you might be), the label's inexplicable inability to compose liner notes of any worth means there are no listings of the sounds, so you have to remember which number corresponds to, say, the helicopter or the police siren-plus-gunshots or the train passing by. Or how they were recorded... *KK*

Sound Quality: 90%



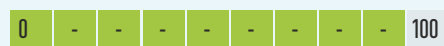
## THE REPLACEMENTS

Please To Meet Me

Sire/Rhino R2 643412 (three CDs + LP)

While Replacement fans need not be audiophiles – sonic virtues were not the band's forte – this second bumper set is surprisingly euphonic (if perhaps too slick for the purist fan). It is, of course, all indie guitar, Byrds-by-way-of-Hendrix, and vocals that link Big Star to Nirvana. That aside, this rocks hard from start to finish. You get the remastered album with six singles-only tracks, a CD with 15 demos and one of rough mixes, outtakes and alternates. At the risk of inflaming those who worship the achingly overrated Kurt Cobain, this may be the best US indie band ever, and if this is not their best *album*, it's the best-sounding. Amusingly, the set's LP contains 13 of the 'rough mixes', not the original album! *KK*

Sound Quality: 90%





### JOACHIM EIJLANDER

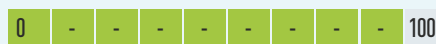
Dark Fire (DSD64/128/256/512; DXD)

[www.nativedsd.com](http://www.nativedsd.com); TRPTK TTK0056

This album by cellist Eijlander is, like the *Paper Motion* set [HFN Feb '21], another TRPTK release, which means it's also heavily annotated when it comes to the equipment employed in the recording process – but it couldn't be much more different in style and approach. It's one of those 'musical cultures meet' projects, the cello being joined by guitar, piano, accordion and duduk. Yes, I had to look it up too: it's an Armenian double-reed woodwind instrument made from apricot wood. It's OK,

you can thank me later. Anyway, the pieces here are unfamiliar, but both the performances and the recorded sound, placing the instruments in an atmospheric church acoustic, are really rather excellent, with Sulkhan Tsintsadze's '5 Pieces On Folk Themes' especially attractive in making use of the varied instrumental textures on offer. It's a slow-burner, to be sure, but one well worth exploring. **AE**

Sound Quality: 90%



### ROYAL CONCERTGEBOUW ORCHESTRA

Beethoven: The Symphonies (44.1kHz/24-bit, FLAC)

[www.hi-hiresaudio.com](http://www.hi-hiresaudio.com); RCO Live 9029686533

Each Symphony here has a different conductor in characteristic live recordings dating from 1962 to 2003: No 1 David Zinman; 2 Leonard Bernstein; 3 Nikolaus Harnoncourt; 4 Herbert Blomstedt; 5 Mariss Jansons; 6 Roger Norrington; 7 Rafael Kubelik; 8 Philippe Herreweghe; 9 Antal Dorati. If you buy the CDs No 7 is with Carlos Kleiber (rights issues necessitating the change here) – but, anyway, he's well represented in live Sevenths and, albeit mono, it's good to have this rather glorious Kubelik alternative to his two DGs. Jansons apart, these are all guest appearances and styles vary from the traditional to the 'historically informed', the magnificent orchestra keeping up with some rapid speeds from Norrington. But turn to Jansons and Bernstein and there's a more palpable rapport. Zinman I found too slick and Harnoncourt's 'Eroica' unfathomable. **CB**

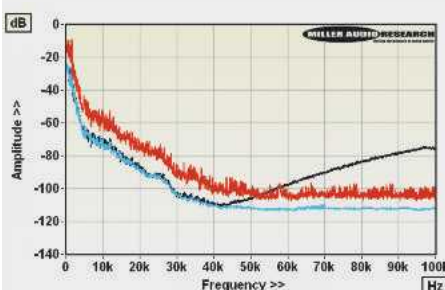
Sound Quality: 85%



### OUR PROMISE

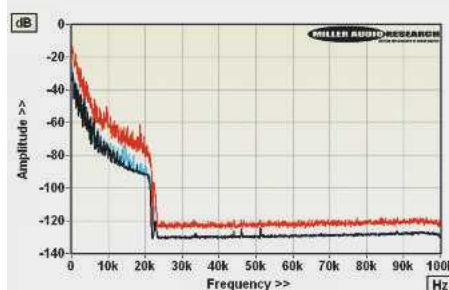
Following our Investigation feature [HFN Jun '11] where we examined the claimed quality of 'high-res' downloads, *Hi-Fi News & Record Review* continues to measure the true sample rate and bit-depth of HD music downloads. The Graphs show peak [red] and RMS [blue] spectra. These unique reviews will be 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



Supplied as FLACs, the DXD files are best unpacked to WAV before playback. The latter are normalised some 5-6dB higher than the DSD128 files [black trace], but both offer ample bandwidth to capture these acoustic instruments. **PM**

### LAB REPORT



The 20kHz 'CD bandwidth' is sufficient to contain the range of the earliest 1962 (mono) analogue recording [No 7, black] but not, perhaps, the newer digital renderings. Signs of peak-level clipping in trks 4, 5, 10, 20, 25, 26, 30 and 37. **PM**





COMPACT DISC



SUPRAAUDIO



DVD



BLU-RAY



VINYL



DOWNLOAD



## MONTY ALEXANDER

Love You Madly – Live At Bubba's  
(DSD64/128/256/512; DXD)

[www.nateddsd.com](http://www.nateddsd.com); 2xHD 2XHDRE1187

The more of these albums the 2xHD label uncovers, remasters and releases, the more you appreciate the work it's doing in letting us rediscover superb performances. These live recordings, taken from pianist Alexander's own collection and made in Aug '82 at a Florida 'Jazz Restaurant', were captured by engineer Mack Emerman, founder of Criteria Studios – home of many a big-selling recording. Here we find a tight little quartet featuring bassist Paul Berner, Duffy Jackson on drums and extra percussion from Robert Thomas, Jr performing a set that's both coolly relaxed and at times driving and spirited, generous in its 92min running time, exceptionally well-recorded and finely remastered. You really don't have to be a beard-stroking jazzier to enjoy this – an ear for a great recording of fine performances will do. *AE*

Sound Quality: 85%



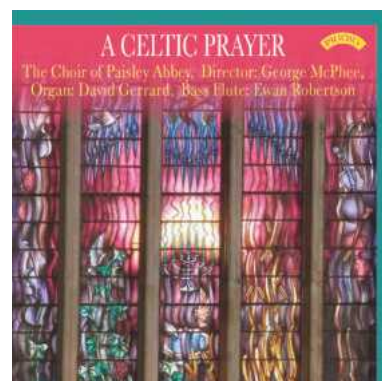
## SOPHIA LOREN, RUSSIAN NATIONAL ORCHESTRA/KENT NAGANO

Prokofiev: Peter And The Wolf (48kHz/24-bit, FLAC)\*

[www.highresaudio.com](http://www.highresaudio.com); Pentatone PTC5186011

This is a download-only decoupling from the well intentioned but slight *Wolf Tracks* by Jean-Pascal Beintus, on the 2003 SACD aimed at children, with narrators Sophia Loren and Bill Clinton, and intros/outro by Mikhail Gorbachev. Highresaudio still lists the original – at higher resolution and with booklet too. Sophia Loren returned to filming recently with the acclaimed *The Life Ahead*; here she sounds genuinely interested in the project and her timing is eminently suited to small listeners. As the instruments are matched to the characters – the cat (clarinet) the obvious star here, the percussion clearly enjoying themselves – the orchestra is faded down, which is a pity. It seems their parts were done in sections to illustrate the texts, whereas Nagano's earlier Lyon version [Erato, deleted] had more *musical* continuity. *CB*

Sound Quality: 80%



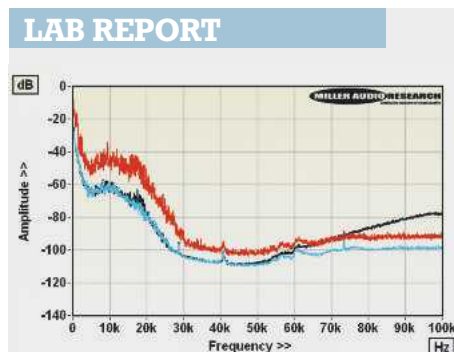
## DAVID GERRARD, EWAN ROBERTSON, THE CHOIR OF PAISLEY ABBEY/GEORGE MCPHEE

A Celtic Prayer (96kHz/24-bit, FLAC)

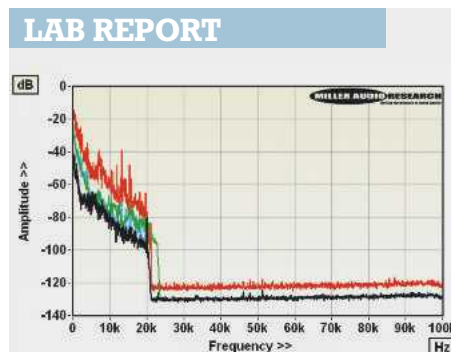
[www.prioryrecords.co.uk](http://www.prioryrecords.co.uk); PRCD1234

Priory specialises in church music and organ recordings. Its latest collection has contemporary Scottish pieces – five by McPhee, Organist and Master of the Choristers at Paisley since 1963; a setting by James MacMillan, *Chosen*, in tribute to him; and music by six other composers – and two 4m works by (15th century) Robert Johnson, choir alone. Texts and informative notes on the 17 tracks *only* come with the CD. We had these, but with the Abbey echo it was pointless trying to follow the words... Women's voices dominate the 25-strong choir. Ewan Robertson plays bass flute (strange timbres!) in three Donne settings by Edward McGuire. Organist David Gerrard is a specialist in early keyboard instruments. Stuart McRae's 'Adam Lay Ybounden' is the most musically interesting item here. *CB*

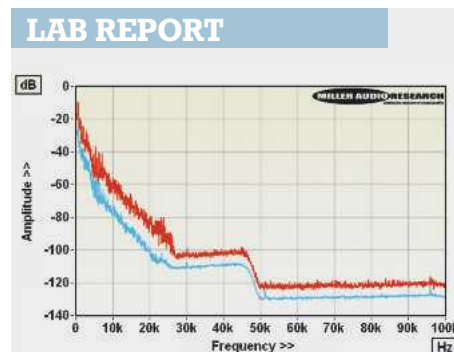
Sound Quality: 75%



With both DSD128 [black trace] and DXD masters derived from original analogue tapes it's the latter that defines both dynamic range and bandwidth. The DXD tracks peak ~6dB higher than via DSD, so choose whichever 'flavour' suits! *PM*



Trks 13 and 14 are offered as 48kHz files [green], while the other tracks look like upsamples from 44.1kHz [peak, red; RMS, blue]. Note also the 20kHz pilot tone on Sophia Loren's vocal track [black], latterly mixed into the ensemble. *PM*



The 96kHz sample rate is well chosen to capture the harmonic span of organ and massed voices up to ~26kHz. Trks 5, 7, 9 and 17 are close to full scale at -0.2dBfs but the typical spectral peak-to-RMS of ~20dB suggests good dynamic range. *PM*

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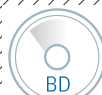
COMPACT DISC



SUPRAUDIO



DVD



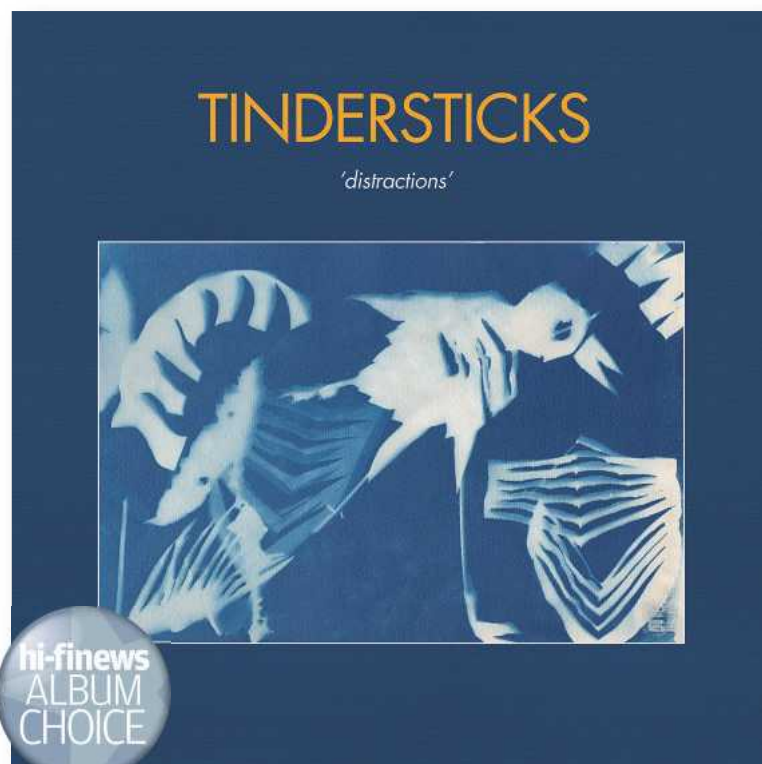
BLU-RAY



VINYL



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### TINDERSTICKS

*Distractions*

City Slang SLANG50349; LP: SLANG50349LP

Vocalist Stuart Staples describes *Distractions* as 'minimal, austere almost', with decoration regarded as 'frivolous'. He's not kidding. It's a challenging collection and a world away from their trademark orchestrated ballads. On the 11-minute 'Man Alone (Can't Stop The Fadin')' sparse incantations float around synthetic drums as if skirting a musical void, but it's gripping nonetheless. There are creepy recitations on 'I Imagine You', a skeletal piano ballad in 'Tue-Moi' and 'Lady With The Braid' is an animated bossa nova with lush keyboards and strings. The closer 'The Bough Bends' incorporates birdsong and voices intoning 'Distractions, distractions', as if a fleeting thought had been transformed into a song. **MB**

Sound Quality: 95%



### THE BESNARD LAKES

*The Besnard Lakes Are The Last Of The Great Thunderstorm Warnings*

Full Time Hobby FTH382CD; LP: FTH382LP

The Canadian psychedelic rock sextet return with their first album in seven years and by track 2, 'Raindrops', this 72m expedition reaches the first of its peaks. A paean to the late Talk Talk founder Mark Hollis, it emulates some of that band's search for transcendence through lengthy instrumental and melodic excursions. Guitarist and vocalist Jace Lasek often slides up into falsetto, a tendency balanced by Olga Goreas' sweeter, steadier tones. The Besnard Lakes strive towards the epic and their layered guitars and keyboards interact like a more invigorated Spiritualized – the title track is 16m of spacey drones. **MB**

Sound Quality: 85%



### THE NOTWIST

*Vertigo Days*

Morr Music MM180CD; LP: MM180LP

The German group resurface with a set that invites comparisons with the Krautrock sound of the '70s, particularly the hypnotic drum patterns of Can and the hazy sonics and skewed lyricism of *Faust IV*. But The Notwist are forward-looking and the musicians they've invited to augment their keyboards, guitars and electronics include Japanese vocalist Saya from Tenniscoats and jazz clarinetist Angel Bat Dawid, with Argentine singer Juana Molina guesting on the breakbeat-driven 'Al Sur'. Their songs balance melody and sonic experimentation and the recapitulation of the instrumental 'Stars' and the disarmingly sweet 'Into Love' gives it a thematic coherence. **MB**

Sound Quality: 90%



### JAMES YORKSTON AND THE SECOND HAND ORCHESTRA

*The Wide, Wide River*

Domino WIGCD484; LP: WIGLP484XM

James Yorkston asked music producer Karl-Jonas Winqvist to invite musicians to improvise backing for these songs. While this might have resulted in a few train wrecks, Yorkston's folk-ish songwriting style is more concerned with detailed observation than structural convolutions and the 'orchestra' play keyboards, guitars, accordion, strings and winds with energy and empathy. 'To Soothe Her Wee Bit Sorrows' has a similar inspired looseness to John Martyn's '70s material; 'Ella Mary Leather' is more arranged, a typically gritty love song; and 'A Very Old-Fashioned Blues' is fleshed out with vocal harmonies. **MB**

Sound Quality: 80%



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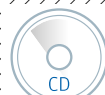
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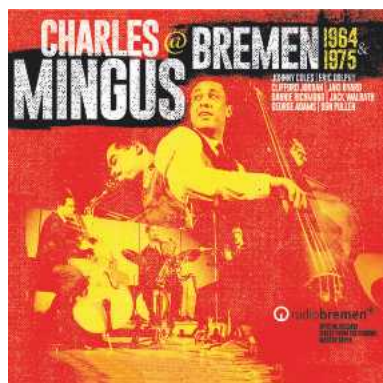
### EMMET COHEN

Future Stride

Mack Avenue MAC1181; LP: MACLP1181

Many pianists have revived the 'stride' style of the 1920s, but Cohen does much more than that here. In the past, he's worked with greats of earlier generations, and curated his own Master Legacy Series of recordings with them. This time, as the album title implies, he's bringing elements of stride into a modern context. With his regular trio partners, brilliant bassist Russell Hall and drummer Lyle Poole, he romps through 'Symphonic Raps' and 'Dardanella', as well as some later standards and originals. Guest soloists are saxophonist Melissa Aldana, and Marquis Hill, whose outstanding trumpet work makes Cohen's 'Little Angel' an impressive finale. *SH*

Sound Quality: 90%



### CHARLES MINGUS

Charles Mingus@Bremen 1964 & 1975

Sunnyside Records SSC1570 (four discs)

The music filling the first two CDs here, from an April '64 performance at Radio Bremen, has long been available in bootleg form, but now it's an official issue, mastered from the radio tapes with a sharper, more revealing sound. The same goes for the 1975 concert recorded in stereo in a larger hall when Mingus revisited Bremen with his current quintet, only drummer Dannie Richmond remaining from the 1964 sextet lineup. Most of the new tunes had been introduced on the *Changes One* and *Two* albums, while 'Fables Of Faubus' sounds rather different without the intensity of Eric Dolphy – you can (just) hear the once-banned words. A great package. *SH*

Sound Quality: 75%



### CHRIS POTTER

There Is A Tide

Edition Records EDN1168; LP: EDNLP1168

Since he came to fame 30 years ago as sideman to bebop legend Red Rodney, Chris Potter has done everything on the saxophone, his credits ranging from Steely Dan to the Mingus Big Band to Patricia Barber. But in this at-home lockdown project, he's done everything on every instrument – keyboards, guitars, percussion – and has also overcome 'the challenge of recording without a proper studio'. You don't get the dynamics, perspectives or gloss of a normal studio album but he's done an amazing job. His perfectly realised arrangements can be grooving, as in 'Beneath The Waves', or uplifting, as in 'So Many Stars'. A one-man *tour de force*. *SH*

Sound Quality: 80%



### KEITH JARRETT

Budapest Concert

ECM 0730194 (two discs); 2LPs: 0739330

This latest solo album documents Jarrett's performance at the Hungarian capital's Béla Bartók hall in July 2016, two weeks before the concert that yielded *Munich 2016*. As a taster, back in May 2020, ECM celebrated the pianist's 75th birthday with a digital single release of a Budapest encore, his blithe and eloquent interpretation of 'Answer Me'. But sadly, around the time the album itself was announced, it was revealed that Jarrett hadn't recovered the use of his left hand since his two strokes in 2018, and was unlikely to perform again. ECM says Jarrett himself has viewed the Budapest concert as the 'gold standard' among his solo recordings, which must be reason enough to add it to your shelf. *SH*

Sound Quality: 90%



KEITH JARRETT  
BUDAPEST CONCERT

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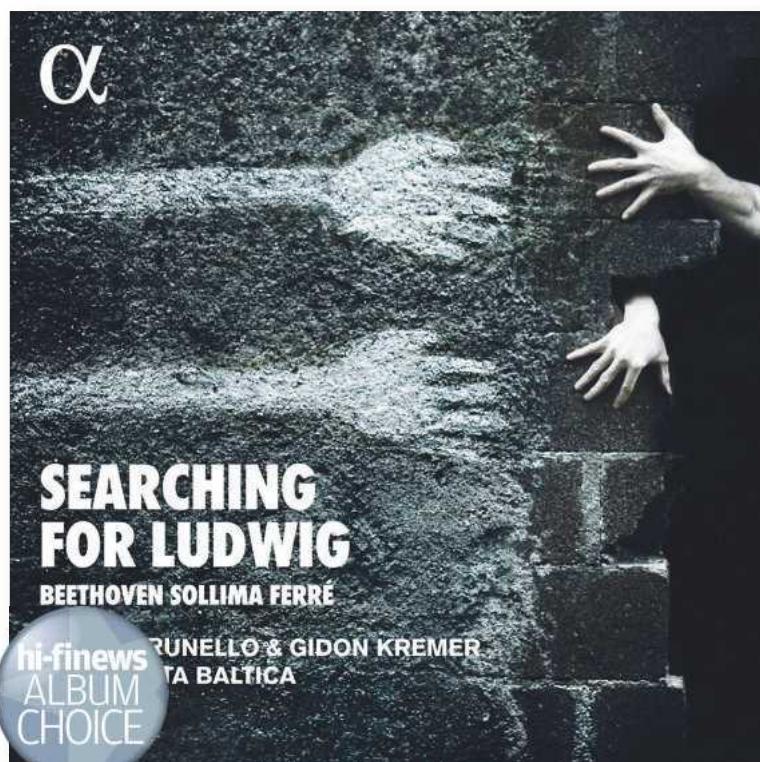
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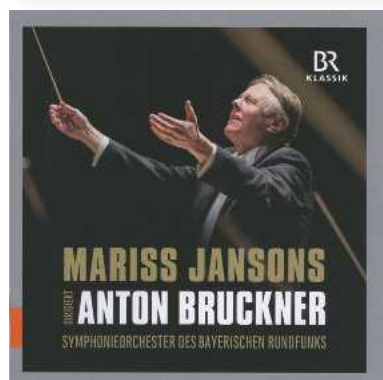
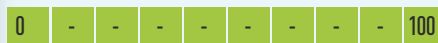
### KREMERATA BALTICA/GIDON KREMER, MARIO BRUNELLO

Searching For Ludwig – related works by Beethoven, Léo Ferré and Giovanni Sollima

Alpha Classics ALPHA660 (downloads to 96kHz/24-bit resolution)

The two main works here are Beethoven's String Quartets Op.131 and Op.135 transcribed for strings, the latter directed by cellist Mario Brunello, the C-sharp minor led by Kremer. A garish piece by Ferré, *Muss es sein?*, is rescored (cello, strings, percussion) with Ferré's manic vocal interjections over-dubbed. The other – far more approachable – new work, *Note Scontate*, rather dreamlike, was composed in memory of Franco Rossi, cellist in the Quartetto Italiano, and is based on Beethoven fragments. The Kremerata playing is wonderful, solo strings alternating in Op.131 with greater intimacy than in the last Quartet. **CB**

Sound Quality: 95%



### BAVARIAN RSO/MARISS JANSONS

Bruckner: Symphonies Nos 3, 4, and 6-9

BR Klassik 900718 (six discs; downloads to 44.1kHz/16-bit res)

This reissue set gathers together concert performances given between 2005 and 2017 in the Munich Philharmonie and (No 7) the Vienna Musikverein – this last is also available separately on SACD. Coals to Newcastle but the best thing here, I'd say. Jansons' Bruckner was warmly affirmative, full of colour – how he achieved results is detailed in the booklet. But there's some variability: 9(iii) is noble while a heavy tread mars (ii); No 8 is admirably spacious but has none of Furtwängler's sense of tragedy. And for CD listening 4(ii) seems too slow, even if it worked in the concert hall. What is consistent is the high quality of orchestral playing, notably in the brass section. **CB**

Sound Quality: 80%



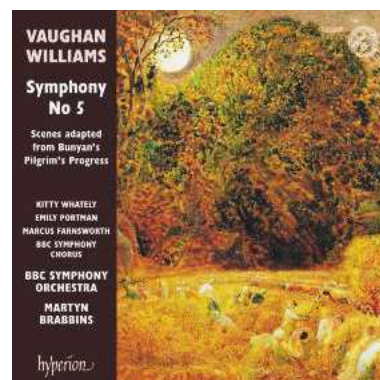
### COE/NIKOLAUS HARNONCOURT

Schubert: Symphonies 1-6, 8 & 9

ICA Classic ICAC 5160 (four discs; downloads to 44.1kHz/16-bit res)

Nikolaus Harnoncourt's most persuasive performances of Beethoven and Mozart were given with the COE. In 1993 we had his first Schubert cycle, with the Concertgebouw [Teldec], and in 2017 a live Berliner Philharmoniker SACD set was released. Remastered from ORF Austrian stereo radio tapes, this cycle comes from performances given at the Styriarte Festival, Graz, in July '88. (The illustrated booklet has reminiscences by some of the players.) This is an assertive Schubert set – rough even, in 8(i) – unlike the smooth, 'polite' COE/Abbado DGs. *Minuetti* are fast, trios dancelike; leadbacks and transistions are fuss-free; and a 'live' feel is perceptible. **CB**

Sound Quality: 85%



### BBC SO/MARTYN BRABBINS

Vaughan Williams: Symphony No 5, Pilgrim's Progress

Hyperion CDA68325 (downloads to 96kHz/24-bit resolution)

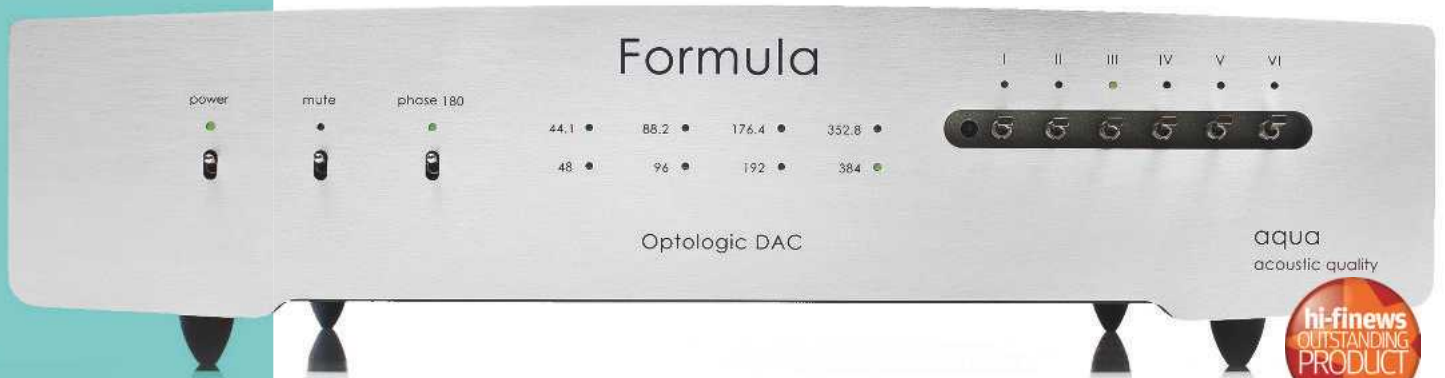
This fourth CD coupling in Hyperion's Vaughan Williams cycle with the BBC SO comes with *Scenes adapted from John Bunyan's Pilgrim's Progress* (with solo voices and two BBC vocal groups; 27m). There's unexpected variety in this selection with Emily Portman's unaccompanied 'Flower girl's song' a highlight. No 5 is the composer's quietest, arguably greatest, Symphony and in (i) it's almost as if the music flows of its own volition – nothing interventionist in Brabbins' account. You simply hope nothing goes amiss in either 'Romanza' or that inspiring finale, and all is well in a distanced Watford hall production by Andrew Keener/Simon Eadon. **CB**

Sound Quality: 95%





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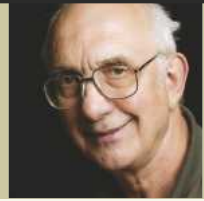
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## Barry Fox Technology journalist

Barry Fox trained in electronics with the RAF and worked as a patent agent, but he gave that up to enter journalism. He is one of the world's top technology writers

# Shattering... silence

**Barry Fox** recalls the old Memorex tape claim that an Ella Fitzgerald recording could shatter a wine glass, but then he finds contact with the ASA is frustrating when pursuing a complaint

**L**egal, decent, honest and truthful' is the long-standing and laudable mission statement of the Advertising Standards Authority. Over the years many complaints have been filed against companies claiming magically higher-fi from mysterious cables, boxes, paints and potions.

Once upon a time, long, long ago I complained about adverts from Memorex that claimed its cassette tape was so good at recording that it let Ella Fitzgerald's voice smash wine glasses – as Caruso had once done (without the help of Memorex tape). It turned out that the playback volume of the Ella tape was louder than a jet engine at point-blank range, so no wonder the glass broke.

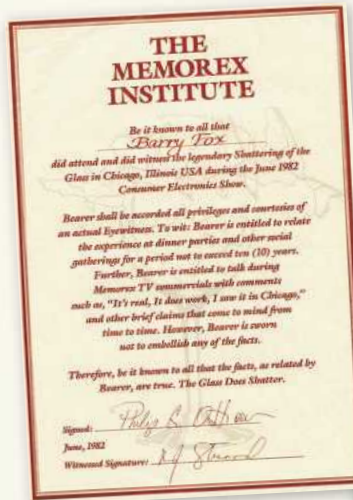
### LACK OF SKILLS

Try searching the current Rulings section of the ASA website for 'hifi', 'hi-fi', 'HiRes' and even just plain 'audio', and you will find very little that relates to sound quality ([www.asa.org.uk/codes-and-rulings/rulings.html](http://www.asa.org.uk/codes-and-rulings/rulings.html)). Indeed, over recent years the ASA seems to have published fewer and fewer judgments on tech-based ads, even though the world has been flooded with adverts for tech-reliant devices and services.

Meanwhile, a recent report by BT shows that British homes now typically have no fewer than 28 devices connected to the Internet.

In a previous column [*HFN* Jul '20] I recounted the sad story of trying to explain to the ASA adjudicators about Bluetooth and the need for end-to-end coding systems to achieve anything better than bog-standard A2DP (Advanced Audio Distribution Profile) stereo. Without understanding the need for compatible codecs the ASA had no hope of fairly judging what a British hi-fi company was claiming for its Bluetooth turntable.

**RIGHT:** The certificate given to the author after he attended the Chicago CES in 1982 during which Memorex demonstrated how a recording made on its tape could shatter glass and (right) a Memorex ad which appeared in *HFN* Jun '77



I tried alerting the ASA's Chief Executive Guy Parker to a lack of skills which leaves his authority ill-equipped to handle tech-content complaints. None of the ASA's senior managers seems to have a technical background, and neither does anyone on the ASA's 13-strong Council.

### STILL WAITING

I hand-delivered my letter to the Big Chief's office to be sure he received it.

That was well before the Covid crisis but he didn't let me have a reply.

As a fresh test, I tried filing a complaint about the bizarre way the energy industry is now selling the concept of smart meters [*HFN* Feb '21]. Instead of telling us how they can be

used in a positive way as a free, accurate tool to measure how much juice a home device is guzzling, either full-on or on standby, smart meters are being sold with the bizarre message that they somehow help the UK build wind farms.

I filed my complaint and heard nothing: no request for more information nor outright rejection, nor confirmation

that the advertiser would be told to use more appropriate words. Then I looked at the small print and discovered that the Advertising Standards Authority has now adopted a completely new policy.

### PROACTIVE STRATEGY

If your complaint is rejected, you hear nothing. Zilch... So because you will just hear silence you won't know what *length* of silence means rejection. And there's no way of checking progress for yourself.

To complete the 'you couldn't make it up' scenario, the ASA has hired market research company IPSOS to follow through complaints with a customer satisfaction survey – which recipients cannot usefully complete without knowing whether they are still waiting for news from the ASA or not.

I again asked the ASA's Chief Executive for comment but so far have heard nothing from him. But a press spokesman says the ASA is now adopting a 'strategic objective of being more proactive in our regulation to enable us to respond to those regulatory issues that matter most'.

If that means anything I think it means that tech adverts are now very low on the ASA's priority list. ☹

'I filled in my complaint, but then heard nothing...'



## 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

# Bob Dylan's big deal

A Dylan fan since his teenage days, **Barry Willis** contemplates the huge Universal Music Group's outlay for the singer's rights, and posits some ways where it might (or might not!) recoup costs

By the time this issue of *HFN* sees daylight, we'll be well into the next Bob Dylan era. It won't be a replay of the soundtrack from 1960s anti-war and civil rights protests. More than likely it will be an orgy of Dylan's music in support of every imaginable product and service that businesses want to throw at us.

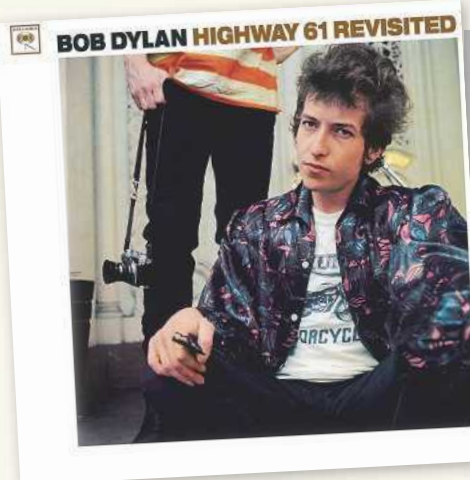
On December the 7th, Universal Music Group (UMG) announced that it had purchased the rights to all of Dylan's music spanning his 60+ year career, up to and including last summer's *Rough And Rowdy Ways*. A division of French media conglomerate Vivendi, UMG did not disclose the purchase price, widely reported to be well north of US\$300 million and perhaps the largest deal ever made for the work of one songwriter.

## COVER STORY

Dylan fans whose memories reach back to his early days may be appalled that their hero has sold out, but in truth his music has long been used to hawk everything from Apple computers to skimpy undergarments for Victoria's Secret. And 'the voice of a generation' hasn't been reluctant to license his compositions for use by other performers. More than 6000 covers of his songs have been recorded over the years.

UMG will henceforth enjoy revenue from public performances – live and recorded – of Dylan-penned songs, plus from every conceivable commercial use. Asked how UMG hopes to recoup its investment, industry insiders opined that the smart money was on 'synchronisation' or 'synch', the oddly-named sliver of the music business focused on licensing deals for use of compositions and recordings in films, TV shows, and online or televised. This is probably an astute observation.

'There he was,  
all scruffy  
nonchalance,  
just feet away'



BD CLAXTON

ABOVE: Dylan's *Highway 61 Revisited* from 1965 and (right) the singer pictured in 2006

With sales of physical media on a continuing decline, concerts on hold, and music fans homebound with TVs and computers, it also implies comic mash-ups: imagine 'Like A Rolling Stone' as theme music for high-performance automobiles, 'Dear Landlord' backing a pitch for luxury condominiums, or 'Maggie's Farm' running behind a lush depiction of gourmet-quality organic food that can be delivered to your front door.

There's negative potential, too. Military recruiters probably wouldn't get far using 'Masters Of War' behind shots of roaring aircraft and massive battleships, but the chances of humour going awry are enormous.

## BUCKET LIST

Full disclosure: Bob Dylan was a major influence in my early life. *Highway 61 Revisited* and *Another Side Of Bob Dylan* were among the first albums I bought with lawn-mowing money. Eventually I owned them all – or at least, the commercial releases. I spent most of my

teen years in a self-programmed Bob Dylan sermon. Not entirely, but mostly. I was dazzled by his lyrical brilliance – still am – and think that his Pulitzer and Nobel prizes were well-deserved.

I even got to see him once, decades later, at an outdoor concert at Atlanta's Chastain Park amphitheatre. I can't say that I actually *heard* him, because the overflow crowd wouldn't stop talking, but there he was, all scruffy nonchalance, a few feet away. It was at best a bucket list event, not the revelation that might have been in a Greenwich Village club in 1965.

## RATIONED OUT

Dylan never had a good voice, but it was certainly adequate and appropriate for most of his stuff. The whine and nasality put off some listeners – people whose opinions I might now more fully appreciate. I still like many of his songs but can't now listen to more than one in a row. They have to be judiciously separated in a much wider mix.

Even so, it's gratifying that someone so influential, who launched his recording career with a hundred-dollar advance from an agent, is now free to enjoy the fruits of his life's labour. ☺



## Loudspeakers of Distinction



LEFT: Eggleston Works Emma Evo. MIDDLE: Amphion Argon 3LS. TOP RIGHT: Kudos Titan 6o6. BOTTOM RIGHT: Kerr Acoustic K32o.

**Amphion** Designed and made in Finland with a unique controlled dispersion technology enabling their speakers to achieve a high-quality sound repeatable in a variety of rooms. The Argon range is well made and offers exceptional value. They are very natural in tone and timbre with no excessive brightness. Bass is extended, well controlled and without exaggeration. A passive radiator design used from the mid-way up the model range offers excellent room integration.

**Eggleston Works** A renowned US company making high quality loudspeakers with curved sided cabinets and facets that reduce resonances, finished with a durable metallic polyester paint. An immediately engaging sound, delivering a large-scale sound, wide beyond the outer edges of the speakers, and layering rearwards for a deep sound stage. Extended high frequencies without being forward, with an authoritative bass resolving good textural detail. Voices are rendered accurately and in correct proportion to the instrumentation. Fast dynamics with excellent timing.

**Kudos Audio** A long-established UK company making some of the finest sounding speakers today. Their speakers have a neutral tonal balance, very precise imaging, and are well balanced across all frequencies. High resolution of fine details producing a broad and deep soundstage. Bass is very fast and controlled especially in the Titan range where isobaric technology is employed. Their models use SEAS drive units uniquely designed for Kudos.

**Kerr Acoustics** An artisan UK manufacturer using some of the finest drivers including True Ribbon high frequency units, and Scanspeak or Volt units for mid-range and bass duties. A birch-ply transmission line cabinet further differentiates them from others. Contrary to many transmission line designs, these speaker have fast and tight bass response that can be placed closer to walls than most dynamic designs. An open and large sound stage, a natural presentation, and an impressive ability to disappear.



## Andrew Everard Reviewer/writer

Andrew Everard has reviewed consumer electronics for over 30 years and is still effortlessly enthusiastic about new developments, discovering new kit – and music

# The power of two

With all his music committed to server storage, **Andrew Everard** has a moment of paranoia, but says there's a lesson to be learned for all the network streaming enthusiasts out there

**Y**ou see, I think I may be getting paranoid – no, not about The Thing We Don't Mention while we still keep calm and carry on, but about storage. Or, to be more specific, about the storage on which resides the majority of my music library. As I've been told repeatedly by someone considerably more immersed than I am in all things storage and networking, when it comes to hard disk failure, 'It's a matter of "when", not "if", it will happen'.

And if the failure of a hard disk costing £100 or so is going to render your entire music library unusable, that's a pretty serious consideration. I, for one, don't fancy the prospect of digging out all my CDs and re-ripping them, let alone attempting to backtrack through all the music I have bought online over the years, and downloading it all over again.

### DOUBLE VISION

It's for that reason I have a single, somewhat blunt, piece of advice for anyone asking what kind of storage device to buy for their music collection – buy two. Yet I see far too many users bursting with pride at their newly-acquired hi-fi-quality music server, without a thought for what will happen when the storage at the heart of it goes skew-whiff sometime in the future. Maybe the idea of that being a distant prospect is cause enough for denial – as one such owner said to me not so long ago, 'I just bought a new car, but I felt no need to put a spare engine in the garage just in case' – but the trouble with any data storage is that 'when not if' thing.

Yes, your new drive may come with a two-year guarantee or whatever, but if you need to use it all it's going to get you is a replacement drive, not one re-filled with all your precious content. All of which has come to mind because, in a

recent instance of biting of the bullet, I've just had to invest a four-figure sum in a new NAS (network attached storage) box and disks, having spent too many hours trying to revive my existing one – hours I could have spent listening to music.

The trouble started when a disk went down a couple of months back, and was replaced, having resisted all attempts to revive it using its manufacturer's rescue tools. With the replacement installed, another died, and then during a firmware upgrade the NAS unit itself failed to update and went dead.

### SEEING RED

Much Googleage found a way to force the NAS to accept new firmware, and all seemed well for a few days, then off it went again. Rinse and repeat a few times, and sitting waiting for the red light of doom became as wearing as it was predictable – bullet-biting time had arrived, and I'm happy to report that the new NAS, loaded with four fresh disks, is performing impeccably. For now, anyway.

There are two things worth noting. The first is that the NAS in question, which was my first device of its kind, was bought and installed sometime in September 2012 – which I think meets all the requirements of 'a fair old innings'.

Second, yes, I could have mitigated the effects of a disk failure by adopting an implementation of RAID storage, in which the use of a redundant disk, or disks, can enable a failed drive to be hot-swapped without the loss of data. However, the use of RAID can instil complacency in the user, especially if it's viewed as a form of backup, which it emphatically isn't.

A total failure of the NAS enclosure housing the drives will still result in an almost certain loss of data, however well RAIDed your configuration may be. You



**ABOVE:** The author's new NAS is the four-bay TS-431X3 from QNAP, which costs £550

could try putting your drives into another housing of the same model running the same firmware version, but there's no certainty of recovery.

### DISK PACK

That's why I have followed my 'buy two' advice, despite the not inconsiderable expense given the capacity of the storage units I am using. So, I have four main NAS enclosures, all running in JBOD (Just a Bunch Of Disks) mode rather than RAID. One only runs my music library, with an offsite duplicate to which it backs up overnight, while another handles all the data backup for the computers in the household, again with a regular backup to duplicate storage.

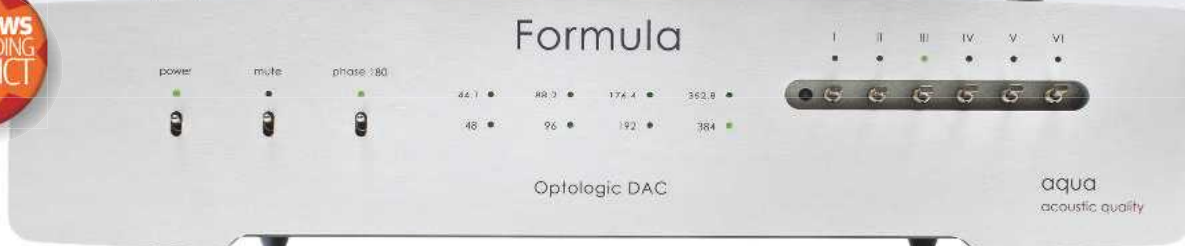
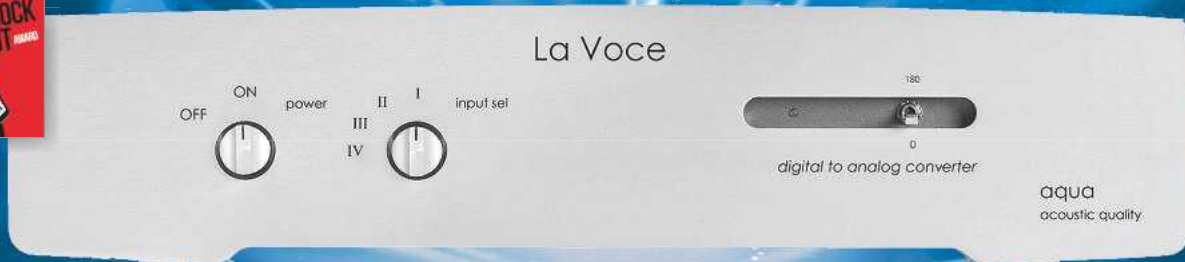
It's for that reason the repeated red lights of doom were more of an annoyance than a major disaster, my main concern being the slight feeling of exposure at not having a backup in place, but it has again brought back to me the importance of backups, even if they're just in the form of a USB drive connected to your Melco, Auralic or whatever.

After all, having invested a couple of grand in your new audiophile library, £100 or so for a USB drive is hardly a lot to pay for reassurance. Mind you, don't get me started on failures of USB drives. ☹

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## Jim Lesurf Science Journalist

Jim Lesurf has spent a lifetime in audio, both as an engineer at UK hi-fi company Armstrong and reader in Physics and Electronics at St Andrew's University

# Maths 'n' myths

Puzzled over power requirements for your home hi-fi? **Jim Lesurf** looks at the confusion over makers' specification sheets, and the part played by the music you like and the size of your room

**W**hen someone wants to buy a hi-fi system, one of the first questions they tend to ask is, 'How much power do I need?'. The answer really depends on your individual circumstances. For example, deciding how powerful an amplifier you'll require will vary with the size of your listening room, your choice of loudspeakers, preference in the type of music you listen to, and how loud you actually want to play it.

### MEETING RESISTANCE

Looking at the spec sheets for the various amplifiers on offer doesn't help much. The figures given for these range from levels of just a few Watts per channel for some single-ended valve designs, up to around a 1000W per channel for the more powerful solid-state amplifiers – not to mention powerhouses such as the D'Agostino Relentless monoblock [*HFN* Mar '20] whose output is rated at 1.5kW!

The standard way to specify these values is based on the amplifier's ability to drive a pure sinewave into an 8ohm resistor. So when a brochure states that

**RIGHT: The most powerful amp *HFN* has so far tested, the D'Agostino Relentless mono power amplifier boasts 1.5kW/8ohm on paper, though our Lab tests found it capable of 1.605kW/8ohm**



an amp can deliver 30W per channel, that value was probably measured by having the amplifier connected to a couple of resistors, and not loudspeakers.

### ON THE LEVEL

Of course, the snag here is that in the real world loudspeakers generally don't actually behave like a simple resistor. Nor is reproduced music usually a steady sinewave. Loudspeaker specifications also often quote a 'power rating' in Watts. So it becomes easy for the unwary to decide that: 'Well, the loudspeakers I like have a rating of 100W, so I must need a power amp rated at 100W per channel'. However, these values

for speakers are usually determined in a completely different way from the one used to rate power amps.

As a result, simply reading manufacturers' specifications can become a puzzling exercise in what I've come to call 'myth-ematics' for the unwary newcomer. Nevertheless, the figures are there, and assuming they are correct, how do we make use of them when choosing an amplifier to suit our needs based on its power rating?

In general I've found when I use an audio system the typical level of output I set when I listen to music is only about 1W or so per channel – although peaks

can easily go briefly above 10W. As I'm a card-carrying geek these values come from watching the output voltages with an oscilloscope and translating them into '8ohm lightbulb load powers' of the kinds that manufacturers quote.

Hence I suspect many people will be quite happy with a well-designed power amplifier that is rated at something around 50W per channel. For example, I enjoy using a pair of Spondor LS3/5A speakers with an ancient, 45W-per-channel Armstrong 600 series amplifier. Bear in mind, though, that I'm more likely to be listening to Radio 3 than a heavy metal album. So your taste might demand more power than mine!

If your listening room is on the large side you may want more audio power. But you'll probably also be using larger loudspeakers, which tend to be more efficient than a small monitor like the Spondor LS3/5A. So when choosing

a combination you should pay attention to the sensitivity figure for the speakers.

The bottom line is that the music is provided by a hi-fi system, which includes your listening room. And you're after what suits you, not me! So – as with myth-ematics – any advice can be no more than a guide on your path towards achieving more enjoyable results. ☺

'Reading the specs can be a puzzling exercise'



**ABOVE:** One of the author's Spondor LS3/5A speakers driven by an Armstrong 600 amp

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## 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 Hendrix experience

Now a museum attraction, the former home of rock star Jimi Hendrix has a simulation of his hi-fi set-up, but **Steve Harris** discovers more about the original amp's design, back in the early '60s

When J M Hendrix moved into a flat in Brook Street in July 1968 he was intrigued to learn that G F Handel had lived in the same building 200 years earlier. But he couldn't have dreamt his flat would one day be part of the tourist attraction 'Handel & Hendrix In London'.

No 25 Brook Street was opened to the public as the Handel House Museum in 2001. Jimi's flat, upstairs and adjoining at No 23, was restored with the help of a Heritage Lottery grant and opened to visitors in 2016. By March 1969, when he left the flat for the last time, Jimi's record collection included Handel's *Messiah* alongside Dylan, Stones, Beatles, Cream and lots of blues and jazz.

### AUTHENTIC REPLAY

The records are on display, but now they can also be played in an authentic manner. With the help of B&O, Lowther and Leak, the museum has re-created Jimi's system. Bang & Olufsen came up with a working Beogram 1000, while Lowther provided a pair of restored 1960s Acousta 115 speakers.

Hendrix played very loud, and friend Kathy Etchingham remembers that they'd tape halfpennies onto the arm to stop it jumping – not so easy with the cylindrical B&O head – and also remembers the speakers blowing and needing repairs.



**ABOVE:** Jimi Hendrix adjusts the 'Balance' control on his Leak Stereo 30 amplifier

**RIGHT:** Leak and Bang & Olufsen have joined forces to help recreate Jimi Hendrix's original hi-fi system inside his Brook Street flat with an original Beogram 1000 turntable but current Leak Stereo 130 amp



In place of the original Stereo 30, Leak provided its current Stereo 130 amplifier, which 'retains the same philosophy that the Stereo 30 was built upon in 1963'. Back then, Harold J Leak's Stereo 30 was the first successful production transistor hi-fi amplifier. The circuit design came from the transformerless amp developed by Dick Tobey and Jack Dinsdale, two young engineers working on military electronics at Elliott Brothers, which would later become part of GEC-Marconi.

They took their cue from H C Lin's 1956 proposal for a quasi-complementary output stage, describing their transformerless power amplifier and matching pre in two *Wireless World* articles, in Nov and Dec 1961.

Then Harold Leak requested a loan of the prototype to do – as he told them – some measurements. Later, when the Leak Stereo 30 came out, Tobey and Dinsdale were shocked to discover that Leak's circuit was almost identical to theirs.

Many years later, Jack Dinsdale told the whole story in an extremely lengthy letter to *Hi-Fi News* [Oct '96]. By that time he was well known to hi-fi enthusiasts as the originator at Cranfield of The Rock turntable, and was Professor of Mechatronics at Dundee. He's now long

since retired, but still happily collaborates on research with Townshend Audio.

You can find the text of that *HFN* letter online at the UK Hi-Fi History Society website [<http://ukhfsoc.torrens.org/makers/Leak/index.html>]. But when I spoke to Jack recently, he told me about one aspect of the amplifier which hadn't been copied by Harold Leak.

### HOT STUFF

'He'd taken the circuit as it was. But a little point that he hadn't noticed was that the diode, which controlled the current through the output transistors, the quiescent current, we had mounted on the heatsink.

'So as the heatsink heated up, as it would do, changing the voltage across the diode, it automatically reduced the current through the output transistors and therefore provided a thermal negative

feedback. He didn't do that, but just kept the diode on the circuit board.

'At the Audio Fair, he placed the amplifier on a radiator, and it sat there happily with everyone looking at it. Of course, the radiator was hot, and the whole device heated up anyway, and I gather that on the third day it went unstable. I thought, serves you right!' ☞

'A key aspect of the amp was overlooked by Harold Leak'





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## BIG BANG THEORY CONNECTING AMPS TO EARTHED SPEAKERS

I'm hoping you might be able to clarify a point raised in the review of the Gato Audio DIA-250S NPM amplifier [*HFN* Nov '19]. I own the non-NPM version and love it. However, I have been considering 'scratching an itch' and changing my loudspeakers to MartinLogan Summit electrostatics. However, I was concerned to read in PM's boxout that 'you must avoid any earthed speaker types'.

Aware that the ML speakers include active subs, I contacted Gato Audio to ask if this precluded their use with this amp. Frederik Johansen, ever helpful, didn't think there would be an issue as there's no connection between the left and right speakers. He did suggest, checking with MartinLogan, which I've done and am now awaiting a reply. Naturally I'd like to avoid a big bang and a hefty bill!

I love the magazine; it's the only one I read regularly (and have done so since the late '80s when I first begin my passion with audio). Keep up the great work!

*Julian Silverthorne, via email*

Paul Miller replies: Most amplifier output stages are single-ended, with the 'black' speaker terminal referenced to the same ground point as the input, and typically the chassis

and PSU/mains earth. Amplifiers with bridged or electrically floating outputs – and many Class D types fall into this category – have live 'red' and 'black' speaker terminals (usually indicated by a flash symbol above each) and should never be grounded for fear of damage through HF oscillation.

This is not an issue when driving a passive loudspeaker, of course, but connecting a floating amp to another amp in an active sub may provide an unwelcome route to ground. I checked with MartinLogan, however, and was relieved to hear that 'Neither binding post is connected to earth ground'. So your DIA-250S and Summit will make happy bedfellows after all!

Special care must be taken by those (very few) of us performing lab tests on bridged/floating amps as, at some point downstream of the product, will be balanced (but still earthed, AC mains-referenced) test gear and/or computers that may also be looped back to the amplifier input.

Gato's DIA-250S is a particular case (its left channel is inverted, and its red speaker terminal commoned to the right channel's black speaker output) but I still had to implement 'countermeasures' on the bench. Such testing is not trivial, which is why of all the reviews published on Gato's fine-sounding DIA-250S, only *Hi-Fi News*' carries a lab report...



**ABOVE:** Gato Audio's DIA-250S NPM amp employs a pair of power FETs in the high-speed PWM switching stage of its Class D amp. High efficiency means cool running

## Variable voltages

**DON'T FORGET REEL-TO-REEL DECKS WITH SELECTORS**

I read with interest Ken Kessler's Top 10 list of reel-to-reel decks [*HFN* Dec '20]. What left me puzzled was his mention of voltage converters for the likes of the Pioneer RT-707. I was a salesman in Comet back in the day and had two reel-to-reel models in the catalogue, from Akai and Pioneer. In 1977 a lot of equipment, especially tuner/amplifiers as they then were called, came with a facility at the back to change the voltage.

If I remember correctly, you unscrewed a small plate to reveal a voltage selector in the form of a rotary-type switch that showed the different voltages you could choose. It was a simple process and no technical knowledge was needed. I also believe the switch showed the voltage of the required country.

*Chris Smith, via email*

Ken Kessler replies: Sorry if I caused some confusion. I have eight decks, some with user-variable voltages as Mr McCordle describes but others are fixed. Among them are 100V, 110V, 220V, 230V and 240V, and both 50Hz and 60Hz. Some are sensitive to the exact rating, some not, eg, I have a 100V Japanese machine that will not work at 110V. I pointed this out only because UK readers may be sourcing used machines via eBay, with non-UK specs. UK models won't be an issue.

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# My lockdown Leaks

SEARCH FOR AN AMP TURNS UP A SYSTEM SOLUTION TOO APPEALING TO RESIST

Despite these grim times I thought I would spread some good news. If any fellow readers are stuck at home and have the financial wherewithal to do so, investing in your hi-fi system can only be a positive thing. I have been on the lookout for a good quality integrated amp for quite a while and so spent time during the recent lockdowns to do some research.

Originally I was tempted by the Denon PMA-2500NE [HFN Aug '16], Marantz Model 30 [HFN Jan '21], Prima Luna EVO 100 or push the boat out a bit for Moonriver Audio's 404. However, I knew deep down that if I were to purchase one of those models I would soon be itching to upgrade my speakers and source. I just wanted to enjoy my music now, regardless of its recording quality.

Enter the Leak Stereo 130. First of all it looks fantastic. Secondly, at £799 the price is reasonable. However, even though I wasn't sure how it would sound I couldn't resist a package offered by one big name specialist hi-fi retailer of the Leak Stereo 130, Leak CDT transport and Wharfedale Linton Heritage speakers with stands, all for £2199.

I am very pleased with the system. It seems to just get on with any genre of music or recording, and there is no listener fatigue. And believe me, I have listened to this set-up for many an hour. The system is very good at low volumes as well. Of course, there



ABOVE: Leak Stereo 130 amp atop the CDT transport, both in real-wood sleeves

are many products out there and I am sure some would offer greater resolution. But as an all-rounder, the Leak/Wharfedale system is doing the job. My next hi-fi purchase will now be a copy of *Hi-Fi News*!

*Nass Khan, via email*

Steve Harris replies: Launched last year, the Stereo 130 model marked the reintroduction of the Leak brand, out of production since around 1980. Leak's current owners, China's International Audio Group, has celebrated that revival with a special installation at the Hendrix flat in Brook Street [see p111]. IAG acquired the dormant Leak brand along with Wharfedale in 1997, which means, incidentally, that IAG has now owned Wharfedale for very nearly as many years as Wharfedale founder Gilbert Briggs did.



ABOVE: Nass's Leak electronics and Wharfedale Linton Heritage speakers on their stands

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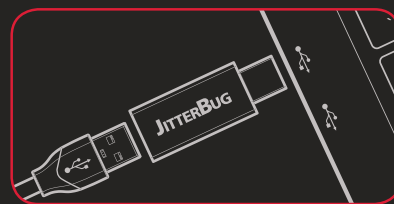
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## Phono stage options?

READER DOWN UNDER SEEKS HELP WITH HEAD-AMP UPGRADE

I have been reading your magazine for many years now. Not only are the equipment reviews great, but I find the articles on artists and albums to be really interesting reading too. To cut to the chase, I want to buy a phono stage to replace my Icon Audio PS MkII and am considering an EAT E-Glo. My dilemma is that I will not be able to hear it in my system as I live in Perth, Western Australia, and the nearest dealer is 2000km away!

Do you think the E-Glo would be a sympathetic match with my system? This comprises an SME 20/3 turntable with SME V arm [HFN Mar '11], Kiseki Blue N.S. [HFN Jul '18] cartridge and a PASS X250.8 power amp driving Magnepan 3.7i speakers. If not, can you suggest some phono stages that will, bearing in mind that I would like to stay with valves? If I do upgrade from the PS MkII, I will also need some type of gain control.

*Ian Lyne, via email*

Ken Kessler replies: Ah, the perennial problem of no nearby dealer with demo facilities – and this situation is going to get worse as more retail moves online and shops disappear from high streets. What I *can* say is that the EAT E-Glo has been my reference phono stage since its launch and I have used it successfully with the Kiseki Blue N.S., as well as every cartridge I have reviewed since 2013.

What I love about it is the facility for accommodating two record decks (though you may not need this), as I do run a few turntables, while the cartridge matching options have never let me down. Sonically, I think it's one of the best, and even at £6300 in the UK, it sells for a price far below the most expensive models on the market. You do, however,



**ABOVE:** The Kiseki Blue N.S. MC pick-up uses a nude line-contact diamond stylus

point out that you'll be needing a preamp if you go for the EAT E-Glo as the phono stage you are replacing offers volume control, which the E-Glo does not.

If you were to pair the E-Glo with any good valve line-level preamp, you would retain all the cartridge tailoring of the E-Glo and get your necessary level adjustment. As it sounds like you are vinyl-orientated, any valve line stage from PrimaLuna, Audio Research, Icon Audio, Manley, VAC or others would suffice as a host to the E-Glo. (Note that there's a possibility that the E-Glo i integrated amplifier [HFN Oct '20] may be followed by a line-level preamp version, which should be a perfect match for the E-Glo.)

What you also might consider, though, is a valve preamp having a comprehensive phono stage, rather than a phono-equipped preamp of limited adjustability – many give you just fixed MM/MC, or one or two impedance values. If I were shopping today, at the top of my list would be the EAR-Yoshino 912. I do wish I could offer more help, though, about a pre-purchase demo!



**ABOVE:** The EAT E-Glo phono stage employs four ECC83 and two ECC88 valves

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# When is a piano not a piano?

LONDON CALLING – HAVE OUR READERS CAUGHT KEN KESSLER OUT? READ ON...

I thoroughly enjoyed Ken Kessler's 'Top 20 Demo CDs' feature in the February issue, which included *Julie Is Her Name Volume 2* by Julie London. This is, indeed, a fine album and the sense of Julie standing in front of the microphone is amazing. But I wonder if Ken's hearing is playing tricks on him as he refers to Julie being backed 'only by bass and piano' when, in fact, it's bass and guitar, with Howard Roberts playing the latter.

Still, both Ken and I can agree that it's a fabulous album, despite the fact that it proudly announces on the sleeve that it was recorded in Liberty Studios 'which is the world's only transistorised recording studio'. Thanks to all the team at *HFN* for continuing to produce a great magazine in these difficult times.

Julian Reeves, Sweden

Just a line about Ken Kessler's review of the Fiona Boyes's album *Blues In My Heart*, which appeared in the January Album Reviews pages. Ken said that 'Boyes's approach makes me imagine what a blues album recorded by Julie London might have been like'. I can help Ken here as she *did* a record blues album. It was called *About The Blues*.

Remi Balestie, via email

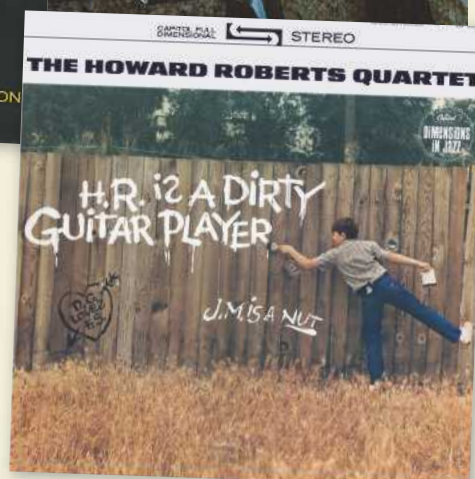
I've just finished reading yet another excellent issue of your magazine, the February 2021 edition. But a note about the 'Top 20 Demo CDs' article by Ken Kessler (there were some great choices by the way). Julie London 'backed only



by piano and bass' on *Julie Is Her Name Volume 2*? As I hear it, there is not a note of piano played on this album. If there is, I really do need to trade in my hi-fi system and start again.

Kevin Eyles, via email

Ken Kessler replies: Egg on face! *Mea culpa*! Not one but two colossal boops, the first forgetting that Julie London *had* recorded a blues album. Worse: I actually own it on CD. (You can purchase it as a 180g LP from amazon, but the CD appears to be out of print.) Her performances of 'I Gotta Right To Sing The Blues' and 'Bye Bye Blues' are astounding, though hard-core blues purists always hated this sort of cover album. Whatever, it's a joy to listen to, so well-noted, M Balestie. My excuse? Write it off to a simple slip of the memory...



ABOVE: Clockwise (l-r) *Julie Is Her Name Volume 2*, guitar player Howard Roberts and his *H.R. Is A Dirty Guitar Player* LP on Sundazed

As for the other gigantic, career-ending blunder, writing 'piano' instead of 'guitar' – and with apologies to the legendary Howard Roberts (one of his LPs, *H.R. Is A Dirty Guitar Player* is on Sundazed ELP 223) – I can only offer you a multiple choice selection of reasons for my idiotic lapse; please choose the most plausible:

- 1) It was a deliberate error and I was just testing those who read the piece – well spotted, Messrs Reeves and Eyles.
  - 2) I took too much Gabapentin that day.
  - 3) I shouldn't have written an article while mixing the Gabapentin with Naproxen.
  - 4) It was a conventional senior moment.
  - 5) It was written at midnight and the mistake was down to sleep deprivation.
- I shall take more care with my Top 20 LPs, which will be appearing in a future issue!

On a final note, I should like to emphasise that I have tried to focus on CD releases that are still available in one form or another, eg, the Lou Rawls US and UK pressings are just as good as the Japanese ones.



ABOVE: The 20th anniversary remastering of Fiona Boyes's *Blues In My Heart* released last year on Reference Recordings (left) and the Julie London album *About The Blues* from 1957 (right)

# My voyage into vintage

SPARES, REPAIRS AND TALES OF RESTORATION AS READER DETAILS HIS LABOURS OF LOVE

Tim Jarman's Opinion piece about vintage hi-fi [HFN Oct '20] struck a chord. Restoring equipment can be as simple as replacing missing wires, as was the case with my B&W 600i speakers (bought for £2 at a car boot sale). At the other extreme is the Garrard Zero 100SB turntable [HFN Dec '16] turntable (£45 on eBay) that I'm currently restoring to health. This will need many hours of work, including a motor re-build.

My Electrical and Electronic Engineering degree helps a little, but it was my years maintaining my model railway locomotives that really taught me about small motors. Most equipment faults are mechanical in nature, so the university degree doesn't help much. Dirt, perished rubber belts and idler wheels, dried lubrication and alignment issues are the common causes of failure.

Vintage gear, like old cars, was built to be repaired with hand tools. This works in our favour. The downside is that spares can be a problem. I had to totally dismantle and re-build the proprietary switches in my Mission Cyrus One amp (£15 in a car boot sale). One solution can be to find a cheap donor for spares, and this need not necessarily be the same model if you research carefully.

You also need time and patience. The act of restoration should be a pleasure in itself, not just a means to an end. My Sony TC-377 reel-to-reel deck (£100 at an antiques centre) took me over a year to get working properly. It was a game of whack-a-mole. No sooner had I fixed one problem than another popped up. I



**ABOVE:** On the bench – Rod Lancaster's Mission Cyrus One amplifier mid rebuild

can now strip that recorder faster than James Bond can his Walther PPK. If you had to pay for the labour it would rarely make economic sense.

What I do have is an interesting system that punches well above its weight and was paid for in labour of love rather than cold hard cash. Each component contains a little piece of me, so I have the added satisfaction of a job well done every time I listen.

*Rod Lancaster, via email*

Tim Jarman replies: Repairing old hi-fi equipment should become simpler with practice, but I've found that it just leads one to tackle more ambitious projects so never seems to get any easier! In my experience, the split between mechanical and electronic faults is about half and half (depending on what you take on). For the former it is well worth getting familiar with small machine tools (lathes, mills, etc) so replacement parts can be made at home.



**ABOVE:** The two-speed, belt-drive Garrard Zero 100SB turntable from the mid '70s

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HFN2021

# Philips CD10 portable

It was the Dutch company's first ever portable CD player and one of the first players from Philips to use a 16-bit chip. But how does this milestone machine sound today?  
Review: **Tim Jarman** Lab: **Paul Miller**

While Philips' dominance of the market for full-sized CD players in the early days of the format has been well documented in these pages, little mention has been made of its activities in the field of CD portables. Despite an obvious flair for innovation and creativity, the company is not especially known for producing miniatures – that crown belongs to the Japanese, and Sony in particular.

Nevertheless, the European market leader in Compact Disc simply had to have a portable player in its range once it had become practicable to produce one. Sony had been the first to market when it released its D-50 [*HFN* Jan '13] in 1984, Matsushita following fairly promptly with the launch of the Technics SL-XP7 in mid-1985. The Philips machine broke cover at the end of the same year.

## BENEATH THE BADGE

Known as the CD10, at a glance it looked to be a mildly restyled Sony D-50. However, there was far more to the player than that. Opening the lid revealed what appeared to be the familiar Philips single-beam, swing-arm laser assembly, indicating that the D10 was an original piece of work rather than a straightforward 'cut-and-paste' job.

Like the flagship CD960 [*HFN* Jul '20], Philips went to its newly acquired Marantz Japan Incorporated (MJI) subsidiary to have the CD10 designed and manufactured. Previously, all Marantz CD players sold in the UK had been designed and produced by Philips, the bulk of them in the Philips factory in Belgium. The CD10 reversed this situation, being essentially a Marantz machine badged as a Philips. This made it the first true Marantz player available in the UK – a milestone in itself.

Miniature components with the low power consumption requirements necessary for battery portable CD players were very specialised items at the time, so it was inevitable that some sharing of resources would be required, though

'The logos on the Sony parts used inside are struck through'



**ABOVE:** Although the CD10 (seen here with AC10 power pack) was designed for Philips by Marantz in Japan, the styling has a European flavour thanks to the sliding volume control and colour graphics

Philips did produce a special version of its CDM-2 optical unit in its European factories especially for the CD10. Known as the CDM-2P, it was made slightly more compact by shortening the parallel linkage of the focus assembly. This made the laser block marginally smaller so that it could be fitted into a smaller resin chassis. The spindle motor PCB was also re-drafted to save a little more space.

As regular readers will know, all the full-sized Philips players at this point used twin 14-bit DACs and a 4x oversampling digital filter. At a time when the Japanese competition offered a single DAC and analogue filtering only, this gave the Dutch firm a technological lead which wasn't convincingly countered until the

end of the decade. The 16-bit version of the Philips 4x oversampling package did not arrive until 1986, being introduced in players such as the CD450 [*HFN* Aug '14].

One of the things that makes the CD10 remarkable is that it, too, is a 16-bit machine, introduced some months before the more mainstream models. In fact all the CD10's decoding and DAC architecture came from the Sony D-50, culminating in a single 16-bit CX20133 DAC time-shared between the two channels.

## HEAVY HEART

Since the D-50 did not have a digital filter the CD10 couldn't have one either. Rather, heavy analogue filtering was required at the DAC output to remove the remnants of the 44.1kHz sampling [see PM's Lab Report, p127]. Although a good solution technically, the fitting of Sony chips had

clearly been done with a heavy heart. Part of the CD10's assembly process involved striking out the Sony logos on all the ICs with a black pen to conceal their origin, even though they cannot be seen without first dismantling the machine.

The servo circuits from the D-50 could not be used however. Sony's KSS-110 3-beam laser mounted on its motorised sled had quite different drive requirements to the CDM-2P, meaning that Philips had to miniaturise its unique servo circuits onto a couple of specially designed surface-mount packages. In fact, these were the first devices of this type to be used in a Philips player.

### NO MEAN FEAT

In particular, the 650Hz 'wobble', which fractionally vibrates the laser along its path to counteract imbalances elsewhere in the system had to be accurately reproduced in miniature – no mean feat given the overall size, weight and power consumption constraints that were imposed.

Despite the still bulky mechanics and the complex servo, the basic CD10 remained about the same size as three CD cases stacked on top of each other (as in the famous design brief for the D-50). It weighed only 750g and had a modest power requirement of just under 4.5W.

As with the D-50, the CD10's bulk was increased by attaching either an AC adapter (type AC10, seen here) or a battery pack (available as the EM 2310 or in a package with the player as the CD10BP). Perhaps the most compelling CD10

accessory was the EM 2510 which allowed the player to be mounted in the dashboard of a car. This included a 12V power supply along with basic preamplifier facilities and was one of the first really practical ways to enjoy CD sound while behind the wheel.

### UP CLOSE

When encountered at first hand it is difficult to avoid thinking that the CD10 is merely a D-50 clone (like the Pioneer PD-C7S). The size and shape of the machine and its power unit are virtually identical, as is the basic layout of the controls. Even the decorative grooves along the

**ABOVE:** As with most portables, a top-loading arrangement is used, complete with a magnetic disc clamp in the player's lid. Note the 3.5mm jack sockets for headphone and line output

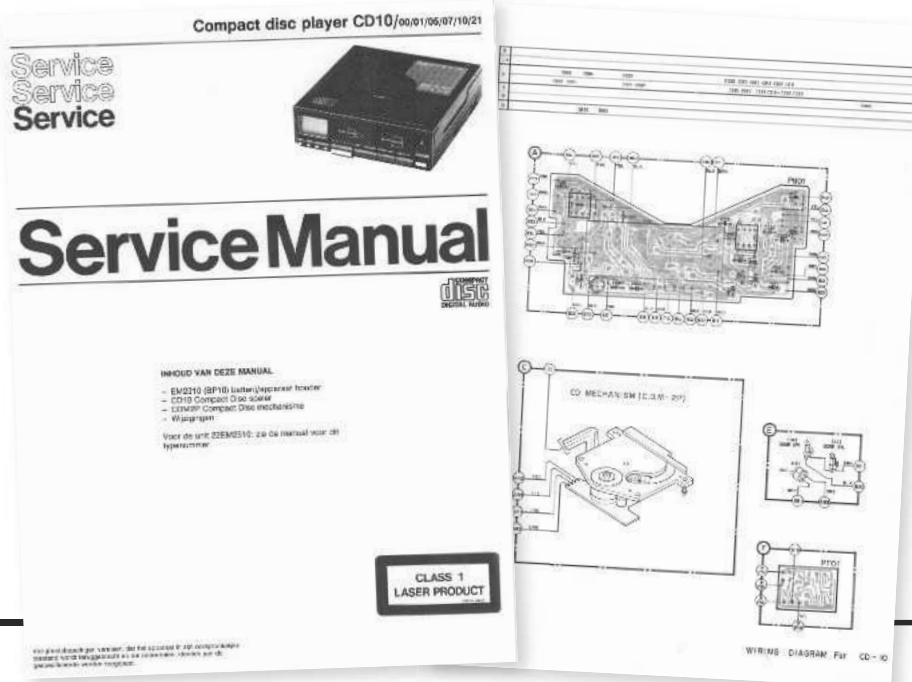
cabinet sides are reproduced with uncanny accuracy. Could the two machines really be so different? Closer inspection reveals the Philips to be rather better equipped, having a larger display, repeat and track programming facilities and a neat sliding volume control with its graduations printed on the generously-sized play key.

And there are other differences. The Sony AC adapter includes a pass-through of the D-50's audio output which emerges at the back as two standard RCA sockets. The AC10 unit of the CD10 lacks this refinement, so a 3.5mm stereo jack socket at the side of the machine has to be used for connection to a hi-fi system instead. Nevertheless, the line output connection is properly engineered and bypasses the volume control and the headphone amplifier for optimum sound quality.

### ON THE MOVE

In use the CD10 feels like any early Philips player, the CDM optics moving leisurely with a series of little squeaks and chirps, always finding their destination eventually. Operation is impressively silent when the desired track is found and the error correction systems are reasonably tolerant of marks on a disc, if not to quite the same extent as a full-size Philips machine. ☺

**LEFT:** Service information for what was a highly miniaturised and densely-packed product – the Philips CD10 is not a simple machine to repair







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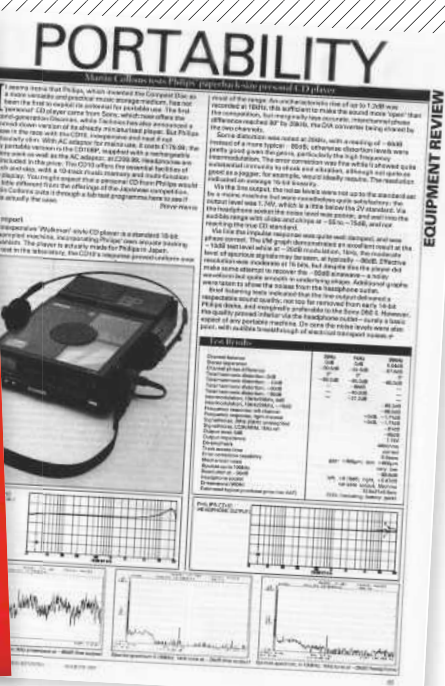
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## VINTAGE HI-FI

**LEFT:** The first review of the CD10BP appeared in *HFN* Mar '87, a year or so after its European launch. It failed to find favour on this occasion

a distinct improvement over the Sony D-50 and its in-house derivatives, which sound brittle and strident by comparison. Overall, the CD10 is best described as having a 'big' sound when used with a hi-fi system, recordings being reproduced with a similar sense of scale to that which one is accustomed from equipment designed with no significant constraints on either size or consumption of power.

Sit back and listen to something like Katie Melua's 'Mockingbird Song' from her album *Call Off The Search* [DRAMCD0002] and you'll find the CD10 to be as rich and fluid-sounding as the D-50 is fast and focused. As is often the case with old Philips players, the bass guitar sometimes got in the way of the rest of music with its big, lazy sound but vocal rendering was excellent and displayed fine clarity.

### SMOOTH STRINGS

In fact, only a shrunken soundstage in which the various parts of the mix appeared as smears instead of pinpoints gave away that this wasn't one of the old 14-bit classics. Similar effects were noted when playing orchestral pieces, Strauss's *Don Juan* [BPO/Karajan: DG 447 441-2] thrilling with its sound when played on the CD10, the perceived smoothness of the strings in particular allowing the entire piece to be enjoyed at a realistic volume level without listener fatigue.

Only the most delicate solo violin sections revealed a lack of ultimate

refinement when compared to a full-sized 'reference' player, this taking the form of a coarseness not dissimilar to that heard from a worn LP. This became inaudible again during the louder sections of the piece, but once 'tuned in to' I'll admit to finding it difficult to ignore.

Still, overall the CD10 performed well given its basic underpinnings. Family members who

**LEFT:** Open wide, here's a surprise! The CDM-2P swing-arm deck proved to be a hindrance when the CD10 was used on the move, but its quality while static is undeniable

On the move though, the CD10 leaves much to be desired. The swing arm mechanism has no way of solidly holding the laser at any given point across the disc and so it flaps about wildly as soon as the machine is moved. If you thought that normal portable CD players were sensitive to being jogged about in the early days then you really need to try this – it is almost comically bad.

Yes, one could imagine that if the player was to be carried gently to a sturdy table, placed ever so carefully down and not knocked in any way then a CD could be enjoyed outside (that is, until the six 'C' sized alkaline batteries were gobbled up, and that doesn't take that long). But this rather defeats the object of a portable model like this. It's a shame, as the audio performance of the Philips CD10 is quite a surprise.

### TIM LISTENS

Perhaps the most remarkable thing about the sound of the CD10 is how similar it is to that of a full-size Philips player, eg, the CD104 [HFN Apr '14], despite it having no digital filter and only one DAC.

Critical listening reveals the expected rather chaotic imaging that many single-DAC players tend to exhibit as opposed to the usual Philips architectural

solidity, but tonally the characteristic smoothness and richness are still there. Furthermore, since the imaging problems are nowhere near as evident when the player is heard via headphones as they

are through a pair of loudspeakers, this could have been an almost ideal product – something akin to a pocket-sized Marantz CD-73 [HFN Mar '19].

Exactly how this performance was achieved remains a mystery. The

layout of the CD10's analogue sections is very similar to that found in the D-50's while some parts, such as the DC-coupled driver stage for the headphone output, are identical. Despite this, the CD10 offers

*'The sound of Strauss's Don Juan is thrilling on the CD10'*





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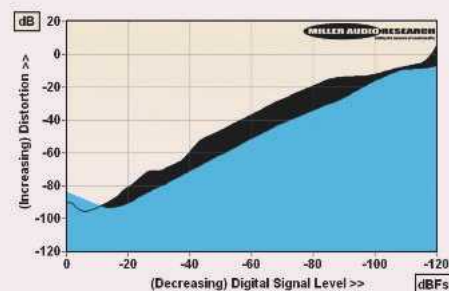
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## LAB REPORT

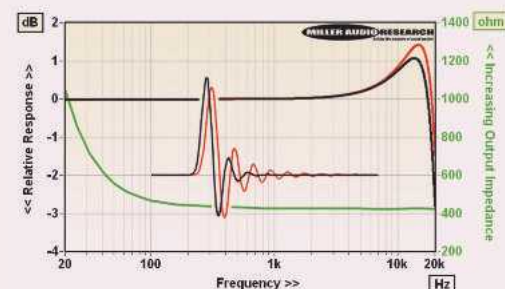
### PHILIPS CD10 (Vintage)

Sandwiched in between Philips' own very capable CDM-2P disc transport and analogue filter/output stage is the very same time-shared 16-bit DAC we saw in Sony's D-50 [HFN Jan '13]. As a result, while the two portable players share common digital features, the differences observed in the CD10 (launched about a year later) derive almost exclusively from its AC-DC power pack and RC analogue filter (the D-50 employed a more sophisticated, steep roll-off LCR filter). The impulse response [inset, Graph 2] necessarily avoids the pre-ringing associated with standard FIR digital filters – the 0.0113msec offset between left (black) and right (red) a function of the sequential left sample-by-right sample conversion. However, the challenge of tolerancing the RC components is revealed in the (correct) and 'peakier' +1.5dB/14.5kHz response and increased post-ringing seen in the right channel and further reflected in its superior 34dB stopband rejection (falling to just 9dB in the left). Source impedance, meanwhile, rises at low frequency but the 1kohm seen here [green trace, Graph 2] will have less impact on bass performance than the 2kohm of Sony's D-50.

Like Sony, Philips achieved a sub-16-bit A-wtd S/N ratio of 89dB in the CD10 while low-level detail is boosted in similar fashion, so signals at -90dBfs are up by +4.9dB. Peak level THD is moderate, reaching 0.003% at 1kHz and 0.006% at 20kHz before dropping away to a minimum of 0.0016% at 1kHz/-5dBfs [see Graph 1]. The player's jitter performance is also slightly high at 750psec, and data-induced in nature. Finally, the headphone output delivers a full 12mW/600ohm but has insufficient drive to maintain more than 8mW into a standard 32ohm load. PM



ABOVE: Distortion versus 16-bit CD digital signal level over a 120dB range (black, 1kHz; blue, 20kHz)



ABOVE: Freq. and time domain responses (left, black; right, red) and output impedance (green). No digital filter, so no pre-ringing on the impulse response

### HI-FI NEWS SPECIFICATIONS

Maximum output level / Impedance	1.73Vrms / 418-1046ohm
A-wtd S/N ratio	88.9dB
Distortion (1kHz, 0dBfs/-30dBfs)	0.0032% / 0.029%
Distortion & Noise (20kHz, 0dBfs/-30dBfs)	0.0062% / 0.0019%
Frequency response (20Hz-20kHz)	+1.10 to -2.75 dB
Digital jitter	750psec
Resolution @ -90dB/-100dB	+4.9dB / +5.9dB
Power consumption	5W
Dimensions (WHD, inc. battery) / Weight	125x45x210mm / 1.2kg



ABOVE: Internal view shows the densely-packed PCB. Note that the word 'Sony' has been blacked out on the major ICs – including the CX23035 decoder [large central IC], the CXK5816 static RAM [centre, right] and CX20133 DAC [top left]

heard it were impressed with its performance too; it's just a shame that it proved to be so impractical in its intended portable role.

### BUYING SECONDHAND

While Philips CD10s are relatively easy to find on the secondhand market, fully working examples are harder to come by. Due to the player's small size, all repairs are extremely difficult and must be conducted with great care. For example, remove the main PCB carelessly and the chances are that you will tear the flexi-PCB to the laser, thereby ruining the machine before you even start.

The CDM-2P optical unit looks familiar but it shares virtually no common components with the regular CDM-2, so replacement parts are difficult to obtain. As with all CDM-2s, the fixed lens below the moving objective (eg, the one you can see) can come unglued, making for erratic reading of the disc. Repairs are possible, but this is by no means a task for a beginner. Laser failure through wear is much less common. This is because portables typically don't run for the same amount of time as their full-sized counterparts and the basic design of the CDM-2 family is famously sturdy.

Problems with the hall sensors in the spindle motor can occur, but like everything else they are tiny and difficult to get to. Elsewhere, problems with the electrolytic capacitors inside the DC-DC

converter can cause all manner of odd symptoms, but since access to these involves a near complete stripdown of everything, problems in this area are best confirmed by examination of the output voltages before repairs are attempted.

One simple problem is that the metal trim on top of the lid can become detached, causing the lid to flex and so prevent the interlock switch from operating correctly. Once the old film adhesive is removed it is easy to glue the metalwork back in place, but be careful to do a neat job as the results are visible from underneath when the lid is open. Incidentally, don't waste your time trying to track down a pair of the original headphones. They were nothing to write home about. ☹

### HI-FI NEWS VERDICT

An unlikely mix of Philips, Marantz and Sony ideas, the CD10 was always going to be an interesting design. Soundwise the player proves that there was more to the dominance of Philips than oversampling and digital filters – the designers could even make Sony's chips sound like their own. An intriguing machine, then, and one capable of making sweet music, but not a player for beginners if repairs are required.

Sound Quality: 75%





# A Perfect 10

Ken Kessler hears SME's new and more affordable turntable and arm

*Hi-Fi  
News  
Dec 1999*

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you an article  
from our vast  
archive of  
features and  
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yesteryear



**ABOVE:** The SME 10 with Model 10 arm and 8-bit microprocessor-controlled PSU

Everyone loves surprises. And, hey, who wouldn't be tickled pink at the thought of a new treat from SME? While the antithesis of fertile, SME never fails to issue a new wonder every time Alastair Robertson-Aikman feels the need to stretch his abilities. We are, after all, talking about a company with a design team, a philosophy and machining capabilities second to none in the world of precision engineering for audio purposes; maybe there's a watchmaker or two in Switzerland who could 'worry' SME.

The finish, inventiveness and sheer intelligence of every SME product ever made give this British company a track record without fault. Even that blip in the lineage, the lightweight SME Series III tonearm, oozes cleverness, excellence and desirability.

'So what's left?' you might be wondering as the analogue playback market continues to shrink down toward relative insignificance. (As

I will forever argue with a current purveyor of LPs, who thinks that selling 5000 of a particular title is a big deal: 5000 is what EMI or Columbia or Decca would have considered to be a respectable weekly figure for faulty pressings in vinyl's heyday.) Do we really need anything more 'right' than an SME 20 or 30 turntable? Isn't the Series V tonearm as good as it gets?

## WORTH PURSUING

As the curtain closes on the century that gave us the LP, SME has decided to issue a new turntable which comes in *below* the SME 20, at £2643.75, a new entry-level player which departs from the '20 and '30 in so many ways it may confound those who find deviations in a 'true path' to be something unholy.

But if AR-A wants to make a plinthless turntable with no suspension *per se*, one which does

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**SME Model 10**  
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away with so much of the 20/30 approach, then it's something you have to assume is worth pursuing. For Alastair is a man who does not make decisions lightly, nor issue new models with rapidity. Maybe he and Quad's Peter Walker come from the same 'anti-prolific' school.

## ROUND TABLES

At first glance, the new SME 10 calls to mind the plinthless turntables which precede it, working back from the Wilson-Benesch Circle through countless (usually British) designs now forgotten in the mists of time. Ariston, Transcriptors and others have released decks which would fit snugly under a dome, and all of which appealed for their compactness and aesthetic aptness.

An LP is a 12in diameter disc, so why not create a turntable which is no larger, save for the arm mount, which exploits the perfectly round shape? Thus, the SME 10 will find instant favour with those who fancy a bit of space-saving and who find a rectangular plinth something of a stylistic fault. Even the earliest of the round decks still look 'modern'; the SME 10 looks positively futuristic, in a sinister, Stealth fighter way.

And yet, by virtue of its build integrity, it is utterly devoid of any of the frivolity which usually accompanies the deliberately ultramodern. This is no exercise in



**ABOVE:** The deck's massive main platter is covered in the same finely grooved material found on the SME 20 and 30, which mates beautifully with your LPs for ideal contact

**BELOW:** Original pages from the Model 10 owner's manual identify parts before going on to outline unpacking and set-up instructions

gimmickry, even though it bristles with novelty. The first thing I noticed was its simplest yet most desirable feature: a cartridge guard in the form of a bent wire defence surrounding a pick-up which would otherwise be unprotected from accidents. However minor a feature this may seem, it is in its own way the most telling of the thought processes which created the '10. Nothing, and I mean nothing, was left out, yet neither was anything superfluous left in or on the SME 10.

As one who lives in an old house, in which dust is endemic, I asked about a dust cover – the curse of

plinth-less decks. AR-A immediately replied that dust covers affect the performance, confirming what others have always argued. But the fastidious AR-A is not the type to allow dust to settle on his wares, so he whipped out a perfectly-shaped soft cover, its precedents being those supplied with every '20 and '30 turntable.

Because the '10 follows years after the '20/'30, it benefits from a new power supply and housing which I wouldn't be surprised to see supplied with the older turntables in future production. Most notable is the sloped front panel, making it much easier to use than the vertical panel of the earlier unit. It contains a row of three buttons which operate stop/start and choose 33.3rpm or

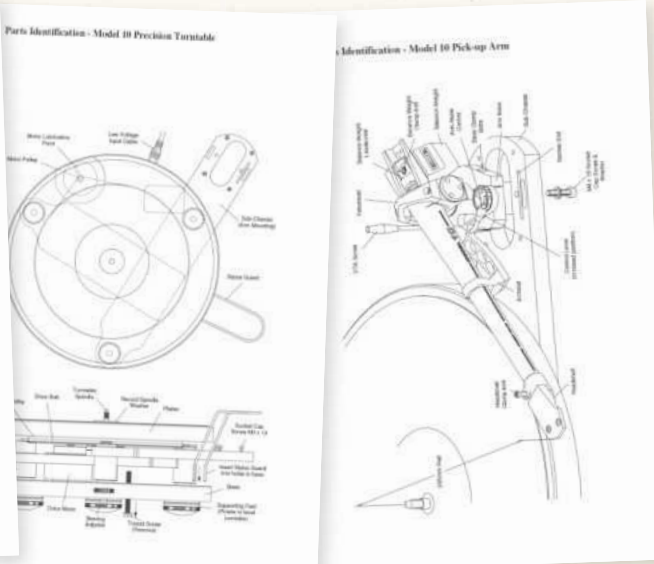
45rpm. Five LEDs indicate main power on, 'on' mode when the start button is pressed, the chosen speed and speed lock to indicate that the deck is up to 33.3rpm or 45rpm, as measured 120 times per revolution by a crystal reference.

## EERIE BEHAVIOUR

Because the power supply is an 8-bit microprocessor-controlled device with regenerative braking, the turntable possesses an eerie sort of behaviour, as if unseen hands are whipping the deck up to speed when called into play, then applying ultra-smooth braking when the stop button is pressed. It's most impressive, almost a party trick and the kind of behaviour rarely seen in audio since the days of top-end, costly and highly-sophisticated open-reel tape recorders with superior tape handling.

Its connection to the deck itself is via a small connector of the S-video/PS mouse type, the socket positioned at the rear of the SME 10's solid aluminium base. This is a circular plate resting on three screw-in feet filled with a polymer reminiscent of Sorbothane. ➔

*'The SME 10 looks futuristic in a Stealth fighter way'*





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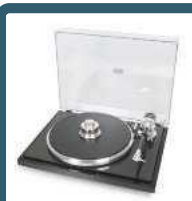
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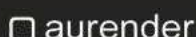
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## FROM THE VAULT

The broad feet are finely threaded, so adjustment for levelling is quick, easy and very precise. Fitted to the base plate are the motor housing – so silent that it's positively creepy – and three pillars also filled with the squishy material found in the feet.

The polymer inserts in the feet and pillars are, effectively, the sole forms of isolation. Positioned on top of the pillars is the T-shaped subchassis, with arm-mount cut-out and the bearing assembly into which is positioned the machined subplatter and taper-top bearing.

Note that a minor adjustment for the bearing tightness can be performed by the user, via an adjuster at the base of the bearing housing, but I would always opt for factory or dealer tweaking.

### FINE GROOVES

The belt, meanwhile, is fitted over the pulley and placed around the sub-platter. The massive main platter is covered in the same finely grooved, mustard-coloured material found on both the SME 20 and 30 turntables, which mates beautifully with your LPs for ideal contact.

Slightly changed from the complex clamping arrangement found in the 20/30 decks is a new single piece screw-down clamp – a marvel of machining – and a special washer placed over the spindle to raise the LP at the centre. SME recommends that the user taps the LPs at three equidistant points to make sure that the disc mates securely with the platter.

As for the new Model 10 arm, which sells for a cost-effective £689.33, it's the latest in a

**RIGHT:** The Model 10 arm sees a separate headshell used, which allows for cartridge azimuth alignment, while adjustment of the counterweight assembly is achieved by sliding it back and forth by hand. The deck is pictured here with an Ortofon Rohmann MC cartridge

**BELOW:** Original pages from the Dec '99 issue of *HFN* carrying Ken Kessler's review of the SME Model 10, the deck that brought down the price of entry into the rarified range of SME turntables as the company entered the 21st century



series of variants which make the SME V's primary virtues available to the many at a reduced cost. Unlike models sold on an OEM basis to other manufacturers, which vary in colour or merely do without the damping or some other feature, the SME 10 is a redesign which aspires to greater simplicity as well as 'universality'.

Most noticeable is the separate headshell, allowing for cartridge azimuth alignment; the SME V presupposes absolutely

SME 10 is a simplified arm base, featuring locating pins and only two screws to affect the proper mounting; it still retains grip when

*'This deck is pure SME: we're talking about a tool'*

the set screws are loosened to keep the arm in the position you've set it prior to final tightening.

The cut-out on the SME 10 armboard accommodates both the new arm base and

the traditional SME four-screw type. In all other respects – anti-skate, height adjustment, etc, the new SME 10 arm mirrors the SME V.

### SIMPLE SET-UP

So is the SME 10 clever? Complete? Ergonomically perfect and above criticism? You'd better believe it. In fact, the only product I know of which comes close to the SME 10 arm (and the SME Series V, of course) for such thorough 'rightness' are the Leica M-Series cameras. And, boy, how I'd love to let AR-A loose on their few remaining faults...

Whatever the verbiage in this report suggests, the set-up is so simple and straightforward that anyone with even a modicum of experience can have the SME 10-plus-arm up and running in under







## FROM THE VAULT

an hour. The company has a tradition of producing owner manuals that are beyond criticism and the SME 10's is no exception. You'd have to be a certifiable moron to mess up this installation.

### SOUND QUALITY

I fitted a much-loved Lyra Lydian cartridge into Musical Fidelity X-LP and EAR 834P phono sections, Lexicon MC-1 and Musical Fidelity Nu-Vista preamps, Nu-Vista 300 and Acurus 3X200 power amps, and used pairs of Sonus faber Guarneri, Wilson WATT/Puppy 6 and MartinLogan Scenario loudspeakers.

What I heard merely confirmed the results of the 'preparatory sessions' when I first experienced the SME 10 in AR-A's own legendary Audio Research/Krell/Quad system. How little did I realise after leaving Steyning that I was ready to write the review, unaware that the SME 10's absolute consistency was so utterly trustworthy.

Nothing I heard later in my own systems contradicted the findings, despite different ancillaries. I stayed with the same recordings I tried at Alastair's: the Mobile Fidelity 180g pressing of Sonny Terry & Brownie McGhee's *Sonny & Brownie* and a vintage Peggy Lee LP, augmented by the new soundtrack to *Yellow Submarine*, some mono Mickey Katz on Capitol and The Police's *Outlandos d'Amour* on Vivante.

When pressed, AR-A might admit that the '20 and '30 offer more weight or solidity, or whatever virtues we lump in with sonic mass, scale and lower-octave supremacy.

But to focus on this would be to imply that the 10 is a lightweight. It isn't. In fact, I find its bass to be among the most harmonious, listener-friendly, smooth, tight and coherent that I've ever heard.

In all other respects, it's pure SME, the sound exhibiting grip, precision, fine detail, consistency – we're talking about a tool, a turntable equivalent of the Wilson WATT Puppy approach to monitor-grade speakers. The SME 'experience' is all about low coloration, the minimising of residual noise, the banishment of any intrusion which might upset

one's equilibrium.

If you are ever lucky enough to meet AR-A, you'll know exactly what I mean. This is a man who must be a closet Buddhist, because he takes the concept of being

'unruffled' to extremes beyond that of a mere English gentleman.

And the turntable reflects this: it is polite, well-bred, refined. But, ah!, you're thinking – it therefore must lack soul. This is not the case, unless you travel under the misguided assumption that turntables have rhythm.

For what the SME 10 reveals to me is that the soul, the rhythm and the funk are in the *music*, not the hardware. And the SME 10 lets you hear the music and nothing else. Indeed, this turntable is so eerily quiet and uncoloured that it is easily one of the best ambassadors yet for the sheer greatness of analogue replay via vinyl. ☺

'The sound is eerily quiet and uncoloured'

**BELOW: SME** founder AR-A with the SME Model 10 fitted with an SME Series V arm and (below) the deck with a Benz Micro Glider SL cartridge running through an Acoustic Signature Tango phono stage



Also in *HFN* this month in 1999

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## LAST WORD

# OFF THE LEASH!

KEN KESSLER TELLS IT LIKE IT IS...

With more time to spare, **Ken Kessler** is listening to budget gear – and he's buying hi-fi secondhand

**A**s I write this, 'Lockdown part III' is in full-ish force across the UK. Like all of you (or the sensible ones, that is), I've only left the house for essentials. As there are numerous tempting books and Blu-ray box sets to fill the days and nights, I'm spending even more time in my listening room, up from 20-30 hours a week in the pre-Covid-era.

Note the word 'era'. Few expect anything approaching normalcy, with shop openings, public transport or other aspects of our lives we once took for granted, to resume anytime soon this year.

### COOL NEW MODELS

The pandemic, however, has had an oddly positive influence on the hi-fi industry – strange to say when hi-fi emporia are closed, shows are a distant memory and conventional methods of launching products have been replaced with announcements on social media.

With increased listening time comes the rediscovery of our systems' foibles or limits, and this in turn has become an unexpected motivation for upgrading. In the meantime, manufacturers have done their best to launch new products despite their hands being tied. So cool new models continue to appear, instead of waiting for Munich 2021 or other shows.

My extended listening sessions have been used to discover components which would

otherwise be denied to me, partly because my own policy is to audition only products that I have been assigned to review. Anyway, time is still precious. I had planned to revive hardware in my mini-museum, for which I purchased a Variac a few years ago, but the Dynaco Stereo 70, Quad IIs and Radford MA15s will have to wait for now.

While there are practical things I ought to be getting on with, like clearing out the basement, emptying a storage unit of magazines, etc, curiosity got the better of me thanks to the ridiculously affordable Thorens MM-008 phono stage [*HFN* Feb '21]. This diversion, in direct contradiction of my self-imposed rule to listen only to review candidates, has prompted a renewed passion for the budget end of the market.

Any psychiatrists among you might argue that this is a deep-seated need to experience

a reality check after the astounding (and astoundingly expensive) DS Audio Grand Master cartridge system that I reviewed in the same issue as the MM-008. The codicil, however, is my desire to address the reduction in disposable income that will

inevitably affect nearly all of us due to the effects of the pandemic. Even if your budget shrinks, your love of music will not, so I'd like to think reviewing gear such as the £220 Thorens MM-008 is my obligation.

Recently, I took delivery of Magnepan's incredible bargain, the LRS, because I was

desperate to hear a ribbon-equipped panel speaker with a US retail price of under \$700 per pair. My American colleagues have been praising it to the skies, and I figured it wasn't a total indulgence to get a pair since I do write articles for mainstream lifestyle magazines as well as *HFN*.

To continue in this vein, I purchased a cost-effective valve amp from the States, a model which isn't available in the UK. Again, this is not for review in these pages, but was purchased out of sheer curiosity. So what follows are general observations about the budget sector as a whole, and are not opinions to be taken to the bank.

### SENSATIONAL SOUNDS

Prior to these acquisitions, I purchased a used Cambridge A1 from a charity shop, which had to unload it because of strict policies about selling anything that requires mains electricity. Sure, it made me feel good, though I needed it like I need a tooth abscess, but what the heck: I don't have an entry-level, solid-state integrated amplifier for reviewing budget gear.

Buying used kit, however, was not part of my exploration, as we cover vintage in depth, and secondhand gear has always been the most cost-effective way of getting decent sound if strapped for cash. Equally, there are those who only want brand-new gear, and I (for whom John Atkinson, a former editor of this magazine, coined the term 'anachrophile') respect that.

While I await the arrival of the amplifier from the States – and I hasten to nod to the PS Audio Sprout (£799), Icon Audio's Stereo 25 (£1399) and countless other affordable amps to consider – I've been listening to the Maggies with ones which are ineligible *vis-à-vis* price. My source has been a sub-£700 turntable/arm/cartridge playing through a budget phono stage.

I am not being coy by failing to name the hardware: it's deliberate because I'm not trying to create a specific system you should buy *per se*. Rather, it's to remind myself – and all our readers – that, as I discovered, sensational sounds can be yours for sensible money. It's why 'Budget Esoterica' is as important as any section of this magazine if new blood is to enter our community. ☺

**'Your budget may shrink – your love of music won't'**

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