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OCTOBER 2020

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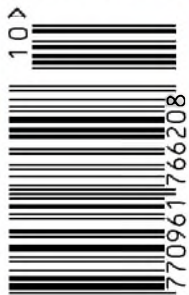
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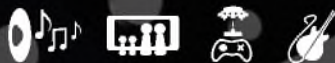
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COMPANY



# welcome

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Chris Frankland, John Pickford



**G**reat to see the brand name of Leak re-launched. In this issue on p10 you can read about the new Leak Stereo 130 amplifier, an update on the original Stereo 30 transistor amplifier launched in 1963 – 57 years ago no less. Reviewer John Pickford is new to Hi-Fi World, but as a long term Leak owner better placed to understand how the new Stereo 130 compares with its predecessors.

A lot has changed over the years between these amplifiers, but a lot has not. We still have transistors and casework of similar dimensions – with knobs on front that humans can twiddle. It's easier and more direct than using an app – and future proof too. Interesting to see what has changed and what has not.

We've covered the wonders of Leak products in the past, as well as publishing a researched history in our October 1996 edition. In this issue we have updated that history to include Leak products launched by Rank Leak VWharfedale – see p18. This takes Leak history to its true end-point.

I see a connection between the ornate 1960s styling of the Stereo 130 and Chord Electronics' Ultima 6 stereo power amplifier that you can find on p46. Both stylistically fight against the visual boredom of a black box. Chord Electronics actually put more into their styling and construction than Leak ever did – or most other manufacturers. Heavily machined casework, luminescent light displays and custom transistors mark out the Ultima 6 as an amplifier like few others – today or yesterday. OK, the price is higher after taking into account inflation from 1963, but all the same this is an eye-popping product.

How on earth can you get surround-sound from headphones? Back in the wacky 1970s they tried to do it and Martin Pipe explains all on p43. This is another smile inducing article, like Dave Tutt's ribald column about the BBC's female DJs on P73.

I hope you enjoy what we bring you this month in another 'interesting' issue!

**Noel Keywood**  
Editor



## hi-fi world

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## verdicts

●●●●● OUTSTANDING  
●●●● EXCELLENT  
●●● GOOD  
●● MEDIOCRE  
● POOR  
£ VALUE

amongst the best  
extremely capable  
worth auditioning  
unremarkable  
flawed  
keenly priced

## testing (see [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk) for full explanations of all our tests)

To ensure the upmost accuracy in our product reviews *Hi-Fi World* has extremely comprehensive in-house test facilities and our test equipment - from big names like Rohde & Schwarz and Hewlett Packard - is amongst the most advanced in the world.

Loudspeakers are measured using a calibrated Bruel & Kjaer microphone feeding a Clio-based computer

analyser, using pulsed and gated sinewaves, in a large room to eliminate the room's influence. Pickup arm vibration is measured with a Bruel & Kjaer accelerometer.

No other UK hi-fi magazine has in-house testing and none has access to such advanced tests across all types of equipment. That's why you can depend on *Hi-Fi World* reviews.



## ELECTRONIC MAGAZINE

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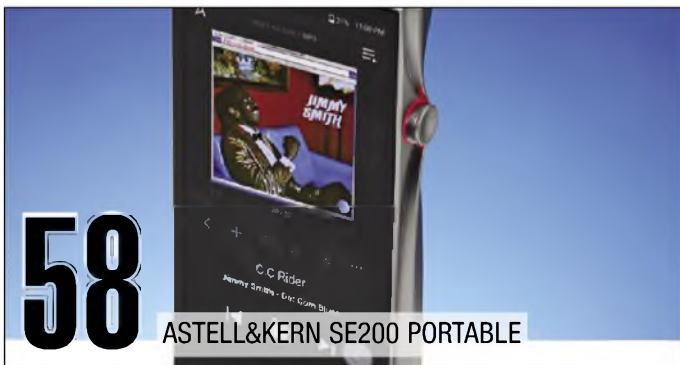
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# news

## A LESS-LIMITED EDITION

The Technics SL-1200 (silver)/SL-1210 (black) series is an institution, having started life in 1972 as a direct-drive hi-fi turntable before being appropriated by the DJ community. It's one of the few decks that non-audiophiles will know by name, and ten years ago there was an outcry when Technics announced its intention to stop making them. The vinyl revival changed its corporate mind, and production resumed in 2016 with the radically re-engineered SL-1200GAE. The iconic status of the turntable was raised further when Technics chose to mark its 55th anniversary in May with a luxurious limited-edition black version. Only 1000 of these £3,999 SL-1210GAEs were released, and they sold out quickly. Technics has however responded to demand by making another 210 (geddit?) available. They feature a badge with inscribed serial number, switchable strobe-light and a specially-tuned Nagaoka JT-1210 MM cartridge. Not so obvious is the internal use of a newly-developed gel material, as found in Technics' flagship £14,000 SL-1000R, to isolate the turntable from external vibrations. If you want one of these legends, you'd better move fast...

Further details: [www.technics.com](http://www.technics.com)



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Gregory James  
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Test Your Music Systems for High Resolution Audio (DSD, WAV and FLAC)

Close To The Soul  
A 1975 live recording by Keith Greeninger, Chris Kee and Brain

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The Music & The Magic of Ms. James Marocco  
James Marocco  
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## HEARING AID

Many of us will be aware of American recording engineer Cookie Marenco's Blue Coast Records (California). The label offers a comprehensive selection of music, which is exceptionally well-recorded using a proprietary "no-compromise" process known as ESE (Extended Sound Environment). Said music is made available on its webstore for download in a multiplicity of formats - the higher the res, the more you pay! You can preview tracks and albums before buying them.

The availability of these formats has raised questions. Which is better - PCM or DSD? Does lossless-encoding impair the music? To help you determine which sounds best on your equipment, Blue Coast has made available for free download the same track in eight different formats. The track, Close To The Soul by Keith Greeninger, Chris Kee and Brain, is described as "folk singer-songwriter, accompanied by upright bass and light drums". It was "recorded on 2in. analogue tape and DSD64, mixed through an analogue console to DSD128 and remastered in DSD256".

The 1.7GB download is a ZIP archive containing this track in 44.1kHz/16-bit WAV (CD), 96kHz/24-bit WAV, 96kHz/24-bit FLAC, 192kHz/24-bit WAV, 192kHz/24-bit FLAC, DSD64, DSD128 and DSD256 formats. You'll find it here: <https://bit.ly/2FAqecG>. Worth downloading if you want to hear the differences between file formats, derived from superb live source recording.

DSD-Guide's interesting comparative-listening tutorial, meanwhile, lives at: <https://bit.ly/3fD0JC3>. Some of its listening advice might also prove useful when evaluating hi-fi equipment in shops.

Further details: <https://bluecoastrecords.com>  
DSD Guide, <https://bit.ly/2XFjazi>

## PLAYING WITH THE BIG BOYS

To find speakers resembling these 4349s from JBL you would have, until recently, needed to visit a recording studio. But now, you can buy these imposing beasts for use at home. They aim - in JBL's words - for the "kind of dynamics and precision enjoyed by music producers and sound engineers".

To achieve these qualities the £7000-per-pair 4349 studio monitors feature 12in. pure-pulp woofers with long-throw 3in. voice coils and "dual-opposing spider dampers" to minimise distortion at high listening levels.

In order to provide similar benefits to anything above 1.5kHz, JBL has specified D2415K compression drivers with lightweight 1.5in Teonex diaphragms coupled to "high-definition imaging" horns. These are built into dual-ported cabinets made with inch-thick material for rigidity.

The 4349s feature front-mounted treble and super-treble attenuators, enabling the listener to achieve a good tonal balance with their room and equipment. JBL's spec claims 8 Ohm nominal impedance, 91dB sensitivity (2.83V/1m), 200W power handling and a -6dB frequency response of 32Hz-25kHz. The 4349s are available in Walnut or Black Walnut veneers, with complementary grille materials. Matching JS-120 floor stands, costing £325, can also be supplied.

Further details: [www.jblsynthesis.com](http://www.jblsynthesis.com)



## ZEN AND THE ART OF HEADPHONE SUSTENANCE

What we've seen so far of iFi's sub-£200 Zen range - a Bluetooth adaptor and a DAC - has impressed us. iFi has now added a third product to the lineup, the analogue (but digitally-controlled) Zen Can headphone amp (£149). There is impressive headphone drive capability - 1.6W per channel into 16 Ohms 'phones. It should be compatible with practically any headphones you care to plug in to the front-panel 6.3mm (unbalanced) or Pentacon 4.4mm (balanced) jacks.

Other features include three analogue inputs (4.4mm balanced, 3.5mm and phono unbalanced), switchable 3D-surround-effect and bass-boost, a 4-position

(0/6/12/18dB) gain control to accommodate different headphone sensitivities and high-grade components.

It's compatible with pretty much any analogue source, but you'll need a digital-to-analogue converter (like the Zen DAC) for digital sources or a phono stage for vinyl.

The Zen Can is powered via a 5V wall-wart or, with appropriate cabling, the USB socket of a computer.

Further details: [www.ifi-audio.com](http://www.ifi-audio.com)

## SPECIAL BREW

Marantz has just announced 'Special Edition' versions of its PM-12 integrated amplifier and SA-12 SACD player/DAC. Marantz engineers have lavished "extraordinary attention to detail" on the tweaked variants - the careful selection of components for key sections of the circuitry and tuning over "countless" listening sessions.

Described as a "discrete two-stage design" with the "cleanest signal path" the £2,999 PM-12SE has separate power supplies for the pre and power-amp sections. The latter is claimed to deliver 100W per channel into 8 Ohm 'speakers (200W into 4 ohms).

Other features include the use of Marantz's latest HDAM devices in the amps, current-feedback techniques, high-grade socketry, electronically-controlled volume and a discrete MM/MC phono stage.

Its partner, the SA-12SE (£2,999), plays SACDs and CDs and features an asynchronous USB input for PC use. This supports hi-res all the way to 384kHz/32bit PCM and 11.2MHz DSD. Lesser material can be treated with the "innovative" Marantz Musical Mastering' system, which upsamples to DSD. Also on board the SA-12SE are conventional optical/digital inputs and a headphone amp. Both units are available in black or silver/gold finish.

Further details: [www.marantz.co.uk](http://www.marantz.co.uk)





## BURNDY BUNCH

Naim adopted the obscure Burndy multiway connector for proprietary signal/power interconnects, making it difficult for owners of high-end Naim gear to upgrade.

Recognising their plight, the Chord Company - that uses Naim products in its listening room - has now introduced a range of Burndy-terminated cables. Built with the same "high-performance materials and unique construction techniques for which the Wiltshire company has become famous", the handmade-to-order interconnects are claimed to "bring performance benefits where it counts". All feature "silver-plated copper conductors, the proprietary flagship 'Taylon' insulation, an acoustic braid and an anti-EMF braid, all protected by a black nylon outer jacket". Naim products catered for include the 552, 555, XPS, CDS, NAC 252, NAC 52, NAP 300, NAP 500 and SNAXO.

Prices - which are dependent on the number of internal cores (up to nineteen), the length required and the associated build time - start at a sobering £1,600.

Further details: [Chord Company](http://ChordCompany.com), (01980) 625700. [www.chord.co.uk](http://www.chord.co.uk)

## CULT RETURN

Cult hi-fi brand NVA is back with a vengeance! Nene Valley Audio was founded in 1982 and run by Richard Dunn, who used to design amplification for rock bands under the guise of Tresham Audio.

NVA's solid-state amplifiers were cased in acrylic rather than metal, to eliminate eddy-currents, which were claimed to affect reproduction.

Hi-fi Subjectivist Audio Ltd aims to "resurrect the NVA brand". Currently, the NVA lineup includes the P50 Mk.III passive preamp (£375, or £425 with a stepped-attenuator volume control), a range of mono and stereo power amps (ranging from the £495 stereo 'Model Worker' S80 to the £2,250 Artisan M600s), a 15 Watt per channel 'personal integrated amplifier (£500), the special low-capacitance cable needed to connect them to your 'speakers, a £475 headphone amp and various interconnects. All such items are available on 30-day trial and can be ordered from the Durham-based company's website. Further details: [www.nvahifi.co.uk](http://www.nvahifi.co.uk)



## NAD'S M33 – WORTH THE WAIT?

After a half-year wait, courtesy of the pandemic, the NAD Masters M33 integrated amp/streamer/DAC is now shipping to retailers. So why the interest? Simply put, NAD has packed this touchscreen-fronted beast to the gunnels with techno-trickery that will appeal to analogue and digital music lovers alike.

Based around NAD's smartphone controllable BluOS streaming platform, the multi-room friendly M33, caters for numerous standard and hi-res formats including MQA, WAV and FLAC. Dirac room-correction, HDMI for TV sound, playback from USB storage devices, a 32-bit/384 kHz ESS Sabre DAC and HD 5.0 Bluetooth feature too.

The amp section uses something called "HybridDigital Purifi Eigentakt" (try saying that after a pint or two!) to deliver as much as 200W power to each channel. It boasts an MM phono stage and numerous inputs, including XLR balanced (both analogue and AES/EBU digital). Two MDC upgrade-module slots ensure that your £3,999 investment won't go obsolete quickly. However, unlike cheaper NAD models there's no Chromecast support - and NAD fails to mention the existence of DSD.

Further details: <https://nadelectronics.com/>



## HEAVY METAL FROM CYPRUS

New from Cypriot manufacturer Aries Cerat are the Essentia and Geminae monoblock "super-amps". The pair is collectively known as the "lanus Series", named after a "two-faced Roman god".

According to Aries Cerat, is a "new way of using hollow and solid-state devices". It is described as offering the linearity of a triode, while being able to source enough current to drive low-impedance loads directly.

In plain English, this means speakers can be driven by its circuitry directly from FET transistors with the quality of sound associated with triode amplification. TriodeFet is also allegedly maintenance-free; the unstressed "internal tubes used for curve-creation are rated at 10,000 hours lifespan".

The TriodeFet used in the new models is actually a refined version of a technology used in Aries Cerat's original lanus monoblock, launched in 2012.

Naturally, stuff of this esoteric nature ain't cheap. Selling for 110,000 euros, the Geminae - all 200kg of it! - is, we're told, "a two-stage Class A amplifier, using a floating circlotron with TriodeFets in the output stage to deliver 130V into 8 ohms (260V into 4 ohms) while never leaving true Class A operation".

The 70cm-tall Geminae may not have an output transformer, but its input stage is "a transformer-coupled small SET amplifier". At a mere 39,000 euros, the Essentia - due later in the year - is a "smaller single-ended, single-stage mono amplifier" without driver or input stage. Its single TriodeFet output stage is said to be capable of 40W into 8 ohms.

Further details: [www.aries-cerat.eu](http://www.aries-cerat.eu)



# Great Return

John Pickford on the return of a great name – Leak – with their new Stereo 130 amplifier.

**L**eak branded equipment last appeared in showrooms over 40 years ago. Now they are back with two new models styled upon their classic 1960s designs. A comprehensive history of

the original company can be read elsewhere in this issue so I'll spare you the long lesson here. Those who know and are interested will notice the new Stereo 130 integrated amplifier bears a striking resemblance to the original Stereo

30, launched in 1963 as the world's first domestic transistor amplifier, as our original Leak advertisement picture shows.

Like its spiritual predecessor, the new Stereo 130 is a solid-state design incorporating latest digital



technology alongside traditional Class A/B amplification, power specified as 45 Watts per channel. In spite of its breadth of modern ability, this is not an expensive amplifier – just £799 with Walnut veneered wooden sleeve as shown, or £699 without.

The Stereo 130 is joined by the similarly styled CDT CD transport (£549/£449) that makes a perfect partner, rather like the Stereo 30 Plus and Stereofetic FM tuner combo I once owned. The new models' Walnut surround is classier looking than my old Leaks – and Leak suggest these sleeves match their veneered loudspeakers like Wharfedale Lintons and Dentons.

Can you slot them in? The Stereo 130 with sleeve is 326mm wide, 146mm high and 267mm deep; the CDT 326mm wide, 146mm high and 283mm deep.

Front panel controls on the amplifier comprise an electronic rotary switch for input source selection, a similarly sized motorised Alps volume pot (activated by the fully-featured remote control) and three smaller knobs for adjustment of bass, treble and balance. Tone controls are essential for some listeners while others find them unnecessary so naysayers will welcome the direct button to bypass the tone and balance circuits. Headphone users will appreciate the excellent dedicated amp stage.

A button marked power is in fact a standby switch as is common nowadays; the true on/off power switch is on the rear panel above the mains socket. In standby the 130 consumes less than one Watt from the mains, as mandated by the IEC. Standby power is needed to keep the remote control active so it can switch the amp on. It's user adjustable too, so the unit will go into auto-standby when there has been no input signal for either 20 minutes or an hour. The amplifier will be in standby mode after these periods, to reduce electricity consumption, unless the function is disabled completely.

Analogue connectivity comprises two sets of unbalanced line inputs along with a moving magnet phono input for vinyl replay. Digital is catered for via coaxial and optical connectors and there is a USB input if you wish to play music from a computer; a Bluetooth 4.2 aptX receiver enables remote



**Comprehensive connectivity including Pre-Out to feed an external power amplifier. Plenty of digital inputs; no XLR balanced inputs. Note the DSD logo at top left: DSD can be played from a computer via USB connection.**

wireless playback and it connected with my phone in less than a minute.

Power from the Stereo 130 is aplenty, easily driving my insensitive (82dB/W/m) Rogers LS3/5a loudspeakers, even though the

3050is.

As many potential users of this vintage styled equipment will want to spin vinyl – or so I guess – I plugged in my 1970 Goldring Lenco GL75 turntable, fitted with a period-correct G800 cartridge with

"it reveals excellent depth of image and betters my ancient TL/12s in the way it fleshes out lower registers"

volume control needed to be at the 12 o'clock position to produce similar levels the 10 o'clock spot produced through Q Acoustics

Super E stylus. Feeding the LS3/5a speakers, I couldn't resist playing a recording from 1963, in honour of the Stereo 130's heritage.



**Under the hood of the CDT CD disc player. At left the slot-loading CD transport mechanism. Near top is the circular toroidal transformer of a linear power supply. The historic Leak logo (right) now adorns a modern electronic circuit board.**



**Full remote control is available for both CD and amplifier.**

Twist And Shout from the Beatles' debut album is no audiophile recording but it's raw and honest. Thrilling as it is, this track can sound thin and harsh through bright sounding equipment yet the Stereo 130 delivered the performance with all its guts intact. Lennon's larynx-shredding vocal (hear his sigh of relief at the end) had all the pleading passion only quality systems can reveal, while the guitars and drums could be clearly heard in correct proportion to the roomy ambience of the studio. Groove noise could've been reduced with a mono switch, a useful addition to tone controls.

Impressed with the fulsome reproduction of a basic mono recording, I stuck with the Fab Four but selected something more modern – 1969 to be precise. That's a half-truth because the 2019 remix

of Come Together improves on the original, especially in its stereo separation. I swapped out my little BBC monitors for some Q Acoustics 3050i floorstanders at this point to get a better insight into bass response.

McCartney's swampy bass line was as deep and weighty as it should be, but more importantly the Stereo 130 got into the groove and played the tune. And subtle nuances such as the odd bit of fret squeak and off-mic vocalisations that inferior components mask were presented in clear focus. This impressed me enormously.

Both of these tracks were, of course, recorded at EMI's studios in Abbey Road, which is apt as throughout the 1960s Leak amplifiers were used exclusively to power the studios' monitors.

Adding the CDT to the set-

feeding the 3050i loudspeakers made the recording warm and inviting. Smooth as they are, the Leak pair does not overlook fine detail as I could distinctly hear the highest vocal harmony less accomplished amplifiers often gloss over.

Having performed brilliantly in my office system, I slotted the Stereo 130 into the main set-up, swapping out my beloved Leak TL/12 Plus monoblocks. Driving 15in HPD equipped Tannoy Berkeleys and fed by a Thorens TD124 based front end, the new Leak amplifier asserted its authority throughout an evening spent listening to a selection of acoustic jazz.

John Coltrane's A Love Supreme needs to be heard through high-resolution equipment to fully appreciate the emotional intensity of the performance. While the solid-state Stereo 130 doesn't quite



**The 12V Trigger connector enables CDT and Stereo 130 to be controlled by a single remote control. There are no analogue outputs, only electrical and optical S/PDIF digital outputs.**

up I played Moving by Kate Bush, from the 2018 CD remaster of The Kick Inside. Kate's icy vocals can sound unbearably shrill through treble-hyped systems yet the Leaks

produce the holographic soundstage of the valve powered Leaks, it reveals excellent depth of image and betters the ancient TL/12s in the way it fleshes out the lower registers.

The new Stereo 130 also comprehensively outperforms my old drab-sounding Stereo 30, which, with its aged electrical components, is becoming to me nothing more than a chic Sixties ornament.

I listened to digital audio through the amp with similarly impressive results. My own hi-res studio masters in Logic Pro replayed accurately through the internal ESS ES9018 DAC, and the even-handed nature of the Stereo 130 even made Spotify an enjoyable background listen. The USB input will accept 32/394 PCM and DSD256 Leak say.

If you're eyeing up the CDT to slot into an existing analogue set-up, be aware there is no analogue RCA output – you will need an external

**Britain's best Hi-Fi Equipment**

STEREO 30 Transistorised integrated amplifier . . .  
 Superb styling, faultless performance and a breakthrough in price and reliability. Price £49.10.0

**Leak's first transistor amplifier, the Stereo 30, launched 1963. Price £49.10.0 the advertisement says, so around £1035 in today's money (Bank of England inflation calculator). Its rotary controls are mimicked on the new Stereo 130.**

DAC. Also, it will only play files up to CD quality (WAV, 16/44.1 or 48) from the flash drive. Higher resolution files were not accepted. Whilst you can't play hi-res from CDT's flash drive, nor DSD, for most users CD, MP3, WMV and such like will be enough.

As a pair, this is a winning combination offering outstanding analogue and digital performance at an attractive price. Had Leak not got these products spot-on, it would've been difficult to disguise my disappointment. I'm delighted with them. Welcome back Leak – you've been a long time coming.

**NOEL SAYS -**

Great to see the Leak name finally resurrected. I say "finally" because it has been on the cards for some time but IAG, who own an array of respected UK brand names – Quad, Wharfedale, Mission, Castle and Audiolab – likely did not want yet another model range. But the recent success of Wharfedale's Dentons and Lintons, built for trad appearance and sound, has seemingly changed their mind.

Unsurprising really because the audience for hi-fi is an old one (50+) but an affluent one. Add in the desire for traditional British hi-fi in overseas markets and you end up with these cosmetic near-replicas of yesteryear.

I've used a succession of Leak products in the past and am a dyed-in-the-wool Leak man! The TL/12 Plus was just gorgeous to hear – liquid beauty. My Troughline VHF/FM tuner is untouchable for sound quality – it puts me right in the studio. And as for Leak loudspeakers – can't even go there.

All of which is to suggest the Leak brand name has value and potentially a great future.

I enjoyed using these products briefly after testing them, but then I know the Quad Vena II well, upon which the Stereo 130 is based. It's a tried and tested design, replete with ESS ES9018 digital-to-analogue converter (DAC) that's wholly appropriate sound wise, making for what I see as a piece of magical retro at astonishingly low price. Bear in mind that 45 Watts will blow you across the room if you use sensitive loudspeakers (90dB from one Watt). Think Wharfedale Lintons or Q Acoustics 1050is, but there are plenty more modern floorstanders that would suit if you want to go head-bangingly loud – 1960s style. **NK**



**MEASURED PERFORMANCE**

The Leak 130 produced 55 Watts into 8 Ohms and 64 Watts into 4 Ohms, similar results to Quad Vena II (June 19 issue). This is sufficient power to go very loud in most systems. Distortion was low at all frequencies and outputs – and I noted that the output stage was very linear with signals below 1 Watt, helped partly by low output noise.

I suspect excellent low level linearity, low noise and rolled off treble all contribute to its smooth sound.

Output rolled down slowly above 20kHz (-1dB at 38kHz) ensuring easy treble. Low frequency output rolled down below 10Hz too, especially with tone controls engaged, to limit subsonic gain when bass lift is applied.

The tone controls were neatly engineered to give a useful but not excessive +7dB maximum bass lift around 40Hz, but more importantly there was good low level resolution, allowing just +1dB to be dialled in.

Similarly the treble control gave +7dB lift maximum (20kHz) but could be set to give fine treble cut of -1dB at 10kHz to reduce the excessive treble of current loudspeakers.

The optical S/PDIF digital input worked to 192kHz sample rate, but frequency response rolled down fast, extending to 26kHz (-1dB). The electrical input gave identical results.

Inside there is an ESS ES9018 Sabre 32 Series digital-to-analogue converter (DAC) that gave a very high 117dB EIAJ Dynamic Range value from the loudspeaker outputs (and 118dB from Pre-out), a very good result able to convey the benefits of hi-res digital but there will be no brightness in the sound.

Distortion at -60dB came in at a low 0.03% with 24bit digital (0.22% with CD).

The MM phono stage needed a normal 4.5mV for full output and overload was high at 50mV. There is no warp filter as such but switching in the tone controls helps. Noise was low at -80dB. Frequency response measured flat from 10Hz-20kHz, with just a smidgeon (0.3dB or so) of bass lift to ensure a sound with some body.

The CDT delivers only CD quality, being unable to play hi-res from the USB drive. It gave flat frequency response to 21kHz and standard CD performance figures of 0.22% distortion and 101dB EIAJ Dynamic Range. With no internal DAC it is a transport, not a player.

The new Leak Stereo 130 measured very well in all areas. It is very linear (no distortion), has low noise and frequency response has been rolled off above 20kHz on all inputs to help toward an easy sound lacking sharpness. **NK**

<b>Power</b>	<b>55W</b>
<b>Frequency response (-1dB)</b>	<b>10Hz-38kHz</b>
<b>Distortion (10kHz, 1W)</b>	<b>0.02%</b>
<b>Separation (1kHz)</b>	<b>91dB</b>
<b>Noise (IEC A)</b>	<b>-111dB</b>
<b>Sensitivity</b>	<b>600mV</b>

**DIGITAL**

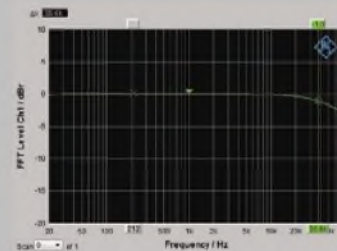
<b>Frequency response (-1dB)</b>	<b>10Hz-26kHz</b>
<b>Distortion (-60dB, 24bit)</b>	<b>0.03%</b>
<b>Dynamic range</b>	<b>117dB</b>

**PHONO (MM)**

<b>Frequency response (-1dB)</b>	<b>10Hz-20kHz</b>
<b>Distortion (1kHz, 5mV in)</b>	<b>0.01%</b>

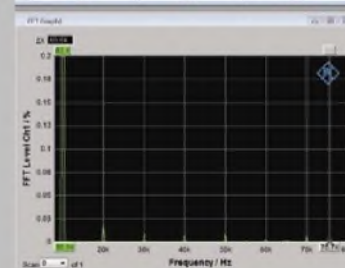
<b>Separation (1kHz)</b>	<b>68dB</b>
<b>Noise (IEC A)</b>	<b>-80dB</b>
<b>Sensitivity</b>	<b>4.5mV</b>
<b>Overload</b>	<b>50mV</b>

**FREQUENCY RESPONSE**

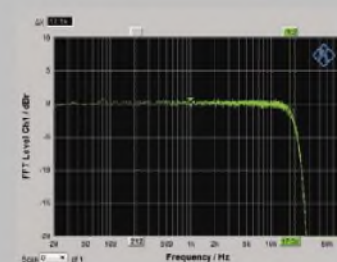


**DISTORTION**

THD @ 1W	THD @ 10W	THD @ 100W
0.0255 %	2.1350 %	10.000 %
OFF	OFF	OFF



**FREQUENCY RESPONSE CDT**



**LEAK STEREO 130 £699 (£799 WALNUT)**



**OUTSTANDING - amongst the best.**

**VALUE - keenly priced.**

**VERDICT**

Warm yet detailed sound from vinyl and digital sources with vintage style and modern features. Superb.

**FOR**

- smooth, full-bodied character
- lovely linkable remote control
- retro good looks

**AGAINST**

- no mono switch

**LEAK CDT £449 (£549 WALNUT)**



**OUTSTANDING - amongst the best.**

**VALUE - keenly priced.**

**VERDICT**

A CD transport that can also play digital files from flash drive.

**FOR**

- easy to use
- plays from a flash drive
- remote control

**AGAINST**

- no hi-res from flash drive
- poor display

LEAK  
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**H**ere's your chance to win a pair of Q Acoustics 3030is we reviewed in the September 2020 issue. Read the review excerpt below and answer the questions.

"I liked the smooth Graphite Grey finish of our 3030is and the neat, polished alloy trims around the drive units when the grille, held by invisible magnets, is removed. The grille affects frequency response little, just a tad more treble is available with grille off. Measurement showed the 3030i has

broad dispersion so the cabinet can be pointed straight down a room or toed-in toward the listening position without obvious difference between the two.

The 165mm bass/midrange unit has an impregnated and coated paper cone, Q Acoustics say, and closely above it sits a 22mm tweeter that looks like a cloth dome to me. I thought it was ring-dome, but perhaps not. All the same, measurement showed it has a smooth response and wide dispersion for even tonal balance. No sharpness here.

The cabinet is sturdy, weighing

6.4kgs. In addition to the Graphite Grey of our review samples, Arctic White, English Walnut or Carbon Black are available.

The design approach used by Q Acoustics is entirely conventional, mounting a bass/midrange unit and tweeter in a compact cabinet measuring 200mm wide, 320mm high and 313mm deep, the grille and rear terminals adding 16mm. With spade or bare wire connection depth is unaltered, but 4mm banana plugs protrude rearwards as always".

For a chance to win this great prize, just answer the four easy questions at right. Send your entries on a postcard only, by 9th October to:

**October 2020 Competition,  
Hi-Fi World magazine,  
Studio 204,  
Buspace Studio,  
Conlan Street,  
Notting Hill,  
London W10 5AP**

## QUESTIONS

**[1] The grilles are held by -**

- [a] nails
- [b] glue
- [c] adhesive tape
- [d] magnets

**[2] The bass/mid unit has an -**

- [a] aluminium cone
- [b] coated paper cone
- [c] steel cone
- [d] wooden cone

**[3] Our samples were -**

- [a] Zebra stripped
- [b] Pink
- [c] Graphite Grey
- [d] Polka dot

**[4] The cabinet is -**

- [a] sturdy
- [b] floppy
- [c] featherweight
- [d] buoyant in air

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# Leak History

**A history like few others. Harold Joseph Leak started one of the world's first hi-fi companies in 1934, bringing superb sound into homes around the world.**

## NOW

**ANOTHER MILESTONE  
IN AUDIO ENGINEERING**

**BY**

**LEAK**



**STEREO 30**  
TRANSISTOR INTEGRATED AMPLIFIER

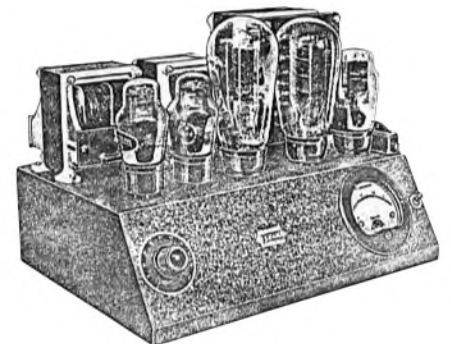
*Harold Leak holding the company's first transistor amplifier, the Stereo 30, launched in 1963. After a range of highly regarded valve amplifiers it met a mixed reception. Early transistors suffered distortion and were unreliable, but Leak persevered – soon after launching an improved Stereo 30+.*

**O**f all the names in high fidelity sound reproduction, that of H. J. Leak and Co (Leak) is arguably the most influential. Leak hi-fi products are well known collectors items today, yet Harold Leak started the company in 1926 with £22 and a handcart; it was officially registered in September 1934. Here's the company's history, compiled from information provided to us in 1996 by Chief Engineer, Ted Ashley, as well as our own researches.

In the 1920s and '30s the idea of domestic hi-fi did not exist. Valve radios brought entertainment into the home and listening was through headphones. But public spaces such as theatres, music halls and cinemas started broadcasting sound through loudspeakers driven by valve powered Public Address (PA) amplifiers.

Sound quality became an issue and Harold Leak addressed this by producing, in 1936, an amplifier with 13W output, a frequency response of 40-14kHz and the ability to "fill a 2000 seat theatre". One was installed in the Palace Theatre, Shaftesbury Avenue, in London's West End entertainment district. This amplifier "is equally suitable for radio and gramophone reproduction" Harold claimed, showing where his gaze was focussed – hi-fi in the home. No examples exist as far as we are aware. Ted Ashley provided the advertisement for it we publish here.

It was in 1945, after the Second World War, that Leak produced their first domestic hi-fi amplifier, the Point One Type 15 that, they claimed, was "the first in the world" to produce just 0.1% distortion. This was at a time when 5% was the norm and 2% laboratory standard. In post



*Harold Leak's first commercial amplifier, launched 1936 and shown at the Olympia exhibition venue, West London. Two PX25 output valves produced 13 Watts and it was "suitable for radio and gramophone reproduction" Harold claimed. The start of domestic high fidelity sound.*

## RC/PA/U Remote Control Pre-Amplifier



## TL/12 12 Watt Triple Loop Feedback Amplifier

**Leak's successful TL/12 amplifier, launched 1948. It used GEC KT66 output valves – popular in their day and used by Quad in the Quad II power amplifier. Output just 12 Watts – but with gorgeous sound.**

war Britain, where food rationing continued until 1948, few were sold, so this is a rare item.

War production work of amplifiers had grown the company to a size that demanded dedicated factory space, Leak moving to a new building in the Westway Factory Estate, West London – headquarters until its sale to Rank in 1969.

Until 1948 the company relied mainly on subcontract work, manufacturing amplifiers for others. But then Harold Leak decided to concentrate on the domestic market, producing the now legendary TL/12 12 Watt power amplifier, price £25.15s – in today's (2020) money £952 (Bank of England inflation calculator). It was accompanied by the RC/PA preamplifier designed to work with records, radio and microphone. The TL/12 was a success; it sold in quantity so they are



**Leak electrostatic panel, 1956. A prototype, never used in a commercial loudspeaker.**

factory at Brunel Road, Westway Factory Estate, London, produced a welter of new products, all well known and venerated today – TL/10, TL/25, TL/12-Plus, TL/25-Plus, TL/50-Plus, and the Stereo 20, Stereo 50 and Stereo 60 valve amplifiers, an AM tuner and Troughline VHF/

FM tuners, as well as the Leak Sandwich loudspeaker, followed by the Sandwich 600 loudspeaker and others.

The company's first transistor amplifiers were the Stereo 30 (1963) and Stereo 70 (1968). Transistor amplifiers of the time struggled with a coarse sound from severe crossover distortion, and this stained their reputation from the start. Harold avoided Press exposure of the Stereo 30 and it was replaced by the Stereo 30+. The later Stereo 70 was a power house at that time however, worked well, got good reviews and sold well. But it faced stiff competition from Japanese amplifiers that had arisen to set the standard. A Delta 30 and Delta 70 followed.

Leak was bought by the Rank Organisation in 1969. As Rank



**Production testing a Leak Stereo 30+ amplifier at the Westway Factory, 1968.**

available today – think around £1000 for a good working sample.

From this auspicious start Harold Leak built the company by vigorously exporting to markets around the world, notably the USA, Canada, Australia, New Zealand, South Africa, India, South America and the Middle East. Through the 1950s Leak's new



**Leak TL/12 Plus – an update of the TL/12 – released 1956. It used smaller EL84 output valves in place of KT66s.**

NEW  
MODEL  
ARMY



**NVA**

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already owned Wharfedale, their engineers took on Leak loudspeaker development at Wharfedale's Bradford factory, West Yorkshire. As a result the Leak Sandwich loudspeaker and later variants were superseded in 1974 by the Leak 2000 series comprising Leak 2020, 2030, 2060 and 2075, all with unique drive units in-house designed with the aid of new-tech laser interferometry.

Dr Alex Garner (later to run Tannoy) headed up the Rank Leak Wharfedale design team for this range, using Leak's Sandwich bass units, a plastic cone midrange perforated with wave breaks and backed by a clear plastic damping layer, and purple Mylar dome tweeter. He was aided by Dr Don Barlow

who worked on the Sandwich with Harold Leak.

The massive 2075, pinnacle of the range, was later upgraded to the 3090, with Isodynamic tweeter and flat aluminium strip bass inductor – a monster of a loudspeaker replete with Leak Sandwich style cones for bass and lower mid-range. The upper mid-range unit came from the 2000 series and a unique Isodynamic planar-magnetic treble unit was



**Leak 'Dynamic pickup' arm with moving coil cartridge for microgroove LP, introduced June 1954.**

In the end, Leak faded away, overwhelmed by an outside world that could produce good amplifiers more cheaply. All the same, with £22 and a hand cart Harold Joseph Leak had done well to bring high quality audio to an appreciative audience around the world – and Leak is remembered for that today.



**Leak moving coil cartridges, introduced 1954. For microgroove at left and 78 shellac at right. Their first cartridge was introduced 1948.**



**Leak's first loudspeaker, the Sandwich – so called because the bass cone sandwiched polystyrene between aluminium foil membranes, for light weight and strength. Introduced 1961. All succeeding Leak bass units used this unique construction. Harold Leak demonstrated its strength by standing on it!**

introduced.

The 3090 was a high-technology statement product launched to kick off a Leak 3000 series – but this series never followed. It was the end of Leak as a brand name, one representing cutting-edge technology product in its time.

At that time – the late 1970s – amplifiers were produced more effectively outside Britain, the last Leak branded electronic products being the Leak 2000 and 2200 receivers, bought in from overseas.



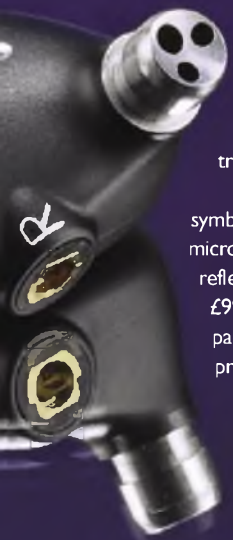
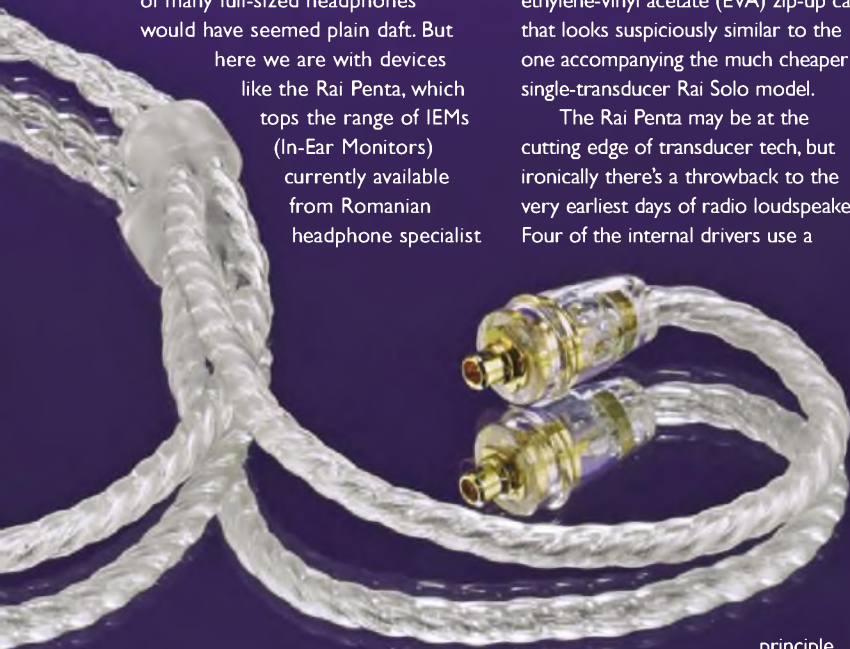
**Leak's last loudspeaker, the massive 3090. It had a Sandwich construction (13in) bass unit and lower midrange driver. The upper midrange unit was perfected by laser interferometry. The Isodynamic tweeter was a unique magnetic-planar design. (Picture: Adam Smith)**



Martin Pipe plugs his lugs with the Rai Penta In-Ear Monitor Earphones from Meze Audio.

# On a Musical Adventure

**N**ot so long ago, the idea of a tiny ear-insert containing five (or more!) transducers and able to match or even better the performance of many full-sized headphones would have seemed plain daft. But here we are with devices like the Rai Penta, which tops the range of IEMs (In-Ear Monitors) currently available from Romanian headphone specialist



Meze Audio. The device gets its name from the Romanian word for 'heaven' (Rai), and an allusion to the number of transducers (Penta).

These devices are a symbol not only of advanced micro-engineering, but - maybe reflecting their not-insignificant £999 asking price - thoughtful packaging too. Meze has provided everything most users will need to make the most of their devices. As well as the 'phones, you get several ear-tips of differing shapes and sizes (4 soft-silicone pairs, one double-flanged pair, a 'Comply' foam pair and two deep-insertion double-flanged pairs), a nondescript 3.5mm to 6.3mm adapter and even a 2-pin adapter that will allow you to judge for yourself how bad the average in-flight entertainment system sounds. There's also supposed to be a cleaning tool, although it was missing from the review sample.

As with all decent earwear, the Rai Penta's cables are detachable - here, courtesy of MMCX connectors. Supplied is a braided cable made of silver-plated copper Litz wires terminated in a rhodium-plated 3.5mm TRS plug. A quality item, albeit rather short at 1m, it will - with or without

adaptor - be compatible with the majority of sources you'll encounter. Note however that balanced upgrades are available from the Meze website.

To safely-transport such goodies, Meze includes an unusually-styled ethylene-vinyl acetate (EVA) zip-up case that looks suspiciously similar to the one accompanying the much cheaper single-transducer Rai Solo model.

The Rai Penta may be at the cutting edge of transducer tech, but ironically there's a throwback to the very earliest days of radio loudspeakers. Four of the internal drivers use a

principle known as 'balanced

armature' (BA). In their original form, moving-iron BA speakers sounded terrible but had the advantage of efficiency - important, given the restricted power of valve amps at the time. As these improved in the late 1920s, moving-coil (MC) speakers - less-efficient, but audibly-better - began to take over and now pretty much rule the roost.

The BA concept has been revived to improve efficiency. This increased efficiency is quite startling; after switching from my reference 'phones (Focal Utopias, with beryllium-diaphragmed MC drivers) to the Rai Pentas, I had to turn down the volume of my headphone amp sharpish - lest hearing damage result! The numbers tell the story; Meze claim a sensitivity of "112dB" (presumably 1mW/1kHz) while the full-sized circumaural Utopias weigh in at a comparatively-paltry 104dB.

The downside to BAs is that while they can be made to sound fantastically good, they do so over a relatively-narrow frequency range; in contrast, MC headphone drivers are almost without exception full-range. Hence the inclusion of four BA drivers in Rai Penta IEM - and as they're not cheap, a product of this nature is always going to be expensive.

Another problem with BAs is that they are not really suitable for use at low frequencies. Consequently,

Meze has adopted a 'hybrid' approach. The fifth driver is of conventional MC design - such transducers have a great track record when it comes to delivering bass. The BAs look after the mids (two drivers) and the highs (the remaining two drivers).

As this is a flagship product, Meze has gone to town with the enclosure, which is precision-milled - right down to the channel-identification markings - by CNC machinery from a block of solid aluminium. Its external shape is the culmination of "3 years research" by Meze, and is intended to fit snugly into your ear so that it's comfortable to wear for long periods. After all, you'll listen to more music if wearing your headphones is a pleasant experience. The Rai Pentas also address a long-term IEM annoyance; using the appropriate eartips, the Rai Pentas always 'stayed put' - even during sweaty visits to my (recently-reopened) gym.

Comfortable they certainly are; my only complaint is that the anodised layer came off the edges of one of the pair. But these are intricate shapes - internally, as well as externally. With five transducers to accommodate, the interior of this IEM is complex. Connecting the drivers to the ear tipped nozzle is a network of sound tubes, which are of "very specific and precise length...they basically determine the air volume in front of each driver". Meze precision-mills them from aluminium, thereby "eliminating imperfections that you can find in the plastic tube and dampener systems" of rival multi-driver IEMs.

## SOUND QUALITY

The nominally 20 Ohm Rai Pentas were partnered with a number of devices - all of which easily drove these IEMs. Most of my listening involved hi-res and CD-quality material, experienced on a Prism Callia (driven by a Cambridge CXN v2 streamer) and my X3 FiiO player. The startling efficiency of the Rai Pentas certainly benefitted the latter (and, for that matter, a Google Pixel 3a smartphone). Among the first qualities you notice during serious listening - you need a few hours to 'break them in' - is their resolution and speed. Usually, these are the first casualties of multiple-driver complexity. Percussion makes transient demands that are met easily here.

The electronic sample-rich rhythms of Disclosure's uptempo house track Tenderly, which you'll find on the deluxe edition of Settle, are a case in point. They stop and start with utter precision and an absence



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*A closeup view of a Rai Penta IEM. Its specially-shaped body ensures a good anatomic fit and thus long-term comfort. Note the 'port-holes'; according to Meze these help to "regulate internal-chamber pressure through a finely tuned PES - Pressure Equalisation System - in front of and behind the driver assembly".*

*The letters 'L' and 'R' have been machined onto the enclosures, for channel-identification purposes.*

'overhang'. Tenderly's bassline is deep and bouncy but it didn't dominate; treble content (mostly percussive) was both clean and finely-etched. Vocals and synth leads retained their proportion and place within the mix. Other material indicated slight midband emphasis – in particular, vocals and speech (announcers on BBCs Radio and 4) were given a tad more presence and intelligibility. Might this have something to do with the hearing-aid heritage of recent BA implementations?

But they sure as hell do a good job with music. Every element of the military percussion forming part of Britten's War Requiem (LSO/Noseda, 24/48) could be made out, even against the massed choral and orchestral forces that the Rai Pentas manage, despite the complexity, to place accurately within the soundstage. The bass drum, which eludes many IEM-type devices I've tried, fared better with the Rai Pentas.

I was also impressed with the detail and insight they impart to vocal soloists and choirs. Conveyed with every heartbreaking nuance intact was Portishead singer Beth Gibbons contribution to Gorecki's Third symphony (Polish National Radio Symphony Orchestra/Pendercki, CD FLAC rip). This is a live recording

and the 'noises off' were sufficiently-resolved to make it convince.

Simpler recordings benefit too. When playing Gdansk-born pianist Hania Rani's beautifully-atmospheric Esja album (CD FLAC rip), the Rai Pentas allow the notes and chords of her instrument to decay gracefully and naturally within the performance space. It was also easy to make out the sounds of her fingers hitting the keys as she plays – and even some breathing – adding to the uncanny realism of what was being projected into my ears.

Sufficient room was given to the bass that accompanies some of Rani's music; it complements the piano, rather than overpowers. The extraordinary resolution of these IEMs did however draw my attention to limitations in the recording chain – noise in the Gorecki piece, as well as the muddy low-end of some of the tracks that make up Bowie's Blackstar album (24/96), among them 'Tis A Pity She Was a Whore.

## CONCLUSION

Yes, Meze could have provided a longer lead. Furthermore, the anodised finish of one review sample began to lose its edge colouring during the review period. Such matters apart, it's difficult to fault the Rai Pentas, their incredible efficiency not compromising the ability to reproduce music. The micro-details laid bare by these IEMs was at times revelatory. They bring recordings closer to what one would expect from a live performance; indeed, given that the acoustics and PA systems of performance venues often leave much to be desired the results here were often more satisfying...



*Meze's package is fairly comprehensive - as well it might be, for a grand. You get eight pairs of tips to suit different ears, a detachable 1m unbalanced cable with 3.5mm stereo plug, a rather cheap 6.3mm adaptor and a distinctively-styled zip-up carrying case. Thanks to the use of standard MMCX socketry, the Rai Pentas can easily be upgraded to balanced operation with an 'after-market' cable - Meze can supply these.*

## MEZE RAI PENTA £999



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# Mail

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Answers by: NK - Noel Keywood; DT - Dave Tutt; PR - Paul Rigby; MP - Martin Pipe.

## LETTER OF THE MONTH PRIZE



### KEF Q150 BOOKSHELF SPEAKER

<https://uk.kef.com/products/q150-bookshelf-speaker>

[subject to availability - Satin Black / Satin White]

**A PAIR KEF Q150 LOUDSPEAKERS are on their way to COLIN TOPPING, Letter of the Month winner in our September 2020 issue.**

## Letter of the Month

### BIG BAND BREAKDOWN

Over the last several months you have made reference to the Syd Lawrence Orchestra's "Big Band Spectacular", recorded at Air Studios, mastered at Abbey Road and issued on the Chasing the Dragon label.

This is indeed a spectacular "you are there" recording, especially in the direct-to-disc version, and a very good introduction to big band jazz (and recommended as such).

I had the honour to be the deejay at the sadly now defunct Big Bands Windsor (BBW), which meant I played the music for distinguished presenters, including Chris Dean, our president, and leader of the Syd Lawrence Orchestra.

At Big Bands Windsor he played a track, pre-release, from "Big Band Spectacular". The record is not particularly new. There is no date on the sleeve or either of the discs but I would suggest it was released in 2015 or maybe 2016.

There was a later "Chasing the Dragon" LP featuring the singer, Clare Teal and the Syd Lawrence Orchestra in celebration of Ella Fitzgerald's centenary on 25th April 2017 – also well worth having

For those who might be interested in exploring big band jazz, I recommend

a great CD box set of the "Second Testament" Count Basie Band "Live at the Crescendo" which is still available from Amazon. The sleeve notes are coy about the recording engineer but it was Wally Heider, which is a recommendation in itself. Great band in full flow

Another great international band was the (British) Ted Heath Orchestra and my best intro recommendation is the double CD of "The Final Concert", from 2000. It isn't available new anymore but I see there are quite a number of used copies on eBay just now. The concert was introduced by the late Malcolm



**Another Big Band LP from Chasing the Dragon "featuring the singer, Clare Teal and the Syd Lawrence Orchestra in celebration of Ella Fitzgerald's centenary – also well worth having" says Robert Parsons.**

Laycock, a member of Big Band Windsor and Chris Dean's predecessor as our President. I had the great pleasure of working with Malcolm and former members of the Ted Heath Orchestra when BBW still had a large membership.

*Pinner Big Band Club continues (although not at the moment of course) and I am deejay there, as well as being one of the presenters. Happy to spread the word and to deal with questions.*

*I can also recommend the "Proper Box" of the early Woody Herman Bands (or "Herds"), and Duke Ellington at Newport 1956 on LP. The landmark Benny Goodman 1938 concert at Carnegie Hall is also a must have, in particular a 1987 Columbia reissue, intended as a 50th anniversary celebration but released when Goodman died in 1987. The original was released in the autumn of 1950 (the story of how this famous recording came about is for another time, but as I say above "happy to... deal with questions").*

*Curiously no attempt was made by Columbia to convert from the American Columbia EQ curve to RIAA (Recording Industry Association of America), so when I listen to this double album I am pleased to be able to use the appropriate setting on my GSP Revelation phono stage, which seems not to feature in your recommendations.*

*The review of the iFi Black Label 'stage has some relevance here, although the GSP is a great sounding 'stage, with twelve EQ curves including a specific American Columbia setting. The Revelation is still on the GSP website, although it has been largely superseded by GSP's Accession which also has selectable EQ curves, but not as many, dispensing with the eight 78 rpm curves. This is in the same price area as the iFi phono stage and my own recommendation for those who can't afford Zanden prices, and indeed those who can.*

*Thanks Noel for continuing to publish during these difficult times, and I quite understand that you were unable to publish for two issues. Power to your elbow, and keep well.*

Regards

**Robert Parsons**

Hi Robert. Thanks for all your helpful info, including more on Big Bands. I think it is the sense of spontaneous ability in this recording that is so engaging: great to hear practiced musicians playing live in a one-off – and what sound quality. Atmospheric and totally engaging. As you say, recorded 2015

Foolishly I now understand I've never really 'got' Big Bands, but I have after hearing this LP (which we all love at HFV Towers) and must try to catch one of their concerts.



**iFi's Black Label phono stage has Columbia EQ setting for all those wanting to hear old Columbia LPs properly balanced. There are Decca and RIAA options too.**

When reviewing the iFi I wondered whether alternative EQ curves would be of interest – now I know! Consider contacting Dave Cawley at Sound Hi-Fi (Timestep), based in Devon, for in-depth info on all this. He lectures in the US about archiving technology and also produces archiving products, including a Direct Drive turntable that can be programmed to spin in 1Hz quartz-locked intervals from 16rpm to 99rpm. All about capturing those old recordings perfectly, but from LP of course.

There was no option but to cease publishing. It made logical sense and I discuss matters like this with our distributor and subscription house of course, to take in other (expert) views. There was total shut down of High Street, stations and airports around the world – and we sell around the world. Also, manufacturers were unable to supply product for review. No point in even trying to publish at the time, even though we were fit, able and willing to do so.

**NK**

### THANKS FOR NOTHING

Hello. I am writing to thank you for pausing production of the magazine over the worst of the lockdown. Wait – what?

Well yes. Another well known magazine that I subscribed to continued to produce magazines by ham-fistedly cobbling together previous reviews into system reviews and upgrade ideas by means of a lot of copy and paste and a bit of connecting text. How many times do they expect me to read the same reviews?

It must have cost you dearly to have to pause production but you have maintained quality. I rationed myself to a page or so a day to keep me going and now we're back in full swing. And a very well known magazine has lost a subscriber.

Thanks again

**Andy Rawlins**

Hi Andy. Thanks for your kind comments. See what I say in answer to the previous letter about why we stopped for two issues. However, we got back to work as soon as possible.

## PINNER BIG BAND CLUB

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OF EVERY MONTH:  
7-10

COME AND JOIN US ON THE FIRST WEDNESDAY OF EACH MONTH TO LISTEN TO THE RECORDED MUSIC OF THE BIG BANDS AND THE VOCALS FROM THE 1930s, 1940s, 1950s AND 1960s.

**"Pinner Big Band Club continues and I am deejay there, as well as being one of the presenters" Robert Parsons tells us. Pinner is in Middlesex (N.W. London) – easy access if you'd like to visit them.**

As I explained in my column (Aug 20) we all caught the infernal bug early in the year and worked through it, not knowing at the time what it was (the symptoms are quite specific). So when shutdown occurred it was unwelcome to us. However, there really was no other sensible alternative to shut-down at the time and re-publishing old material refreshed by a small re-jig is an old trick I would not consider.

Shut down cost less than expected. We received a grant from the Royal Borough of Kensington and Chelsea. And of course we were furloughed, like everyone else. This made all the difference; there was no need to publish junk.

Happily, the hi-fi business is cranking back up pretty fast, even if the news trade is not because retail magazine sales are 40% down on the High Street and 80% down (gulp) at stations and airports. However, there is a slow but steady increase in these locations, as there sort-of has to be if planes are to keep flying and trains keep running. The world is slowly returning to normal, if a new 'normal' after the damage that has been caused. **NK**

### CHOOSING A CARTRIDGE

Andrew Burtchaell's letter in the September issue, reminded me of a dealership in Birmingham some years ago. I was shopping around for a new MM cartridge at the time, more or less deciding on the Ortofon VMS 20, which was upgradeable to the VMS 30 – remember those?

I went into Norman H. Field in Hurst Street, Birmingham to discuss my choice. To my amazement, providing that I paid in full, I could return the cartridge and try something else, if not happy. What a service. Needless to say I developed a great rapport with this dealer. I have often wondered if dealers still do this?

**Mike Bickley**

Hi Mike. Yes that does seem to be unusual. The product when used becomes second-hand and worth little, even if in perfect condition, so a risky offer from the dealer as far as they were concerned. But it worked out well it seems.

Dealer offers change regularly so we cannot identify such offers, but readers should at least 'phone and ask. The issue of pickup cartridge sound and non-returnability comes up often as a source of buyer frustration. Seems like Norman H.



**"I am particularly interested in the differences between the Mk4 Illustrious and Conqueror arms" says Chris Lloyd.**

Field in Birmingham made a bold attempt to overcome this issue. So I guess readers could 'phone them to see whether this deal is still available.

Another way is to 'phone importers, since they are usually in close contact with dealers. For Ortofon this is Henley Audio, Didcot, UK. **NK**

### TONARM REVIEW?

With the resurgence of vinyl over the last decade, and record companies now seemingly making available on the format their least dynamically compressed versions of popular recordings, I decided that it might be time for me to upgrade/update my vinyl rig.

I run a Michell Gyrodec turntable (upgraded fully to near Orbe spec), Origin Live Silver Mk3c arm (much preferred to my previous Mk1), Ortofon Cadenza Black cartridge (purchased 2010) and Tom Evans Microgroove+

this will provide huge sonic dividends, and I am renewing my cartridge with the same model in the near future.

I have been looking at arm upgrades (to undertake at the same time as the cartridge exchange) and favour sticking with Origin Live as a direct upgrade, but find that many of the Hi-Fi World OL tonearm reviews are out of date (being from 2003-2007), reviewing older versions of much of the OL tonearm range. Might these reviews be updated soon? I am particularly interested in the differences between the Mk4 Illustrious and Conqueror arms, and how they compare to the Silver – as well as other arms from other manufacturers.

Also, a (comprehensive?) review of the latest Tom Evans phono stage range would also be useful in terms of future upgrades – and I'm sure would delight readers of the magazine.

It would also be lovely to see Hi-Fi World explore possible replacements



**The Oppo BDP-205D Universal disc player – Blu-ray, DVD, CD etc. Not now in production, but a benchmark for CD quality that is followed design-wise today.**

phono stage (lithos 7, 2004 vintage). I am sending off my phono stage to the manufacturer for upgrade to latest spec (Mk2.5 apparently) as I understand that

for the now defunct Oppo BDP-205 player. Which similar players equal or exceed the audio performance of this benchmark?

Finally (on my wish list, apologies!) I am a long term user of the AVI hi-fi brand. They mothballed production of their range of active loudspeakers over the last year - I understand for both personal and business reasons, not least due to global market geopolitical issues. But it now seems that they might be putting their final(?) long anticipated floor standing loudspeaker design into production in the near future, although details are scant. When they do, might Hi-Fi World be able to acquire a pair for review? It would be great to see comparison with the ATC SCM40A, which look to be the new speaker's main competitor and which I heard at this year's Bristol Hi-Fi Show and was impressed by.

Many thanks for continued excellence with the magazine, particularly with regard to the technical content of the reviews.

Best wishes,  
**Chris Lloyd**

Hi Chris. We must indeed speak to Mark Baker at Origin Live and review his latest arms. With SME out of the picture, Origin Live's excellent arms have greater prominence - and as you have found they give fine results.

Much the same can be said for Tom Evans phono stages. We have a regular stream of phono stages passing through our doors but have heard nothing from Tom Evans on his latest products, so time for us to get in touch methinks.

Oppo's BDP-205D Universal player was a one-off. Complex in its video ability and supreme in audio quality - it was too good to be true. So now not true. There will be no follow up. Best to consider a CD transport like the Audiolab 6000CDT coupled to their M-DAC+ that has the same basic set-up of ESS DAC with linear power supply as the Oppo.

In fact, just about everybody now offers Oppo type sound by using the same ESS ES9018 DAC fed by a linear power supply - even the Leak combo we review this month, comprising a CD transport hooked up to ES9018 equipped amplifier.

I'll say more about this prominence of the ESS ES9018 next month in my column, with suggested alternatives. It's a safe option and a great option - but not the only option. **NK**

## POWER SUPPLIES

I am not an electronics expert by any means, but I have been wielding a



**Audiolab's CDT-6000 CD transport. Buy a transport like this and connect up to a modern DAC for top quality from CD.**

soldering iron on electronic projects and hi-fi equipment for many years. I just felt I wanted to write to you to express my thanks for the very interesting articles published in Hi-Fi World concerning changes in technology and their impact on our hobby. I have found Dave Tutt's advice regarding SMPS, improved electrolytic capacitor technology and dodgy technical solutions particularly helpful.

I have acquired three integrated amplifiers from the famous online auction site during the past 12 months, one of which was an Arcam Alpha 3. Arcam's technical department's advice to me was to make sure I replaced capacitors like with like, but thank goodness I didn't as the pre-amp voltage regulators could hardly cope with the increased voltage created by using modern capacitors of lower capacitance and higher working voltage in place of the original 10,000 mfd smoothing capacitors. In all three amps, needless to say the PSU caps were 85 degree rated (not 105).

A Cambridge Audio A1 amplifier using Philips TDA1514 was particularly interesting. It has a reasonable sound to it, but again PSU smoothing caps of low voltage headroom. But the real anathema for me was that it

to rely on the audio interconnects to keep the user safe! Needless to say, it now has a mains earth connection with a 100 ohm lift wire wound resistor to chassis and works fine with no hum problems at all.

As Dave has commented, I dread to think what problems will be experienced over the next few years when SMPS power supplies become the norm and then start failing. It seems to me that manufacturers have been able to produce stable amplification technology, but haven't yet quite managed to sort out stable and robust power supplies and mains power connections.

Best regards,  
**Russell Hawkins**  
West Sussex

Hi Russell. Many thanks for your comments. I have to say that much of the equipment that we see, be it hi-fi or computers or most domestic equipment is compromised by the price profit motive of the manufacturers so we have to assume then that all this equipment could be better - if only by changing a few fundamental parts.

Of course availability of those parts is not always an easy question to solve but sometimes, with some



**Audiolab's M-DAC+ featuring ESS ES9018 DAC, John Westlake designed digital filters and a linear power supply. A replacement for the Oppo BDP-205D.**

was supposedly double insulated and therefore had no mains earth connection. Worse still, the transformer is a metal frame type, so if a failure in the double insulation were to occur, the large metal casing of the amp could become live. It doesn't seem good to me to have

equipment it can have a radical effect.

I am always aware of other aspects of doing modifications that might not seem obvious. In the past transformers were just that - a transformer. But now with thermal fuses fitted to many of them even a

slight increase in current can cause a 5 degree increase in the core and enough to blow the thermal fuse rendering the transformer and probably the entire amplifier useless for want of a 60p fuse.

I am reminded of when Fender valve guitar amplifiers first came into the UK their transformers were tested across two American phases of a three-phase supply; at 60Hz and around 220V they ran fine. In the UK 230-240volts at 50Hz is an entirely different question and they ran too hot to touch (but have lasted in most cases 40-50 years).

As you can imagine there have been some changes that I have made which I have had to return to stock as they were causing stress in other parts of the equipment but at the same time the combination of repairs and modification is something that has been my work for best part of 46 years or more. I started when I was still at school.

On the point of earthing, the EU and IEE made some changes to the standards and therefore the way equipment was built some time ago. It was assumed I think that everything should be double insulated and therefore would not need to be earthed. After all how could we also trust the other half of the IEE standards – house wiring – to give us an earth that we required for our equipment?

There is no doubt that hi-fi with earthed chassis either with earth lifting by resistor or as in PA amps with parallel resistors and 0.1µF capacitors does have a sonic advantage. Indeed any tuner, no matter how good the aerial, will be better with a proper earth. Ask any ham radio person how deep and widespread his earth wire is buried in the garden! Pity the IEE didn't stop the stupidity of captive power leads which cut through the cable and render equipment significantly more dangerous, be they earthed or not!

I deal with SMPSU just about every day because they are already in everything and failing in everything. Your microwave oven, programmer on your washing machine, computer, phone, everything has them: it is just the scale of their output that is a factor. It is obvious that those that have tried mixing SMPSU with class D amplification have failed miserably to make these things reliable. Ampeg and Peavey Bass head amplifiers are typical examples of computer aided design and manufacture that is so far



**Furutech ADL GT40a phono preamp with high-res 24bit digital convertor. It provides great digital sound from LP.**

away from creating reliable products that they should never have been released! I hope Yamaha with their current range or PA equipment have cracked it as they are now offering a 7 year return to base warranty on some of their products!

Regards,

**DT**

### VINYL TO FLAC

*For the past twenty years I have been enjoying the convenience of music in the digital realm either on CD or latterly as FLAC files. I now find myself in a predicament as the age of the CD is drawing to an end and more and more record labels are releasing music as either an MP3 file or physically on vinyl.*

*I'm looking to invest in a record player for the express purposes of converting new vinyl releases to FLAC files. I presently own a Novafidelity X40 which has a built in phono stage and can record to FLAC but it also has line inputs for recording if you feel the phono stage needs upgrading.*

*I also possess a decent PC so I'm open to buying a decent phono stage, and if required, an ADC and using the computer for conversion. I have a budget of around £1,000 to £2,000 but I can be flexible.*

*What I want is the best possible reproduction of what is in the vinyl groove to convert into a FLAC file and I ideally only want to go through the process of recording once. Thanking you in advance for whatever advice you can supply.*

**John Buxton  
Sheffield**

Hi John. This is an issue that comes up often in our pages. The simplest,

most straight forward and affordable solution that gives top sound quality by producing high resolution 24bit digital files is offered by the Furutech ADL GT40a phono stage (MM) with super high quality (24bit) digital convertor (ADC) on-board, price a reasonable £550 or so. Feed its USB output to your PC and rip vinyl using either VinylStudio or the more complex but free Audacity editor.

I'd suggest you avoid budget turntables with optional digital output because most are 16bit (CD quality) and they are incapable of capturing the vinyl sound without adding in a coarse 'grey' character due to the quantisation noise that budget 16bit ADCs produce. Audacity will produce a FLAC file for you, or any other format as you so wish.

**NK**

### LOUDSPEAKER ISOLATION

*Looking at my Lena Xone floor standers, I had always thought the floor spikes were of poor quality/assembly as the 'speakers were prone to wobble. Also the floor boards in my listening room resonated.*

*I needed 'speaker isolation platforms. Good ones are very expensive so I pulled out all eight spikes and assembled this... a 600mm x300mm x50mm slab sitting on six half (cut) squash balls. The speaker sitting on 4 Sorbothane hemispheres which are on top of the slab.*

*Great isolation. Sound has now snapped into focus. no resonance in floor and clean bass... all for a total cost of £60.*

**Martyn Goodacre.**



# High Fives

Klipsch The Fives loudspeakers offer the lot for under £1k, impressing Noel Keywood.



**W**ith these little loudspeakers you get a whole hi-fi system, albeit without source, for £830. Klipsch The Fives pack a massive amount of technology into a small space and I could barely find anything to fault, they are so carefully engineered. "The most versatile loudspeakers on earth" Klipsch say – and I agree.

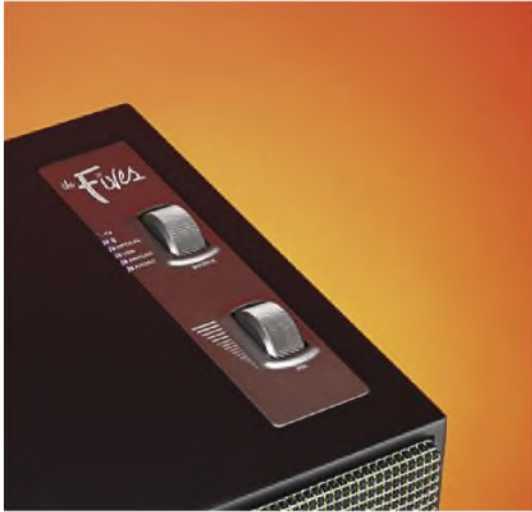
What you get here is one active loudspeaker (right) carrying all the electronics, so it's connected to

mains power via a lead with small two-pin 'calculator' connector, easily replaced if the 3m long one supplied is too short. The other loudspeaker is passive, driven through a 4m (12ft) long connecting cable. The right loudspeaker can be placed at left if this is nearer a mains socket, but then the stereo sound stage is reversed, not a big issue for most potential users I suspect.

The main loudspeaker comes packed with ability. It has a 60 Watt stereo low frequency amplifier feeding left and right bass units,

and 20 Watt stereo high frequency amplifiers feeding left and right treble horns, giving 80 Watts total per channel – enough for very high volume.

There are so many input options it was almost bewildering. There are S/PDIF digital inputs, optical and electrical, plus a USB input for computer connection. The S/PDIFs can, for example accept the digital output of a CD player. Klipsch note that the optical input works up to 192kHz sample rate – and it does I found.



**Large thumb wheels atop the right loudspeaker control volume and select input. The input LED display doubles as a volume level display.**

Then there are analogue inputs, comprising a pair of Line level phono sockets that can be switched to accept the output of a turntable fitted with moving magnet (MM) cartridge. For convenience there is also a 3.5mm stereo jack input, using a socket found on mobile phones and portable players to allow use of a simple 3.5mm connecting lead, rather than a 3.5mm-phono adaptor lead. No probs with getting high volume since our measurements showed both are very sensitive

But that is far from all. This loudspeaker accepts the Bluetooth output of a mobile 'phone as well, for wireless connection.

And finally it has an HDMI input to accept audio from the ARC return channel of a video player or TV with HDMI ARC equipped connector. The latter is to make for easy connection into any A/V system, allowing these little wonders to replace a sound bar. Sound bars are a convenience but they should sit under the screen, whereas independent loudspeakers can be placed at left and right, possibly either side of a chimney breast if you live in an old building with such things, as I do.

Klipsch have covered just about all angles here. At the price and small size

you have to accept Class D amps driven by a switch-mode power supply (I would guess) and a digital converter that is low cost, as I was to find out.

In spite of this huge range of options and the background technical complexity, including active crossover and twin power amps, The Fives were quick and easy to set up and use; even the manual (downloadable from Klipsch website) has been shorn down to simple diagrams that I found clear and succinct. It's a plug 'n play job in effect and all worked perfectly, straight out of the box. Select input from one thumb wheel atop the right active speaker and control volume with the other. But there is a remote control to do all this, including turning power on and off.

Klipsch build in a dynamic EQ system as they call it, in effect what was once termed a 'loudness control'. At low volume it increases bass output to compensate for the ear's lack of low frequency sensitivity at low volume. Measurement revealed

+5dB maximum bass lift at low volume and if this doesn't please, possibly when listening close up at low volume in a small bass-heavy room, it can be switched out on the remote control. As volume goes up bass boost comes down progressively with these systems. There are no tone controls.

The cabinets are 305mm high, 166mm wide and 235mm deep, weighing 5.35kg / 4.85kg apiece. Bass comes from a small 4.5in (120mm) paper cone woofer and treble from a 1in (25mm) titanium dome tweeter loaded by a large Tractrix profile horn. At rear there is a Tractrix port.

**SOUND QUALITY**

The Fives have vivid dynamics making them sound lively and bold – meant in the best sense. There was no shortage of bass even with Bass EQ switched out. In fact, I checked a few times just to make sure because bass was on the heavy side for my taste, even in our large (6550 cu ft) listening room where small loudspeakers can sound lost. The trombone behind Hans



**The right loudspeaker (at left in this picture) carries a small 110V-240V mains input, a four pin connector for the right passive speaker, plus an array of digital and analogue inputs. The RCA phono sockets are switched between Line and Phono for a turntable. There is a sub-woofer output too.**

The sink singing Mississippi was a little bloated I felt, but full bodied that's for sure – and with a sense of scale. There was a boxy warmth that made The Fives sound large and fruity, out of all proportion to their real-life size.

The horn loaded tweeter has its own sense of presence too, forcing out highs. From measurement I expected a slightly softer presentation but The Fives came over as hard and fast across the midband, up to the point of being a tad brash at times. Why?

I started out feeding in CD digitally by using a QED Quartz glass fibre optical cable from our Oppo BDP-205D Universal player acting as a transport. Reviewing The

although gain of the bass amp has been moved up just a tad on the treble amp to ensure a sound with warmth and heft – something that's easy to arrange with separate amps.

Operationally I ran into no problems. The volume control was a bit over-eager at times but I managed to get the volume I wanted in the end. And if you want deep bass The Fives actually do it at normal volume levels; at high volume the small 5in bass unit gets over excited, as small drivers do when trying to move oodles of air.

**CONCLUSION**

Great fun loudspeakers that attempt to blow the windows out. Klipsch The Fives are small, but sound large.



**A 1 inch (25mm) titanium dome tweeter with phase cap and Tractrix horn loading that gives it wide dispersion and optimal acoustic coupling.**

Wide dispersion gives big sound staging and there's plentiful bass. With more inputs than "all others on earth" Klipsch say, they are massively capable too. The digital section isn't distinguished, but this apart The Fives are a thoroughly superb set of active loudspeakers.

"What you get with these 'speakers is a big, gutsy American sound"

Sixes (February 2020 issue) Jon Myles preferred analogue. When I connected up the Oppo's analogue outputs, bringing into play its ESS DAC, this smoothed the sound. So did analogue from our Timestep Evo Technics SL-1210 Mk2, SME309 arm, Audio Technica VM-750SH Shibata tipped moving magnet cartridge. Conclusion: a not brilliant digital section – as is to be expected at the price, analogue sounding best.

Difficult to explain this, but digital sounded more lively – sharper and faster – than analogue, yet more unsettling in the long run. Analogue was a smoother and easier listen.

Although my words may seem a little critical, at the same time I enjoyed what I heard after spinning through a wide range of CDs. What you get with these 'speakers is a big, gutsy American sound shall I say, not for wimps!

Yet at the same time there was none of the obvious tonal imbalance – especially from raised treble – that pollutes so many UK loudspeakers nowadays. Klipsch don't do that. They keep it clean and accurate,

**MEASURED PERFORMANCE**

Frequency response of the small Klipsch The Fives ran impressively flat from 35Hz up to 18kHz. The horn loaded tweeter was very smooth on and off axis under measurement, unlike most budget loudspeakers.

Bass output was strong and well maintained down to 50Hz, the rear port peaking sharply at 50Hz (red trace) to augment output. So, strong bass that goes low, the port adding to 'bass speed'. An analysis of bass amp response showed peaking at 40Hz so the sound has been tailored for strong low bass.

In frequency response terms this is a very accurate loudspeaker with wide

dispersion of sound, suggesting good insight from a present midrange and plenty of detail, not over emphasised.

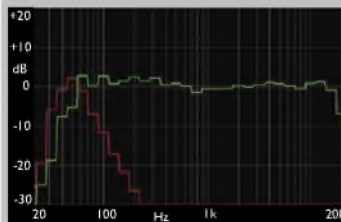
Sensitivity through the analogue Line input was high at 80mV for a loud 90dB sound pressure level at one metre, sufficient to accept the headphone output of a 'phone – typically 1000mV – with plenty of leeway on the volume control.

A full level digital input gave 90dB again with volume to spare, so no problems here in terms of volume matching. Frequency response was identical to the analogue inputs, meaning there are no fundamental response issues with the DAC used. But high-ish noise and distortion levels, plus the presence of a huge out-of-band alias signal point to cost-cut digital processing.

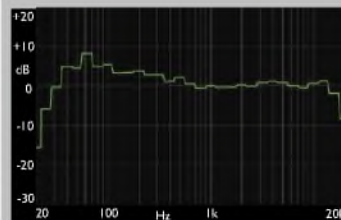
The Phono stage drove the Fives to a loud 90dB from a 5mV input with plenty to spare on the volume control and frequency response was identical to the Line input (with an inverse RIAA equalised pink noise input), so an accurate phono stage.

The Fives measured well through analogue and not so well through digital inputs. They have been engineered to give an almost unusually accurate response though, that will come over as smooth and natural – good for long term enjoyment. **NK**

**FREQUENCY RESPONSE**



**BASS EQ AT LOW VOLUME**



**KLIPSCH THE FIVES £830**



**OUTSTANDING - amongst the best.**

**VALUE - keenly priced.**

**VERDICT**

Impressive little loudspeakers with big sound and massive ability.

**FOR**

- powerful sound
- smooth
- big bass

**AGAINST**

- mediocre digital quality
- no tone controls

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# American Beauty

The beautifully made Bricasti M3H DAC and headphone amp from America may be easy on the eye, but is its beauty more than skin deep? Chris Frankland finds out.

I admit to not knowing much about Bricasti before laying hands on its M3H DAC with headphone amp. Yet, this American company's musical credentials are impressive.

Bricasti was founded in 2004 by Brian Zolner and DSP software engineer Casey Dowdell – a pro-

audio company once described as “the godfather of digital reverb”. The M7 reverb processor was Bricasti's first studio product and importer SCV has been slowly building Bricasti's presence in the UK hi-fi market since the M3 joined the flagship M1 at the CanJam show last July.

The standard M3 DAC sells for £5,399, but the M3H is fitted with the optional headphone amp, adding £679 to the price.

The M3H is well constructed. Weighing around 4.5kg, the 64mm high by 356mm wide by 287mm deep case is machined from solid aluminium sections. It uses two fully



differential conversion channels, each with its own Analogue Devices AD1955 chip in a mono configuration with clocking achieved by DDS (direct digital synthesis) to ensure a “pure digital signal path” without the use of sample rate converters, to help it achieve “extremely low” levels of jitter.

Independent power supplies have been fitted for analogue and digital processing sections to help prevent digital noise from entering the analogue chain. There is native DSD playback through AES or SPDIF inputs using its own proprietary one-bit analogue converter. The USB interface supports sample rates up to 384kHz/24bit PCM and DSD256 via DoP.

To replay DSD files from a computer, you will need to use a media player such as JRiver or Audirvana. In my case, I simply plugged a USB drive containing my DSD files into a Pro-Ject Stream Box S2 Ultra (see review in September issue) and used that for playback.

The front panel sports a volume control, display and six buttons to select input, level, status, balance and mute. A ‘reference’ option allows

you to store your settings. On the far left there are balanced (XLR) and unbalanced headphone outputs.

The rear panel provides analogue outputs – balanced via XLR and unbalanced via phono – and digital inputs via S/PDIF: electrical (phono), AES/EBU (XLR), Toslink optical, and also USB. There is also an RJ45 network socket. The volume control allows the M3H to drive an external power amplifier.

Bricasti say their headphone circuit operates in true balanced mode, with four drivers, one for each positive and negative leg of the left and right signal, and is said to provide a “balanced path from the output of the DAC to the headphones”.

### SOUND QUALITY

I fed the M3H from an Audio Note CD4.1x CD player. The Bricasti then fed an Audio Note Tonmeister integrated valve amp driving Audio Note AN-J LX Hemp speakers and alternatively Focal Chora 816s (review September 2020 issue).

The M3H offers two digital filters for PCM (CD) playback. Differences were small, but I marginally preferred Linear to Minimum Phase.

First impressions of the M3H were good. On Van Morrison’s Perfect Fit from the Days Like This CD, his challenging vocals were well presented and articulate, backing singers were well separated and the horn section had plenty of pizzazz. The bass line could have been a little fuller, but on balance the M3H sounded very good.

On Ben Sidran’s Sunny Side of the Street, the weighty bass line of this excellent recording was well conveyed with a good ‘walk’, while his stylish, jazzy vocals were articulate and detailed. All in all, the M3H appeared free from any major flaws.

Next I tried a couple of DSD files. On Stevie Wonder’s Master Blaster from Hotter than July the M3H captured his unique vocal style well and got a firm grip on the track’s solid, pumping rhythms, with a good snap to drums and percussion.

On It’s Too Late from Carol King’s Tapestry, the M3H imbued her vocals and piano with great presence and delicacy, while the bass line was tuneful and percussion well defined and separated.

So how was it on headphones?





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To find out I hooked up Focal's excellent Stellias.

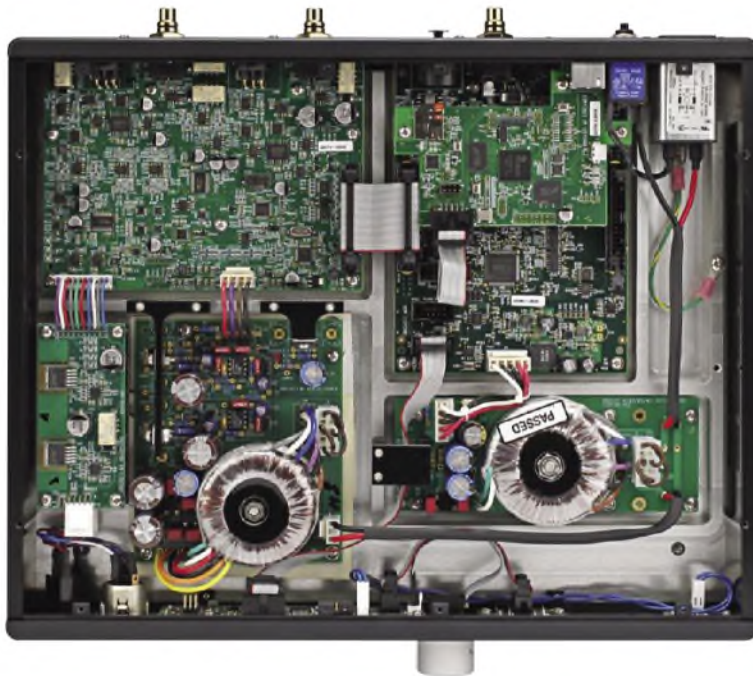
I tried them in both balanced and unbalanced mode and there was no doubt the balanced output was markedly superior in sound quality.

The M3H acquitted itself masterfully with the Stellias. On James Taylor's Mexico, his guitar had great note shape, attack and body,



**Digital S/PDIF inputs (at left) are AES/EBU (XLR), electrical (phono), optical (Toslink). There is also USB for computer.**

**Balanced (XLR) and unbalanced analogue outputs are provided (at right).**



**Analogue and digital circuits have their own independent linear power supplies, fed by the circular toroidal transformers seen here.**

his vocals were excellent, drums were dynamic and the backing vocals from David Crosby and Graham Nash were nicely defined.

Sax ace Kenny G's G Bop meanwhile moved along nicely with good weight to its bouncy bass line, great definition to his mellow, yet incisive, soprano sax and a fluid syncopation to the percussion line.

**CONCLUSION**

The Bricasti M3H impressed me greatly. CD and DSD playback were excellent and it gave a strong performance both on its analogue line output and through headphones. It is a very capable performer.

**MEASURED PERFORMANCE**

With output Level set to reference 0dB, giving 2V from the RCA phono socket analogue outputs and 4V from the balanced XLR socket outputs, Dynamic Range (EIAJ) measured 120dB from the former and a high 123dB from XLR. The AES/EBU digital S/PDIF input also measured 123dB. These are high values, putting the M3 up with the best, if not ahead. It uses an Analogue Devices AD1955 DAC (2002) whose spec quotes 123dB dynamic range, so it meets spec.

Output can be doubled by turning the level control to +6dB but doing this degrades dynamic range slightly, rather than increasing it as in Chord Electronics DACs. Best to use 0dB with the M3.

The headphone output delivers 8V maximum, way above 1V or so needed for most headphones (for shattering volume), so plenty of leeway here. Dynamic Range measured 122dB – excellent for headphones.

Distortion and noise levels were very low. With 24/96 distortion came in at

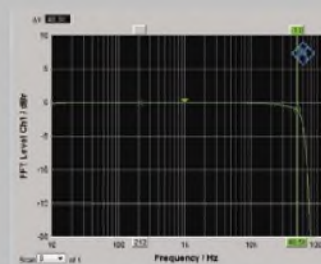
0.015% (-60dB) – up with the best. As always, distortion from CD (16/44.1) was 0.2%, due to 16bit quantisation noise.

Frequency response extended to 43kHz with 192kHz sample rate digital (fed in via the S/PDIF electrical connector) our analysis shows, rolling off slowly to the 96kHz theoretical upper limit. The filters did not alter this. The S/PDIF optical input (Toslink) connector managed 96kHz maximum; with 176.4kHz and 192kHz sample rates it fell silent, where most DACs have Toslink connectors and receivers able to handle these rates.

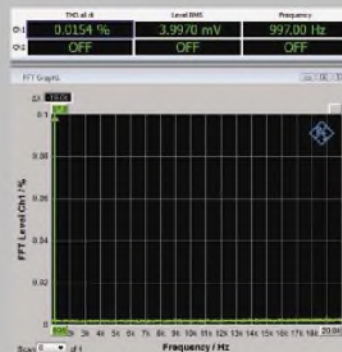
The Bricasti measured well in all areas, but inability to process no higher than 96kHz sample rate via optical input is a drawback. **NK**

- Frequency response (192kHz,-1dB)** 5Hz-43kHz
- Distortion (-60dB, 24bit)** 0.015%
- Dynamic Range (EIAJ)** 123dB
- Output (phono, XLR)** 4V / 8V

**FREQUENCY RESPONSE**



**DISTORTION**



**BRICASTI M3H £6,078**



**OUTSTANDING - amongst the best**

**VERDICT**

Performed well on CD and DSD playback and offered excellent sound quality on headphones too.

**FOR**

- great-sounding DAC
- drives headphones effortlessly
- great sound on DSD playback
- can be used as a preamp

**AGAINST**

- no remote control as standard
- optical input can only process 96kHz

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# AKG's head case

Martin Pipe recalls the K290s – AKG's 1990s attempt at making surround-sound headphones.



**B**ack in the wacky 1970s, the audio industry tried to impose quadrasonics – four-channel surround-sound – on an unsuspecting world. The idea is that, thanks to speakers positioned behind as well as front of you, there would be depth in addition to breadth of sound. It would take you closer to the concert hall, and studio wizards mixing pop and rock music would also be able to put those four chan-

nels to good creative use.

Quadrasonics failed for a number of reasons. Among these were incompatible standards, poor software availability, the expense and inconvenience of four speakers and the fact that – due mostly to limitations in the era's analogue technology – it simply didn't work well enough to justify the additional outlay, as far as most listeners were concerned.

Its essential need for four speakers meant that listening on headphones – by their very nature, two-channel devices – was out of the question until some bright spark came up with the idea of 'quadrasonic headphones'. Several different models were produced, and equipment manufacturers accommodated them by putting both 'front' and 'rear' headphone jacks on the front panels of their quad amps and receivers.

All of the quadrasonic headphones available during the 1970s had two transducers in each earcup. One reproduced the front, while the other handled the rear. In most '70s-era specimens they were merely angled relative to each other on a baffle behind the earcup, and spaced to provide a degree

of separation that allowed the ear to discriminate between the two channels and thus perceive depth.

By their very nature, quadrasonic headphones were ungainly contraptions and listeners had trouble distinguishing front from rear. They switched back to lighter stereo headphones for personal listening, quad being once again a speaker-only experience. But AKG came back to this idea with the K290s I'm talking about here, for reasons I will explain later.

Other varieties of headphone fared better in sound field terms. One such design was conceived by John Fixler and licensed to headphone manufacturers. It differed from most insofar that the transducers were internally-enclosed at opposite ends of the cup. The longer distance between them allowed a good 'quad effect' to be achieved – although bass response was restricted.

AKG, an Austrian company well-known for its excellent headphones and microphones, tried to re-invent quadrasonic headphones with the K290. Basically, they took a proven headphone design, complete with self-adjusting headband, squeezing two transducers into each headshell



*Each K290 earcup contains a pair of transducers – one front, and one rear. AKG angled them relative to each other on a baffle behind the earcup.*

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**The leads – with twice as many internal cores than two-channel stereo headphones – are fixed so cannot easily be upgraded.**

along the lines of the non-Fixler quadrasonic headphones described earlier.

Transducers had become smaller so AKG could use a proven ‘form factor’ instead of forcing the user to wear something heavy, ugly and ungainly.

The result – their 270g semi-open circumaural K290s marketed as ‘surround headphones’ in 1996/7. Their long 6m cable was terminated in an 8-pin mini-DIN plug that you can’t plug directly into any standard stereo headphone socket; thankfully, AKG supplied an adaptor that allowed use of the K290s as ‘parabolic’ stereo headphones.

But there was also the thorny issue of connecting the K290s to home-cinema receivers. If they had headphone sockets, they were stereo-only.

I’m sure AKG would have liked the industry to standardise on its 8-pin connector, but it wasn’t to be. Instead, AKG supplied a trailing socket terminated in eight wires – two per transducer – to which you could fit connectors of your own choosing, possibly 6.3mm ‘front’ and ‘rear’ jack plugs – not a simple solution most users could deal with.

In an attempt to solve this problem, AKG also sold the K290 ‘Surround Switchbox’. Its main job was to attenuate speaker-level

signals so that they could safely-drive headphones. Two pairs of K290s can be plugged into the front panel of this box, with a control to switch between the two.

The K290s were intrinsically better-suited to old four-channel quad operation than later five-channel home cinema, since they cannot accommodate a centre channel transducer. To compensate for this, AKG’s box will – with a rear-panel switch – apply any signal connected to its ‘centre’ input equally to the front left and right channels in what is known as ‘phantom’ centre channel operation.

When launched the K290s sold for a substantial £150 – at a time long before expensive headphones became widespread. The switchbox was £100 on top of that.

I didn’t pay anything for mine, being review samples never collected by AKG’s PR company. To be honest, I don’t recall being particularly impressed by their performance as surround-sound ‘phones when I first reviewed them long ago.

Since 1997, there has been renewed interest in quadrasonics, so for this retro appraisal I fitted front and rear jackplugs to the K290’s unterminated wires. They were then plugged into my vintage Pioneer QX-949 receiver, its discrete inputs being fed by a universal disc player. Discrete quad material, including a channel-identification test disc and a transfer of Alan Parson’s Dark Side of the Moon four-channel mix, were played.

Nothing has changed my opinion; rear and front channels mostly ‘blend’ into each other so it’s difficult to pinpoint instruments, effects and vocals within the soundfield. And I know where they should be, from speaker listening! This lack of expected depth is a disappointment.

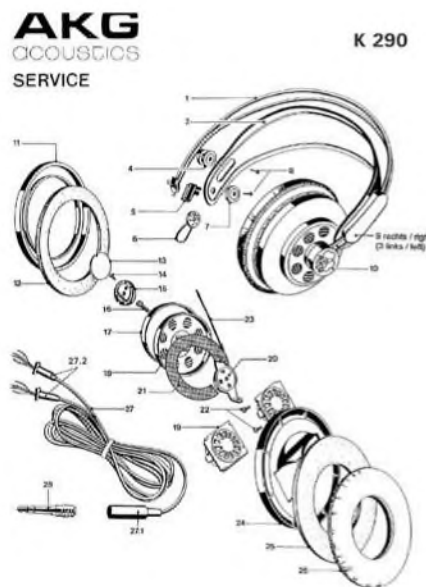
The front and rear transducers of each earcup are, I suspect, simply too close to each other – had AKG made the K290s longer to increase the distance between them, or used a Fixler arrangement, I’m sure they would have performed more

convincingly with surround material. But then they wouldn’t have been light and compact, able to be worn for long

periods – a significant plus point of their design.

But they do please in other ways; with the stereo adaptor, the K290s proved to be capable musical performers with hi-res digital material, as played through a Cambridge CXN and Prism Callia DAC/headphone amp. They image reasonably well and have a sensible tonal balance. There’s a solid low end (which is more than can be said of vintage Fixlers!) and no unpleasant colouration to speak of.

I’ll say that modern designs costing £300 (the K290s’ equivalent selling price today) are more revealing, though. I can appreciate why the K290s didn’t go down well with the home-cinema crowd, who appreciate the visceral thrills of ‘big’ soundscapes – and subwoofer bass



**An exploded view of the K290’s from AKG’s service manual. Around centre of the diagram you can see the small twin drive units that were supposed to give surround-sound from headphones.**

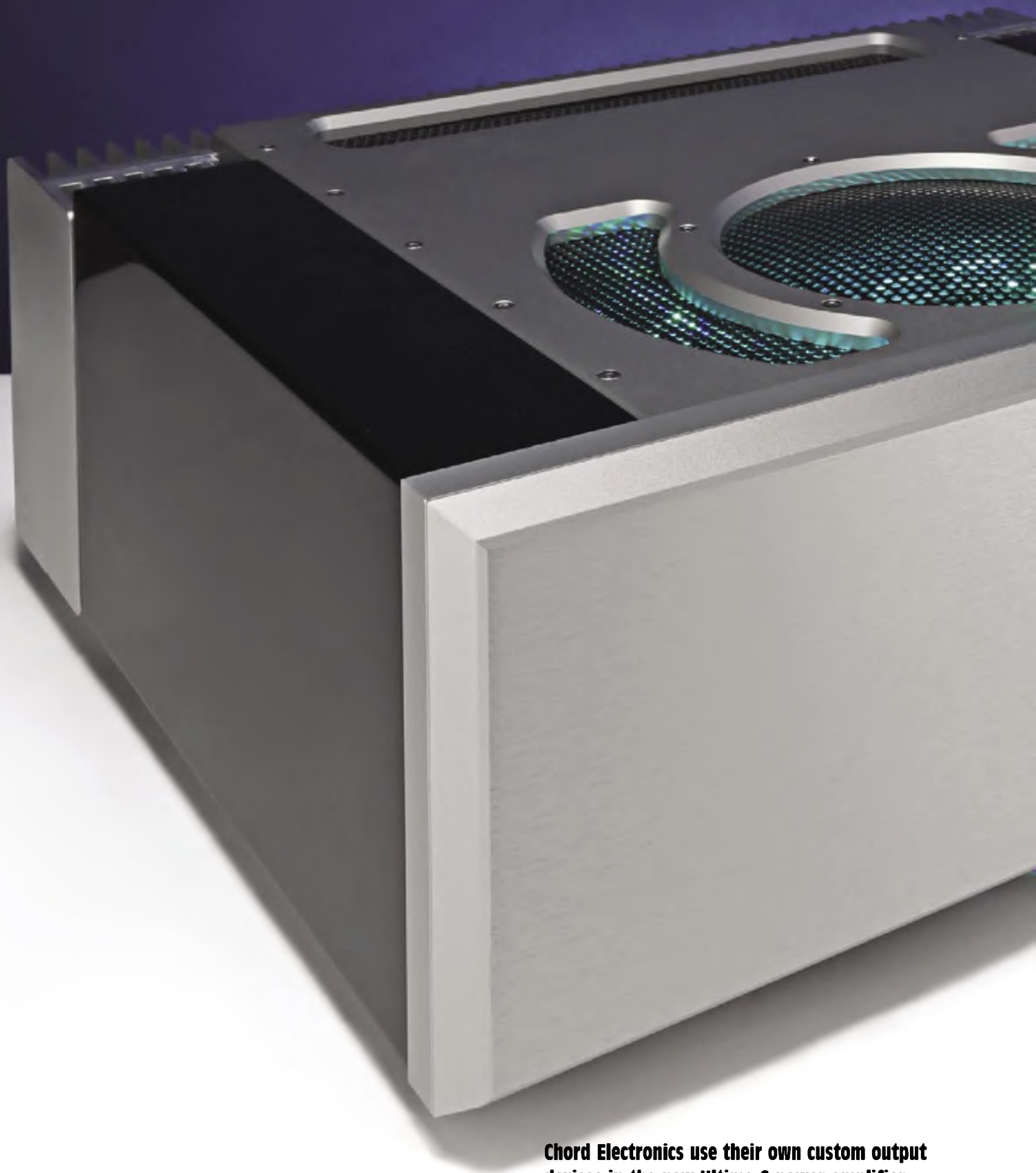
you can feel, as well as hear. These quad phones, although light, don’t convey such effects well.

Needless to say, the K290s didn’t last for long and AKG didn’t make a follow-up. They do crop up on eBay from time to time, typically selling for between £50 and £150 (occasionally with switchbox included). Replacement earpads are rather more common.

All the same, AKG’s K290s were an interesting attempt at providing surround-sound through wearable headphones and provide a fascinating look at what has been marketed in the past to keep us entertained.



**The AKG K290s needed an optional Surround Switchbox. This was connected, via spring-clip terminals, between amplifier and ‘speakers’.**



**Chord Electronics use their own custom output devices in the new Ultima 6 power amplifier. Noel Keywood listens.**

# Custom Device



I've just been reading – well re-reading – Chord Electronic's lengthy and intense explanation about why their new Ultima 6 stereo power amplifier that I'm reviewing here – price £5995 – is different to most else.

Known for their high technology digital-to-analogue convertors (DACs) designed in-house, Ultima follows Chord Electronics tradition. With its own custom output transistors this power amplifier is, by definition, different and unique. See what I was reading in our box out – but have a strong cup of coffee first!

In outline Ultima 6 is simple. There are no fripheries. Plug an analogue cable into one end, press the large illuminated power button, make sure loudspeakers are attached – and that's just about it. At your disposal is huge power, spec'd at

180W per channel (but we measured 300W) from a package weighing a substantial 22.4kg and measuring 420mm wide, 360mm deep and 150mm high. It's a difficult lift, even though no big mains transformer lurks inside; amusingly the company say keep it away from toroidals (anathema to Chord Electronics).

A classic 19in (482mm) wide rack shelf accepts it. Limited height and depth make Ultima 6 able to fit the bottom shelf of most hi-fi racks, or of course it can be placed on the floor.

Lack of fripheries means there's nothing at rear that needs setting or adjusting. Nor at front either. No volume control for example, so any source – such as a phono stage – must have its own volume control. There is a small hidden slide switch to change internal light level: high or low.

In Chord Electronics fashion, pressing the large frontal power button that glows dull red when off, causes it to light up bright green. Internally, and visible through the top air vents, a blaze of "teal" coloured LEDs light up to show electronic activity. What you don't get are power output LEDs, a headphone output or remote control. The latter functions must lie in an accompanying preamplifier, or DAC. Since most DACs have volume control this should not be an issue and I reviewed the Ultima in as simple a set-up as possible, without preamplifier.

The Ultima 6 is massively built, having substantial aluminium heatsinks to keep the output transistors cool. This is an analogue amplifier – not Class D – but it has the company's own switch-mode power supply. Much of the technical data I read was devoted to why this



**The top view shows the switch-mode power supply, with its many transformers and capacitors, is situated at front. Although switch-modes have transformers, they are not big and weighty like traditional types, because the conversion process works at high frequency.**

switch-mode supply is not like others, and why switch-mode is potentially better. Most run from 110V-240V but the Ultima 6 was marked as 230V only, with no mention of this in the manual.

The interesting bit of their tech. notes that caught my attention was the fact that this amplifier uses their own custom designed and manufactured MOSFET output transistors. As they note, most power transistors are designed to switch on and off, meaning they are not purposed to amplify smoothly changing audio signals. Solution to this problem is to use a bias current to keep them switched on and apply heavy feedback in order to lower the distortion they exhibit. In effect, an electronic sticking plaster. Ultima has output transistors designed for audio, not switching, Chord Electronics say – and our measurements confirm. See our box-out for more information.

The power input socket is not a standard IEC type, but a heavier duty 16A C-19 type, so Ultima comes with its own mains cable that cannot be easily changed or upgraded. The rear panel carries unbalanced RCA phono socket inputs and balanced XLR inputs. I used XLR only. There was an issue with the Phono sockets on our demo-sample amplifier that restricted bandwidth (see Measured Performance). I presume this will be sorted out, but such an amplifier is best driven through balanced XLR socket input in any case.

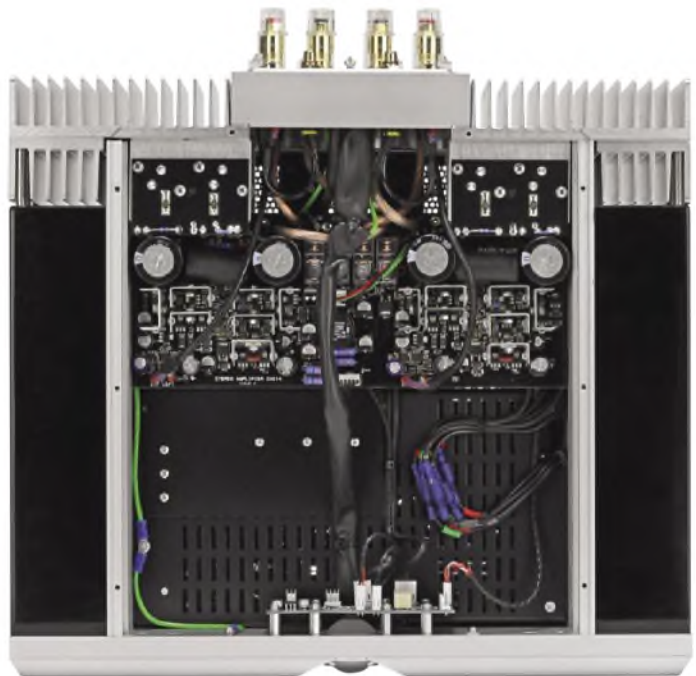
## SOUND QUALITY

I used the Ultima 6 to drive our Martin Logan ESL-X hybrid electrostatic loudspeakers, through Chord Company (unrelated to Chord

drive Ultima direct which, because it uses an ESS ES9018 DAC, gives a different sound to Dave. Analogue connections were through Chord Company Epic balanced cables to both DACs.

The qualities of Ultima 6 soon became apparent. It conveys a sense of rigidly imposed structure on music, holding instruments into tight lock on the sound stage, giving plenty of dynamic headroom to allow crescendos to rise unhindered. It was immediately clean, grippy and smooth, powering along The Pink Panther Theme (CD) with a sense of underlying force that eludes our smaller Creek Evolution 100A amplifier. The bass guitar had strength, as did the laconic saxophone that loomed large in front of me.

Quite obviously, from this track and later bass demos such as Safri Duo's Samb Adagio, Ultima was driving the Martin Logan bass bins within moments of losing their life when I turned volume up: I half expected to see cones flying through the air. It has massive power but is almost restrained in presenting it, being so clean and composed.



**Underneath, a heavy duty cable runs from the 16A power input to the front power supply. At rear are the amplifier's audio circuits.**

Electronics) Signature Reference cables. Primary source was a Chord Electronics Dave DAC fed by an Oppo BDP-205D Universal player acting as a transport, connected by a QED Quartz glass optical digital cable.

I also used the Oppo player to

There was also impressive disconnect between instruments and the pounding bass synth of Sam Adagio: no matter what the bass synth was doing, the other synth lines remained steady on the sound stage; no instrumental line was bumping into another.



This translated over when winding volume up with the London Symphony Orchestra, playing Holts's Mars, from The Planets: horns and violins stayed firmly in position when big kettle drum strikes appeared.

Thunderous pieces like this were a delight for the Ultima: it threw them out with scale, yet also with a tight sense of orchestral order, as if the musicians had been nailed down.

I fancy Ultima 6 was a tad more embodied and empathically engaging than Chord Electronics power amps I have heard in the past. Even our slightly vivid CD of Nigel Kennedy had his Strad. sounding smooth and amenable.

For deep insight and the ability to sustain a powerful sound Ultima 6 was worryingly good. It was a more sympathetic match with Chord Electronics own Dave DAC, than the ESS ES9018 in our Oppo player. There were times when the analysis of Ultima and our electrostatics suggested the Oppo's ESS DAC was slurring high frequencies, where Dave was delineating fast events and sending them in with cutting weight.

Ultima has the ability to receive fast data and resolve it, being symbiotically related to Chord



**Massive heatsinks adorn the amplifier's rear, but it runs cool in normal use. One pair of loudspeakers only, and a large/unusual IEC mains socket sits between the analogue inputs.**

Electronics DACs in this sense. A challenging sound full of sonic activity and not for the somnambulant, but impressive all the same. It's an amplifier for listeners on their toes, those who want it all.

**CONCLUSION**

Ultima 6 is a very interesting amplifier, technologically and

sonically. Vastly powerful at 300W per channel our measurements revealed, it has a sense of unstrained power of the ultra-clean variety. With deep insight giving fantastic detail it demands use with the company's Dave DAC to show its mettle. Not a cheap combo but certainly amongst the best at any price.

**ULTIMA 6 TECHNOLOGY**

**Chord Electronics say -**  
The first truly high volume, high power bipolar transistor, the ubiquitous 2N3055, was developed as a triggering device for an atomic bomb, acting as a switch – as all bipolar transistors are. These devices are not good in their transition period between on and off which – unfortunately for bipolars – is where they are used in audio amplifiers.

The Chord Electronics output stages in Ultima are designed around metal-on-silicon MOSFET devices developed exclusively for Chord electronics by a UK semiconductor fabrication house formerly involved heavily in the aerospace sector. Chord Electronics approached them to produce a 200 Volt / 300 Watt device that has been realised by use of a novel packaging technique, which places two silicon chips in parallel in the same TO3 style case.

This technique has the significant advantage of ensuring perfect thermal matching of the devices, eliminating the need for temperature balancing resistors in the output stage, thereby substantially improving both efficiency and the overall stability of the amplifier.

Our MOSFET design has been refined over time and is now in its fifth generation. Even our smallest amplifiers benefit from using our own bespoke silicon.

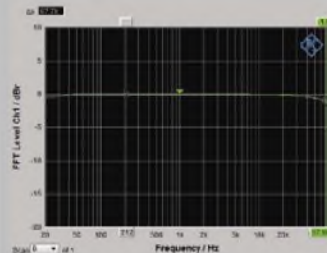
**John Franks, MD, Chord Electronics.**

**MEASURED PERFORMANCE**

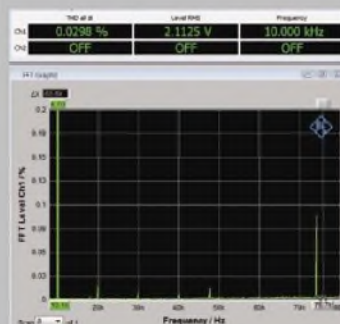
Power of Ultima 6 measured 312 Watts into an 8 Ohm load and 484 Watts into 4 Ohms, making it massively powerful. No noise at full power (no fan) and the heatsinks stayed cool, although full power is applied only briefly, around one minute, when testing. No overload indicators.

Distortion levels were very low, 0.005% in the midband (4&8Ω), and just 0.03% at high frequencies (1W, 10kHz, 4Ω), as shown in our distortion

**FREQUENCY RESPONSE**



**DISTORTION**



analysis, worst case being full output at 10kHz where just 0.07% was recorded. These are very low values.

Gain measured x30 (30dB), 1.6V in giving near full output (48V), from both the unbalanced RCA phono socket inputs and the balanced XLR inputs. However, most power amps need 1V for full output; with the Ultima 6 a preamp will be needed for full power, but 1V from a normal preamp still gives 100W output and DAC outputs are usually greater than 2V so can fully drive Ultima 6.

Frequency response via XLR measured 4Hz-66kHz, our response analysis showing the audio band from 2Hz-20kHz. Via the phono inputs treble rolled off, measuring -1dB down at 10kHz, from our generators, as well as Dave and an Audiolab M-DAC+. Presumably production samples will not have this response but XLR is best used in any case.

There was minimal output noise, with a noise figure of -102dB ref. full output of 50V/312W. NK

<b>Power (8Ω)</b>	<b>312W</b>
<b>Frequency response (-1dB)</b>	<b>4Hz-66kHz</b>
<b>Distortion (1W, 10kHz)</b>	<b>0.03%</b>
<b>Noise</b>	<b>-102dB</b>
<b>Sensitivity (for full output)</b>	<b>1.6V</b>

**CHORD ELECTRONICS ULTIMA 6 £5995**



**OUTSTANDING - amongst the best.**

**VERDICT**

Powerful yet composed, with massive insight and detail. Best with a Chord Electronics DAC.

**FOR**

- hi-tech sound
- ease of use
- huge power

**AGAINST**

- no volume control
- no remote power-off
- no headphone output

Chord Electronics  
+44 (0)1622 721444  
www.chordelectronics.com



# WORLD STANDARDS

Your guide to the best products we've heard that are currently on sale in the UK...

## TURNTABLES

**AVID INGENIUM** £800  
Great bass response and upper midrange detail allied to clarity makes this a must-hear at its price point



**CLEARAUDIO INNOVATION** £6400  
Expensive, but offers great results from a finely honed and beautifully finished belt drive turntable, with servo control from the platter to keep a grip on tempo like few others. Can be fitted with a Clearaudio tangential arm, or any conventional design. Awesome



**INSPIRE MONARCH** £4,350  
A rebuilt from the ground up Technics Direct Drive, having blistering pace and dynamics allied with smoothness, sophistication and purity of tone. A true reference



**LINN LP12SE** £3,600  
The UK's most iconic turntable, the legendary Svindek goes from strength to strength. New Keel sub-chassis and Radical DC motor add precision and grip to one of the world's most musical disc spinners. Expensive though.

**MICHELL GYRO DEC** £1700  
Wonderful styling coupled with great build and finish make this turntable a delight for friends and family. It has an attractive clear acrylic dust cover, and you can mount just about any arm. A current design standard



**PRO-JECT ESSENTIAL DIGITAL** £300  
A budget turntable that turns in a great analogue performance, but also has a hi-res digital output. Send 24/96 across your lounge via optical cable to a DAC and get great audio quality. Or record LP to your laptop



**REGA RP3** £550  
The first of the super-quality Regas, little compromised by price and featuring Rega's outstanding RB303 tonearm, suitable for MM and MC cartridges. A standard at the price point

**TIMESTEP EVO** £2100  
The famous Technics SL-1210 MkII Direct Drive but with improved plinth, isolation, main bearing and power supply, plus an SME arm (add £1500). DD convenience, rock steady pitch and fab sound at a great price. Our in-house reference



## TONEARMS

**ORIGIN LIVE ENCOUNTER MK3C** £1,745  
Origin Live combines carbon fibre and ebony to marvellous effect in its new 12-inch arm. Creamy and rich in presentation, the Encounter delves deep into the mix for a satisfying listen

**HADCOCK GH-242 EXPORT** £810  
Consummately musical, lyrical sounding tonearm, but needs the right turntable

**ORIGIN LIVE ONYX** £450  
Easy, smooth, creamy nature that reminds you why you're listening to vinyl in the first place. Essential audition at the price



**REGA RB303** £300  
A one piece tapered casting makes this arm's structure almost unrivalled. Great dynamics and superb imaging, for MM and MC. Reference quality for peanuts

**SME 312S** £1,600  
Twelve inch magnesium alloy tapered arm tube plus SME V bearings. An insightful yet smooth and relaxed sound. Superlative build completes the package. Our Editor's steed



**SME 309** £1500  
A one-piece tapered 9in arm finished like a camera and slick to use. Superlative SME quality and sound at affordable price

**SME V** £3000  
Offers rapid fire timing and a sense of precision, plus rock solid dynamics. Top dollar for deep pockets

## CARTRIDGES

**AUDIO TECHNICA AT-OC9 MLIII MC** £420  
A fine sounding MC with strong bass and super fine treble from a great stylus – yet inexpensive.



**AUDIO TECHNICA AT-F3/III MC** £150  
Great value entry level moving coil with detail and grip you just can't get from similarly priced moving magnets

**BENZ MICRO ACE SL MC** £595  
Smooth, lucid and full-bodied, award-winning hand-made cartridge from Switzerland

**BENZ MICRO WOOD SL MC E945**  
Highly finished Swiss moving coil that plays music with riflebolt precision.

**DENON DL-103** £180  
A popular and much loved budget MC with big bass, smooth treble and deep sound stage. Fantastic value



**LYRA TITAN I MC** £3,500  
 Breathtaking speed and dynamics from LP, helped by diamond coated, boron rod cantilever.



**ORTOFON 2M MONO SE MM** £80  
 A mono cartridge purposed for The Beatles in Mono microgroove LPs. Fitted with a top quality Shibata tip. Fab for the four.



**ORTOFON 2M BLACK MM** £400  
 As good as it gets from MM. Fabulous detail and insight from a Shibata stylus, good bass and excellent tracking.

**ORTOFON CADENZA BRONZE MC** £1,400  
 A mid-price MC with a slightly livelier presentation than the super smooth Cadenza Black. High-end sound at midband price – great value.



**ORTOFON CADENZA BLACK MC** £1,800  
 Ultra smooth and dimensional moving coil with bass and punch aplenty. Lovely stylus.

**ORTOFON A95 MC** £3,750  
 Fast and extremely detailed, this is an MC cartridge that sets standards.

**REGA CARBON MM** £35  
 Budget price for a competent cartridge with a fairly unflappable nature. Ideal for beginners.



**GOLDRING 1012GX MM** £250  
 A glorious sounding cartridge with solid bass and strong dynamic punch, plus excellent treble from its Fritz Geiger stylus. Fun and affordable.



**SHURE M97XE** £80  
 Big warm sound, but great tracking and bullet proof stylus protection from damped guard. A survivor.

**VAN DEN HUL DDT-II SPECIAL MC** £995  
 Long-established cartridge from Holland with an open and dynamic sound.

**PHONO PREAMPS**

**CAMBRIDGE AUDIO 651P** £200  
 Clean, concise sound from MM and MC cartridges at a very low price. A real bargain.

**ICON AUDIO PS3 MKII** £2,500  
 All valve MM phono stage with MC transformer option, graced by big, spacious and relaxed sound.



**LUXMAN EQ-500 PHONOSTAGE** £4,495  
 A fully-equipped phonostage from Japanese manufacturer Luxman that offers comprehensive cartridge matching allied to superb sound.



**LEEMA ACOUSTICS ELEMENTS ULTRA** £1,199  
 Smooth and detailed sound with the ability to accommodate most modern cartridges. Exceptional value for money.



**PRO-JECT TUBE BOX DS** £425  
 Compact MM and MC phonostage with valve output circuit and a big sound.



**QUAD QC24P** £995  
 MM and MC, oodles of gain, a volume control – and valves! Looks superb and sounds even better: smooth, atmospheric and big bass.

**TIMESTEP T-01MC** £995  
 New, minimalist phonostage that sonically punches well above its weight.

**PREAMPLIFIERS**

**ICON AUDIO LA-4 MKIII** £1,400  
 Uses early 6SN7 triodes for liquid sound. Has plenty of gain and a remote control into the bargain.



**MF AUDIO CLASSIC SILVER** £4,500  
 One of the best preamplifiers we've heard at any price, this transformer-coupled marvel does very little wrong. It's powerful, clean and open, yet delicate. Its sound is unmatched at or near the price.

**MING DA MD7-SE** £1,520  
 A valve preamplifier with an open, effortless sound and a big soundstage. It has plenty of gain so will accept any source and drive any power amp. A real beauty.



**INTEGRATED AMPLIFIERS**

**ARIAND PRO845SE** £1,499  
 Pure single-ended valve magic. Low-powered but immediately gorgeous, easy-going yet forcefully dynamic at the same time.



**AUDIO RESEARCH VS160** £3,500  
 Power house sound with enormous pace and punch from traditional US muscle master Audio Research. Breathtaking, but expensive.



**CAMBRIDGE AUDIO AZUR 651A** £350  
 Dual-mono construction and meaty toroidal power supply combine to produce a solid and sharp sound with sonics far beyond its price point.

**CREEK EVOLUTION 100A** £1,500  
 Superb build and smooth confident sound make this powerful amplifier a benchmark.



**CYRUS 8DAC** £1,400  
 Trademark shoebox-sized Cyrus integrated now offering 88Watts per channel, plus DAC. Svelte delivery from a dainty case that fits in anywhere – and isn't Class D!

**EXPOSURE 1010** £495  
 Entry-level integrated from Exposure has excellent upper mid-performance with an almost valve-like sound.



**ICON AUDIO STEREO 60 MKIII** £2,800  
Excellent tube integrated with plenty of power and an expansive soundstage, plus KT150 tube option and bias meter for easy adjustment.



**NAIM NAIT 5Si** £925  
Naim's fabled entry-level integrated amplifier is updated to si status. Demos Naim's superbly muscular sound at entry level.

**SUGDEN A21SE** £2,480  
Class A amp with fantastic sound quality producing hard, sculpted images, deep detail and tight bass. Just don't expect disco-like sound levels!



**POWER AMPLIFIERS**

**AUDIO RESEARCH VSI75** £7,498  
Powerful, fast valve sound that makes everything else look weak at times. Needs careful matching but well worth the effort.

**AUDIO RESEARCH VS115** £5,000  
Oodles of power with enormous punch. Rafael Todes said it provided "shock and awe" while retaining incredible smoothness and texture.

**ICON AUDIO MB845 MKII** £7,600  
With 120W from big 845 valves right down to low frequencies, this power amplifier has massive dynamics and bass swing, yet is easy on the ear.



**ICON AUDIO MB81PP** £15,000  
Big Russian transmitter valves deliver 200W from these massive monoblock amplifiers. Frightening in every sense.

**MCINTOSH MC-152** £4,995  
Stunningly insightful sound with enormous bass punch from a uniquely designed transistor amp. Amazing audio, a league up, if expensive.



**QUAD ELITE QMP MONOBLOCKS** £2400 PR  
The proverbial iron fist in a velvet glove. Plenty of power but delivered with an assured and confident nature. Smooth on top and easy on the ear but can rock out when needed.

**QUAD II-EIGHTY MONOBLOCKS** £6,000 PR  
Powerful and expansive sound from modern design monoblocks that also look lovely. Superb – used by us as a reference.



**LOUDSPEAKER FLOORSTANDER**

**B&W 803 D3** £12,500  
B&W's updated statement floorstanders deliver depth and definition with breathtaking speed and authority, aided by a diamond coated tweeter. Expensive – but enormously impressive.

**CASTLE AVON V** £1,600  
A big floorstander at a modest price that suits the average room. Refined ribbon treble and deep bass give it a great delivery.

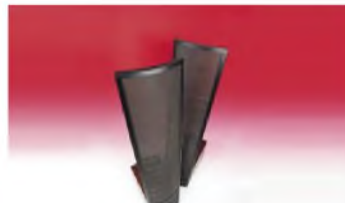


**EMINENT TECHNOLOGY LFT-8B** £2,500  
Excellent U.S. planar magnetic loudspeaker at bargain price. Utterly superb - a must hear.

**EPOS K2** £1,000  
A fun sound that is tidy all round and very engaging, with solid bass. Music as you hope it to be.

**FOCAL ARIA 926** £1,400  
Simple, clean, neutral sound – easy going but well engineered and affordable.

**MARTIN LOGAN SUMMIT X** £16,698  
Matches Martin Logan's XStat electrostatic panel to a powerful subwoofer to provide extended, powerful bass. Dramatic sonic purity. Awesome – all but unmatched.



**MARTIN LOGAN ELECTROMOTION** £2,500  
Martin Logan's budget baby XStat hybrid electrostatic. Fits into any lounge to give electrostatic levels of clarity and imaging.



**QUADRAL CHROMIUM STYLE 8** £1,700  
A supremely smooth yet open sounding loudspeaker. Clean and detailed treble from a fine ribbon tweeter. Accurate yet informative and enjoyable. Pure class.

**QUADRAL ORKAN VIII AKTIVS** £6,200  
Active loudspeaker with tight, powerful bass, perfect accuracy and detailed treble from a ribbon tweeter



**Q ACOUSTICS 2050i** £480  
A large floorstander at a budget price. Offers high sensitivity and big sound and has very few flaws for the price

**SPENDOR SP100 R2** £6,495  
Retro looks but a sound that's hard to match. Spendor's 12" bass unit provides massive low-end grunt with a room-filling sound.



**SPENDOR A3** £1,300  
Fine little floorstander with a smooth, natural midband and even tonal balance. Ideal for smaller rooms.

**TANNOY DEFINITION DC10 TI** £6,000  
Enormous power with great projection. Glorious subsonics too. Need little power to go very loud and have superb finish into the bargain.



**TANNOY KENSINGTON** £9,950  
Big but not overpowering, punchy modern sound from classic cabinetry. Need little power to go very loud and suit a traditional home, or castle.



**LOUDSPEAKERS STANDMOUNT**

**ACOUSTIC ENERGY NEO 1 V2** £225  
Civilised sounding speaker with fast and tuneful bass.

**ACOUSTIC ENERGY AE1 CLASSIC** £845  
Brilliantly successful remake of an iconic design; not flawless, but surely one of the most musical loudspeakers ever made.



**ELAC BS243** £1,000  
More transparent and spacious than they've a right to be at this price, these refined mid-price standmounters represent top value.



**EMINENT TECHNOLOGY LFT-16A** £1,200  
U.S. planar magnetic bookshelf loudspeaker with unrivalled mid-band and treble. Hear it before all else.

**WHARFEDALE DIAMOND 220** £200  
Builds on the success of previous Diamond ranges with better bass, more detail and a greater sense of scale.



**KEF LS50** £800  
Supremely musical mini-monitors which sound much bigger than they look.



**MARTIN LOGAN MOTION 35** £1,300  
Folded Air-Motion tweeter gives a taste of Martin Logan's electrostatic sound in a standmount. Different from the standard mini-monitor and all the better for it.



**PMC TWENTY.21** £1,575  
Transmission line loaded standmount with a big box sound from a compact cabinet. Punches well above its weight.



**Q ACOUSTICS 2020i** £165  
Great little bargain-priced stand-mounts with a friendly, fun yet surprisingly refined sound. Hard to better for a pair of starter loudspeakers.

**WHARFEDALE DENTON** £500  
A beguiling mixture of retro looks with modern, high-technology drive units. The Denton has an easy-going, big-hearted sound with a touch of trad warmth that should appeal to many.



## HEADPHONE AMPLIFIERS

**CREEK OBH11** £150  
Designed specifically for low to medium impedance (30 Ohm – 300 Ohm) headphones the little Creek has a marvelously well-judged sound.

**CHORD MOJO** £399  
Class leading portable DAC and headphone amp with ability beyond all else. Big, open spacious sound.



**EPIPHANY EHP-02** £99  
PP3 battery-powered portable gives great sound quality at an almost giveaway price. Happy with the output from an iPod or CD player, the little epiphany is a true bargain.



**ICON AUDIO HP8 MKII** £650  
The HP8 MKII valve-based headphone amplifier brings the spacious sound of valves to headphones. And it matches 'em all.



**FIDELITY AUDIO HPA 100** £350  
Great little headphone amplifier with a lively yet refined and open sound.

**MUSIC FIRST PHONE BOX** £276  
Brings a big stage, plenty of detail and rich, deep colours to the sonic spectrum.



**OPPO HA-2** £250  
Remarkable performance and sound from ESS Sabre32 DAC in a slim portable package.



## CD PLAYERS

**AUDIOLAB 8200CD0** £949  
Inspired CD player and DAC with price-performance ratio like no other. Capable of matching designs costing much more.



**CANOR CD2+** £3,100  
Musically coherent and tuneful valve-driven CD player from Slovakia. Lovely liquid sound.



**CAMBRIDGE AUDIO AZUR 651C** £410  
Snappy modern presentation from this budget CD player. Cracking audiophile entry point for any digital fan.

**CHORD RED REFERENCE MKIII** £16,000  
A unique and massive engineering exercise that could well be the best CD player available. Chord's Pulse Array DAC technology produces a musical experience like few others. A true reference player.



**ESOTERIC K-03** £9,495  
Superb high-end silver disc spinner that is beyond criticism. Devoid of its own character but has a flawless presentation.



**EXPOSURE 101** £395  
Detailed player with fine sense of timing should be an automatic entry on any demo list at this price.

**ELECTROCOMPANIET EMP-1/S £4,650**

Epic in scale, lavish in tone and exuberant in its musicality - this is a memorable SACD spinner. Quirky in operation and modest in finish, though.



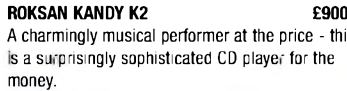
**OPPO BDP-105D £1200**

Universal player and DAC that makes CD and Blu-ray (+DVD) sound deep, spacious and full bodied. Reference quality that's affordable.



**REGA APOLLO-R £550**

Rega comes up with a fine CD player again. Tremendous detail and an easy, unforced sound at all times. Few bells and whistles but made up for by its superb sonic ability.



**ROKSAN KANDY K2 £900**

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**TUNERS**

**CAMBRIDGE AUDIO AZUR 651T £299**

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**MAGNUM DYNALAB MD-90T £1,900**

Exceptionally able, but commensurately priced, audiophile tuner that cannot fail to charm.



**DACS**

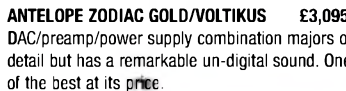
**AUDIOLAB M-DAC £600**

Excellent sound from ESS Sabre32 DAC and impressive flexibility with a unique range of filter options make this a stand-out product. Low price is the icing on the cake.



**AUDIOLAB Q-DAC £250**

Stripped-down version of Audiolab's M-DAC loses some features but retains much of the sound, making it a veritable bargain.



**ANTELOPE ZODIAC GOLD/VOLTIKUS £3,095**

DAC/preamp/power supply combination majors on detail but has a remarkable un-digital sound. One of the best at its price.



**CHORD 2QUTE HD £990**

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**DCS DEBUSSY £8,000**

DCS's bespoke 'Ring DAC' circuit gives a beautifully-fluid, almost analogue sound that encourages long listening sessions. Not cheap but worth every penny.



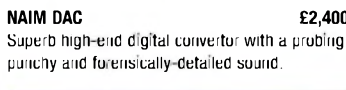
**NORTHERN FIDELITY DAC £650**

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**METRUM OCTAVE £729**

Unique two-box digital-to-analogue converter with great sound at a great price. Cuts upper treble, though.



**NAIM DAC £2,400**

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**TEAC UD-501 £699**

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**RESONESSENCE INVICTA MIRUS £4,499**

One of the most highly spec'd DACs available, with a smooth yet enthralling presentation. Few approach it.



**NETWORK PLAYERS**

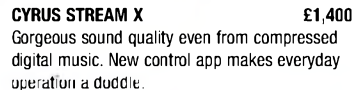
**CHORD DSX100 £7,500**

Chord's proprietary DAC circuit shines in their top-of-the-range streamer. Hear-through clarity with a sound rich in detail, dynamics and soundstage.



**CAMBRIDGE AUDIO NP30 £399**

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**CYRUS STREAM X £1,400**

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**NAIM NDX £2,995**

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**NAIM ND5XS £2,175**

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**NAIM NAC-N172 XS** £1,650  
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**PRO-JECT STREAM BOX RS** £1,095  
Unusual valve-based streamer/preamp with variety of inputs and a lovely liquid sound. Not the most detailed but compensates with sheer musical verve.

**QUAD PLATINUM DMP** £2,500  
Combined CD/network player has all the usual Quad elements but with added zest and detail that brings life to everything you care to play.



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**ASTEEL&KERN AK100 MKII** £569  
Portable high-definition digital player with superb sound quality. Punchy and fast.



**FiiO X3** £150  
Fabulous value player with nice easy sound and full range of abilities. Small and light. For newbies.

**LOT00 PAW GOLD** £1,500  
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**MAINS CABLES R US NO.27** £95  
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**TELLURIUM Q BLACK** 280/3M  
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**YAMAHA HPH-MT220** £150  
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**McIntosh C47**

- 7 analogue & 5 digital inputs
- Decode & play back high fidelity DSD files via USB
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ON DEMO

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ON DEMO

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- The legendary turntable reborn
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- 2-way horns system speakers
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Avantgarde Speakers

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- 2-way horns system speakers
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- Moving coil

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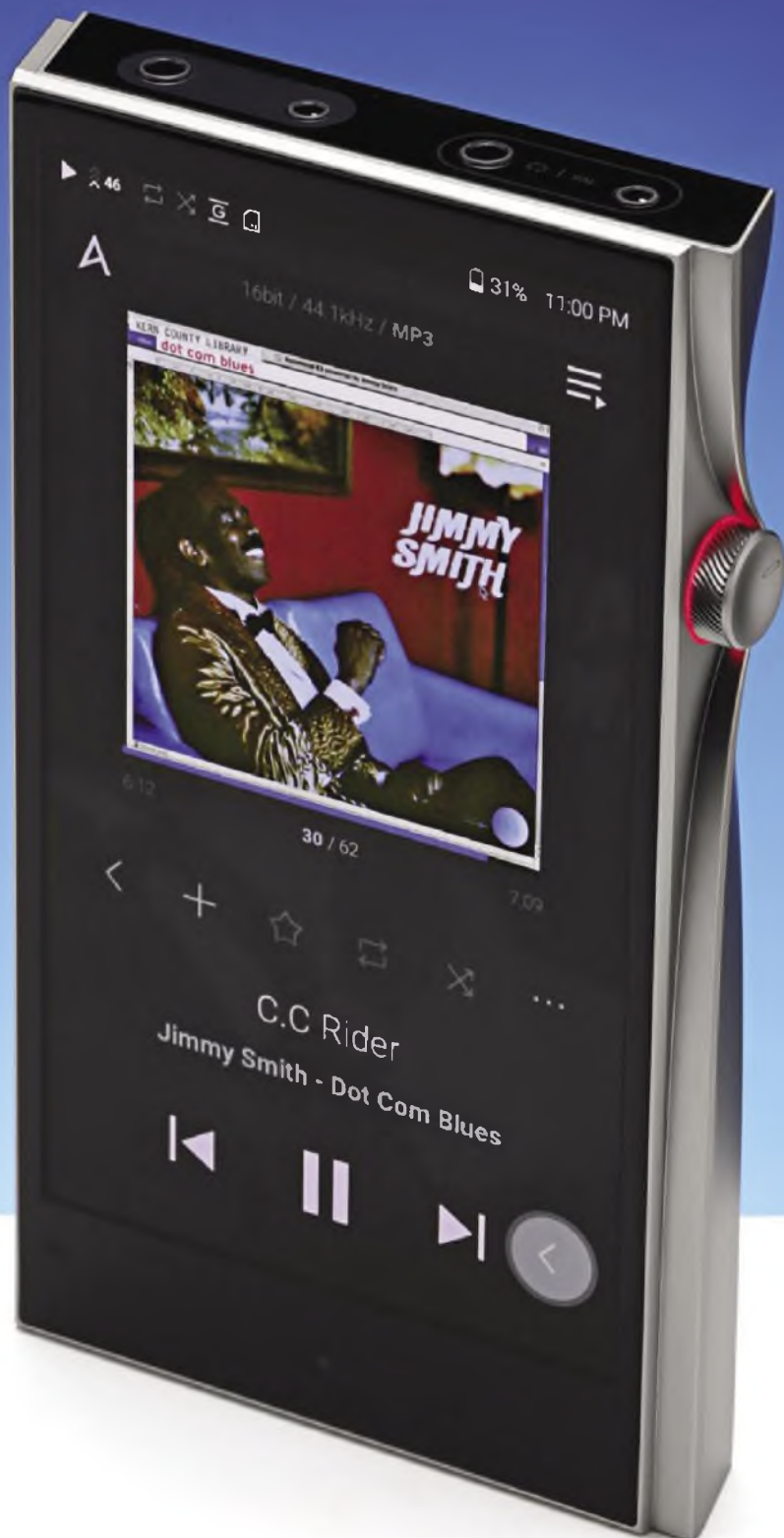
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# Seeing Double

Astell&Kern's SE200 player has two DACs. Noel Keywood listens in.



The new and slightly-swish SE200 portable player from Astell&Kern I'm reviewing here comes in at a massive £1799 – breathtaking by digital audio player (DAP) standards where FiiO will do you a nice one for one-third the price, or less. So what is it that makes this player so expensive? It has two DACs inside, so you can choose which you feel sounds best.

I admit to being initially baffled. The literature makes much of two DAC chips, one from Japanese manufacturers AKM, the other from American manufacturer ESS, but beyond that it says nothing about how a potential user can hear them, what the benefits are, etc. Since the output of DACs can be integrated, I wondered whether this was happening. After searching around I came across a small diagram on p03 of the pdf manual that reveals all: there are separate outputs from each DAC, having both conventional 3.5mm stereo jack plug and a not-so-nice 2.5mm four pole jack plug delivering balanced output. To listen to AKM plug in at left, to listen to ESS plug in at right.

It would be good if A&K somewhere explained to a new user, in text form, how the system works. Also the different outputs are unidentified on the player. Plugging into AKM lights the volume control surround orange, and plugging into the ESS output invokes “mint” (as the manual puts it) so a simple sticker is supplied that bearing these colours with ESS and AKM text. I suspect A&K have not clearly identified the sockets for their own production conveniences, leaving this a confusion for users when the sticker comes adrift. See our pics that illustrate the situation more clearly.

For the money you get a finely crafted, solid and rigid player weighing 276gm and measuring 77mm wide, 132.2mm high and 16mm deep. That makes it not so small, but not big either. Won't go into a shirt pocket like Astell&Kern's AK100, but will go into a

bag, coat pocket or cargo trouser pocket. Size wise a tad smaller than an iPhone, except in weight and thickness, due mainly to casework and batteries large enough to run the power hungry DACs. There are two of them draining the batteries, although only one is used, a penalty of the design. Control is by a bright and clear 720x1280 5in touch-screen, but there are also transport buttons.

will fit onto 230GB in WAV form, or double in compressed FLAC form. Little need for an external card then, except to carry music libraries: say a card for Classical, one for Rock, or perhaps a category or artist. I find microSD cards useful like this – although it is like trying to herd ants.

Connecting the SE200 to my Mac's USB 3 socket via its



**A top face user stick-on label identifies the ESS and AKM outputs.**

Both AKM and ESS DAC chips are advanced and can process all modern digital, including DSD. The unit can play DSD from internal memory or a plug-in microSD card. Our review sample had a quoted 256GB memory of which 230GB was available on-board it said and the Android file loader confirmed – a massive amount. Additionally, the

supplied lead (USB C to IEC A plugs) produced no response – as Astell&Kern warn in their manual. A USB2 socket did work however. A&K recommend using Type C - Type C cable for Mac but again with USB 3 protocol on a Thunderbolt hub, this did not work. USB2 only it appears. Plugging into my PC running latest Windows 10 with USB2 the player was seen without problem. The spec says SE200 has a Type C socket running USB3 but my Mac Mini running Mojave did not think so.

As you'd expect at the price, there is Bluetooth transmission and wi-fi connection to a router, by which means the SE200 can access the 'net to play music from commercial music services, with Tidal and Deezer on our player, plus V-Link.

Charging time is around 4hrs from a standard 5V phone charger, but 2hrs from a 9V 1.5A fast charger; 12V from car battery is not recommended.

The DACs used are an AKM AK4499EQ and ESS ES9068AS. Start up time was a reasonable 20 seconds and battery life quoted as 10hrs AKM and 14hrs ESS. As you would hope and expect, all file formats can be played including quad-DSD (DSD256 – don't ask about file size) and MQA files. The unit can be used as a DAC running from a computer via USB connection, in which case it accepts DSD over USB as DoP (check out the excellent Audirvana player for this).



**Heavily contoured casework gives a swish appearance.**

SE200 accepts a microSD card up to 1TB capacity. Only DSD64 files, at 200MB apiece, will start to challenge such storage: 1,240 will fit internally. A CD track needs 65MB so 3,800



**At left, small transport control buttons.**

The user screens were reasonably well ordered in terms of operating logic, Home screen being a rather basic looking 11-option list in which many were awkwardly identified – Folder was internal/external storage differentiation for example. The Play screen's progress bar and time code info were too small I felt, but album artwork and basic controls sufficiently visible to be seen under shaky operating conditions, like travelling on London's Tube.

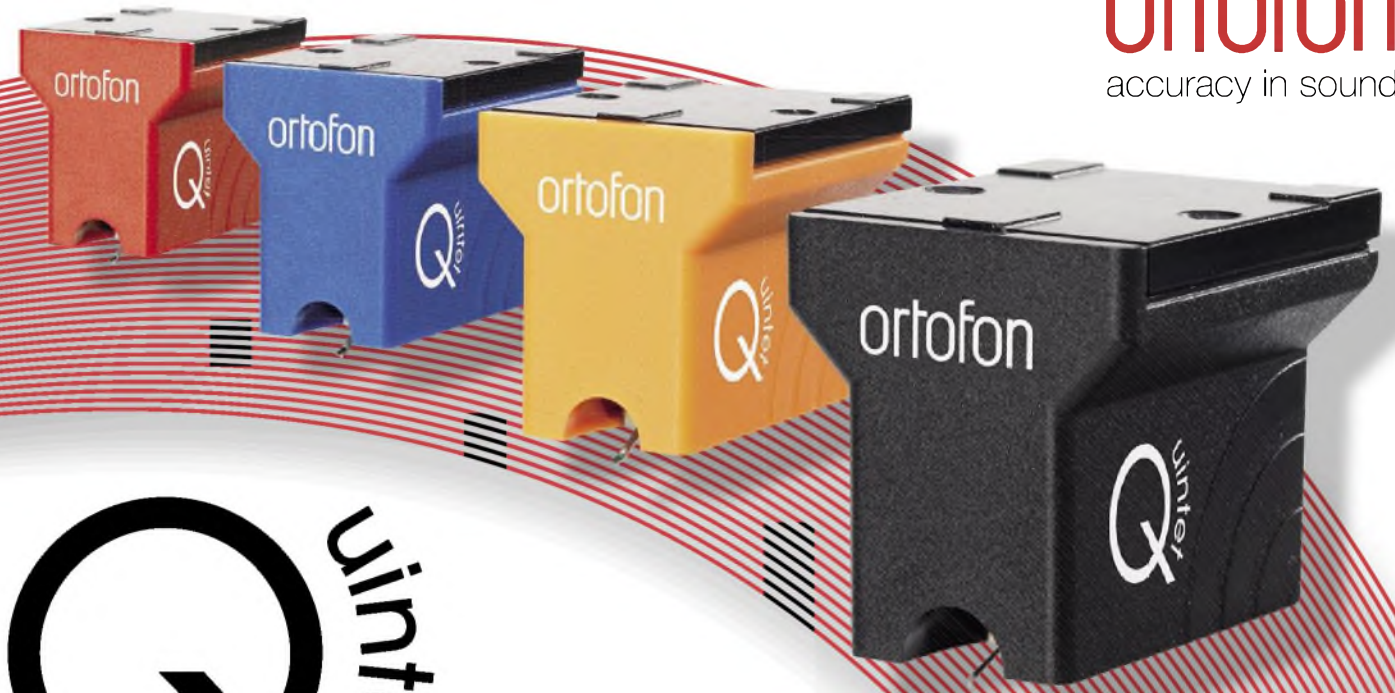


**The underside has a USB C style socket for charging/file loading and (right) a single microSD card slot.**

**SOUND QUALITY**

I used the SE200 with Oppo PM1 planar magnetic headphones. With fast tempo Rock like Fleetwood Mac's Go Your Own Way (24/96) the AKM 3.5mm (unbalanced) output was the faster and sharper of the two, hard in its dynamic and punchy: visceral Rock. Mick Fleetwood's drumming almost exploded through

ortofon  
accuracy in sound

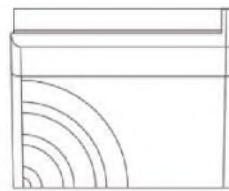
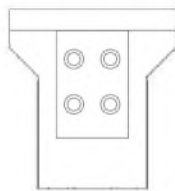
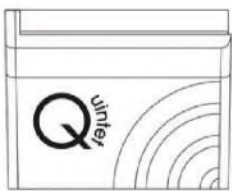


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All Quintet cartridges use the same ABS thermoplastic bodies and neodymium magnets, but each model in the range has its own sonic expression that reflects its status. From the well-rounded **Quintet Red**, through the smooth **Quintet Blue** and spacious yet dynamic **Quintet Bronze**, up to the pure audio excellence of the **Quintet Black S**; this series offers something for every discerning listener at a very attractive price. The Quintet Series also includes a true-mono cartridge, for accurate reproduction of older mono recordings.

Quintet cartridge design



Quintet Black S  
May 2014



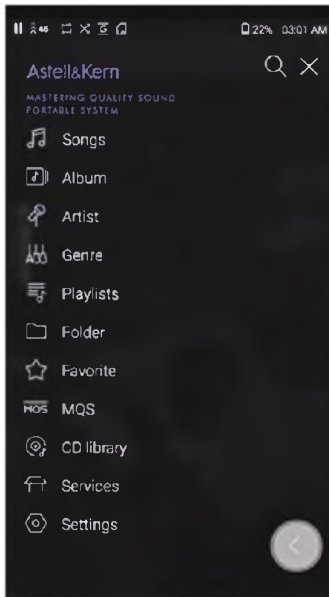
Quintet Blue  
December 2014



Quintet Black S  
July 2017



Quintet Blue  
July 2019



The Home screen, a basic eleven option list.



Album artwork was well reproduced by the high resolution screen.

the 'phones and the multi-chorus backing leapt out.

Plugging into the ESS 3.5mm jack output brought a slightly softer approach – but one with more delicacy, insight and subtlety. The sound stage broadened a tad as more information was teased out; altogether an easier and more sophisticated sound. But the differences were not great – not so great I would dare declare one obviously better than the other.

I swung more toward AKM with Diana Krall's Narrow Daylight (DSD) where piano had a harder presence and timing seemed sharper, more precise. There was bite in the sound

The ESS DAC was more insightful and delicate, almost gentle – but less propulsive. Yet at the same time it teased out more detail from plucked guitar strings. Very difficult call!

The differences in sound transferred over to classical. With Vivaldi Concerto Opus 4 No8 (DSD) strings were rich and smooth via ESS, but better differentiated via AKM! Confusing. After lengthy listening I went for ESS for a broader sound stage and generally more atmospheric presentation, with greater insight into the timbral richness and tapestry of the strings.

The ESS balanced output was a tad cleaner and better defined when using the Oppos with a balanced cable (separate earths) but the AKM sounded a little uncouth. Because 2.5mm four-pole balanced plugs are so small and easy to break, they're impractical except for home use so I don't take them seriously.

Overall, the SE200 gave a rich and full bodied sound, if with the soft bass definition that all battery powered portable players exhibit.

**CONCLUSION**

Astell&Kern's new SE200 player is distinguished by the presence



The Play screen with barely visible blue progress bar.

of two high performance DAC chips, allowing users to choose the sound they find most engaging. It's a very nice player overall but with questionable results under measurement from the AKM section and at a price that is stratospheric in portable player terms I can't see that it will appeal to many.

**MEASURED PERFORMANCE**

Frequency response of both chips was identical, running flat to 90kHz with 192kHz sample rate PCM (ESS shown).

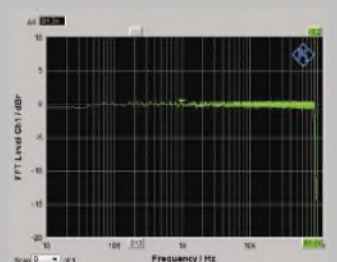
As quoted in the spec, output from AKM was 3V and ESS 2V via the 3.5mm unbalanced headphone jack, and double

from the 2.5mm balanced jack. With a -60dB test tone however it was clear that the AKM output was noisy, but the ESS output silent – putting them far apart in measured performance. The presence of noise limited AKM EIAJ Dynamic Range to a poor 95dB via unbalanced and an even worse 78dB via balanced, suggesting a noisy headphone drive amplifier, since AKM DACs don't produce figures like this.

EIAJ Dynamic Range of the ESS section measured an excellent 122dB from unbalanced and 124dB from balanced – the sort of figures expected at the price.

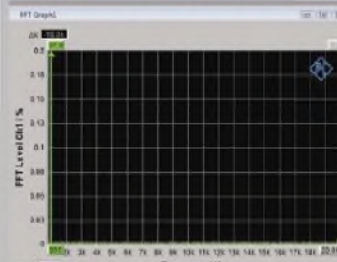
The AKM section measured poorly, the ESS section very well. This is unlikely fundamental DAC performance so much as behaviour of the buffer headphone drive amplifiers. A peculiar result, possibly determined by differing drive amps. selected for their sound. **NK**

**FREQUENCY RESPONSE ESS**



**DISTORTION ESS**

THD @ 0dB	Level RMS	Frequency
0.0163 %	2.1137 mV	997.00 Hz
OFF	OFF	OFF



<b>DIGITAL (AKM / ESS)</b>	
<b>Frequency response (192kHz,-1dB)</b>	<b>5Hz-90kHz</b>
<b>Distortion (-60dB 24bit)</b>	<b>0.3/0.016%</b>
<b>Dynamic Range (EIAJ)</b>	<b>95 / 122dB</b>
<b>Output (unbalanced)</b>	<b>3V / 2V</b>

**ASTELL & KERN SE200 £1799**



**GOOD - worth auditioning**

**VERDICT**

Rich smooth sound with two presentational options. But very expensive.

**FOR**

- choice of sound
- build quality

**AGAINST**

- unnecessarily complicated
- heavy
- poor AKM performance
- unmarked outputs

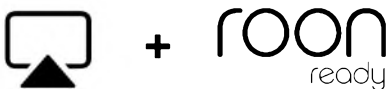
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4TB Storage 

DLNA Device 

Wireless/Wired 

Battery Powered 

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GLENN HUGHES

The Official Bootleg Box Set  
Volume Three: 1995-2010  
Purple Box

Presented as a clamshell box with suitably distressed, makeshift, slightly edgy and 'street' box art, the contents feature six CDs of musical ditties plus a fold-out booklet sheet that serves as a poster on one side and a tracklist/catalogue on the flip.

The CDs themselves reveal a rather disparate spread of concerts. What I mean by that is, you see the title of the box set and you immediately imagine an even spread of concerts ranging over that time period to rest gently upon 2010 after an exhausting build up.

Not so. In fact, what you have here is Hughes showing us how darned busy he was in 1995. Then he apparently collapsed into bed in time for Christmas of 1995 and didn't wake up, Sleeping Beauty-like, until 2008 whereupon he dived back into gigging, spreading that energy to 2010. Whereupon he rested, in a god-like fashion

presumably and saw that it was good.

Specifically therefore, CD1 and CD2 features a 1995 show to support his then latest album 'Feel' plus the previous year's 'From Now On...'

The following day, supposedly full of energy and life, Hughes was back but this time in the LA2 in London, with a similar list of songs from his solo years: Trapeze and Deep Purple.

Esquires in Bedford on 3 May 2008 occupies CD4 that includes a similar mix plus a rare airing of his debut solo single 'I Found A Woman' and The Moody Blues' 'Nights In White Satin'.

The final two discs feature a show recorded at the Spring & Airbrake, Belfast on 9 October 2010 (CD5 & CD6).

Offering great value plus lots of high-energy performances and fair master quality, this is a valuable archive document on the Glenn Hughes career.

AUDIOPHILE CD



MARY COUGHLAN

Title: Life Stories  
Label: Hail Mary

Always in Ireland saw the birth of our Mary in 1956. And then it went downhill from there, really Drugs and alcohol didn't help and the lady found herself in a mental hospital. Then she tootled off to London and checked into a hippy squat at 19 years of age. Waitressing here, sweeping streets there.

She turned to singing after meeting, of all people, Dutch music legend Erik Visser.

Visser also remained musically active in Ireland and after meeting Coughlan he co-wrote, arranged and produced her 1985 debut album 'Tired and Emotional' which was, it has to be said, a roaring success. It went platinum in 1986. Visser's collaboration with Mary Coughlan resulted in eight albums.

This new album has been beautifully mastered and bathes in a delicate wash of space and air that allows reverb from the vocal all the way down to cymbal taps. In bass

terms, there's an organic confidence here and a tonal balance that bookends the sound nicely with the resonance piano.

I've heard Coughlan's voice described as "smoky" but it isn't. It really isn't. That's a lazy label. Instead, Coughlan has a voice chiselled by years of experiences. It emerges through a brain filter of memories. What you're hearing here is a series of conclusions. That is, she's settled into a way of living here. I may have this horribly wrong I know, but Coughlan sounds like she's come to terms with herself and she's done. And from that position, she's now telling her story. From that point onwards. So her lyrics are thus delivered with great weight and a knowledge of what goes on out there.

Her music is full of lazy swing combined with blues/folk lullabies as well as an irreverence of independence. Her voice is heavy with time.



This CD box set is backwards in terms of how it emerged and where it came from. That is, this was a TV and DVD based project. The CDs and the music within, emerged from that. As Wyman himself said "When I first began my Blues Odyssey project I concentrated on making a television series that would introduce people to the Blues".

So it comes as no surprise then that the DVD itself has been included inside the clamshell box set, along with two CDs packed with a compilation of blues songs and artists and a glossy booklet detailing the same.

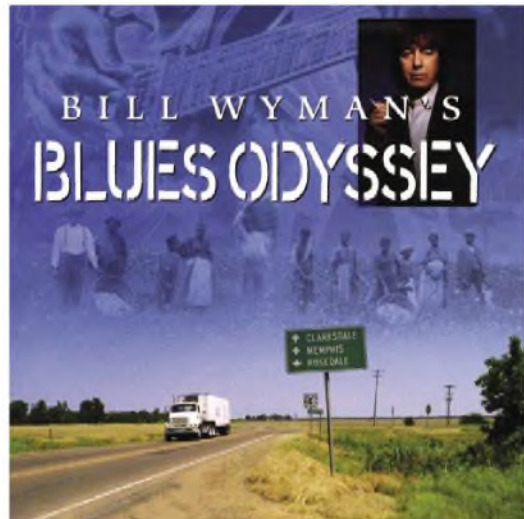
The DVD includes interviews with the likes of B.B. King, Buddy Guy, Otis Rush, Mick Fleetwood, Mike Love, Albert Lee and also related figures like Rosetta Patton - Charleys daughter - and Big Bill Morganfield (the son of Muddy Waters).

The CDs are packed with

legendary figures too but the 46 tracks included in total here don't just feature the more generally well known names. There's Bumble Bee Slim's 'Ramblin' With That Woman', Casey Bill Weldon's 'WPA. Blues' and 'Cow Cow' Davenport's 'Railroad Blues'.

The accompanying booklet does a good job of squeezing as much essential information into the limited page count as possible. For example, let's take Mr Davenport here and we find that he was the first piano blues player to achieve a breakthrough "in his own right", accompanying Dora Carr back in 1924 when he called himself Charles. It was only later the train-infused 'Cow Cow Blues' gave him his nickname.

As you might expect, dynamic reach on a lot of these tracks is limited along with a bright edge to the presentation. Saying that though, Edsel has done a fine job to round off the aggressive sonic nature of much of this work to present a fine archival line up.



**BILL WYMAN**

Title: Blues Odyssey  
Label: Edsel

AUDIOPHILE CD

Last year, the Floating World label reissued three albums from the band that were originally released on Universal. This 3CD collection appears in a jewel case (and the use of the multi-winged case variant is a relatively rare occurrence nowadays, it has to be said).

The record label has worked with Fairies guitarist Andy Colquhoun (ex-Warsaw Pakt and Tanz Der Youth) who joined the Fairies for their pleasantly monickered 1987 album 'Kill 'Em And Eat 'Em'.

Actually, it's Colquhoun who is the focus of this release. The entire set revolves around the man. This is why the 'and Friends' part of the title exists because the Fairies are only a part of this box set story. 'Andy Colquhoun and Friends' would have been a more honest, though possibly less saleable, title.

This compilation of three albums includes the live recording 'Pink

Fairies - Chinese Cowboys' that was taken from two dates on their 1987 tour. The sound is typically bright and thin in lower frequencies.

Next in line and similar in musical style is 'Dr. Crow' by the Pink Fairies' forerunner The Deviants featuring Mick Farren and Andy Colquhoun. That's not all though. Witness the talents of Blodwyn Pig's Jack Lancaster, and Phil Taylor from Motorhead plus members of Wayne Kramer's band. Sound is edgy with rather clinical mids and jabbing bass.

And finally Andy Colquhoun's later solo outing 'Pick Up The Phone America' which features some fine solo lead guitar work and has a slightly new wave crunch. Sound is slightly more open around the soundstage but also retains the clinical approach.

Check out the included glossy booklet, penned by Alan Robinson who does his usual fine job on providing a blend of information and entertainment.



**PINK FAIRIES AND FRIENDS**

Titles: Chinese Cowboys/Dr. Crow/Pick Up The Phone America!  
Label: Floating World

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# "Nightwish band members are seemingly diminished by her massive presence"



Noel Keywood

I had to laugh when reading Dave Tutt's column this month about his exasperation with wittering wimin on BBC Radio. And how they drive him mad. The BBC drove me mad long ago and I pressed the off button – permanently. So I can't pass an opinion on the BBC's female DJs and their undies – thankfully.

But I can think of a counter view that might make Dave Tutt happy, and many others perhaps. I was going to say "many other males" but don't need to, because this is about women, if not as the BBC portray them.

Long ago, as a student in the British Aircraft Corporation, Bristol, studying electrical engineering whilst working on Concorde, I was miserably poor. To make ends meet I joined the Royal Naval Reserve – and found myself at sea on HMS Venturer, a coastal minesweeper. Not so good to get seasick in a Force 7 but I got a brown envelope at the end with a few quid in it, covering the cost of chips for the next few days.

The name HMS Venturer has stuck in my mind ever since and not so long ago I went to YouTube to see what might pop up. What I came across was an eerie video of a submarine chase that transfixed me. I could not stop watching it and soon realised that although the submarine chase was frightening, the music was haunting. It was *Sleeping Sun* by Nightwish.

I'm no heavy metal fan but the woman singing this had a voice I wanted to know more about. I found myself pursuing female vocalists on YouTube that are little talked about in (my) everyday life and an antidote to the whole simpering female vocal genre we are served up in the UK.

Who was I listening to as the submarine HMS Venturer silently

stalked a German submarine?

It was Tarja Turunen, but could have been Floor Jansen.

Familiar names? Likely not. Forgive me for my ignorance if you feel they have universal acclaim and I should know better! But if you want to hear non-wittering wimin try these two: they'll blow your socks off. Pixies be gone.

Nightwish – a Finnish heavy metal band – have had both Tarja Turunen or Floor Jansen sing *Sleeping Sun* – and here life gets interesting. As a song it is what it is; what these women bring to it I find transfixing. Both are singers of great if slightly different ability: what they have to do however – as one explains – is sing over the cacophony of thrashing guitars and pounding drums all around them – which means project. And boy do they do that!

Not since I heard Janis Joplin singing *Ball and Chain* have I ever come across a woman who could get close – but Floor Jansen takes the roof off – then gets going. Physically this Dutch woman is big – 6ft (183cm) and strongly built. Point being she has lung capacity and physical strength to blow a stadium down – I've not heard anything like it since Janis. Nightwish band members are seemingly diminished by her massive presence; their Marshall amps haven't got cabinets big enough and there aren't enough Watts to compete.

Needless to say there's the usual heavy metal garb – black leather corset and all that – attempting to cover her body, and this can be a bit misleading. In studio discussions you can find on YouTube this woman has a massive voice and is a massive talent. Worth checking out to hear from her how she sings – her technique – and what it's like to be on stage.

Then there's Tarja Turunen. Heard of her? Another heavy metal goddess it appears, but again look her up on YouTube and this Finn is classically trained, having great voice control and projection as a result. She doesn't quite have the bellowing power of Floor Jansen, being of more ladylike dimensions – 5ft 5in (65cm). But a very interesting and impressive singer all the same who also explains her technique, perfected at a German academy. It was I believe Tarja who first caught my attention singing *Sleeping Sun* because he voice borders on operatic.

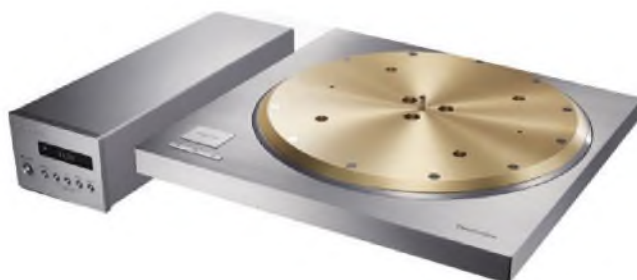
I have to mention Dutch symphonic metal band Within Temptation here of course, fronted up by singer/songwriter Sharon den Adel – who surely is the queen of this genre and an inspiration, contributing to Within Temptation's string of hits and lasting popularity.

Since I've gone on about physique – opera singers and Adele testifying to the need for it – I'd better talk SdA. She is 5ft 6in (170cm), so down the centre line as it were. What this woman has is great frequency range, she is noted for reaching very high – and there is great fluency of expression too. Sharon den Adel is an enormous talent and deserves her success.

Intriguing to find that these three women have at various times sung together on-stage (see YouTube). What we appear to have here then is a European symphonic/heavy metal genre fronted up by women – women who can not only belt it out, but are talented singers and song writers too. Whilst the heavy metal genre can get tedious after a while – there's only so much head banging any human can do and I did mine long ago – there is fine singing

So my remedy for poor Dave Tutt suffering Pixies in his workshop is to get in some heavy metalwork! ●

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**Hi Fi News said:**

Any great turntable gives you a certain frisson when you hear it. It's that old 'shivers down the spine' feeling, a sense of being let into a world to which you had previously not been privy. This is a remarkable turntable - and arguably the apex of vinyl playback. It's difficult to see how the SP-10R motor unit can be improved upon. It is a definitive statement of engineering prowess, and marks the return of direct drive to the top tier of turntables.

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# "Hats off to Neil Young, Prince and others who struggled to set music free"



Paul Rigby

In last month's column I may have come over all Luddite and anti new technology and, let's be frank here, a big part of me is just that.

After all, if old things work well and continue to work well then why dump them? I'm talking about hi-fi here, not the Hi-Fi World staff!

Then again, another big part of me embraces new technologies and the possibilities of the future and the need to know what's over the next hill.

What bugs me I suppose, is not the emergence of new technologies per se but how they are often implemented and exploited for financial reasons – and only for financial reasons – and how that often dilutes and sometimes mutates the new medium. Not only that, what that does to us and the older, familiar technologies we also enjoy, revere and are prematurely retired. Again purely for financial reasons. Not technology reasons.

So what really bugs me isn't so much the new technologies, it's the people who wish to exploit them and, in their quest to exploit, the damage they do.

Yet, I don't see myself as a curmudgeon – despite what the wife says. I realise that there is much out there that has proven useful and valuable to myself and other lovers of music. Much that I find useful and now essential and couldn't imagine doing without.

Let's take Internet land as one example. One of the most essential music-related tools out there is the ability to preview music at will.

When I were a lad, the only way to get a rough idea how a piece of music sounded before purchase was to borrow/tape a

copy from a friend or you might stumble over the piece on the radio. Before Internet Surfing, Radio Surfing was one of my main tools to expose myself to new and interesting music.

Now? The Internet is packed to the gills with streaming facilities or play-on-demand services. Just as important as Tidal and Spotify et al is a critical service that often goes unreported and is never talked about in any national magazine that I'm aware of: retail services. Shops.

If I hear of an intriguing band, artist or album, I fire up YouTube and search for it to have a listen. Failing that, I check out Bandcamp to do the same. Failing that, and this hits my last point, there's a batch of busy retailers that can do the same. This service is often superior because the access is quicker and there's a 'buy' option right alongside. Juno ([www.juno.co.uk](http://www.juno.co.uk)) is one good example. They sell physical product (vinyl and CDs) but also offer track-by-track play of the same on their website, enabling you to have a quick listen before you buy.

This preview idea is not new, of course. I remember Listening Posts in places like Andy's Records and Our Price in which you could listen to a limited amount of CDs as part of their preview facilities. Those Listening Posts seemed advanced and hot stuff at the time but they quickly palled as their inadequacies were revealed. Now? The online variants of the same are easier to use and more efficient.

Buying music is another revolution that the Internet has opened up. The High St. record shop may have taken a battering (but they're surviving and, I hesitate to say this, hanging on

in there, which is rather lovely) but the fact that you can buy just about any rarity you might care to mention via the Internet has meant that we cannot only access more music but access the music we want – and at the time we want it.

Gone is the prospect of having to contact some obscure record shop through a hard-to-find music fanzine's classified Ad, resident in a country 1,000 miles away, who charge three times the value of the LP and then whack on a king's fortune in P&P.

Competition (eBay and Discogs, etc) has opened up sales, regulated prices (OK, charity shop bargains and useful public ignorance have taken a hit so there's swings and roundabouts on this one) but it's easier to access much more music now.

Finally, I love the fact that more and more specialist music is available (if the artist is on the ball) directly from an artist's website. Limited editions and archival releases can be bought from the same by true fans. Music, let's not forget, that major record labels wouldn't have touched with a barge pole.

And that's my final point. New technologies have removed the dictatorial nature of the music industry where artists were merely well-paid thralls and we were spoon-fed measly music morsels. Just enough food to keep a starving man alive, eh?

We should all thank those fighting pioneers, the guys who 'took it to the man', to change that situation for the benefit of us fans. Hats off to Neil Young, the late, great Prince and others who struggled to set music free. ●

# MUSICAL FIDELITY



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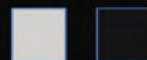


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# "This piece of waste fitted into a pannier bag on my bike – and sprang into life too"



Martin Pipe

**N**ow the worst of the Covid-19 pandemic seems to be past us, there is talk of fundamental change. Might we, as consumers, even be persuaded to buy fewer goods of higher-quality less frequently? Sure, such items would be more expensive initially – but they would be designed for upgradability, and furthermore their repair would be economically viable. Rather than chasing the lowest price we would receive service and support as part of an overall package, as once we did. Local hi-fi shops would play a key role in this.

These dearer, but better thought-out products would also retain their value on the second-hand market.

When I was a lad, growing up in the early 1980s, new hi-fi equipment was expensive; furthermore, there was little of the easy credit and low interest rates we have today. Records were expensive too, LPs selling for £4.99 (nearly £20 today). That meant scrimping, saving and working holiday jobs to buy new gear and music – or taking the 'pre-owned' route.

My first decent amp, a Goodmans Maxamp 30, was pre-owned and cost me £2.50 – plus another 50p for a 2N3055 output transistor to fix it. The solid-state Maxamp 30, which enjoyed a long production run, was beautifully constructed; the power-amps lived on panels that swung out for serviceability. Although modest by the standards of the day (a mere 15 Watts per channel) it was an expensive proposition – £54 in 1969, approaching £1,000 of today's money.

Today's kit is far more complex than my Goodmans mid-1960s marvel, its design being optimised for automated-manufacture rather than repair. Thus the prevalence of surface-mounted components and chips bonded to the circuit board. Repairing such boards is at best very

difficult, requiring specialist tools and the skills to use them. However, if such modern boards develop a fault they could be swapped locally. The faulty board could then be sent back to the manufacturer, perhaps to be re-cycled.

And if the industry was to work to common standards, as is the case in the world of IT, then the consumer could choose electronics (a board) from alternative sources. Standards would define, amongst other things, board size, the location of connectors and fixing points, power-supply requirements and control protocols.

Since power supply and casework are the most expensive elements of a product, why throw them away when they have life ahead? Admittedly fashions change, but so too could front-panel trim to change appearance.

Recent personal experience shows that we haven't shrugged off our unforgivably wasteful consumerist excesses; this needs to change, for all our sakes. Throwing away broken items is bad enough, but discarding items that are still of use is, in my view, criminal. On the very day I am writing this, I witnessed refuse collectors chuck a three-seat leather sofa into the destructive jaws of their dust bin lorry. Earlier, I passed said sofa – not a mark on it.

Another example. On the way home the other day from my recently-reopened gym, I encountered a JVC-branded 40in full-HD LCD smart TV on the pavement. Lying next to it was the essential remote control. JVC used to be an innovative concern. As well as developing the VHS home-video format, it conceived CD-4 quadraphonics, quartz-locked turntables and the ANRS 'Dolby-soundalike' for cassette-decks. And JVC made some pretty-tasty hi-fi gear.

How the mighty have fallen;

modern JVC TVs are manufactured in Turkey, by a firm called Vestel. Sad to see a JVC TV on the pavement.

Funnily enough, I already had a near-identical 40in LCD TV with a 'Bush' badge. This has an intermittently-dicky LED backlight, and so I carted the JVC home with the intention of using it for spare-part surgery. It must surely have been broken, or it wouldn't have been left out for rubbish collection. Back home, though, I could see none of the jagged dark patches that point to a damaged LCD panel. So I powered it up – and behold, the thing worked!

Even the slot-loading DVD player tucked into the side behaved; a movie disc was in it. No uneven backlighting and, after tuning it in, I was rewarded with decent pictures from the set's integrated Freeview HD tuner. So no probs with JVC then, just the laziness of its owner who consigned it to waste. This should not be happening.

A couple of days earlier I came across a Sony 5.1 A/V receiver by the side of the road. No remote this time, but the instruction book was taped to the top of its cabinet. For an amplifier with a front-panel sticker proudly-shouting its ability to deliver '1000W' it was surprisingly light. Yet it was nowhere near light enough for a switch-mode power supply, implying that conventional transformer-based circuitry lay inside. This piece of waste fitted into a pannier bag on my bike. And guess what? It sprang into life too!

Why weren't these items advertised on Freecycle, listed on eBay or offered to charity shops? Even a handwritten note saying "working, please take!" would have been better than nothing. The astonishing amount of electrical waste we are now needlessly producing borders on criminal. Fundamental change to reduce this torrent of waste is needed. ●

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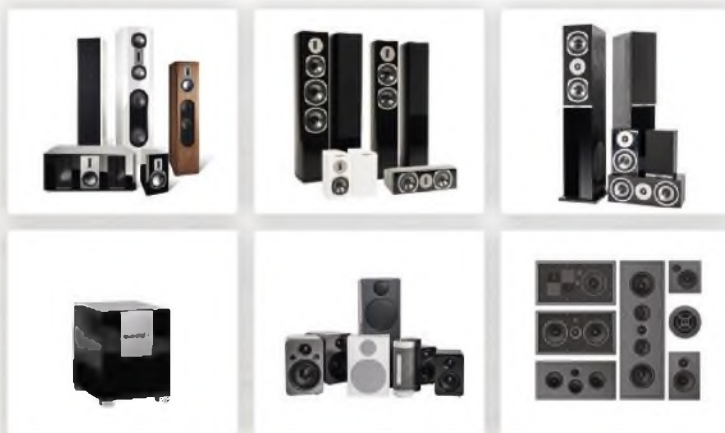
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# "It can be done intelligently; we don't have to hear about undies"



Dave Tutt

**M**y workshop is yet to be fully working which means my normal sources of music are missing for daytime entertainment. I've been listening to radio and one thing that has wound me up is the wittering of the current crop of radio DJs who are a serious blot on the output of our National broadcaster.

The BBC's need to litter every program with banal verbiage and stupid games and quizzes is to me a thorough irritant that I feel Radio 2 would be so much better without.

With Radio 2 employing so many women I can't understand why they think I need to know about one of them answering the door to the postman in her undies. Nor do I care about Zoe or Vanessa or – worst of all – Elaine Paige on a Sunday!

Jo Whiley wittered incessantly about the Pixies for her entire show and then proceeded to carry on the following day about them. Correct me if you think I am wrong, but I have heard guitarists who arrive at my workshop who play with more talent than the Pixies will ever manage!

Radio 1 not only has more of the same DJs but its music lacks any form of attraction to me. I am sure people have similar thoughts about their radio stations.

Thing is, I dial through the FM band and I don't really find anything that is better – and despite now having DAB there isn't anything there that has made me get excited either.

Arghh! All I want is music, not idiots who love the sound of their own voices and are paid more in a year than I see in twenty!

I complained about it to my ex employer but the BBC, being

so even handed, politically correct and diverse to the extreme cannot possibly do anything about it and cannot be bothered to reply to me. Well you wouldn't would you!

I know, I am just a grumpy, miserable old man. Worse I am a sexist miserable old man as I do not appreciate having my radio littered with wittering women!

But as all those things I am still significant – and I would like to hear talk and music that appeals to me. Since what the BBC are now peddling does not, its services have ceased to be of interest and I would like my money back.

Mind you the likes of Vine and Madeley drive me nuts too so its not just the women! Radio talk shows I can get on any number of stations – again with opinionated idiots in charge. I'm an opinionated idiot so I can do it myself! So Jeremy Vine can go to his TV show and I'll have someone else thanks.

Only a few DJs have presented me with a worthwhile background: Trevor Nelson, Bob Harris (of course) and even Gary Davies and Tony Blackburn. It can be done intelligently; we don't have to hear about undies.

On another point this month I was interested in Noel's comments on PC and Mac issues and programmed redundancy. In the music world, as in the IT world, it is actually the data – be that music, written word, pictures, databases or any other human input – that is important.

Microsoft would have you believe that their operating systems are far more important than any data you might have created, hence their view that we should always update our machines with the latest fixes for problems in their software we are very unlikely to see, but that may kill our machines and render

our data inaccessible.

Aside from the fact that if we have a good internet security package and are aware of how it works and act on its alerts, many of the updates are likely to be only marginally effective and many may well be unnecessary. Even worse they commonly make the machine slow to respond to the point where you will throw it in the bin and buy another one.

To this end I have spent the last six years at least trying to avoid anything that has Microsoft on it – or for that matter Adobe or Apple.

I use a Win7 PC that was made by Dell in June 2011. I am not the original owner and have been using it since it came to me as being unusable due to speed issues.

First thing I did was to dump Windows 7 for Ubuntu Studio 16.10 and this has to be the most stable PC software I have ever owned. It is fast, reliable, predictable and totally free.

As an ex-IT specialist I have to say that chasing issues with Microsoft products – be it with servers or desktop machines – was the most wasteful way to spend the best part of 22 years of my life – and I have no intention of going back to it.

Ubuntu is far better than chasing and – worse – paying for software to do things reliably.

My workshop got a boost in the right direction this week as I mounted Celestion Series 1s on the ceiling, home built cabs with 8 inch bass drivers on speaker stands and Mission 700s with new bass drivers on top of the home built ones. I'll explain this another time

My computer systems have either been scrapped or rebuilt and my workshop amps and CD players are stacked and wired. More soon I hope! ●

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# WORLD CLASSICS

Here is our list of the great and good from audio's glorious past, products that have earned their place in hi-fi history. You'll also see some oddities which aren't classic as such, but are great used buys. The year of introduction is given, alongside the original UK launch price.

## TURNTABLES

**EAT FORTE** 2009 £12,500  
Lavishly finished two box, two motor turntable with gorgeous Ikeda 407 tonearm bundled. Exceptionally stable and unfussy performer with a relaxed but highly enjoyable gait



**FUNK FIRM VECTOR II** 2009 £860  
Innovative engineering gives a nimble, pacy and musical sound that's one of the best at the price

**REGA P2** 2008 £300  
Excellent value for money engineering, easy set up and fine sound

**MCINTOSH MT10** 2008 £8,995  
Big, expensive, controversially styled and glows more than some might consider necessary, but an astonishingly good performer

**REGA P3-24** 2008 £405  
Seminal affordable audiophile deck with fine bundled tonearm. Tweakable, and really sings with optional £150 outboard power supply

**ACOUSTIC SOLID ONE** 2007 £4,050  
Huge turntable, both in terms of sheer mass and sonic dynamics. Fit up to three arms and enjoy, just don't damage your back moving it

**AVID VOLVERE SEQUEL** 2007 £4,600  
Stylish high end vinyl spinner with industrial strength build quality and a sound to match. Sound is edge-of-the-seat stuff

**MICHELL GYRODEC SE** 2005 £1,115  
Design icon with superlative build. Sound is beautifully smooth, effortless and exceptionally expansive

**MARANTZ TT-15S1** 2005 £1,299  
Cracking all in one deck/arm/cartridge combination, this must surely be the best sound/plug and play package at this price point

**MICHELL TECNODEC** 2003 £579  
Superb introduction to Michell turntables - on a budget. Top quality build and elegant design mean it's still the class of the mid-price field.



**MICHELL ORBE** 1995 £2,500  
The top Michell disc spinner remains a superbly capable all rounder with powerful, spacious sound that's delicate and beguiling

**SME MODEL 10A** 1995 £4,700  
Exquisitely engineered deck and SME V tonearm combo that's an extremely accomplished performer with classical music

**LINN AXIS** 1987 £253  
Cut-price version of the Sondek with LVX arm. Elegant and decently performing package. Later version with Akito tonearm better

**ROKSAN XERXES** 1984 £550  
Super tight and clean sound, with excellent transients. Less musical than the Sondek, but more neutral. Sagging plinth top-plates make them a curious used buy

**DUAL CS505** 1982 £75  
Simple high quality engineering and a respectable low mass tonearm made for a brilliant budget buy. Polished, smooth and slightly bland sound

**MICHELL GYRODEC** 1981 £599  
Thanks to its stunning visuals, this bold design wasn't accorded the respect it deserved. Clean, solid and architectural sound.

**TOWNSHEND ROCK** 1979 £ N/A  
Novel machine has extremely clean and fluid sound. Substantially modified through the years, and capable of superb results even today

**MARANTZ TT1000** 1978 £ N/A  
Beautiful seventies high end belt drive with sweet and clean sound. Rare in Europe, but big in Japan



**REGA PLANAR 3** 1978 £79  
Brilliantly simple but clean and musical performer complete with Acus-derived S-shaped tonearm. 1983 saw the arrival of the RB300 which added detail at the expense of warmth. Superb budget buy

**SONY PS-B80** 1978 £800  
First outing for Sony's impressive 'blotcracer' electronic tonearm. Built like a tank with a clean and tidy sound, albeit lacking involvement. Scarily complicated and with no spares support - buy with caution!

**TRID LD-7D** 1978 £600  
The best 'all-in-one' turntable package ever made. Clean, powerful and three-dimensional sound, ultimately limited by the tonearm.

**ADC ACCUTRAC 4000** 1976 £300  
Bonkers 1970s direct drive that uses an infra red beam to allow track selection and programming. More of a visual and operational delight than a sonic stunner

**PIONEER PLC-590** 1976 £600  
Sturdy and competent motor unit that performs well with a wide range of tonearms. Check very thoroughly before buying due to electronic complexity and use of some now-obsolete ICs

**PIONEER PL12D** 1973 £36  
When vinyl was the leading source, this bought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PL112D was off the pace compared to rivals



**TECHNICS SP10** 1973 £400  
Seminal Japanese engineering. Sonics depend on plinths, but a well mounted SP10/II will give any modern a hard time, especially in respect of bass power and midband accuracy

**LINN SONDEK LP12** 1973 £86  
For many, the Brit superdeck; constant mods meant that early ones sound warmer and more lyrical than modern versions. Recent 'SE' mods have brought it into the 21st century, albeit at a price

**ARISTON RD11S** 1972 £94  
Modern evolution of Thorens' original belt drive paradigm. Scotland's original super-deck was warm and musical, albeit soft. Still capable of fine results today

**GOLDRING LENCO GL75** 1970 £15.65  
Simple, well engineered motor unit with soft, sweet sound and reasonable tonearm. Good spares and servicing support even today

**GARRARD 301/401** 1953 £19  
Tremendously strong and articulate with only a veiled treble to let it down



**THORENS TD124** 1959 £ N/A  
The template for virtually every 1970s 'superdeck', this iconic design was the only real competition for Garrard's 301. It was sweeter and more lyrical, yet lighter and less impactful in the bass

TONEARMS

**REGA RB251** 2009 £136  
Capable way past its price point, the new 3-point mount version of the classic RB250 serves up a taut and detailed sound. A little lean for some tastes, but responds well to rewiring and counter-weight modification.

**HELIUS OMEGA** 2008 £1,595  
Stylish and solid lump of arm with fabulous build quality that turns in a dynamic and weighty performance.

**AUDIO ORIGAMI PU7** 2007 £1,300  
The classic Syrinx PU3 updated to spectacular effect. Hand made to order, with any mass, length and colour you care for. Fit, finish and sound truly impressive.



**GRAHAM PHANTOM** 2006 £3,160  
Sonically stunning arm with magnificent bass centerity and soundstaging. Build quality up to SME standards, which is really saying something!

**TRI-PLANAR PRECISION** 2006 £3,600  
Immaculate build, exquisite design and one of the most naturally musical and lucid sounds around.

**MICHELL TECNOARM A** 2003 £442  
Clever reworking of the Rega theme, using blasting, drilling and rewiring!

**SME 309** 1989 £767  
Mid-price SME comes complete with cost-cut aluminium armtube and detachable headshell. Tight, neutral sound with good tonality, but lacks the IV's pace and precision.

**NAIM ARO** 1987 £1,425  
Charismatic unipivot is poor at frequency extremes but sublime in the midband; truly emotive and insightful.

**SME SERIES V** 1987 £2,390  
Vice-like bass with incredible weight, ultra clear midband and treble astound, although some don't like its matter of factness!

**NAIM ARO** 1986 £875  
Truly endearing and charismatic performer - wonderfully engaging mid-band makes up for softened frequency extremes.



**ALPHASON HR100S** 1981 £150  
First class arm, practically up to present-day standards. Buy carefully, though, as there is no service available now. Totally under priced when new exceptional.

**SME SERIES III** 1979 £113  
Clever variable mass design complete with Titanium Nitride tube tried to be all things to all men, and failed. Charming nonetheless, with a warm and inoffensive sound.

**TECHNICS EPA-501** 1979 £ N/A  
Popular partner for late seventies Technics motor units. Nice build and Titanium Nitride tube can't compensate for middling sound.

**LINN ITTOK LVII** 1978 £253  
Japanese design to Linn specs made for a muscular, rhythmic sound with real dynamics. The final LVIII version worth seeking out.

**AUDIO TECHNICA AT 1120** 1978 £75  
Fine finish can't compensate for this ultra low mass arm's limited sonics - a good starter arm if you've only got a few quid to spend.

**HADCOCK GH228** 1976 £46  
Evergreen unipivot with lovely sweet, fluid sound. Excellent service backup.

**ACOS LUSTRE GST-1** 1975 £46  
The archetypal S-shaped seventies arm; good, pulsive and involving sound in its day, but ragged and undynamic now.

**SME 3009** 1959 £18  
Once state of the art, but long since bettered. Musical enough, but weak at frequency extremes and veiled in the midband. Legendary serviceability and stunning build has made it a cult, used prices unjustifiably high.

PHONO STAGES

**CREEK OBH-8 SE** 1996 £180  
Funchy, rhythmic character with oodles of detail makes this a great budget audiophile classic. Partner with a Goldring G1042 for an unbeatable budget combination.

**MICHELL ISO** 1988 £ N/A  
This Tom Evans-designed black box started the trend for high performance offboard phono stages. Charismatic, musical and punchy - if lacking in finesse.



**LINN LINNK** 1984 £149  
Naim-designed MC phono stage built to partner the original Naim NAIT - yes, really! Fine sound, although off the pace these days.

INTEGRATED AMPLIFIERS

**NAIM NAIT XS** 2009 £1,250  
With much of the sound of the Supernait at half the price, this is powerful, articulate and smooth beyond class expectations.

**MUSICAL FIDELITY PRIMO** 2009 £7,900  
Seriously expensive, but one listen explains why. Wonderfully exuberant sound that can only come from a top quality tube design.

**SUGDEN A21A S2** 2008 £1,469  
Crystalline clarity, dizzying speed and forensic detailing. Power limited so needs sensitive speakers.

**CREEK OBH-22** 2008 £350  
Brilliant value budget passive, with remote control, mute and input switching, plus an easy, a neutral sound.

**CAMBRIDGE 840A V2** 2007 £750  
Version 2 addresses version 1's weaknesses to turn in a mightily accomplished performance, offering power, finesse and detail.

**SUGDEN IA4** 2007 £3,650  
Goodly amount of Class A power, icy clarity and a breathtakingly fast, musical sound make this one of the very best super-integrateds.

**NUFORCE P-9** 2007 £2,200  
Impressive two box preamp with superb resolution and an engaging sound.

**MELODY PURE BLACK 101D** 2007 £3,295  
The clarity and openness of valves plus firm grip and fine detail make this a preamplifier masterclass.

**AUDIOLAB 8000S** 2006 £400  
In another life, this sold for three times the price, making it a stand-out bargain now. Very clean, powerful and tidy sound.

**MCINTOSH MA6800** 1995 £3735  
Effortlessly sweet, strong and powerful with seminal styling to match.

**DELTEC** 1987 £1900  
Fast, dry and with excellent transients, this first DPA integrated is the real deal for eighties obsessives. Ridiculously punchy 80W per channel from a tiny, half-size box. Radical, cool and more than a little strange.

**EXPOSURE VII/VIII** 1985 £625  
Seminal pre-power, offering most of what Naim amps did with just that little bit extra smoothness. Lean, punchy and musical.



**AUDIOLAB 8000A** 1985 £495  
Smooth integrated with clean MM/MC phono stage and huge feature count. Extremely reliable, too. Post '93 versions a top used buy.

**VTL MINIMAL/50W MONOBLOCK** 1985 £1,300  
Rugged, professional build and finish allied to a lively and punchy sound (albeit with limited power) make them an excellent used buy.

**MUSICAL FIDELITY A1** 1985 £350  
Beguiling Class A integrated with exquisite styling. Questionable reliability.

**MISSION CYRUS 2** 1984 £299  
Classic 1980s minimalism combines arresting styling with clean, open, lively sound. Further upgrade-able with PSX power supply.



**NAIM NAIT** 1984 £350  
Superb rhythms and dynamics make it truly musical, but tonally monochromatic. Fine phono stage, very low power.

**CREEK CAS4040** 1983 £150  
More musical than any budget amp before it. CAS4140 loses tone controls, gains grip.

**MYST TMA3** 1983 £300  
Madcap eighties minimalism, but a strong and tight performer all the same.

**ROTEL RA-820BX** 1983 £139  
Lively and clean budget integrated that arguably started the move to minimalism.

**NAD 3020** 1979 £69  
Brilliantly smooth, sweet and punchy at the price and even has a better phono stage than you'd expect. The archetypal budget super-amp.

**ROGERS A75** 1978 £220  
Lots of sensible facilities, a goodly power output and nice sound in one box. The later A75II and A100 versions offered improved sonics and were seriously sweet.

**A&R A60** 1977 £115  
Sweet and musical feature-packed integrated; the Audiolab 8000A remains a classic.



**SUGDEN C51/P51** 1976 £130  
Soft sounding early Sugden combo with a plethora of facilities and filters. A sweet and endearing performer but lacking in power and poor load driving ability.

**SUGDEN A21** 1969 £ N/A  
Class A transistor integrated with an eminently likeable smoothness and musicality. Limited inputs via DIN sockets.

**ROGERS CADET III** 1965 £34  
Sweet sounding valve integrated, uses ECL86 output valves, even has a half useable phono stage, sweet, warm a good introduction to valves.

**CHAPMAN 305** 1960 £40  
Smooth pre/power combo with a sweet and open sound. Not quite up to Leak/Quad standards but considerably cheaper secondhand.

## POWER AMPLIFIERS

**ELECTROCOMPANET NEMO** 2009 £4,995 (EACH)  
Norwegian power station as cool as a glacier tonally, yet impresses with sheer physicality and fleetness of foot. 600W per channel.

**NUFORCE REFERENCE 9SE V2** 2006 £1,750  
Brilliant value for money monoblocks with massive power and super-clean, three dimensional sound.

**QUAD II-80** 2005 £6,000 PER PAIR  
Quad's best ever power amplifier. Dramatic performer with silky but dark tonality, blistering dynamics, serious power and compellingly musical sound.



**QUAD 909** 2001 £900  
Current-dumper has a smooth and expansive character with enough wallop to drive most loads. Not the most musical but superb value all the same.

**NAIM NAP 500** 2000 £17,950  
Flagship amplifier will drive just about any speaker with ease. Factor in the company's trademark pace, rhythm and timing and it all adds up to one effortlessly musical package.

**MARANTZ MODEL 9** 1997 £8000  
Authentic reproduction monoblocks still more than cut the sonic mustard. Highly expensive and highly sought after.

**MICHELL ALECTO** 1997 £1989  
Crisp, clean and beautifully controlled with gorgeous styling. Partnered with the £1650 Orca this sounds delicious!



**MUSICAL FIDELITY XA200** 1996 £1000  
200W of sweet smooth transistor stomp in a grooved tube! Under-rated oddity.

**PIONEER M-73** 1988 £1,200  
Monster stomp from this seminal Japanese power amplifier, complete with switchable Class A and Class B operation. Clean, open and assured sounding, albeit a tad behind the pace on high speed dance music. Rosewood side cheeks and black brushed aluminium completes the experience.

**KRELL KMA100 II** 1987 £5,750  
Monoblock version of the giant KSA-100 is one of the seminal 80s transistor power amplifiers. Massive wallop allied to clean and open Class A sound makes this one of the best amplifiers of its type.

**RADFORD STA25 RENAISSANCE** 1986 £977  
This reworking of Radford's original late sixties design was possessed of a wonderfully rich, old school valve sound with enough power (25W) and lots of subtlety.

**QUAD 405** 1978 £115  
The first of the current dumpers is a capable design with smooth, effortless power and a decently musical sound. 606 and 707 continue the theme with greater detail and incision.

**HH ELECTRONICS TPA-500 AMPLIFIERS** 1973 £110  
Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain.

**LECSO AP1** 1973 £ N/A  
Madcap cylindrical styling alluded to its 'tower of power' pretensions, but it wasn't. Poor build, but decently clean sounding when working.

**QUAD 303** 1968 £55  
Bullet proof build, but woolly sound. Off the pace, but endearing nonetheless. Some pipe smoking slipper wearers swear by them!

**LEAK STEREO 20** 1958 £31  
Excellent workaday classic valve amplifier with decent power and drive. Surprisingly modern sounding if rebuilt sympathetically. Irrepressibly musical and fluid.



**LEAK STEREO 60** 1958 £N/A  
Leak's biggest valve power amp offers 35 Watts per channel and more low end welly than the smaller Stereo 20. Despite concerns over reliability, rarity value means high price.

**QUAD II** 1952 £22  
The all-time classic valve amplifier, with a deliciously fluid and lyrical voice. In other respects though, it sounds hopelessly dated. Low power and hard to partner properly.



**LEAK POINT ONE, TL10, TL12.1, TL12 PLUS** 1949 £28  
Early classics that are getting expensive. Overhauling is de rigueur before use, using original parts if possible. Surprisingly crisp and musical. Deeply impressive in fine fettle.

## PRE AMPLIFIERS

**AUDIOLAB 8000C** 1991 £499  
Tonally grey but fine phono input and great facilities make it an excellent general purpose tool.



**CROFT MICRO** 1986 £150  
Budget valve pre-amp with exceptionally transparent performance.

**CONRAD JOHNSON MOTIV MC-8** 1986 £2,500  
Minimalist FET-based preamplifier is brilliantly neutral and smooth with a spry, light balance in the mould of Sugden. Something of a curio, but worthwhile nonetheless.

**AUDIO RESEARCH SP-8** 1982 £1,400  
Beautifully designed and built high end tube pre-amplifier with deliciously sweet and smooth sound. Not the last word in incision or grip.

**LINN LK-1** 1986 £499  
A brave attempt to bring remote controlled user-friendliness to hair-shirt audiophile hi-fi. Didn't quite work, but not bad for under £100.

**NAIM NAC 32.5** 1978 £ N/A  
Classic high end pre. Brilliantly fast and incisive sound that's a joy with vinyl but a tad forward for digital.

**LECSO AC-1** 1973 £ N/A  
Amazing styling courtesy of Allan Boothroyd can't disguise its rather cloudy sound, but a design classic nonetheless.

**QUAD 33** 1968 £43  
Better than the 22, but Quad's first tranny pre isn't outstanding. Responds well to tweaking/ rebuilding though...



**LEAK POINT ONE STEREO** 1958 £ N/A  
Good for their time, but way off the pace these days. Use of EF86 pentode valve for high gain rules out ultra performance. Not the highest-fi!

**QUAD 22** 1958 £25  
The partner to the much vaunted Quad II monoblocks - cloudy and vague sound means it's for anacrophiles only.

**LOUDSPEAKERS**

**WHARFEDALE DIAMOND 10.3** 2010 £290  
Great small standmounters for audiophiles on a budget; dry punchy sound with impressive soundstaging at the price.



**YAMAHA SOAVO 1.1** 2009 £3,000  
Musical, transparent with impressive dynamics and cohesion. Excellent build and finish.

**USHER BE-10** 2009 £10,500  
Clever high end moving coil design with immense speed and dazzling clarity allied to epic punch. Needs the best ancillaries to fly, though...



**SPENDOR A5** 2009 £1,695  
Multi-talented floorstanders with generous scale and punch and Spendor's classic mid-range detail. Deliver a sound that thoroughly engages whatever you care to play.

**MONITOR AUDIO PL100** 2008 £2,300  
The flagship 'Platinum' series standmounter has a lovely warm and delicate sound with superlative treble.



**MARTIN LOGAN SOURCE** 2008 £1,600  
Brilliant entry level electrostatics, giving a taste of loudspeaker esoterica for the price of most moving coil boxes. Tremendous clarity, evenness and delicacy, although not the world's most powerful sound.

**PMC OB11** 2008 £2,950  
Cleverly updated floorstanders give scale and solidity in slim and well finished package.

**ISOPHON GALILEO** 2007 £2,100  
Big standmounters that really grip the music and offer quite startling dynamics and grip.

**ONE THING AUDIO ESL57** 2007 £1,450  
One Thing Audio's modifications keep the good old ESL57 at the very top of the game.

**MOWGAN AUDIO MABUN** 2007 £3,995  
Massively capable loudspeakers that offer dynamics, scale and clarity in an elegantly simple package. Wide range of finishes, too.

**B&W 686** 2007 £299  
Baby standmounters offer a sophisticated and mature performance that belies both their dimensions and price tag.

**B&O BEOLAB 9** 2007 £5,000  
Technically impressive and visually striking loudspeakers with sound quality that more than matches their looks.



**ISOPHON CASSIANO** 2007 £12,900  
Drive units featuring exotic materials allied to superlative build quality result in an immensely capable loudspeaker. Not an easy load to drive, however.

**QUAD ESL-2905** 2006 £5,995  
The old 989 with all the bugs taken out, this gives a brilliantly neutral and open sound like only a top electrostatic can; still not a natural rock loudspeaker, though.

**B&W 801D** 2006 £10,500  
In many respects, the ultimate studio monitor; dazzling clarity and speed with commanding scale and dynamics.



**REVOLVER CYGNIS** 2006 £5,999  
Revolver pull out all the stops and show what they can do with this magnificent flagship loudspeaker. A superb monitor that is like a mini B&W 801D in many ways.

**USHER BE-718** 2007 £1,600  
Beryllium tweeters work superbly, allied to a fast and punchy bass driver. The result is subtle, smooth and emotive.

**USHER S-520** 2006 £350  
Astonishingly capable budget standmounters that offer detail and dynamics well beyond their price and dimensions.

**ACOUSTIC ENERGY AE1 CLASSIC** 2006 £845  
Brilliantly successful remake of an iconic design; not flawless, but surely one of the most musical loudspeakers ever made.



**MISSION X-SPACE** 1999 £499  
The first mass production sub and sat system using NXT panels is a sure-fire future classic - not flawless, but a tantalisingly unboxy sound nevertheless!

**MISSION 752** 1995 £495  
Cracking Henry Azima-designed floorstanders combined HDA drive units and metal dome tweeters with surprisingly warm results. Benign load characteristics makes them great for valves.

**TANNOY WESTMINSTER** 1985 £4500  
Folded horn monsters which sound good if you have the space. Not the last word in loudness but can drive large rooms and image like few others.



**CELESTION SL6** 1984 £350  
Smallish two way design complete with aluminium dome tweeter and plastic mid-bass unit set the blueprint for nineteen eighties loudspeakers. Very open and clean sounding, albeit course at high frequencies and limp in the bass. Speakers would never be the same again...

**HEYBROOK HB1** 1982 £130  
Peter Comeau-designed standmounters with an amazingly lyrical yet decently refined sound. Good enough to partner with very high end ancillaries, yet great with budget kit too. A classic.



**QUAD ESL63** 1980 £1200  
An update of the ESL57, with stiffer cabinets. Until the 989, the best of the Quad electrostatics.

**MISSION 770** 1980 £375  
Back in its day, it was an innovative product and one of the first of the polypropylene designs. Warm, smooth, clean and powerful sound.

**ACOUSTIC RESEARCH AR18S** 1978 £125  
Yank designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great speed from the paper drivers, although finesse was most definitely not their forte...

**YAMAHA NS1000** 1977 £532  
High tech Beryllium midband and tweeter domes and brutish 12" woofers in massive sealed mirror image caps equals stunning transients, speed and wallop allied to superb transparency and ultra low distortion. Partner carefully!



**JR 149** 1977 £120  
Cylindrical speaker was ignored for decades but now back in fashion! Based on classic KEF T27/B110 combo as seen in the BBC LS3/5a. Doesn't play loud, needs a powerful transistor amplifier, but has clarity and imaging.

**KEF R105** 1977 £785  
Three way Bextrene-based floorstander gave a truly wideband listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace.

**IMF TLS80** 1976 £550  
Warm and powerful 1970s behemoth with transmission loading and a mixture of KEF and Celestion drive units. Impressively physical wideband sound but rhythms not a forte.

**SPENDOR BC1** 1976 £240  
 Celestion HF1300 tweeter meets bespoke Spendor Bextrene mid-bass unit. The result is a beautifully warm yet focussed sound. A little bass bloom necessitates careful low-stand mounting.



**HH ELECTRONICS TPA-50D AMPLIFIERS** 1973 £110  
 Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not exactly stylish, however.

**BBC LS3/5A** 1972 £88  
 Extremely low colouration design is amazing in some respects – articulation, stage depth, clarity – and useless in others (both frequency extremes). Came in wide variety of guises from various manufacturers building it under licence.

**LEAK SANDWICH** 1961 £39 EACH  
 Warm sounding infinite baffle that, with a reasonably powerful amplifier can sound quite satisfying.

**QUAD ESL57** 1956 £45 EACH  
 Wonderfully open and neutral sound puts box loudspeakers to shame. Properly serviced they give superb midband performance, although frequency extremes less impressive. Ideally, use in stacked pairs or with subwoofers and supertweeters.

## SYSTEMS

**MERIDIAN SOOLOOS 2.1** 2010 £6,990  
 Crisp styling, bright, colourful touchscreen, plus excellent search facilities. This is one hard disk music system with a difference. Best partnered to Meridian active loudspeakers.



**NAIM UNITIQUITE** 2010 £995  
 Great little half width one-box system with truly impressive sound allied to a wealth of source options.

**ARCAM SOLO MINI** 2008 £650  
 Half the size and two-thirds the price of a full-sized Solo, the Mini gives very little away in terms of performance to its bigger brother.

**MERIDIAN F80** 2007 £1,500  
 Fantastically built and versatile DVD/CD/DAB/FM/AM unit, designed in conjunction with Ferrari. Ignore nay-sayers who sneer that it isn't a 'proper' hi-fi product. Just listen.

**MARANTZ 'LEGEND'** 2007 £22,000  
 The combination of SA-7S1 disc player, SC-7S2 preamp and MA-9S2 monoblocks delivers jaw-dropping performance.

**SHANLING MC-30** 2007 £650  
 Quite possibly the cutest all-in-one around with fine performance from the CD player, tuner and MP3 player input. Very low power, though.



**AURA NOTE PREMIER** 2007 £1,500  
 Lovely shiny CD/tuner/amplifier with fine sound quality and dynamic abilities.



**ARCAM SOLO NEO** 2006 £1,100  
 Excellent all-in-one system, with a warm, smooth and balanced sound to match the features and style.

**PEACHTREE AUDIO IDECCO** £1,000  
 Excellent sounding iPod dock, impressive DAC and fine amplifier section make this an excellent one box style system.



## TUNERS

**ARCAM FMJ T32** 2009 £600  
 Excellent hybrid FM/DAB+ tuner with a smooth, engaging sound. Factor in its fine build and it's a super value package.



**MAGNUM DYNALAB MD-100T** 2006 £1,895  
 One of the best ways to hear FM that we know; superbly open and musical sound in a quirky but characterful package.

**MYRYAD MXT4000** 2005 £1,000  
 Sumptuous sound and top-notch build quality make for a tempting AM/FM package. Warm and richly detailed on good-quality music broadcasts.

**NAIM NATU3** 1993 £595  
 The warm, atmospheric sound is further proof of Naim's proficiency with tuners.

**CREEK CAS3140** 1985 £199  
 Excellent detail, separation and dynamics - brilliantly musical at the price. T40 continued the theme...

**QUAD FM4** 1983 £240  
 Supreme ergonomics allied to a pleasingly lyrical sound with plenty of sweetness and detail made this one of the best tuners around upon its launch.



**NAD 4040** 1979 £79  
 Tremendously smooth and natural sound allied to low prices and good availability make this budget analogue esoterica.

**MARANTZ ST-8** 1978 £353  
 Marantz's finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.

**YAMAHA CT7000** 1977 £444  
 Combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

**SONY ST-5950** 1977 £222  
 One of the first Dolby FM-equipped tuners, a format that came to nought. Still, it was Sony's most expensive tuner to date, and boasted good sound quality with brilliant ergonomics.



**ROGERS T75** 1977 £125  
 Superb mid-price British audiophile design, complete with understated black fascia. Smooth and sweet with fine dimensionality.

**SANSUI TU-9900** 1976 £300  
 A flagship Japanese tuner. It boasts superlative RF performance and an extremely smooth and lucid sound.



**TECHNICS ST-8080** 1976 £180  
 Superb FM stage makes for a clean and smooth listen.

**REVOX B760** 1975 £520  
 The Revox offers superlative measured performance although the sound isn't quite as staggering as the numbers. Fine nonetheless, and surely the most durable tuner here?



**SEQUERRA MODEL 1** 1973 £1300  
 Possibly the ultimate FM tuner. Massive in terms of technology, size and features dedicated to extracting every ounce of performance from radio, including impressive multi-purpose oscilloscope display.

**LEAK TROUGHLINE** 1956 £25  
 Series I an interesting ornament but limited to 88-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket. Deliciously lucid with true dimensionality.

**HEADPHONE AMPLIFIERS**

**GRAHAM SLEE NOVO** 2009 £255  
Dynamic headphone amplifier with a great sense of timing. Crisp, clear treble and warm midrange gives an involving sound



**MUSICAL FIDELITY X-CAN V8** 2008 £350  
Open and explicitly detailed sound plus serious bass wallop. A great partner for most mid-to-high end headphones

**CD PLAYER/RECORDERS**

**MUSICAL FIDELITY TRIVISTA** 2002 £4000  
When playing SACDs, the sweetest, most lucid and lyrical digital disc spinner we've heard. Old school stereo, pure DSD design. CD sound is up in the £1000 class, too! Future classic

**MARANTZ SA-1** 2000 £5,000  
The greatest argument for SACD. This sublime Ken Ishiwata design is utterly musically convincing with both CD and SACD, beating most audiophile CD spinners hands down



**SONY MDS-JE555ES** 2000 £900  
The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding

**PIONEER PDR-555RW** 1999 £480  
For a moment, this was the CD recorder to have. Clean and detailed

**MARANTZ DR-17** 1999 £1100  
Probably the best sounding CD recorder made; built like a brick with a true audiophile sound and HDCD compatibility



**CAMBRIDGE AUDIO CD4SE** 1998 £200  
A touch soft in the treble and tonally light, but outstanding in every other respect

**SONY TCD-8 DATMAN** 1996 £599  
Super clean sound makes this an amazing portable, but fragile

**LINN KARIK III** 1995 £1775  
The final Karik was a gem. Superb transport gives a brilliantly tight, grippy dynamic sound, albeit tonally dry

**NAIM CDS** 1990 £ N/A  
Classic Philips 16x4 chipset with serious attention to power supplies equals grin-inducing sonics

**TECHNICS SL-P1200** 1987 £800  
CD version of the Technics SL-1200 turntable. Massively built to withstand the rigours of 'pr' use and laden with facilities - a great eighties icon

**SONY CDP-R1/DAS-R1** 1987 £3,000  
Sony's first two boxer was right first time. Tonally lean, but probably the most detailed and architectural sounding machine of the eighties.

**MARANTZ CD73** 1983 £700  
A riot of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC - super musical



**MERIDIAN 207** 1988 £995  
Beautifully built two box with pre-amp stage. Very musical although not as refined as modern Bistream gear. No digital output

**CAMBRIDGE AUDIO CD1** 1986 £1500  
Inspired Stan Curtis redesign of Philips CD104, complete with switchable digital filter. Lean but tight and musical performer



**MERIDIAN MCD** 1984 £600  
The first British 'audiophile' machine was a sweeter, more detailed Philips CD100. 14x4 never sounded so good, until the MCD Pro arrived a year later

**SONY CDP-701ES** 1984 £890  
Sony's first bespoke audiophile machine used a 16x2 DAC to provide a clinically incisive sound; supreme build quality allied to the pure unadorned luxury of a paperback-sized remote control.

**YAMAHA CD-X1** 1983 £340  
Nicely built 16x2 machine with a very sharp and detailed sound; sometimes too much so. Excellent ergonomics, unlike almost every other rival of the time

**SONY CDP-101** 1982 £800  
The first Japanese CD spinner was powerful and involving. Brilliant transport more than compensated for 16x2 DAC, and you even got remote control!



**ANALOGUE RECORDERS**

**AIWA XD-009** 1989 £600  
Aiwa's Nak beater didn't, but it wasn't half bad nonetheless. Massive spec even included a 16x4 DAC!

**NAKAMICHI CR-7E** 1987 £800  
The very best sounding Nakamichi ever - but lacks the visual drama of a Dragon



**SONY WM-D6C** 1985 £290  
Single capstan transport on a par with a Swiss watch, single rec/replay head better than most Naks. Result: sublime

**PIONEER CTF-950** 1978 £400  
Not up to modern standards sonically, but a great symbol of the cassette deck art nonetheless

**YAMAHA TC-800GL** 1977 £179  
Early classic with ski-slope styling. Middling sonics by modern standards, but cool nonetheless!

**SONY TC-377** 1972 £N/A  
A competitor to the Akai 4000D open reel machine, the Sony offered better sound quality and is still no slouch by modern standards

**REVOX A77** 1968 £145  
The first domestic open reel that the pros used at home. Superbly made, but sonically off the pace these days

**COMPACT DISC TRANSPORTS**

**ESOTERIC PD** 1997 £8,000  
The best CD drive bar none. Brilliantly incisive, ridiculously over engineered

**TEAC VRDS-T1** 1994 £600  
Warm and expansive sound made this a mid price hit. Well built, with a slick mech

**KENWOOD 9010** 1986 £600  
The first discrete Jap transport was beautifully done and responds well to re-clocking

**DACs**

**DCS ELGAR** 1997 £8500  
Extremely open and natural performer, albeit extremely pricey - superb

**DPA LITTLE BIT 3** 1996 £299  
Rich, clean, rhythmic and punchy sound transforms budget CD players

**CAMBRIDGE AUDIO DAC MAGIC** 1995 £99  
Good value upgrade for budget CD players with extensive facilities and detailed sonics.

**PINK TRIANGLE DACAPO** 1993 £ N/A  
Exquisite; the warmest and most lyrical 16bit digital audio we have ever heard

**QED DIGIT** 1991 £90  
Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now past it.

**CABLES**

**MISSING LINK CRYO REFERENCE 2008** £495/0.5M  
High end' interconnects, with deliciously smooth, open and subtle sound without a hint of edge

**TECHLINK WIRES XS** 2007 £20  
Highly accomplished interconnects at an absurdly low price. Stunning value for money

**VDH ULTIMATE THE FIRST** 2004 £250  
Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency. Tight and tuneful bass mixed with air and space



**WIREWORLD OASIS 5** 2003 £99/M  
Excellent mid-price design with a very neutral, silky and self-effacing sound. Superb value for money.

**TCI CONSTRICTOR 13A-6 BLOCK** 2003 £120  
Top quality 'affordable' mains outlet block, with fine build and good sonics. Well worth the extra over standard high street specials, which sound coarse and two-dimensional by comparison.

# vinyl section

## contents

OCTOBER 2020

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**VINYL NEWS 80**

All the latest and greatest vinyl releases for you, from the pen of Paul Rigby

**REGA APHELION 2 CARTRIDGE 83**

Noel Keywood listens to Rega's new top moving coil cartridge

**AUDIOPHILE VINYL 90**

Paul Rigby rounds up the latest audiophile vinyl releases

**AUDIOPHILE BOOK 93**

Sharp Shock, a compendium of 1970s - 1980s music, read by Paul Rigby.


# news



**PEGGY LEE**

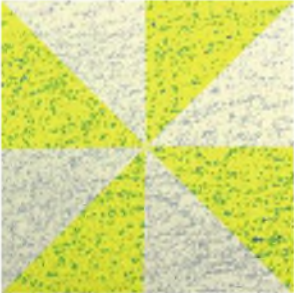
On the 'Ultimate' (Capitol) this release exposes one of the great song stylists of modern times. Her version of the songs, 'Is That All There Is' and 'Fever' were and are classics and both appear on this excellent double album retrospective, released as a gatefold and including other tracks like 'He's a Tramp' and her first Benny Goodman hit, 'Why Don't You Do Right'.

One nice surprise is the previously unissued track, 'Try a Little Tenderness'.



**SPEAKERS CORNER**

Yusef Lateef's 'The Blue Yusef Lateef' (1969) is a sort of concept piece that looks at the blues from different angles and points of view and, something that might not be as expected, different cultures. This record exposes Lateef, the experimenter, Lateef distilling blues into a shared human condition.




**JACK ELLISTER**

His 'Lichtpyramide' (Tonzonon) mixes synths and the organic while infusing calming, meditative, Germanic spoken word over a combination of pastoral guitar and introverted synth noodles.



**JACKSON BROWNE**

A 12" single this time, 'Downhill from Everywhere' from an LP due early October. It's a little unusual to see a 33rpm 12" like this from a major artist. Inside is a heartfelt cry and attempt at eco awareness and an accusing finger stab in your chest. Strong stuff.



**MUSIC ON VINYL**

From The Soundtrack Of Our Lives 'Welcome to the Infant Freebase' (1996), this alt-rock outfit from Sweden provides a 60s/70s vibe and Britpop, psychedelia-infusions. This is a limited, numbered edition pressed on gold vinyl.

From The Edgar Winter Group 'They Only Come out at Night' features one of the most unsettling examples of sleeve art that I've ever seen. Originally released on Epic in 1972, this vinyl remains a classic exponent of blues-infused rock that featured the magnificent singles: Frankenstein and Free Ride

From The Upsetters and 'Return of Django', the album's title reflects the spaghetti western genre that had already emerged during the mid-60s. This is music of its time and for its time and this is what late 60s reggae sounded like: raw and a bit ragged



## DEMON

From the UK audiophile label comes a bunch of Leo Sayer including the hits package 'Have You Ever Been in Love' (1983) which has one of the best A-sides I've heard in a while. 'Here' (1979) had Sayer reunited with David Courtney to produce this underrated LP. Finally, 'World Radio' (1982) was produced by Arif Mardin, features a slice of Bee Gee song writing and should have done better than it did.

Two from the Hot Wax imprint includes Honey Cone's 'Love, Peace & Soul', the trio's fourth and final soul LP. A heartfelt release.

100 Proof's (Aged in Soul)'s '100 Proof' combines mellow soul and harder funk resulting in a too-often ignored release from this Holland-Dozier-Holland production.

There's also two from the Average White Band here. 'Benny and Us' (1977) teamed the band with Ben E. King for a hit-drenched LP including 'Get It Up for Love' and 'A Star in the Ghetto'. 'Warmer Communications' (1978) included the single 'Your Love Is a Miracle' and was the group's final gold status LP release. Easy on the ear, it offers quality throughout.

Also check out Jackie Wilson's 'Whispers' (1966) that's reissued with an illustrated inner sleeve.



## KURT ELLING

New out is 'Secrets are the Best Stories' (Edition). Elling does an Anita O'Day, using the vocal as a jazz instrument. Bending the lyrics, adding dissonance, mixing tempos sometimes mid line and bending words around corners.



## THIRD MAN

From Jonathan Fire\*Eater 'Wolf Songs for Lambs' (1996) produced a typically primitive blues-rock sound but with the energy and a lead singer that was Rolling Stones in style and presentation. A pre-Strokes band, you might say. A should-a, could-a band who split too early.



## ...AND FINALLY

Lettuce offer 'Resonate' (Round Hill), a slice of jazz-funk from the band's seventh album, a sequel to the 2019 release, Elevate. I love the retro colours here but it's too safe.

Jon Balke's 'Discourses' (ECM) shows this jazz man has obvious creative talent. He's playful, cheeky, funny and adventurous.

From Darren Hayman 'Home Time' (Fika) offers a lo-fi approach to rock. It has a stripped, folkish quality.

Kutiman's 'Wachaga' (Slyal) is an Israeli multi-instrumentalist who sought and grabbed some musical collaboration from a Tanzanian village. This 'World' funky mix is the result.

'Undress and Dive After' from singer-songwriter, Martha Rose (Treibender Teppich) could be described as considered, sensitive, indie folk but there's also elements of classic 80s indie in there.

From Hedvig Mollestad, 'Ekhidna' (Rune Grammofon) comes axeman - well, axewoman - monster jazz rock guitar! High energy, guitar solos, complex guitar riffs and in yer face performances. Plus calming jazzy bits.

Come Stay with Me is a compilation to support artists impacted by COVID-19. There's thirteen Leeds-based acts here including Team Picture, Jasmine, English Teacher and Magic Mountain.



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# Top 2

**Rega's Aphelion 2 is their top moving coil cartridge. Noel Keywood listens.**

**T**his is not a Rega cartridge as I know them; I was taken aback. The Rega sound is distinctively mild – but not so here. This £3200 cartridge is a small change of tack, to use a nautical term. Not so big as to threaten the boat: “a course correction” so as to say.

I'll get straight to the point: the Aphelion 2 doesn't display the Rega sound as I know it – or have known it. Which is a bit of a surprise because Aphelion 2 has plenty of competition in this price band and needs a unique selling point, but I found it similar in balance to others. It is less expensive than our reference Ortofon A95 (£3900) but a tad more expensive than Cadenza Black (£1825) both technically similar to Aphelion 2 in the use of a boron rod cantilever.

However, there is a wild card in all this: Rega's three-point fixing arm, to which the Aphelion 2 is ideally suited of course (unlike rivals). If you already have a Rega arm or are thinking of getting one then Aphelion 2 awaits, assuming you are willing to spend so much on a pickup cartridge.

I have always been a Rega arm man since owning and using an RB300 – and remain so after reviewing their Planar 10 turntable (March 20 issue). Use in a Rega arm is a strong pull toward Aphelion 2.

What is Aphelion 2? It is Rega's own in-house designed and assembled high flyer that comes with a light, stiff and strong boron rod cantilever fitted with a Line contact diamond stylus. This is right on current technological trend, boron cantilevers coming from an outside global supplier (who I have yet to identify) that I suspect supplies all cartridge manufacturers, since manufacturing such a specialised miniature part is all but a weird thing

to do. But the point is these cantilevers are popular with manufacturers, they have significant strengths and Aphelion 2 uses one. I regularly hear one in the Audio Technica OC9X SH I use frequently for review purposes.

The light weight of boron helps keep tip mass in check which in turn improves high frequency tracking. That said, top level torture tracks induced slight mis-tracking with Aphelion 2 (see Measured Performance), where others clear them. But to put this into perspective, these test tracks are above what you'll find on any commercial LP, especially nowadays as modern cutting lathes are held in check by sophisticated electronics to avoid such modulation levels.

Boron then helps Aphelion 2 track well in the mid-band and at high frequencies, bringing a sense of steady confidence to high level vocals with sibilance in particular.

Whether a boron rod cantilever is strong enough not to bend or snap I do not know! Luckily I have not had that experience in all the many cartridges I have reviewed. Guess there's a limit somewhere but likely a boron rod will be more durable than an aluminium tube.

The Aphelion 2 body is machined from aluminium and as our pictures show there are three threaded fixing holes. Two are set half an inch (12.7mm) apart as usual, allowing the cartridge to fit any arm, the third can be used only with Rega arms that have three-point fixing. The idea here is not just to clamp the cartridge more securely, but also to make rigid the whole headshell assembly, reducing



the vibration headshells exhibit, so improving sound quality.

Rega supply three short hex head bolts and – unusually – a small torque wrench to tighten them, possibly to avoid the alloy threads being stripped by those who over-tighten.

Weighing just 6gms, this is a very low mass cartridge – at the limit of what most arms can balance out. Most should just manage it.

Rega do not supply accessories such as tracking force gauge, stylus brush or a range of screws. Screws supplied are short M2.5s suitable only for their own arm; custom headshells that come thicker – especially when made of hardwood – will need longer screws.

## SOUND QUALITY

I used the Aphelion 2 in our SME309 arm, mounted on a Timestep Evo modified Technics SL-1210 Mk2 Direct Drive turntable. Phono stage was an Icon Audio PS3 MkII (valve) with MC input transformers to eliminate hiss. Power amplifiers were a Creek Evolution 100A and, alternatively, an Icon Audio Stereo 30 SE single-ended valve amplifier, feeding Martin Logan ESL-X hybrid electrostatic loudspeakers through Chord



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It did not take long when listening to Hugh Masekela's Uptownship, on Hope (180gm), for my listening notes to remark on speed of hand drums and general rigid clarity, with fine bass definition. As the hand drums kept going I could detect this cartridge has a boron cantilever. There was a hard edge to each transient and a



**Rega's unique three point fixing top plate, with threaded holes for ease of attachment. This strengthens the whole headshell assembly.**

slightly mechanical sound. When I told Ortofon I preferred the tapered aluminium cantilever of Cadenza Bronze to the boron rod of A95 they

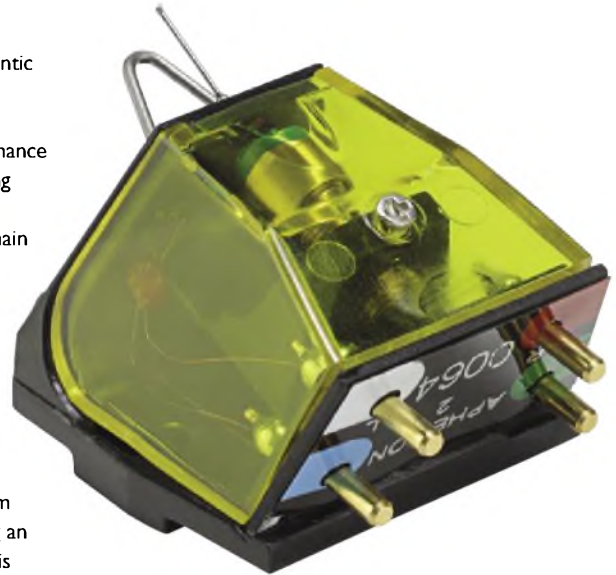
chuckled and said I liked a 'romantic sound'. Boron is preferred by manufacturers.

So there you are: forget romance here, we are talking about cutting edge speed in the sound, or put another way excellent time domain definition. However, materials have signature resonant properties that are easily identified by the ear and the hand drums had not only hard edged transients that I knew came from boron,

but there was a coolness in the sound I also know from A95 and OC9X SH. Being an engineer I should enjoy this sense of precision – but a bit of romance in the sound always helps methinks.

In the case of Aphelion 2, that runs flat to 20kHz and peaks a little, there was vast insight and detail, with a smidgeon of treble brightness on outer grooves. Bear in mind here our cartridge was new. As a stylus wears

"we are talking about cutting edge speed in the sound, or put another way excellent time domain definition"



**Colour coded rear connection pins are unobstructed by bodywork, making for ease of connection. The generator assembly can be seen inside.**

it gets progressively duller, so raised treble gives longest effective stylus life in subjective terms. Making Aphelion 2 well balanced in original form, before wear sets in.

From Uptownship the striding bass line was firm and solid in our SME309 arm – and doubtless better in a three-point fixing Rega arm since this fixing method improves definition all-round. The Aphelion has an icily clear mid-range that made Masekela's vocals shine out and cymbals were conspicuous, yet they had a lovely sonorous quality. I was pinned to the seat, blasted backwards! Well, when volume went up. Think speed and dynamics, with a sense of solid, well defined bass that we all like to hear shaking the room.

This is no sonic wimp of a cartridge, yet it is well controlled in its behaviour. There is no warmth; it is brutally honest about what is in the groove: technically correct. Forget about the easy tone of yesteryear.

Introducing yesteryear! I'd noticed ticks and pops came out like rifle shots, as they do from modern MCs, so wondered how a cartridge like



**Aphelion 2 comes in a sturdy machined alloy case, complete with torque wrench to ensure the attachment screws are tightened by the correct amount.**



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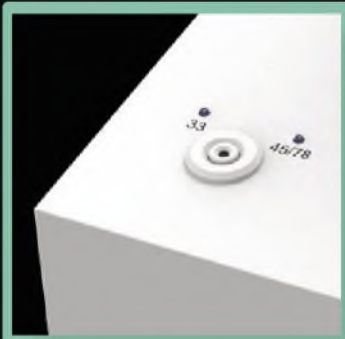
The X2 is available in four finishes; a premium walnut wood veneer, a luxurious black 8-layer high gloss paint, or black or white eight-layer hand-polished satin paint.



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this would play old records. On went All Your Love, from Blues Breakers (Decca, 1966) and no problem; I just heard all the restrictions of a recording of that time: pinched and coarse midrange mainly Clapton's guitar work was vivid and John Mayall's distant vocals discernible.

Noise was more evident in a heavily played track, Out of Reach, from World of Blues Power (Decca, 1969) where the gloriously atmospheric vocals of Peter Green and his beautiful guitar work – second after Hendrix in my view – came over clearly, regular groove noise from heavy playing not being made intrusive. RIP Peter Green.



The body is compact in shape and light in weight – just 6gms.

Bringing me naturally to classical on LP where noise is a major point of complaint. Spinning the lovely 2L (Norway) LP of Marianne Thorsen playing Mozart violin concertos I was taken more by insight into the Trondheim Soloists behind her than ticks or pops. Opening lower strings sounded fruity on track one and when Marianne Thorsen's violin suddenly entered proceedings it was startlingly clear and forward. A tad cool perhaps, but vivid.

The term “cool” that I kept writing in my notes became more defined with Mark Knopfler's True Love Will Never Fade, from Kill to Get Crimson (180gm). This is a full bodied recording Aphelion 2 cooled by removing its sense of warmth (OK, a logical inevitability!). I got to hear Knopfler's fluid fingers, strummed and plucked strings ringing out sharply and clearly; you get to hear it all with Aphelion 2.

On to the subject of inner grooves. Playing Time to Say Goodbye, from Two Countries One Heart (180gm), a fine audiophile recording from Hi-Fi Direct of Italy, Rosella Caporale's sustained crescendo, almost in the run-out groove, was piercingly clear and stable; no sign of mistracking and good insight too.

Of course, I had to spin The Big Band Sound, from the Syd Lawrence Orchestra – an extraordinary recording – and Sing Sing Sing showed



The boron rod cantilever carries a line contact stylus. Above is a guard. From above it can be seen clearly when cueing.

just how fast and controlled Aphelion 2 is. Trumpets were vivid and with hard edge, the brass section generally dominating. The glorious drum solos were solid and clear too, but I wished for a bit less top-end emphasis to better hear this drum work.

**CONCLUSION**

With its machined aluminium body and three-point fixing Aphelion 2 should be used in a Rega arm with three-point fixing head shell, to heighten the intentional drama within its design. It is fast, hard of tonality but desperately insightful, firing music out like precision bullets. Certainly a cartridge to be auditioned, it is coolly capable and dramatic in revelation.

**MEASURED PERFORMANCE**

Our analysis of the Rega Aphelion 2 (JVC TRS-1007 test disc) shows frequency response runs basically flat from 20Hz to 20kHz. However, there is a +2dB peak in output around 12kHz, enough to give some brightness in high treble. Lack of an upper midband roll-off means there will be a strong sense of insight and detail. The stylus traced inner grooves well, with minimal loss of -1dB in upper treble (red trace), barely noticeable in use.

Tracking of 300Hz test tones on CBS-STR112 test disc was very good, the Aphelion 2 clearing a high 63µm lateral track at 2gm down force (recommended) but starting to mistrack at 90µm – but it stayed in the groove. At 1kHz (B&K2010) where acceleration is higher and tip mass more influential a high 20cms/sec band was cleared but the highest 25cms/sec track caused mistracking, but again the tip stayed in

the groove. Some cartridges clear these top bands more confidently but the Aphelion 2 is unlikely to mistrack in use.

Distortion measured a respectable 1.3% on lateral modulation against a typical figure of 1%, so close. On vertical modulation the figure was a low-ish 2.6% due to a measured vertical tracking angle of 25 degrees (DIN 45-452 test disc). Optimal is 22 degrees and the Aphelion 2 got very close, making it a low distortion cartridge in overall terms.

Output measured 270µV at 3.45cm/sec (380µV at 5cms/sec rms) on Shure TTR-109 test disc. This is a very low value (6dB less than Ortofons) requiring a low noise MC phono stage.

The Aphelion 2 measured well all round, except for low output. Frequency response suggests strong midband information retrieval and some high end brightness.

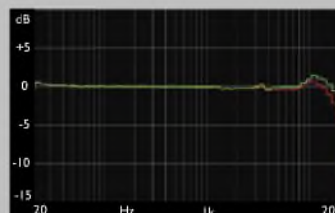
NK

Tracking force	1.9-2.0gm
Weight	6gms
Vertical tracking angle	25degrees
Frequency response	20Hz-20kHz
Channel separation	25dB

Tracking ability (300Hz)	
lateral	80µm
vertical	45µm
lateral (1kHz)	20cms/sec.

Distortion (45µm)	
lateral	1.3%
vertical	2.6%
Output (3.45cms/sec rms)	270µV

**FREQUENCY RESPONSE**



**REGA APHELION 2 £3200**



**OUTSTANDING - amongst the best.**

**VERDICT**

Starkly informative, offering deep insight. Cool in sound character but impressive.

**FOR**

- deeply insightful
- low weight
- vivid

**AGAINST**

- a tad bright
- low output
- no accessories

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CREEDENCE CLEARWATER  
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Fronted by John Fogerty, these twangy rockers offered slices of blues and country in the mix to provide an essence of Americana and hit a vein of brilliant form during the final years of the sixties.

You could - possibly arguably - say that this album was the group's last hurrah but it also showed that the group's musical ambition was expanding and maturing. The first single from this album, 'Travelin' Band', was testament to that.

At the same time, you could also sense that they were running out of steam, as good as this album was and remains. That is, the best tracks on the album all appear as A- and B-sides, orbiting the three singles. I've mentioned one of those tracks above. The rocking 'Up Around the Bend' was a high-energy feast while the track 'Who'll Stop the Rain' plugged into the darker

side of Fogerty, a side he was not avert to exposing to his listeners.

The rest of the album was packed with covers such as 'I Heard It Through the Grapevine' plus old Sun tracks like 'Ooby Dooby'.

This new edition of the classic album emerges as the LP hits its 50th anniversary. As such, it has been provided with high-quality attention, with mastering completed at Abbey Road by one of the best mastering engineers in the business, Miles Showell. Now, anyone who knows or at least knows of Showell will also understand that he's the industry's principle expert in half-speed mastering and this vinyl has been treated thus. Half-speed mastering is a protracted and long-winded process but does result in a highly detailed soundstage, great focus, airy mids and organic bass in general terms. And that's what you get here.

AUDIOPHILE VINYL

Carla Bley  
Andy Sheppard  
Steve Swallow

Life Goes On

ECM



CARLA BLEY, ANDY SHEPPARD &  
STEVE SWALLOW

Life Goes On  
ECM

Look at the line up here and you might assume this is another one of those wife-swapping type jazz ensembles. Free-form trios that come and go, split and reform with new members - while the older members run off to hook up with other trios and quartets or more.

But not this bunch. Of course pianist Bley and bassist Swallow are partners in crime and life which helps the bonds that tie, while sax man Sheppard had tied his star to those folks for some time. In fact, this is the trio's fourth album outing, an easy-going four years after the LP, 'Andando el Tiempo'.

There are three multi-part works here: the title track, Beautiful Telephones and Copycat. Each one features vaguely thematic musical ideas but all focus on modern or relatively modern jazz time and chordal structures. There's complexity here amongst the

relaxed and laid-back atmosphere.

This vinyl edition is a fine release and has been mastered well - often the case from this German label.

And that's fortunate because, on this production, the trio are taking it easy, taking things slowly and using more space than might normally be the case. Hence, there's more chance for you to notice small details. The slow deliberate piano chords roaring up and down the scales with gay abandon, the considered bass plucks and the heavy resonance of the body of the thing, while the breathy and textured sax is more than humanistic in both approach and tone.

The music here can be complex and intricate but it can also be playful - performed with a smirk and a smile. The trio obviously enjoy each other's company and, more than that, working together. So, why not join in the party?

**D**o you ever remember that funk/soul hit, full of musical stuttering it was, called 'Give Me Just a Little More Time'? A Top 10 hit and the band's first and best-known single, but Detroit's time in the hit-tested sunshine was relatively brief. Around the 1970-1973 period.

Two other singles followed: '(You've Got Me) Dangling on a String' and 'Everything's Tuesday' but they languished as Top 40 contenders, failing to have quite the same impact. Then they broke up in 1971, got back together, had some regional US hits then finally broke up in 1976 while two group members, General Norman Johnson and Showman Danny Woods moved onto solo careers.

So where does this LP fit then? Well it slots easily into the group's massive ego, if the lyrics are anything to go by. Women weren't safe in their presence, it appears. Don't damn them for their boasting and

bluff though because there's plenty of good songs on this 1970 release that originally appeared on Holland-Dozier-Holland's Invictus label and followed their well-received, self-titled debut of the same year.

As you will read in the Dylan review elsewhere, there was a distinct feel to the mastering from that seventies release and that holds true here too. There is a warming tonal direction in the mids with a sense of cuddly yet strong bass that wraps the music in cotton wool. This means that clarity is not a principle ingredient of the soundstage, not compared to more contemporary releases. That doesn't matter though because the mastering sets this music in its place in history.

And that music is a confident, swinging slice of funk and soul. Head-nodding, foot-tapping soul that combines Johnson's unique delivery, Woods' strong approach and a classic soul, finger-clicking that will have the hips a-swinging.



## CHAIRMEN OF THE BOARD

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# AUDIOPHILE VINYL

**B**it of a weird one this, but a weird one all Dylan fans need to investigate.

Firstly because this release was not a standard Dylan album but a sound track for Sam Peckinpah's movie of the same name.

Also, it was the first LP he had released since 1970's 'New Morning'. Apart from a spot in the earlier Bangladesh benefit concert in 1971, Dylan had gone AWOL.

On this release, Dylan reacquainted himself with a former colleague, guitarist Bruce Langhorne, who had appeared on the LP, 'Bringing It All Back Home' and others before that.

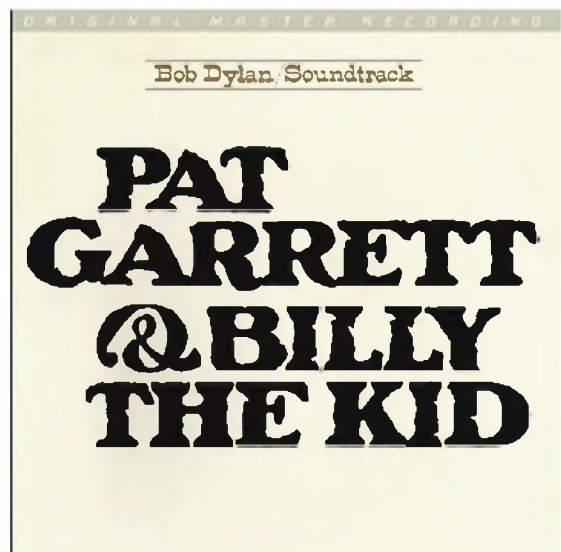
Unlike some named artists of certain sound tracks, Dylan took a firm hold of this one, composing and playing upon it. It was also remarkably simple in approach and musical structures with a folkish and country flavour to add form and

colour.

As to emphasise the serious nature of the project, Dylan also brought in other names such as Booker T. Jones, Roger McGuinn and top fiddle player, Byron Berline.

The album repaid Dylan for his hard work because it produced a killer single, the one and only 'Knockin' on Heaven's Door'. There's plenty of other excellent additions to that hit, including the three 'Billy' songs, while the instrumentals were all worthy.

Often neglected, this album stands on its own two feet as a quality release, enhanced because Mobile Fidelity has added excellent mastering to this 33rpm LP. There's a slight warming nature to the mids on this issue which gives the music that classic 70s tone. The mastering colours used here were also all over other 70s releases of the time, its a sort of tonal signature but one that still retains plenty of information and focused detail.



BOB DYLAN

Pat Garrett & Billy The Kid  
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# Sharp shock

Paul Rigby looks at a compendium of edgy music from 1976-1986 – music that was a shock.

## A SHARP SHOCK TO THE SYSTEM

Author: Vernon Joynson

Publisher: Borderline Productions

Price: £75

**Y**ou know, I've been doing the journalism thing for a few decades now. If you asked me to run off 1,000 words or so on any given subject, it wouldn't take me too long to sort that out for you. As for our Vernon? Blimey. I stand in awe at the man's textual accomplishments. Mr Joynson rattles off a 1,000 pages before tea, never mind 1,000 words.

This book is no exception. It's also a staggering achievement. This monster of a tome is sub-titled thus: 'A Comprehensive Guide To UK Punk, New Wave, Post-Punk, Mod Revival, Neo-Psychedelia, Goth-Rock & Electronic Music 1976-1986'.

This book is actually a sequel to Joynson's 'Tapestry of Delights', the two volume edition, which looked at UK music from 1963 to 1976. It's a big subtitle for a big book. How big? 1,440 pages big. That's how big.

This new paper-based phenomenon is sold as a numbered, limited edition. Numbered? Indeed yes, you'll find a neat little number added to the inside front cover, in case you can't find it. There are 1,000 copies now out there.

If you do grab one then you'll find 1,682 entries plus twelve pages of full colour illustrations featuring bands, artists, LPs, 45 singles, EPs and, let's not forget, cassettes and where artists continued beyond 1986. Biographies continue until the present or until the artist ceased performing and/or recording.

And those artists actually roam further than the large subtitle suggests because you'll also find

synth-pop, indie-pop, indie-rock and alternative rock, plus industrial acts.

The book also looks at sub-genres including cassette culture, power pop, punk variants, the mod revival and more. There's also Irish artists added in for good measure, plus the odd band from outside the boundaries such as Australia's The Saints and France's Stinky Toys – because they were based in the UK and/or found success here and were part 'of the scene'.

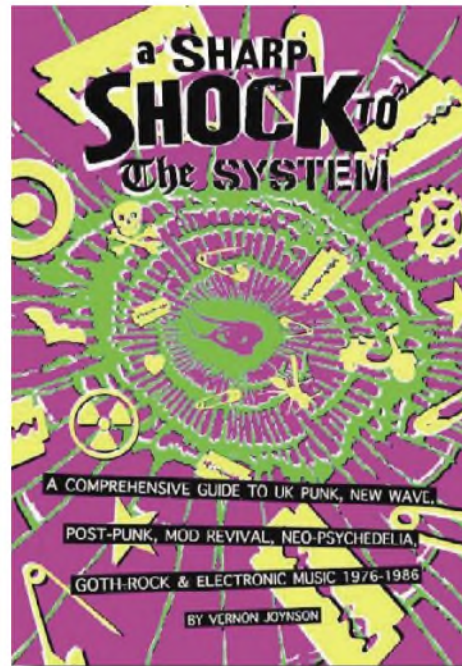
I like that flexibility in this book. That is, the book runs with the music and the passion and doesn't knock itself out with too many boundaries.

That said, even with a book of this size, Joynson has made some editorial decisions by giving biographical but not full discography information on larger eighties artists that fit within the Ska, 2-tone, disco, soul and reggae domains.

One interesting facet is the rarity scale code and its accompanying price range which might help in terms of pricing, if you're buying/selling any of the included releases. Hence, the code SC is 'Scarce' and valued at £18-£35, while R1 is 'Rare' and valued at £35-£60 and R7 says that 'Only a Handful Exist' with a price at £1,500+.

The layout of the book is classic Vernon but, in case you've never grabbed one of his books before (and you should), here's how these things roll.

Let's pick someone at random. I'll go for Ian Dury & The Blockheads.



You get a band-member run down, what they did in the band and what line-up they belonged to. There's an album run down including label, catalogue number and year of release. A host of release notes on each including value, different territory, format and limited-edition versions, compilations and live releases, EPs and single releases, reissues, plus a full biography and information on the band since Dury's death. About six pages of closely-printed, A4-packed information in small type!

The detail is wonderful but there's also emotive inserts here from Joynson. This is not a robotic academic tome. For example, Joynson disapproves of the departure of Chas Jankel from The Blockheads and the inclusion of replacement, Wilko Johnson in 1980, the band's "... material was seldom as strong again," he says.

This book offers years of reading enjoyment, serving as an enormously valuable reference for fans, collectors, buyers and sellers. 'A Sharp Shock to the System' is a triumph and easily worth the asking price. **PR**

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## YAMAHA A-S3200 INTEGRATED AMPLIFIER

Yamaha returned to past glories some time ago and continue today with this new amplifier, rated at 170 Watts per channel. Styled to mimic designs from the 1970s, this is no dull black box, rather something to grace the lounge – a statement product. Being Yamaha it has to be good. Next month we find out just how good, after applying comprehensive tests. Don't miss reading what we discover.



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This is a selection of what we hope to bring you, not a complete list. We regret that due to a wide range of issues, we cannot guarantee that all products listed above will appear.

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# ALANIS MORRISETTE

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"Morrisette brings a big bucket of delicious anger to this LP"

It took Morrisette all of two months to do and here we are, twenty-five years later.

Although she didn't do that while walking the full length of Route 66 or living in the woods or even up in the proverbial, poverty-stricken garret. No, she did it while holed up in an LA studio with producer Glen Ballard, in 1994.

A grand total of 33 million sales later and Morrisette knows she's 'done good'. There's even a related musical, would you believe. Would you? I wouldn't. But there is.

For all of the emotion, the hardcore lyrics, the explicit nature of the passion exposed to all, you have to remember this. She released this LP when she was nineteen. A time when she hadn't even been in a long term relationship, when she felt independent in extremis and frankly, it shows. She sometimes sounds like a spoiled brat. A selfish kid. An unfeeling, self-centred, self-preservational egocentric.

She knows this too. She recently commented in an interview with The Independent "At one point I was hyper autonomous, thinking that was the way, I'll just do this all myself, I don't need anybody, and then now having been married 10 years I realise that there's some lyrics in that song that I would update. As in, I'm actually participating in your healing, I'm not just sitting over here going 'Hey, you're on your own, call me when you're done!'"

But you know what? That's OK because it talks to other teeny teens. This is the stuff many of them think about. This is the attitude a lot of girls of a similar age have. This is the narrow existence particular young ladies (and lads let's not forget those shall we?) occupy.

It also brought Morrisette fame and rather unwanted attention "...as soon as the video for 'Hand in my Pocket' came out, I remember walking down the street in New York and people started running up to me and I thought 'Oh, okay this is different'. As a Canadian with my particular temperament, I just love people watching and then all of a sudden I became the one that was watched, and it was very odd".

Oddly enough, after the release of this album, things took a turn for the worse as her so-called protectors became exploitative in rather nasty ways.

Talking, a few year ago now, to [www.interviewmagazine.com](http://www.interviewmagazine.com) "When I was younger, my survival strategy was to be super people please-y, to tend and befriend. And then I realised that wasn't working. I was getting my heart broken at every turn. And then after fame, my survival strategy went to just being aloof. What saved me was a third option: to focus on my relationships...the really basic ones, like with my husband and my best friends and my therapist. Growing up has helped".

The album has re-emerged as an anniversary issue that's been cut from the analogue master but I'm not impressed with the pressing itself which, at least on my sample, was warped. Not badly enough to prevent play or overly affect the sonics but it was disappointing to see.

It's funny to hear this one again. Alanis reminds me, especially on this LP, as a wilful, rather petulant teen-age daughter, entering puberty and testing her boundaries.

Someone whose moods and hormones you really don't have time for just now. And you just want to send her to her room. With no phone. And the plug removed from her hi-fi. And then you shout up stairs to turn down the volume on that TV.

And then you mumble "bloody kids" to yourself as you put on the kettle for a cuppa and try to calm down.

Saying that, Morrisette does bring a big bucket of delicious anger to this LP and it works very well. Especially on a track like 'You Oughta Know'. She almost spits the lyrics out and you really wonder if the microphone had to be sponged down after this particular song.

And then she can get melancholy on tracks like Perfect. But you know, really, that it's the hormones again and yes, she's about to burst into tears and eat a tub of ice cream in front of a romcom – and tomorrow she'll be saying she hates you again. It's a feisty LP that inspires such reactions. **PR**

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