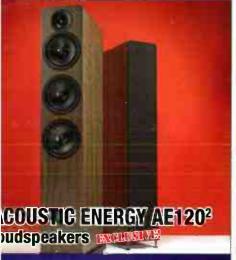
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#### hi-fi world

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he trouble with loudspeaker drive units is they send sound backwards as well as forwards. Long ago they realised that If a cone moved forward, compressing the air ahead of it, this air would race around to the back, cancelling sound – inconvenient. Some bright spark realised this could be prevented by putting the drive unit in a box – which is where we are today. Trouble is that

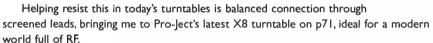
trapped sound causes other problems.

This has concerned KEF for some time - I recall they

once had magic charcoal to counteract the problem – but all has gone quiet on that front. Now they have come up with Metamaterial. It's only for tweeters but certainly has quite an affect, You can read more about it on pll where we review their new Reference I Meta stand-mount loudspeaker.

The subject of radio frequency (RF) pickup by loudspeaker leads is a fascinating one that gets raised on p34 where we look at a pair of filter blocks designed to remove it. As Martin Pipe says, loudspeaker leads can act as aerials and this they used to do in areas surrounding the Crystal Palace TV transmitter in South London. TV sound would break through into the hi-fi via the 'record player'. Strong TV signals were travelling from loudspeaker output to phono input, overloading it and getting rectified. Cure was to solder a small capacitor across the first transistor's base-emitter junction – simple and quick; I did it often.

These days we are surrounded by transmitters in our home so it is possible such problems still exist, even though there are now stringent rules to minimise spurious radiation. But this does not impact wi-fi or Bluetooth radiated power, nor the regular 3W bursts from a 'phone to handshake with the local 'phone mast.; we've all become walking transmitters, for better or for worse.



Hi-fi has its strange sides and we look at them in this issue. I hope you enjoy.

#### Noel Keywood Editor

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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.

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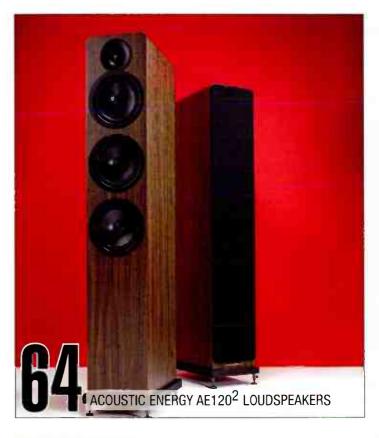
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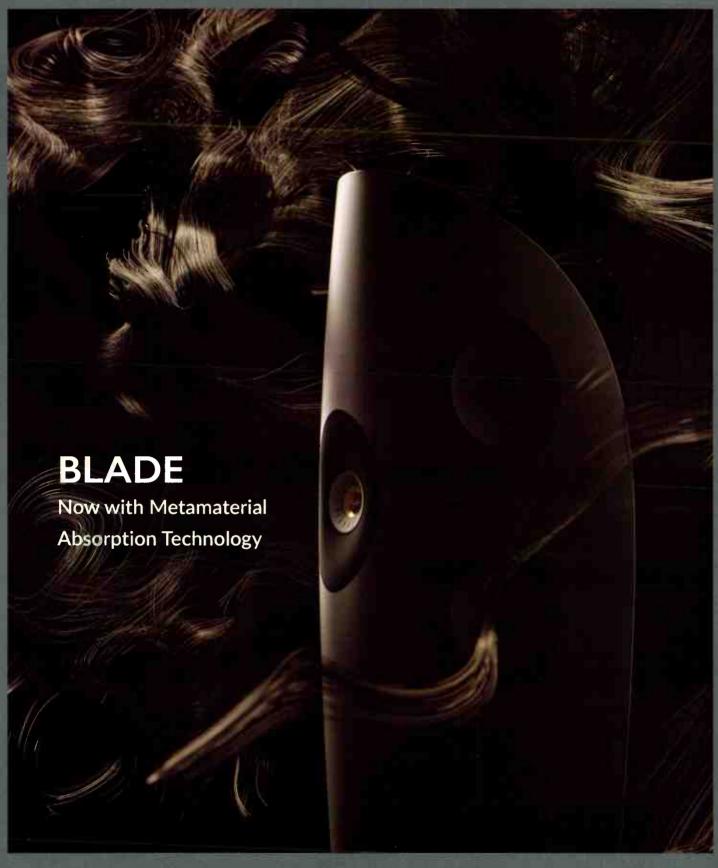
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# news

#### **HAPPY BIRTHDAY, AUDIO TECHNICA!**

Aged 32, Hideo Matsushita started work at Tokyo's Bridgestone Museum of Art. He organised vinyl listening sessions, which were popular and proved to him that pre-recorded music could convey the depth of emotion felt by concertgoers. At that time (the mid-1950s), hi-fi equipment was prohibitively expensive. Matsushita was determined that more people should be able to



"experience such fantastic audio quality" and this led to his decision – 60 years ago – to establish Audio Technica in a small Shinjuku apartment. His first product, the AT-I cartridge, proved successful and set A-T on a journey that continues to this day. As well as cartridges, headware, mikes and record-playing accessories, today's A-T makes turntables – the latest of which is a 'black edition' of the AT-LPW30 manual belt-drive turntable. The £290 two-speed AT-LPW30BK has an inbuilt phono stage and is equipped with a AT-VM95C MM cartridge – which can trace its lineage all the way back to 1962's AT-I. We wonder whether their delightful Soundburger might be revived too!

Further details: www.audio-technica.com



#### FAIR AND BALANCED

Another turntable and two phono stages have joined Pro-Ject's extensive portfolio, Priced at £2,099, the belt-driven X8 is described as a "mass-loaded high-end turntable" with heavyweight wooden plinth, rubber-damped aluminium 5.1kg main platter and low-noise synchronous motor driven by an AC generator for "convenient switching between 33 and 45rpm". Based on other high-end Pro-Ject turntables, the X8 is pre-installed with a 9CC Evolution tonearm that's built around a 9ln. tapered carbon-fibre armtube. Completing the package, which can easily be upgraded to "True Balanced" operation, is a pre-installed Ortofon Quintet Blue moving-coil cartridge.

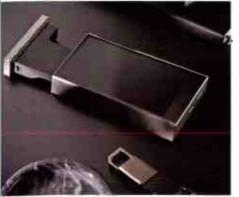


Also ready for balanced (and unbalanced) connections are the S3 B (£349) and DS3 B (£529) 'Phono Boxes'. Both are dual-mono, fully-discrete and built into steel boxes for screening purposes. They support moving-magnet and moving-coil cartridges, with front-panel controls to configure gain and loading settings. Helping to justify the DS3 B's premium is its resistive-loading control, which is continuously-variable between 10 and 1,000 ohms.

Further details: www.henleyaudio.co.uk







#### **ANOTHER AWARD FOR THE SE180**

Astell&Kern's £1,399 A&futura SE180 DAP recently won an iF Design Award, on account of its "elaborately-processed art sculpture". iF's judges recognised one of the 'modular' SE180's key features as its DAC interchangeability, which allows the user to tailor the sound to personal preferences. The latest DAC module for the SE180 is the £369 SEM4, which boasts Asahi Kasei AK4493SEQ dual-DACs and – to "enhance the sample rate of the audio source, so music fans can get closer to an analogue-like original sound" – 'Digital Audio Remaster' (DAR) upsampling technology. DAR, developed specifically for the SEM4, goes all the way to 384 kHz (or DSD256).

Other SEM4 features include Teraton Alpha and Velvet Sound processing, claimed by A&K to yield "more natural audio", carefully-chosen passive components and electronic design that facilitates continuous running-times of up to 14 hours to be achieved – "the longest among SE180 modules", A&K assured us.

Further details: www.astellkern.co.uk

#### **HEAVY METAL FROM SHEFFIELD**

Sheffield-based Ophidian was established in 2011, to make loudspeakers that "outperform their physical dimensions". To this end, they feature Ophidian's proprietary "Aeroflex" take on bass-reflex cabinet design. Aeroflex's "much larger and longer port system", we're told, "drastically-lowers air velocity", thereby ensuring that the driver is "properly-controlled" throughout its stroke...for better dynamic range and an even tonal balance, regardless of listening level. Such technology lurks within the £14k 'Voodoo' flagship, an imposing 3-way floorstander "capable of powering even the largest rooms with ease". With Aeroflex and twin 265mm bass drivers, which boast "huge" magnets and anodised aluminium cones, the Voodoo's -3dB LF point is an impressive 26Hz. Sitting in a damped sub-enclosure is the similarly aluminium-coned 180mm mid-bass driver, which features a phase-plug at its centre, while a 22mm Sonomex soft-dome tweeter handles treble. Weighing 59.5kg, the internally-braced walnut-finished cabinet sits on a CNC-machined aluminium plinth with adjustable feet.

Further details: www.ophidian.co.uk



#### A ROSE BY ANY OTHER NAME...

Class AD ('Advanced D'), a "tonally neutral" variation of Class D PWM technology with "innovative new materials" like gallium-nitride FETs to improve sound quality – is Korean company HiFi Rose's "next-generation" amplifier design. The Class AD output 'modules' of new £5,499 RA180 integrated amplifier – its first – join forces to deliver a meaty output of 400W per channel in 'bridged' mode.

As an alternative, the four modules can be run in 'biamping' mode in conjunction with an onboard crossover, separately-feeding the LF and HF sections of suitable

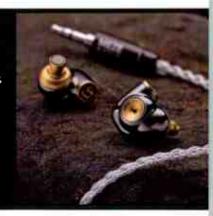
speakers with 200W via independent sets of output terminals. Other features include tone controls, MM/MC phono stage with adjustable filters, three unbalanced Line inputs, one XLR balanced input, motorised volume control and dimmable VU meters. The RA180 can be controlled via an app, as well as a conventional infra-red handset. The amp's unusual 'Nagra-meets-steampunk' styling, as befits its maverick nature, definitely grows on you!

Further details: www.henleyaudio.co.uk

#### MARAMURES MAGIC

Meze Audio, no stranger to these pages, has added the Advar IEM to its range. As with previous products, its name is spiritually-interwined with Meze's home country. In Romanian lore, Advar is an all-powerful tallsman that blesses those who wear it. We're not sure these £649 IEMs will go that far, but their wearer should certainly be blessed by music reproduction of a high standard - courtesy of a "precisely-tuned" 10.2mm dynamic driver, with "warm, dynamic presentation" and "smooth, velvet-like" character. The "ergonomically-contoured" stainless-steel housings, from which the cables can be detached, result from a "long-term search for the optimal fit" and are said to rest lightly (and comfortably) on the ear while at the same time providing effective noise-isolation. They're inspired by the surface of raw haematite (iron ore), as well as the natural springs, forests and mountains of Maramures — the northern area of Romania where Meze is based.

Further details: www.scvdistribution.co.uk





#### FLOAT ON

Connected-Fidelity has followed up its 'RF Blocker', reviewed this month, with a range of products to isolat audio products from the mechanical vibrations that can impair performance. According to Connected-Fidel the damping materials on which most isolation products rely have compliant 'memories' that contribute 'resonance characters' of their own. To get around the problem, the firm's founder Michael Osborn (of Asti Trew fame) has come up with a new "floating spheres" design — specifically, non-resonant chromium-steel b races within two 49mm anodised-aluminium "cup-shaped channels".

Furthermore, three polyoxymethylene (POM) spheres set into the top and bottom faces of each 'Float' act as 'feet', to ensure stability. Designed to sit under your equipment, Connected-Fidelity's Floats are available in packs of 3 (£346) and 4 (£399), inclusive of 'coasters' for your mounting surface. Silver or black finishes are offered, as are M6 and M8 threaded versions for loudspeakers.

Further details: www.connected-fidelity.com



#### **GIMME FIVE!**

More than 30 years have flown since Rega launched its original Elicit (50W) integrated amplifier. The 1990 'clamshell' design covered all of the era's key sources — vinyl, CD, tuner and tape. Now we have the £2k Mk5 version. It has a high quality moving magnet phono stage, as one would expect from a manufacturer famous for its turntables, but also built-in is a hi-res (192/24) DAC with optical and coaxial (but also not USB) inputs.

To accommodate other sources, the neatly-minimalist Mk5 is equipped with four line-level inputs. Unlike the

1990 model, the Elicit Mk5 can be remotely-controlled by the supplied handset. Other features include 'advanced' discrete FET-based preamp circuitry (derived from Rega's £3k Aethos), record/preamp outputs, 'direct' input for AV installations, 2x 105W per channel (8 Ohms) of Class AB output power, headphone socket and ALPS volume control.

Further details: www.rega.co.uk

#### **ECLIPSE EGGS ON**

We've looked at (and listened to!) the unusual egg-shaped full-range speakers from Kobe-based Eclipse in this magazine. Although they lack presence at the frequency extremes, they make up for it with their communicative nature and agility. In some respects these speakers outshine more conventional 'boxes', faring particularly well with solo piano in our experience. Eclipse has been quiet of late, and indeed its last products to be featured here were the £1k-per-pair TD508 Mk3s...four years ago.

The Japanese firm has now broken its silence, with a new version of the stand/ceiling mountable low-power TD307 – also in Mk3 form. Its new high-performance 6.5cm drive unit, with fibreglass diaphragm and neodymium magnets, is supported by other refinements including an ovoid cabinet of greater volume (for improved bass) and improved input terminals that accept both bare wire and plugs. The 2kg 8 Olim TD307 Mk3, rated at 25W maximum, is available singularly (mono freaks and home cinema users?) for £300, as well as in £600 pairs.

Further details: www.eclipse-td.com



#### **TAPE TALES**

We frequently hear about the renaissance of analogue reel-to-reel tape, but most of it involves new (and expensive!) recordings for playback on decades-old hardware. Occasionally, rumours surface of a brand-new deck – almost always unashamedly-deluxe, and made in tiny numbers. One such machine is the 'Papillon 15" Studio Tape Recorder' from Metaxas & Sins, only 10 of which will be built. The Papillon, which leverages

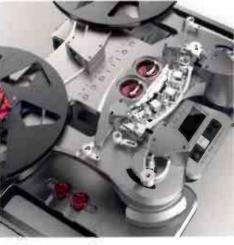


electronics and machining processes that simply didn't exist in the 1970s, is undeniably a work of art. Influenced by a previous era's Swiss-made Stellavox recorders, the three-speed (7.5/15/30ips) half-track deck uses ARM-based microprocessor technology to drive

high-torque brushless motors – one for each reel, and one for each direct-driven capstan (it's a closed-loop design).

Further motors engage and retract the pinch rollers. In contrast, the audio electronics relies on "single-ended transistor purist electronic paths developed in the 1960s". Built into a trolley (like yesteryear's professional workhorses) it would visually-complement HiFi Rose's amp featured elsewhere; mind you, with its pricetag of 75,000 Euros it's evident that Metaxas & Sins are going after a different class of customer. As well as the 'full' 3-head record/play version, a single-head playback-only option will be available.

Further details: www.metaxas.com



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# Meet Meta

KEF's new Reference 1 Meta loudspeaker has Meta technology. Noel Keywood listens.

nere's a fascinating probem little talked about
with loudspeakers: how
to make them referenceaccurate without sounding
boring. KEF show how
in their recent Reference I Meta
that I'm reviewing here. It was fascinatingly perfect — I could clearly

hear so (after a bit of fiddling). Io enjoy what could be described as near-perfection you need £7500, or £1000 more with KEF's own S-RFI floor stands as shown here. Gulp.

I designed and built many accurate, flat response loudspëakërs for World Audio Design through the 1990s and it wasn't difficult, given a decent set of drive units. What was difficult – and remains so it appears – was to avoid a lifeless sound. Easy to spice things up by adding a bit of treble and bass boost. As commonly done nowadays. KEF avoid such trickery and it was good to hear the outcome, since I very much believe in fundamental accuracy





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One of the peculiarly offset port retaining ring (left) together with a long black low-frequency foam insert. In the 'speaker here is the alternative short grey insert.

 one of those values from long ago that many manufacturers wish to quietly ignore for the sake of excitement in the showroom.

How do KEF combine accuracy with excitement? Well, not entirely through their vaunted use of Meta material. That's confined to the tweeter they say, leaving much of the audio band un-Meta'd. The Uni-Q driver (at top) comprises 25mm (Iin) alloy tweeter sitting at centre of a 125mm (5in) alloy cone mid-range unit in what is termed a co-axial arrangement. Note in particular the stiffening ribs/waveguides of the midrange cone, giving it stable behaviour over its operating band of 450Hz to 2.1kHz - a crucial region subjectively because this is where the ear is very perceptive. Also note how a surround blends this driver into the cabinet's front face, for a good acoustic match.

The central tweeter has
Tangerine waveguides to control
dispersion because it sits symmetrically in what is a shallow horn

formed by the midrange cone – and symmetry here is not good, leading to phase issues and small response perturbations when measured on-axis (but not off-axis). Such problems have been banished here.

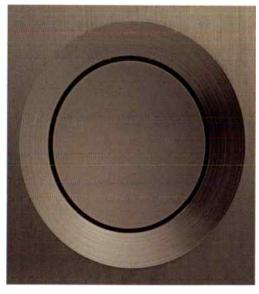
Behind the tweeter, we are told, lies an acoustic maze of Metamaterial that is asymmetric so offers broad absorption to high frequencies to provide clean treble. And I believe that helps toward the very smooth, extended response we measured.

Below 450Hz a 165mm (6.5in) aluminium cone bass unit comes into play, loaded by a rear port, extending bass down to a low 37Hz KEF say, but in practice it reached down lower, to a very low 30Hz with the optional long port (black) supplied. As I became immediately aware when listening. Since this drive unit covers the lower midband it makes an Important subjective contribution.

The Reference I Meta looks compact from the front perhaps, measuring 205mm wide and 440mm

high, but it is deep at 422mm and very heavy at 18.2kgs (44.1lbs) apiece. The sturdy KEF stands raise height to 990mm. Ours came in a deep gloss black but a range of finishes are available and as you might hope the quality of construction and finish is superb. For those who would rather not see the drive units a cloth grille is supplied.

These speakers are tweakable: the port can be changed. Supplied are two dense-foam inserts: short (grey) and long (black). I listened to and ran-in the KEFs before measurement and in quick time removed the long black port as supplied and inserted the short grey port to reduce boom in my 17ft long lounge. There was a very obvious difference between



The 163mm alloy coned bass unit covers the lower audio band as well as bass, from 450Hz right down to 37Hz KEF say. It does quite a lot of work in this 'speaker.



The port without foam insert or the profiled retaining ring that clips in and rotates to lock.





Bi-wiring is made possible by simply turning finger-screws to break connection between bass unit and UniQ driver.

the ports, the long port suiting a bigger room than mine. Changing ports was a fiddle: a shaped plastic retainer must be unclipped. But once done bass better integrated with the sound.

#### **SOUND QUALITY**

I paired the KEFs with our grippy and well illuminated PrimaLuna EVO 300 hybrid amplifier, with its intensely detailed sound and fast, punchy bass from what is a high power (100W) FET amplifier fronted by valve preamp. Connection was through Chord Company Signature Reference screened cables.

The source CD player was an Oppo BDP-205D with its ESS ES9038Pro Sabre DAC, and this was also used to deliver in hires from a MacBook Pro using an Audirvana+ software player to play DSD, as well as PCM. The Mac was run by battery to be a fully floating source free from ground loop noise; it was connected by USB.

The KEFs did not come at me, so much as gently and persuasively beguile me. And it didn't take long. The strings of Antonio Forcione's guitar in Tears Of Joy (CD) were silkily clear and easy on my ear, yet there was great insight into the performance, well rendered background reverb bringing in a

sense of life, vivid contrast between strings and body making for engaging dynamic contrasts. And all the time a great sense of balance across the audio band that made for silky cohesion.

There was no doubt that Meta material has significant affect. My torture treble tracks were cleared of muddle and hash. I got a fuller picture of Willy de Ville standing at the microphone

handled by it - if with difficulty. He's inches from the diaphragm, but the KEFs revealed all this in easy yet correct fashion.

Same again with Fleetwood Mac's Dreams (24/96) where Mick Fleetwood's cymbal crashes were clear and clean, lacking the mush that often comes off them. I attributed this to tape overload (saturation) of a late-1970s multitrack studio recorder when it may

"With Dance of the Tumblers (24/96) there was a spacious depiction of the hall's acoustic and the rasp of brass was sonorously rich"

singing Spanish Harlem live (CD). At intro audience whoops were clear and the venue's acoustic made obvious; three successive sibilants in "rose of Spanish" now were not overwhelming the mic and producing muddle, so much as being

The long port (black) is tuned to 30Hz and the short one (grey) to 45Hz. Fastest and best integrated bass from short port; lowest bass from long port.

well be from tweeters manufactured 40 years later. The Meta tweeter had magical ability here - and it was consistent. Highs were clean, clean, and there was also a return of sonorous sweetness to strings, across a wide range of music I played. It was nice to hear what I

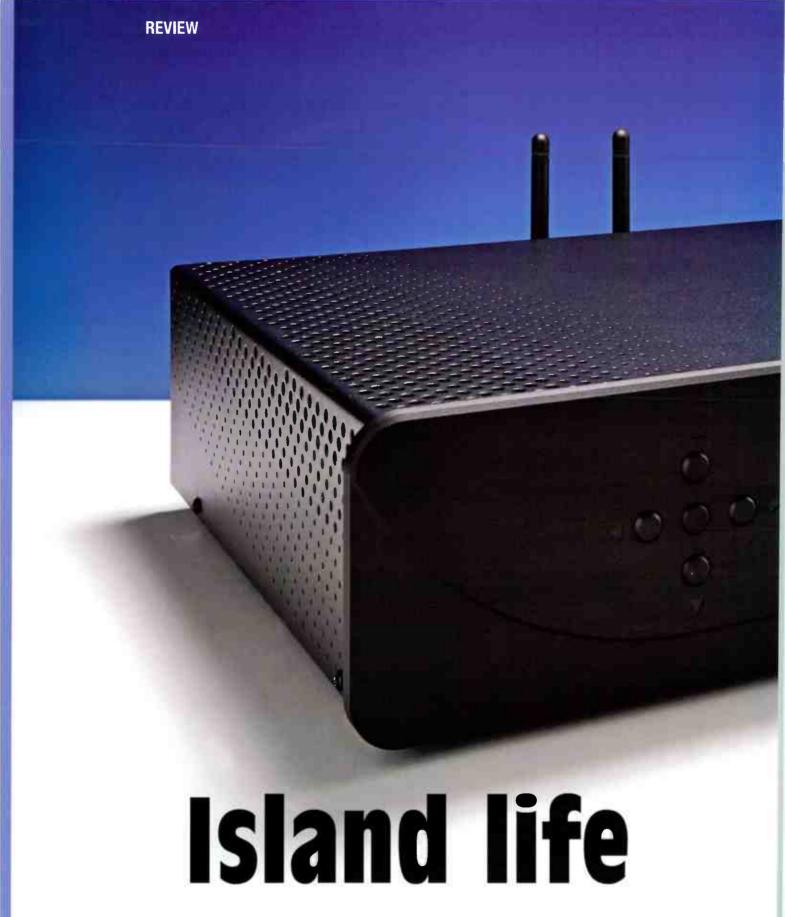
felt was a definitive version of the recording rather than yet another one, different but not better than the other ones. As a reviewer this puts me into a guessing game - which is right? - that I don't like. The KEFs were convincingly

Similar strengths affected classical. With the Minnesota Orchestra playing Korsakov's Dance of the Tumblers (24/96) there was a spacious depiction of the hall's acoustic and the rasp of brass was sonorously rich, filled

with timbral content. Yet it was also pure and simple it seemed to me. There were regular strikes from a kettle drum at the back of the sound stage and these were both powerful and well timed, if soft in outline definition. I'm sliding into bass

quality here and as with Rock the Metas were fulsome in their bass rather than viscerally punchy.

Sliding out of bass quality and back to the classical viewpoint, the same sense of balance I heard with Rock was a positive, the Trondheim Soloists behind Marianne Thorsen playing Mozart Violin Concerto No4 (DSD) sitting in a deep open space



#### Martin Pipe navigates the oceans of digital audio content with Atoll's Signature ST200

ased in the Brécey area of Normandy, Atoll Electronique was founded a quarter-century ago by brothers Stéphane and Emmanuel Dubreuil. Back then,

they believed "budget-conscious audiophiles" were inadequately-served with "reasonably-priced true high-end audio electronics". Atoll's first products were stereo amplifiers, but CD players and home-cinema amplification fol-

lowed shortly thereafter. Still a family business, Atoll makes all products in its own factory and "where possible", according to Jonathan 'Jonty' Egan from UK importer Replay Audio, using "parts that are sourced as close to base



as they can be". Jonty explains that his firm took on Atoll, because "the brand is successful across Europe... with unique award-winning ranges....but has never really been distributed properly in the UK".

According to Jonty, the French firm's "principal idea is to make affordable high-performance products without recourse to manufacturing in Asia or other cheap-labour markets". In this regard, he compares Atoli to our own Rega. Although Atoll still makes CD players it realises that streaming accounts for everincreasing slices of our listening. The £2k Signature ST200 featured here is, Jonty explains, the "followup to Atoll's first streamer, the 'mini' MS120...it uses the same "Stream Unlimited" platform, but with beefed-up power supplies and an improved output stage". Also available is the uprated

£2800 ST300, with balanced XLR line outputs (the ST200 is 'phono only'). Both models share the same elegant and understated machined front-panel and steel casework.

There's more to the Roon Ready ST200 than streaming music from Internet radio stations, commercial services like Spotify and Deezer or 'local' DLNA media servers via Wi-Fi or Ethernet. The obligatory Bluetooth is built in, and the unit will also play music stored on USB A Flash drives; MQA is supported - as are DSF (DSD), linear PCM, FLAC, ALAC, AIFF, WMA, OGG, WAV, AAC and MP3. Gapless playback is catered for, while hi-res compatibility extends to DSD64/128 and PCMderived material up to 24/192kHz. In its LED-confirmed fixed-output 'bypass mode' the ST200 can be used as a digital source with an existing system. However, it can

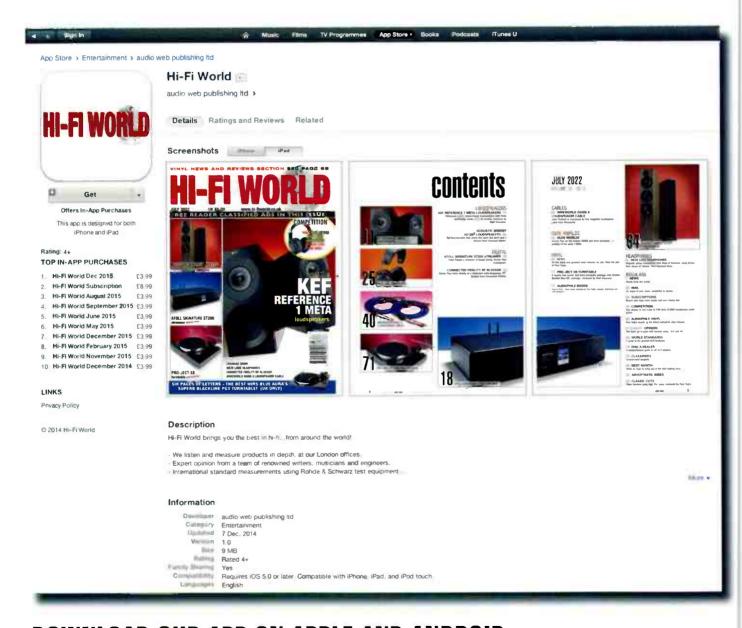
easily be transformed into a 'digital preamp' by holding down a button. Its versatility here goes beyond the 100-step volume control - which enables the ST200 to drive active speakers and power amps directly.

In this mode, the ST200 is intended to take pride of place at the heart of a system - thanks to its source selection facilities. In addition to a quartet of S/PDIF digital inputs (two coaxial, two optical) for devices like CD transports and digital TV set-top boxes, Atoll has provided a pair of line inputs so you can enjoy your phono stage, tuner or analogue tape without the need for external switching boxes or other clutter.

And outputs? First and foremost are analogue phono sockets, but there are also coaxial and optical digital outputs that enable the ST200's streamer section to be to be auditioned via

# H-FI WORLD

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an external DAC. Unfortunately, 'digitised' versions of the analogue inputs aren't available on these terminals - also conspicuous by its absence is a USB-B port for computer audio. Atoll has however endowed the ST200 with a frontpanel unbalanced headphone output. Shame it's a 3.5mm socket, though — a 6.3mm type would have been better.

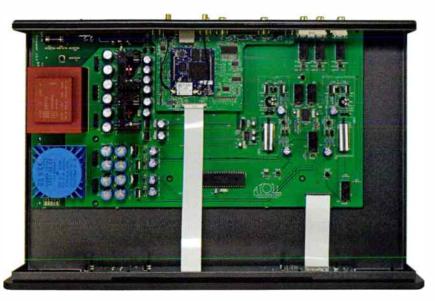
The ST200 can be controlled via the front panel, the supplied handset (which will operate other Atoll gear) or the inevitable free 'app' for Android or iOS. They work in conjunction with an 5in. colour LCD screen, which will display – for example – radio station logos and album cover



Supplied with the ST200 is this handset, which will also control other Atoll products. The inner/outer ring arrangement seems fiddly at first.

art when it's not showing clearlypresented menu options.

Full marks to Atoll for designing the user interface so that all key functions - including the selection of music for playback - can be 'driven' with the frontpanel buttons on either side of the screen. Less favourably, these buttons aren't backlit and so you may have to feel your way around the front panel in a darkened room. On which subject, the display can be arranged to 'time out' so that it doesn't act as an unwanted source of illumination during those night-time listening sessions.



The ST200 uses tried and tested technology including a Stream810 streaming module, Burr-Brown PCM1792 DAC chip, National Semiconductor LM1972 attenuator and linear power supplies. Note that our sample is missing some PCB fixing screws.

A peek inside reveals neat construction, and that Atoll has stuck to 'tried and tested' electronics - beginning with the power supplies. There are two of these - one for the analogue circuitry, the other for the digital side of the operation - and both are conventional transformerbased linear designs. Core to the ST200's functionality is a Stream810 streaming module from StreamUnlimited - launched in 2016, and thus proven technology. Buying in such hardware is understandable, as technology of that complexity involves considerable R&D resources. The Stream810 is mounted on a daughterboard, alongside wellknown Cirrus chips that handle digital audio input and output duties, thereby providing possible upgrade paths. On the main board, there's a venerable Burr-Brown PCM1792 DAC chip and - to facilitate volume control - a National Semiconductor LM1972 attenuator. Despite the split-rail power supplies, which remove the need for AC coupling, we could see two audiophile-grade IuF 'ClarityCap' ESA polypropylene capacitors. The headphone amp benefits from a output stage based around TIP31/32 transistors.

#### **USAGE AND PERFORMANCE**

I was impressed by just how quick the ST200 was to install, and the responsiveness of its user interface. Within a few short minutes of wiring the unit into my system - for most of the time, a Cambridge Edge W power amp driving Quadral Aurum Wotan VIII speakers – I was playing music, specifically Radio 3. The ST200 was of course being used in its preamp mode here. Interestingly, I couldn't get BBC Radio 3 with anything better than a 128kbps MP3 stream, which doesn't really do justice to the music. After discovering the IP address that was automatically-assigned to the ST200 by the



As supplied, Radio 4 is only available here in 128kbps MP3 format. You can however add the higher-quality stream manually.



All manner of broadcasts are available with the ST200's excellent Internet radio client.



As well as four digital inputs (two optical, two coaxial) there are two analogue line inputs. There's even a 12V trigger to switch on a compatible power amp when needed. The aerials are for Wi-Fi and Bluetooth, but there's also an RJ45 ethernet socket for wired connection to a network.

DHCP process, I entered it into my browser to access the unit's web interface. The page that appeared asked me to specify my location, and I duly set the country to Britain (UK). After restarting the unit and narrowing down the radio search to BBC stations, the bestquality 'HD' (320kbps AAC) stream for Radio 3 magically appeared.

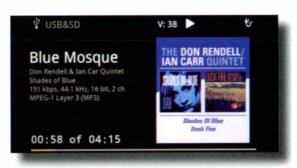
Strangely, Radio 4 remains accessible only as a MP3 stream. You can however manually add a streaming URL via a 'custom radio' menu. Defining stations, once you've found them, as 'favourites' is a cinch. A neat trick, presumably a feature of the ST200's 'Airable' radio platform that smacks of people power. You can request, at the touch of a button, that the current station or podcast be added to the searchable 'master station' list - which, even as it is, covers thousands of broadcasters from all around the world. Sound

Atoll bundles a pair of 1m phono interconnects. These are at the better end of the mass-market spectrum, with moulded-on gold plated plugs.

quality is also a definite draw. the stations that can benefit from it being given an appropriately full-bodied and detailed presentation. In all. Internet radio is a definite ST200 strength. Also on the radio tip is Bluetooth, which is useful for playing music held on smartphones. This isn't quite as straightforward to use as some implementations. Search for 'Atoll Streamer' on your device, pair and start playing. Fair enough.

If you want audio, through, you'll need to

find and select your device in the ST200's Bluetooth menu! The sound quality, with FLAC-encoded tracks streaming from a Sony Nexperia smartphone, is more than up to the job of providing say - background music for a party. Critical listening however reveals that subtle details and musical cues blend into the background. Atoll doesn't tell us what version of Bluetooth has been implemented here, or indeed what audio codecs (aptX, etc.) are supported, but the Stream810 datasheet (bit.ly/3lrq6fi) seems to suggest it's Bluetooth 4.2. Most competitors have since switched to Bluetooth 5. As regards codecs, all I know for sure



With its 800x480 resolution, the excellent 5in. TFT screen display does justice to cover art.



Key to the ST200's versatility are its comprehensive setup menus, which are clear and sensibly laid-out.

is that my phone says that 'HD audio' is possible.

#### **SOUND QUALITY**

Compared to some streamers, a few of which are cheaper, the ST200 is relatively-unsophisticated. There's only the one DAC, for example; some of the competition use two in a differential configuration. I found the LSE/Noseda War Requiem (24/48) struck an appropriate balance between choral and orchestral forces: the ST200's command of dynamics is commendable.

Switching to an old favourite. Wall of Voodoo's Call of the West (CD FLAC rip), I was impressed

by the clarity on offer. I could delve into the fusion of percussive electronics and acoustic drums, while the tonal characters of the harmonica and guitars emerged intact. Amidst all this, Stan Ridgway's quick-fire delivery of frequently-intense lyrics (Factory, for example) I never struggled to hear. For some reason, the ST200's display times how long you've been listening to an external input - whether digital or analogue! I found the DAC mode to be very useful when fed with the optical output of my Humax set-top box, proving that TV sound can actually be pretty good. CDs, played via a coaxially-interfaced Pro-Ject CD Box S3, exhibited the same combination of agility and dynamics that marked streaming playback.

A comparison between the ST200 line input and an attenuated 'direct' feed proved that Atoll's relay-based source-switching and electronic volume control add no deterioration to speak of. I 2in. singles, spun on an Ariston RD80SL with Pro-Ject Phono Box S2 Ultra were detailed (the guitar detail outro of Beggar and Co's Somebody Help Me Out) if maybe a little warm (the bass guitar of Freeez's Southern Freeez).

Switching to headphones, I found that the ST200 was

able to drive Meze **Empyreans** without obvious dirtiness, even with tracks that had a prominent and energetic bassline - such as David Bowie's Blackstar (24/96). To achieve acceptable sound levels, though, the volume control needed to be towards the upper end of the scale. A good showing but not quite up to the standard of the headphone amplifier built into the relevant version of the Naim Uniti Atom. I'm sure the headphone amplifier could have sounded even better, had dedicated leads - as opposed to PCB tracks and flat ribbon cables - routed its output to the socket. A headphone-specific volume level isn't 'remembered' and users of less-than-sensitive headphones may be deafened by their speakers if they forget to

#### CONCLUSION

The ST200 has its quirks, but is nevertheless a likeable and

turn down the volume first!



Key commercial streaming services, including Spotify and Tidal, are supported.



As well as Internet radio, it can play music stored on locally-networked DLNA media servers and USB storage devices. Playlists containing your choice of tracks, suitably-sequenced, can be created for subsequent playback.

adaptable unit. At a time when technology is advancing so quickly, we're pleased that Atoll has combined proven electronics with a responsive and friendly user interface. Next time, though, we'd like a 'proper' 6.3mm headphone socket!

#### **MEASURED PERFORMANCE**

Frequency response of the Atoll ST200, from S/PDIF and USB digital inputs to Line Out, measured flat from 4Hz to 76kHz our analysis shows, with a steep roll-off up to the 96kHz upper limit set by a 192kHz sample rate signal. With 44.1kHz sample rate (CD) response was flat to 21kHz, as is usual. There are no filter options. Optical S/PDIF inputs reached 96kHz only; coaxial reached 192kHz.

Distortion of DAC/output amplifier measured a low 0.05% at -60dB with 24bit, but only up to 96kHz sample rate, rising to 1.2% at 192kHz. At full digital level (0dB FS) and volume at maximum (100), giving 2.5V out, distortion measured a high 0.6%. Reducing volume to 84/100 for 1V out — enough to drive most power amplifiers — it fell to 0.12%; the output amplifier distorts at high level, volume must be kept down.

Dynamic Range (EIAJ) was good, if unexceptional, measuring 111dB – enough to comfortably exceed CD (100dB) but not up with the best at 117dB–123dB when playing hi-res.

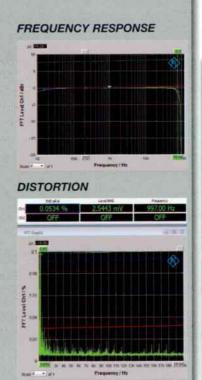
Surprisingly, Bluetooth 5 from iPhone managed 111dB as well – impressive.

Gain from Aux 1 input to Line output was x0.9 (-1dB loss) and maximum output 5V. However, distortion rose steadily to reach 0.8% at 2.5V output, explaining why distortion was high with full scale digital. The Aux1 input also produced 0.5% distortion above 2V in.

Providing no more than 2V in or out is used then the amplifier passes muster but there is no good reason for such distortion nowadays, line drive amps being a well worked out technology. A digital output allows use of a better external DAC/drive amp. as an upgrade.

The ST200 gave a good set of results, if with the unusual blemish of distortion at high signal level. NK

Frequency response	4Hz-76kHz
Distortion (-60dB)	0.05%
Separation	96dB
Dynamic range	111dB
Noise	-108dB
Output	2.5V



ATOLL SIGNATURE ST200 £2,000

EXCELLENT - extremely capable.

#### **VERDICT**

A neat and versatile streaming alternative from France.

#### FDR

- responsive and friendly
- good sounding overall
- potential upgrade path

#### **AGAINST**

- headphone-related issues
- bluetooth could be improved

Replay Audio +44 (0)1925982507 www.replayaudio.co.uk

so. After reviewing Grado's conventional RSX1 I had to crank up gain by +10dB on an Audiolab M-DAC+ to get these phones to rock. But all hi-res portable players (DAPs) can drive them with ease (see Measured Performance).

There is a lot to talk about with the Lirics. They use a novel planar drive unit that in effect has bass and treble sections etched on it. The bass section is large area, the treble section small area and aimed directly at the ear's canal leading to the drum. Best to look at the diagram to see how this works. It eradicates the warmth and softness that characterises planar drivers. This ingenious asymmetric signal path pattern, complete with what

Romania but the drive unit is built by Rinaro of the Ukraine, that borders Romania. It is their technology apparently and they call this - interestingly - an MZ4 Isodynamic hybrid array drive unit. A title that appears to acknowledge Wharfedale's seminal contribution to the field, 'Isodynamic' having been replaced by 'magnetic-planar' in current parlance.

The Lirics are purposed for mobile use they say. That means light weight and a closed back to prevent sound annoying others. Trouble with closed back phones is that they can sound hollow and boomy. Meze say they have addressed this and indeed I found the Lirics sounded airy and



Behind a protective grille lies a diaphragm with flat conductor etched on it. At bottom is what appears to be a phase plate to smooth treble.

#### **SOUND QUALITY**

The 'phones were driven by an Audiolab M-DAC+ with ESS ES9018 DAC and on-board linear power supply, connected to a Mac computer (Mojave) running an Audirvana+ software player to read CD, hi-res and DSD, via USB link.

I found the Lirics have a light balance that favours highs rather than lows, if not by overly great extent. I spent much time



Rinaro's diaphragm has a switch-back bass section and circular high frequency section (yellow).

comparing their low frequency output against my Oppo PMI planar-magnetics and in the end felt the latter were preferable for their depth, heft and warmth. With



The ear pieces have soft leather cushions that fitted well. Each one has a 3.5mm mono jack socket so balanced working (separate earths) is possible.

appears to be a phase plate (to smooth things out) in front of the circular high frequency section, marks out the Liric as innovative and different. The low and high frequency surface conductors

appear joined in the company literature, there is no crossover between them. Who thought

this up? Antonio Meze founded the company in

Accessories comprise short lead for mobile use, long lead for home use, plus two adaptors. The leads were flexible and did not kink.

spacious like open backs, whilst throwing less sound out. Goal achieved.

Mobility demands low weight and here they were what I'd term "normal weight", coming in at 395g (without leads) on our scales. The leads for mobile use are light and flexible however, so don't add much. They have 3.5mm mono plugs to each ear piece, combining into 140cm long lead terminated by a 3.5mm stereo jack. There is an alternative 400cm (10ft) long lead for home use. Independently connected earpieces

can be run balanced, but a lead is not supplied for this. There are two adaptors, one for aircraft outlets and one for 1/4in (6.3mm) outlets. A hard carrying case is supplied and a pouch for cables and connectors.

Build and finish were very good, with nice soft ear pads that fitted well. The 'phones are not symmetric and best stayed on my head with headband swivels at front I found, but neither way appeared quite right for me.

Mozart's Ave Verum the low drone of a church organ had conspicuous weight with the Oppos, less so with the Litics. The acoustic of the space was less obvious too. However, when the choir entered the Lirics were way ahead in insight and delineation of fine detail. Where the Oppos generalised the Lirics presented a large group of individual singers, there was so much more revelation. This made the Oppos sound muffled.

I use this example to illustrate what I heard generally: the Lirics have superb insight, fully up with the best planar-magnetics, even if at times I found them a tad too much in this respect.

What I must not forget to say though is they are a step up on conventional dynamic headphones in their finesse and lack of colour, something I take for granted since I gravitate to planar magnetics for purity of sound. The Lirics were superb in this area.

High frequencies were prominent, yet quality was so good it was difficult to object. Johannette Zomer's voice soared singing Handel's Lascia ch'io Pianga (DSD64), sweet and pure.

I'd say Classical music benefits more from headphones of this ability than most else. With basic Rock like The Eagles 'Somebody' (24/96), insight and sheen took precedence over the driving rhythmic fundamentals supplied by drums and bass guitar. The swirling Hammond organ lost its sinister majesty, a castrati version it seemed! Fantastic insight but whilst the level of analysis was beyond criticism I wanted more meat on the bone with this sort of Rock. Like wise I wanted to better feel Jean Jacques Burnell's lead bass work in The Stranglers' Down In The Sewer, backed by a more solid organ played by Dave Greenfield.

The Lirics needed around 5dB more gain than my Oppos, giving some idea of where they sit in sensitivity terms. Although low in sensitivity, they're still plenty good enough to run loud from even a mobile 'phone. There was very little sound leakage, as intended, to suit mobile use.

#### CONCLUSION

In true magnetic-planar fashion the Lirics offer one of the most insightful, smooth and detailed sounds possible. They live up to



A hard shell carrying case protects the 'phones when on the move. It also carries accessories in a pouch.

their price and perceived potential here. On offer is a light demeanour where lows are tight and defined but of limited heft. This is not an unusual balance in modern headphones (ignoring Beats) so the Lirics are normal enough as it were and will appeal to all those who want forensic insight rather warmth or driving bass.

#### **MEASURED PERFORMANCE**

Our frequency response analysis published here is not HRTF equalised so has a dip around 4kHz as result — normal and expected. Overall trend shows low frequencies 3-4dB below the mid band (800Hz) where output is dominant, pushing lows back for a lighter apparent sound. At 40Hz level is down -5dB relative to the mid band, for example. Headphones — magnetic-planars and dynamics — often measure flat to 40Hz relative to 1kHz so the Liric's will have less obvious bass than many, but it is there.

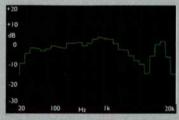
There is relatively strong output around 10kHz and a deep gap (-15dB at 6kHz) between the peak and the mid-band – deeper than is common – divorcing high treble from all else, likely affecting subjective integration. High frequency output is made stronger, as claimed, by the unique track layout within the Rinaro driver.

The impedance trace has a strong peak at 1.8 kHz our analysis shows, but is otherwise  $30\Omega$  with a d.c.r. of  $27\Omega$ . Overall impedance measured  $43\Omega$ , with pink noise. Injecting 1 mW ( $207 \text{mV}/43\Omega$ ) sine, sound pressure

level measured 93dB – 7dB below the 100dB claimed. Headphone sensitivity values are commonly 'optimistic'. It is still extremely loud from just 0.2V so no problem in real life where mobile 'phones and portable players produce 1V-2V or more.

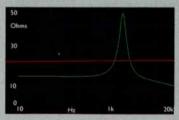
The Lirics have a distinctive measured performance and likely associated sound, but it is a good set of results with no aberrations. **NK** 

#### FREQUENCY RESPONSE



#### **IMPEDANCE**

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#### **MEZE LIRIC £1850**



EXCELLENT - extremely capable

#### VERDICT

Clear and insightful, if with a balance favouring highs.

#### FOR

- superbly detailed
- fabulous clarity
- low sound leakage

#### AGAINST

- light bass
- midband forward
- awkward fit

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# LETTER OF THE MONTH PRIZE

Answers by: NK - Noel Keywood; PR - Paul Rigby; MP - Martin Pipe; JP - John Pickford.

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Letter of the month wins a superb Blackline PG1 turntable!



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A PAIR OF ACOUSTIC ENERGY AE100<sup>2</sup> LOUDSPEAKERS are on their way to DAVID GREY, Letter of the Month winner in our March 2022 issue.

#### Letter of the Month

#### BLUETOOTH

In his very intriguing review of the Fiio M17 [HFW May 2022 p66-69], Noel describes using his iPhone 11 Pro with the Onkyo HF Player app as an audio source via Bluetooth, and goes on to describe the Onkyo app sending 24 bit audio as well as DSD. I have been using the same app with a succession of iDevices over the past few years.

I agree that an iPhone running Onkyo HF Player, connected to a DAC via USB [either directly if the DAC is MFi certified, or via one of the Lightning to USB "camera connection kit" adapters if not] can transmit hi res audio including DSD. With my own iFi Zen Signature DAC, I can demonstrate this using the several test files I have and persuade the DAC's LEDs to indicate which format I am playing. For actual listening, I use my Oppo HA2 headphone amp if I am using my iPhone as a source with either Qobuz or Onkyo HF Player to play music, though the Oppo has no way of showing what codec it is receiving [HF Player does display it].

I don't, however, think this works over Bluetooth. All audio on an iOS device has to go through the iOS Bluetooth stack [ https://developer. apple.com/ accessories/ Accessory-Design-Guidelines.pdf ]. iOS supports either SBC or AAC encoding at 44.1K, with a maximum bit rate of 264 630bbs **[basically** 256K]. This is not capable of transmitting DSD at all, and will effectively impose a 44.1K, 16 bit, with lossy encoding at 256K [i.e. sub CD quality] bottleneck on audio quality which cannot be bypassed by any

iOS never really indicates which audio codec is in use via Bluetooth, so unless the DAC



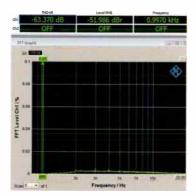
With the FiiO M17 "I'd just use the microSD card on the device as a source, given the limitations of Bluetooth" says James Atkinson.

gives some indication, you are very much in the dark. I have a Bluetooth receiver with an optical output connected to an old Meridian F80, and the receiver only ever indicates AAC when I use an iPhone as the source, despite being capable of receiving supposedly superior codecs.

As Noel mentions at the start of the review, there are newer versions of Bluetooth with wider audio capabilities, but they are not yet currently supported by iOS.

I'd favour either a USB connection from an iPhone or i'd just use the microSD card on the device as a source, given the limitations of Bluetooth.

James Atkinson.



Dynamic Range is a measure of distortion and noise (THD+N) in the presence of a low level (-60dB) signal. This is now becoming a de-facto parameter of goodness, used by all the big chip manufacturers.

Add 60dB to the 63dB instrument result shown here for final DR of 123dB for M17.

Hi James. I thought this would come up as it is a rather intriguing issue. As you say iOS is 24/48 PCM only and certainly doesn't support native DSD. Worse, Bluetooth then compresses the signal further for transmission and the result is measurable as a dynamic range somewhat less than CD, usually around 98dB (CD is 102dB). Listening to Bluetooth I never had any problems with it other than there was just a touch of 'generalisation' in the sound, not the deeper insight you get when listening to native DSD for example.

So I was surprised to find Cambridge Audio EVO150 measuring 115dB (Sep21 issue)



Our Rohde&Schwarz UPV analyser. It can measure massive dynamic range values, showing that Bluetooth is now capable of hi-res performance (for whatever reason!).

which is impossible for 16bit. Since then other products have managed such resolution, but only when they have Bluetooth 5.1 or above. Note specifically that these are measured dynamic range values using the common EIAJ (Electrical Industries Association of Japan) methodology, with a Rohde&Schwarz UPV audio spectrum analyser able to resolve such values (few can). The -60dB test tone is sent from the HF Player's Hi-res folder and DR

Songs Q

IPOd HI-Res AWA

Some Class Isolate two A Start of Proceed

Somebody
FLAC Long Road Out Of Eden (Disc 2) / The Eagles

Songbird
FLAC Long Road Out Of Eden (Disc 2) / The Eagles

Songbird
FLAC Long Road Out Of Eden (Disc 2) / The Eagles

Songbird
FLAC Long Road Out Of Eden (Disc 2) / The Eagles

Wind Song
AIFF Librard (24bit-1924H2 DVD-A Stored) / Flectwood

Wish You Were Here
FLAC Wish You Were Here / Fink Floyd

Y

You Make Loving Fun
FLAC Burnours (24bit-1924H2 DVD-A Stored) / Flectwood

BSF Unknown / Linknown

OG. Bach\_Concerto for Harpsichord Flute and VI.

DEF Unknown / Unknown

18\_ Handel-Jubilate Peace of Utrecht-As it was...

DSF Unknown / Unknown

18\_ Handel-Jubilate Peace of Utrecht-As it was...

DSF Unknown / Unknown

Sold test No2

WAV HSW test / Nic

Sold a chillio pianga-Zomer

Unknown / Unknown

Sold Back No2

WAV HSW test / Nic

Way Hard Songs Albums More

The HI-RES folder of Onkyo's HF Player app for iPhone, with DSD (.dsf/.dff) files and our -60dB test file for Dynamic Range measurement.

measured 119dB from the FiiO M17 – an extraordinarily high value. With this the sound takes on a smoothness and depth not usually heard via Bluetooth.

I use DSD files on the iPhone under these circumstances because the original recordings are of audiophile standard, not upconverted CD to hi-res and such like (junk). It is sent as PCM of course (don't think we're likely to see native DSD in iOS anytime soon!) but with good original quality and 24bit resolution the final sound is superb, so much so that I now tend to gravitate to Bluetooth and the iPhone as a quality source. **NK** 

#### **ANDY BEY**

Please thank Paul Rigby for highlighting the true brilliance and vocal talent.... Andy Bey. He is an exceptional composer and vocalist. His vocal diction is wonderfully expressive and soulful, quite beautiful. You can see I am a massive fan.

First heard Andy Bey singing along side, Dee Dee Brigdewater on Stanley (Stan) Clarkes "Children of Forever", an early Return to Forever production (1973) by the great Chick Corea, who plays keyboards.

After your readers find a copy of Experience and Judgment... then straight away find "Children of Forever", they are both a complete joy. While hunting these out, have a listen to Andy's version of Nick Drakes classic "River Man" it's blinding.

I would also recommend another vocal genius to investigate, "Extension of a Man" by the great Donny Hathaway... another Desert Island disc. Superb. Could go on for



"After Experience and Judgment...then straight away find "Children of Forever", they are both a complete joy" says Ash.

years... it is amazing the links within music.Andy Bey crossed many. Cheers and Regards

Ash (Ashley & Elaine Trafford)
Winchester

#### **LENCO DRIVE**

Our book stores in Canada are opening up to in-person shopping and I picked up the April 2022 edition. The Stylus Rake explanation was very interesting. I also looked at the Wally Tools web site and found it quite fascinating as they go to extreme lengths in tone arm setup. As well as

on a \$2600 tone arm was off and I was wrongly blaming the cartridge, until I used the blocks.

Also, I don't believe that one needs to invest a lot of money in a digital stylus force gauge. Do you

really need readings to 1/100th of a gram when the variance range quoted on most cartridges is at least + or - 1/4 of a gram? Unless the digital gauge comes with a certificate stating its accuracy, it is only good for repeatability, i.e. if you find a 'sweet spot' for a particular cartridge you can go back to it easily. Otherwise, the good old teeter-totter one like the Shure SFG-2 is good enough.

There seems to be a renewed interest in Lenco, as per some of your letters. A couple of years ago a friend gave me his Lenco L75 which he's had since school days and looked after it well. I replaced the original

plinth with several layers of birch plywood and finished off with bamboo. The tone arm was changed to a Rega RB300. And the original idler spring replaced with a pulley/weight arrangement. The original tone arm



Veritas set up weights used by Joe Wdowiak.

lift was left, as its one of the best I've found.

It sounds really quite impressive. After using a suspended Thorens TD125 for many years, I was surprised how quiet the background is on this rigid Lenco L75. The project was well worth the effort, even with all the drilling and filing to get the Rega in. Pictures in attachment of Lenco and set up blocks. Regards,

#### Joe Wdowiak Canada

#### **DOWNSIZING**

I have been pleased to see your reviews of more economically priced hi-fi which might encourage younger and less well heeled music lovers to seek quality over style or convenience in their music listening choices. In particular in your March edition the Blue Aura receiver and Mission



the setup disc and other 'tools', one should acquire a USB microscope. All in total, it could amount to at least \$1000. If one has cartridges and tonearms that run over \$10k, maybe worthwhile. Even so, as you say "you have to ask yourself whether you are able to gain any useful improvement..."

Recently, I invested in a set of aluminum precision setup blocks for less than \$100 and they have been very useful in setting up cartridgel tonearm with respect to the arm being level and more importantly, the azimuth of the head shell. To my surprise, I found that the head shell



Joe Wdowiak's Lenco GL75 idler drive turntable with Rega RB300 arm, full restored. Lovely.

speakers looked on paper to be an ideal match. It would have been interesting to have had information on how they sounded together. The addition of the well rated Yamaha WXAD streamer would have created a very versatile system for around a thousand pounds.

The incidental virtue of such a system is simplicity and compactness and I am learning to appreciate this. Due to building works I have had to store my multi-box Cyrus system



Dr John Hurley's Castle Knight 2. "Something that has a much smaller footprint" and pleases the wife!

and create two compact systems in other rooms. One includes my Funk turntable, Dynavector cartridge and phono stage going directly into a Beyerdynamic headphone amp supplying (simultaneously) Beyerdynamic and Sennheiser headbhones. The other includes a Yamaha Wxc-50 preamb streamer into a Cyrus Smartbower amb and Castle Knight standmount speakers. Whilst I cannot claim that either betters the main system both yield very good results and the latter could be assembled buying second hand for very little money.

This has led to an interesting challenge from my wife which is why do I not downsize my big space consuming system to something that has a much smaller footprint. I am pondering the law of diminishing spatial returns.

#### Dr John Hurley

It would be nice if young people could easily enjoy music through an affordable system, but somehow the landscape seems to have changed. They prefer headphones, and mobile phones as a source. I liken this to the interesting change in attitude within the young toward cars, seen as having functionality similar to washing machines. Necessary, but boring. Happily, music isn't boring to anyone so the value of high fidelity will live on, even if in brain implants, perhaps from Blue Aura and Mission. Trying to getting a teenager to take out the earpieces coaxes me to saying this. **NK** 

#### **HOT MATCH**

My current system consists of Michell Gyrodec SE, Rega RB 2000, Dynavector XX2 MKII, Lehmann Audio Black Box Phono Stage, Quad Vena 2 integrated amp, Pioneer PD30 CD player, ALR Jordan Classic 2 'speakers. For streaming I use an Astell&Kern SR15 linked to the amp via Chord USB and Audio Technica OTG cable.

In my spare room I have an Icon Audio SE20 that I occasionally use in another system.

I see you can use the Quad as a pre amp and the Icon as a power amp. Would this be a viable proposition to use them like that? If so would I need to do anything in particular?

Thank you

#### David Church Southampton

Hi David. You can use them together and need not do anything special. Icon say in their manual: "It is sensitive enough to be used

with all modern source equipment having an output of 300mv or greater". Your Quad Vena 2 will have a low output impedance and valve amps have high input impedance, so zero problemo. **NK** 

#### **GARRARD 401**

David Bond's progress report on his 401 modifications was a good read, as I have been a 401 owner/user since around 1970 and it bears a serial number indicating manufacture sometime in 1969. I have never used another turntable in all that time!

I remember going into a reputable audio dealer here in Birmingham, the reason being that I was going to change the SME 3009 tonearm. When I said it was a 401, I was laughed at. Well they're not laughing now!

Because I wasn't using a flavour of the month turntable, the dealer didn't show much interest. My 401 has had a Martin Bastin bearing fitted plus a service. I recently replaced the idler wheel with a Classic Turntable Company idler. My choice of turntable mat is a Ringmat system.

Like all pastimes, fashions come and go and audio is no exception, as the revival of the 301/401 turntables has shown.

Regards

#### Mike Bickley

Hi Mike. The superb sound quality and musical enjoyment a Garrard 401 provides transcends fad and fashion — and that is part of its beauty. It shows how a good product can move into other realms, such as high initial cost but



Icon Audio Stereo 20 single-ended valve amplifier with KT88s. Can I use it with my Quad Vena 2 asks David Church?



"My 401 has had a Martin Bastin bearing fitted plus a service" says Mike Bickley. Here's our 401 with restorational Martin Bastin plinth.

low cost over time, and with no waste. A modern poster child for classic design that lasts – denying land fills content.

Here's a little story. Back in the early nineties I saw in a Kings Cross (London) warehouse piles of 401s ready for export to Japan.

What? Tatty old turntables being shipped across the world. Why?

Well, because in Japan they had twigged that when restored this was a seriously good and deeply historic turntable, used professionally for music replay in a period – 1960s/70s – when music went global. The Garrard played it in studios around the world.

At this time my 401 was in the loft, reaching the departure lounge because of its rumble (yet I had bought it new from Garrard).

The warehouse was a shock to me, a wake up call. Martin Bastin was the man – I think the only man – at that time who understood the problems it had, understood its abilities – and was able to restore my Garrard 401 to full, rumble free, working condition. I – like you – am so grateful to him. **NK** 

#### **CRACKLE-AND-POP**

I am a lucky listener, having been able to acquire a pair of Martin Logan ESL-9 classic speakers whilst in US. I am still listening and enjoying, thanks to PMC (their UK agents) and Martin Logan.

About a year ago, the left speaker started to emit the odd crackle-and-pop, initially I thought this was from

the records I was playing, but seemed strange that it was only from one speaker.

This became more prominent when I played a CD and I thought "this is not right" although it did not ruin my listening enjoyment.

I contacted UK distributor PMC and ML support directly, explaining the situation and sent a recording of said cracke-and-pop. I was concerned as I had purchased in US and here I was in UK, wondering whether I would get any help.

I should not have worried. Harry Hill from PMC and the support team at Martin Logan US were incredibly helpful and before long a large box arrived at the door containing two new stat panels.

All I can say is "thank you" for such great customer service and as long as I have a room that can support these speakers I will use



Martin Logan's Classic ESL9 hybrid electrostatic loudspeaker. "Before long a large box arrived at the door containing two new stat panels" John Speight says.



Brutally fast and deeply detailed sound from Ortofon's diamond cantilever Verismo MC cartridge.

- and if not, then PMC will be my first option if I have to change.

My Ortofon Quintet Black has been in constant use for the last 5 years and starting to look at replacements. I was thinking of Cadenza Bronze or Black as a possible replacement.

I was also wondering whether for pre-amplification the EAR MC4 would be a good upgrade at this time or is the EAR834P sufficient?

Worth noting, my room is about 12ft by 10ft and MLs sound superb, no boom and really clear. An EAR 834 valve amplifier drives them easily. Love the sound.

Great speakers, great support.

John Speight

Hi John. Thanks for the update on your Martin Logan Classic ESL9s. They're probably the finest loudspeakers I have ever heard, apart from the big Tannoys (that inhabited a different world). Good to know that Martin Logan support in the UK remains effective.

From my tinkering with our ESL-X loudspeakers (to super-glue broken plastic stator brackets) panel replacement is not difficult. Our brackets broke due to the panel being used as a handle in their unusual life on-the-move as a review tool. I noted that the larger XStat panel of your 'speakers had stronger uprights and I suspect that this, and panel area, are responsible to the sturdy dynamics of your loudspeakers.

Ortofon's Cadenza series MC cartridges produce great bass: solid and powerful. Also superb

stage depth – in true MC fashion. My preference was for the Bronze but I hope Ortofon have not reduced treble as I'm noticing that they seem to be doing with their cartridges. The Bronze had a smidgeon of treble lift to give it insight, zip and verve. It also has a tapered alloy cantilever, that I favour over boron rod cantilevers.

If your wallet is sturdy enough, consider their Verismo with its diamond cantilever, for which your EAR834P would be a great

match. NK

#### **NOT DEAD DENON**

Your correspondent Mike Bickley mentioned me in one of his letters in the June issue. He was referring to my letter, published in the May issue, in which I stated that I was now using a Goldring 1042 cartridge in place of a Denon DL 304 that was showing serious signs of wear. He posed the question how does he get through two Denon DL 304 cartridges? which begs an answer.

I purchased my first DL 304 in 1995 on the recommendation of your ex-contributor, Haden Boardman, from whom I had bought a Leak Stereo 20 that had been modified by Glenn Croft, which I still use today. At that time the cartridge was fitted to a Roksan Tabriz Zi arm on a Logic 101 turntable.

All was fine and dandy until my wife and I went on holiday in 1997, leaving family at home. On our return, the cantilever of my beloved 304 had been snapped and we had gained a kitten. I was assured that the two matters were not related, the latter being offered as a compensation for the former. (I did not get it either, as we already had a cat and a dog).

For a couple of years, I reverted to the Roksan Corus Black that I was using prior to the 304. When finances allowed, I purchased a second 304 and this was in use until late 2014 when sent my original broken 304 to the Expert Stylus Company for assessment and repair. They fitted a sapphire cantilever and an ultra low mass Paratrace stylus. The result was stunning, far better than my second, now 14 years old, 304.

The Logic, in the meantime, had been relegated to reserve use and

had, long ago, been replaced by a Bastinised Garrard 401 with an Origin Live Silver Mk 2 arm.

In early 2021 the repaired Denon began mis-tracking on one channel. Re-aligning, and altering the playing weight and bias failed to resolve the issue. The old Roksan was brought back into use, as a stop gap, still sounding good and tracking well. I had begun using this, along with a Rega Fono Mini (MM only) to convert my favourite vinyl into digital files for use in a portable player. Replacing the, now 30 years old, stylus with a new one for a Goldring 1042 was a simple matter and I am very happy with the result.

I am afraid, that after nearly 50 years of tinkering with my hi-fi, I am happy to sit and enjoy the music without the constant search for better. That does not mean that I am finished with the 304s. I am planning to return, at least, one of them to use.

At a slight tangent, I e-mailed Glenn Croft (of Croft Audio), a couple of years ago, to ask him about the modifications he had made to my Leak Stereo 20. He was most obliging



and explained the purpose of the changes and also adjustments and checks that would need to be made if key components were replaced. I mention this because I feel that he, and his amplifiers, would, as a UK cottage industry, be good subject for an article in Hi-Fi World.

#### Paul Topping Manchester

Hi Paul. That made me laugh. Moral of the story is don't go on holiday. Or, perhaps, you should have taken them all with you! Including the cat.

The Denon DL304 gathers praise from all who use it and it is indeed a archetype of MC sound – big, spacious and easy. **NK** 

# New kid on the block

Martin Pipe tries Connected Fidelity's RF Blocker accessory.

few years ago, a strange repetitive buzzing noise spoilt the quieter passages of my vinyl records... and drove me mad! in he end, it turned out to be powerline networking adaptors I had reviewed for another publication several months earlier (and forgot to unplug afterwards... not the sort of mistake you'll make nowadays, given the escalating cost of electricity!). Basically, some of the high-speed data being carried on radio-frequency ('RF') carriers between 2MHz and 86MHz - along my house's mains cabling made its way to the hi-fi equipment's power supply; it should also be borne in mind that mains wiring is unscreened and can act as a primitive aerial. Admittedly some of the record-playing gear I was using at

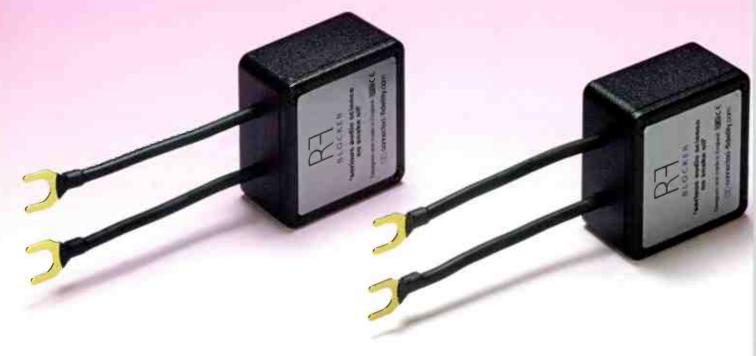
the time pre-dated CE 'electromagnetic compatibility' (EMC) regulations, which ensure that electronic products aren't vulnerable to such radiations and don't emit unwanted ones of their own.

Unplugging the offending items solved the problem - which, I note, didn't affect newer kit quite as much. That buzzing was still there, but at a level below record surfacenoise. It should however be borne in mind that the signals delivered by moving-coil (and to a lesser extent, moving-magnet) cartridges to your phono stage are tiny, and thus particularly-susceptible to external interference sources.

This saga did get me thinking about the effects of RF radiations on audio equipment. Once upon a time, they could be attributed solely to broadcasting and radio

communication systems of various types, plus unwanted interference both natural and man-made. There are however plenty of sources nowadays - Wi-Fi, mobile phones, home computers, Bluetooth gadgetry, tablets and smart TVs amongst other things. Most have to comply with EMC regulations to some degree, but if they rely on RF mains signalling there's not much you can do about that.

Might hi-fi's ability to communicate the most subtle of musical details to listeners be affected by RF - especially when those audio signals are in a vulnerable analogue state? That thought occurred to Michael Osborn, the guy behind (amongst other things) equipment manufacturer Astin Trew and - much more recently - accessory



brand Connected Fidelity. After experimentation he decided it could, and found that one of the routes through which RF can make its way into audio equipment is through the speaker cables. Like the mains wiring discussed above, it can act as an aerial. Some amplifiers can, Osborn explains, "deal with RF from the loudspeaker cable end far better than others". Osborn's solution is the 'RF Blocker' - a compact and 'entirely passive... wideband radio-frequency filter' device, encased in a die-cast box, with two stubby leads that bridge the amp's output (or speaker's input) terminals. To make this as straightforward as possible with your own equipment, versions with spade terminals, 4mm plugs and bare wire are available.

Unlike some firms, Connected Fidelity - which uses the slogan "serious audio stuff, no snake oil" - is completely open about its design. It could have encapsulated the RF Blocker to keep its secrets hidden, but it didn't. As the box is held together with four screws, we were able to take one apart. Inside is a small circuit board containing a few low-power surface-mounted resistor-capacitor combinations. connected in parallel to the two leads. My first thought was that the RF Blocker is a variation of a Zobel network, also known as a 'Boucherot cell', of the sort that you'll find on the outputs of many solid-state Class AB amplifiers. This is a series resistor-capacitor (R-C) arrangement, which is in essence connected in parallel with your speaker. Its job is to provide an alternative path to the difficult (and mostly-inductive) load presented to your amp by the speaker's voice-coil, thereby improving stability. I sought clarification from Osborn, and it would indeed seem I was onto something. A Zobel network can also have the effect of 'grounding' any RF that's present on the speaker output.

As a result, Osborn told me, RF is prevented from "re-entering the amplifier where it can (depending on amplifier design) get into the feedback loop". The RF Blocker's multiple R-C combinations - four of them - are "tuned differently, to cover a wide range of radio frequencies". This all makes some kind of sense with more conventional solid-state class-AB amps, as used by most of us. What about

the audio-frequency output transformers of valve amps, and the heavy output filtering that is a core element of a Class D amp? Thanks to such considerations, such amps would - surely? - have no need of devices like the RF Blocker."In our experience and that of one reviewer who uses Class D power amplifiers", Osborn explained, "this is not the case at all...the RF Blockers seem to 'clean up' the sound making it more natural, perhaps more so than with Class AB amps...work that one out if you can!". In his experience, the sound of "valve

amps with transformer outputs is... more natural with the Blockers in place, and so the filtering is perhaps improving the performance of the voice coils coupled to the loudspeaker cones".

Osborn reckons "that RF 'energy' in the loudspeaker coil could be interacting with the magnet, and slightly 'smearing' the audible performance" but cannot offer any evidence. "Every loudspeaker/cable/amplifier configuration seems to behave slightly differently when the Blockers are fitted, mostly in a beneficial way". He acknowledges that "some amplifiers deal with RF from the loudspeaker cable end far better than others". You can place RF Blockers on terminals at the amplifier, speaker or indeed both ends of the cable - logically, they would be more effective when positioned as close as possible to the amplifier output stages. This was certainly the case of one of the amps I tried, a Naim Nait 3 feeding Acoustic Energy speakers (I had to knock together an adaptor, as my RF Blocker review samples had spade terminals). I could perceive an improvement at times, in terms of cleanliness, especially with hi-res recordings (out comes that Britten War Requiem again!).

It also seems to play to the strengths of the Nait 3 - which, interestingly, already has a Zobel network! - when it comes to



Inside the RF Blocker from Connected Audio. It's derived from the Zobel network, a series resistor-capacitor arrangement designed to improve amplifier stability. However, it can also 'ground' any unwanted radio-frequency signals that are introduced by the speaker cables acting as 'aerials'.

> precision and timing. On the other hand, with Quadral Aurum Wotan VIIIs driven by a Cambridge Edge NQ/W combo, a newer and far more sophisticated design with oodles of internal high-speed digital wizardry the designers had to factor in, the benefits of the RF Blockers were so subtle I couldn't hear them! As with cables and some other esoteric accessories, you may get worthwhile results or you may not - it depends on your equipment, hearing, listening environment and to some extent software tastes. Some have claimed transformational results from these devices. Thankfully, Connected Fidelity offers a money-back guarantee and so - although the RF Blockers aren't cheap at £250-odd a pair, especially in these uncertain times - you have nothing to lose if they don't work out for you.

#### CONCLUSION

The possibility of RF 'noise' getting into your hi-fi system via the speaker leads and compromising its ability to reproduce music is an intriguing idea that - according to Connected Fidelity - is "based on sound electronics principles... there is no 'Angel Dust' used here"! Thanks to the firm's neat 'widgets', these RF gremlins are easy to deal with. The results you get will however vary according to your individual circumstances, and so it's definitely worth trying before buying.

**RF BLOCKER £249** PER PAIR (BANANA PLUS OR SPADE TERMINALS) £235 (BARE WIRE)







#### **VERDICT**

An interesting idea that deserves auditioning.

- excellent construction
- very easy to install
- can deliver audible benefits

#### **AGAINST**

- you might not hear any improvement!

Connected Fidelity www.connected-fidelity.com

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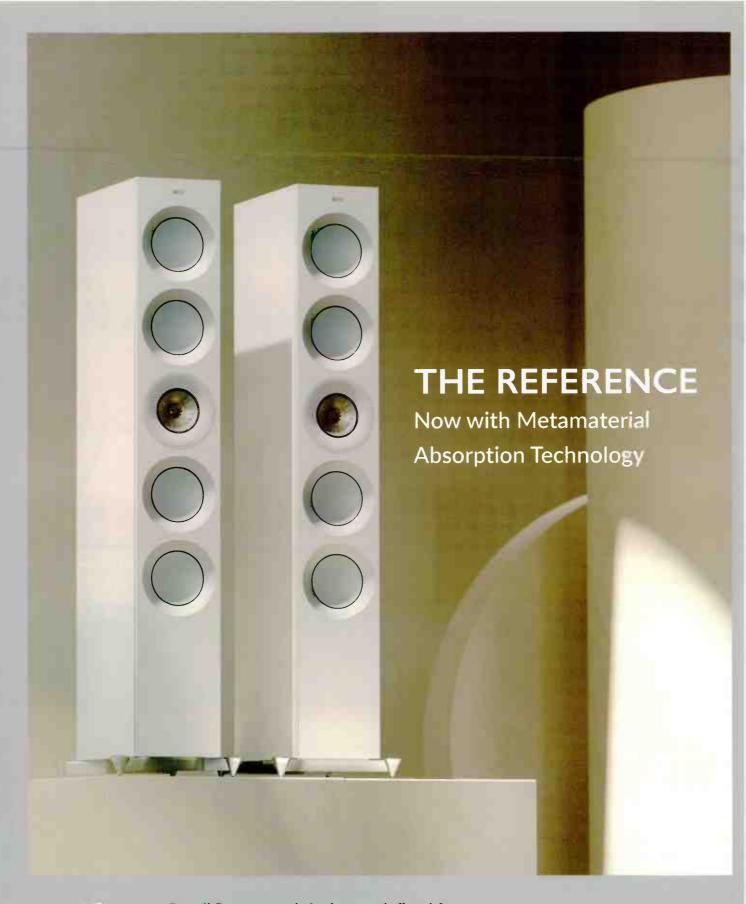






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"Here are neatly-foldable closedback circumaural headphones that will connect to your audio source via Bluetooth aptX HD or a detachable 3.5mm cable - which, at 2m, is possibly a little too long for mobile use. PSB also throws in a widget that allows said cable to

interface with airline audio systems, a more conventional 6.3mm adaptor and a neat carrying case.

Fully-charged, via a basemounted USB-C port, the M4U 8 MKII is capable of up to 25 hours of use (18 if the four-microphone active noise-cancellation system is engaged). When turned off, or if the batteries are drained, passive operation is possible when fed via the cable.

On which subject, the M4U 8 MKII is packed with techno wizardry that I suspect would impress the likes of Bill Gates. For a start, NFC is offered as a wireless alternative to Bluetooth. Then there's the latest version of PSB's proprietary 'RoomFeel' technology, which emulates loudspeakers operating in a room to deliver the "clear, natural sound of a live performance".

Even more interesting, though, is the M4U 8 MKII's ability to tailor its sound to the individual wearer. "Personal Sound by Audiodo" is hearing test. You're asked if you can hear a series of tones at different levels. Audiodo then applies correction to the audio, in order to achieve a flatter response."

For a chance to win this great prize, just answer the four easy questions at right. Send your entries on a postcard only, by 12th July 2022 to:

July 2022 Competition, Hi-Fi World magazine, Office 052 464 Edgware Road London W2 IAH

#### QUESTIONS

- [I] Connection is
- [a] semaphore
- [b] hand signs
- [c] Bluetooth
- [d] Aldis lamp

#### [2] Who would be impressed?

- [a] Heinrich Hertz
- [b] Guglielmo Marconi
- [c] Frankie Howard
- [d] Bill Gates

#### [3] What delivers live performance?

- [a] RoomFeel
- [b] artificial echo
- [c] concert tickets
- [d] electric shock

#### [4] Personal sound is from -

- [a] local masseur [b] Audiodo
- [c] tinnitus
- [d] nearby wasp

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# Ariston...and on



#### Martin Pipe finds that the RD80 turntable, built in a factory unit near Prestwick Airport, is still capable of imparting analogue magic today.

n the beginning (well, 1961!) was Massachusetts audio firm Acoustic Research, with its XA turntable. The brainchild of legendary audio inventor Edgar Villchur, the XA - yours for \$78 (1966) complete with tonearm and dust-cover. It was the first turntable to feature a steel sub-chassis for the belt-driven platter, its precision bearing and the tonearm base.

Said sub-chassis was suspended from the deck plate at three points, using damped springs. Villchur's basic idea was that such construction isolates, from sources of vibration, the tonearm and the platter on which the record sits. Such vibrations could come from the drive motor, as well as external shocks like heavy footsteps. Thanks to the platter's 1.5kg weight, it could iron out speed irregularities. Heavy platters take a while to come up to speed, though, meaning that turntables of this sort are

unsuitable for - say - DJ use.

Villchur was proved right, and the XA has gone down in the annals of hi-fi history, inspiring other designs around the world. In Scotland the suspended-subchassis turntable became the basis of an

industry. The country hosted such firms as Ariston, Fons, Strathclyde Turntable Developments (STD), Systemdek and sole survivor Linn Products. First off the production lines was the Ariston RDII. As launched in 1971, it had a slip-



The RD80 uses the classic suspended-subchassis drive system - a sub-platter, coupled by flat belt, to a synchronous motor. Speed change involves moving the belt between the pulleys (45rpm upper, 33rpm lower).



A removable base cover plate, which provides access to the tonearm base and wiring, marks out this RD80 as a later 'SL' variant. The tie-wrap secures the 5-pin output plug to the underside of the deck's Linn Basik LVV.

clutch (to prolong belt life) coupled to a single-step pulley. Its diameter equated to a platter speed of 33 1/3 rpm only.

Hang on...a single-speed belt-driven sprung-subchassis turntable optimised for LPs? Yup, the RDII laid the foundations of the iconic (and still-produced) LPI2. Indeed, one led to the other. Back in the early 1970s Peter Dunlop, who would later establish Systemdek, owned Dunlop Westayr — an engineering company that, amongst other things, manufactured storage heaters. When buying a hi-fi system for his home, Dunlop was

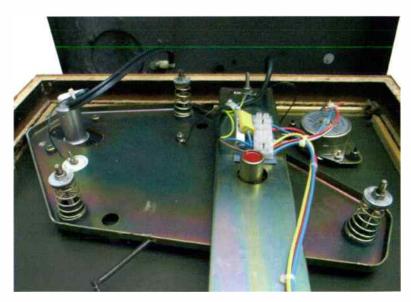
introduced to Hamish Robertson — who had, by this time, been running Ariston for a couple of years. What grabbed Dunlop's attention was a prototype of the RDII; not long after, Dunlop Westayr took a controlling stake in Ariston (shades of Remington there?).

Key to Robertson's turntable was the precision shaft and single-point bearing assembly. Supporting the weight of the platter, it had to revolve smoothly and without play. These components were made by a Glasgow firm, Castle Precision Engineering, owned by Jack Tiefenbrun – whose son Ivor brought Linn Products into being. The RDII would change to a single-point ball bearing, and its 24-pole synchronous motor was to feature a two-step pulley for manual speed change.

Linn meanwhile stuck to the



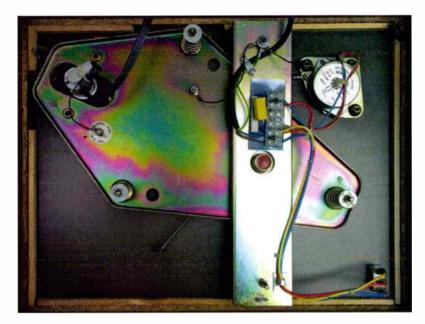
Linn's LVV wasn't dissimilar to the tonearms fitted to the mass-produced Japanese turntables of the 1970s and early 1980s. A popular companion for the RD80, it's outclassed by more modern designs.



Classic suspended-subchassis stuff. Here we see the pressedsteel assembly, to which are fitted the precision bearing for the belt-driven platter and the tonearm base. It's held to the deckplate at three (adjustable) points, the springs acting as 'shock absorbers'.

original concept and marketed the single-speed "Linn-Sondek LP 12 transcription deck" an advert in the May 1973 edition of Hi-Fi News and Record Review making specific reference to the design (Copyright) and development (Patent Pending) of the "special bearing and bearing housing assembly, and pressed steel chassis incorporated into the transcription deck sold up to December 1972 under the name Ariston RDII". In their original forms, the two decks were reputedly so similar that parts could be interchanged.

The saga culminated in a bitter late-1970s court battle between Robertson (alongside Fons) and Linn. The latter won, but Robertson died before the decision was published. John



The RD80's excellent internal construction - Scotland's strong engineering heritage made it a UK turntable powerhouse.

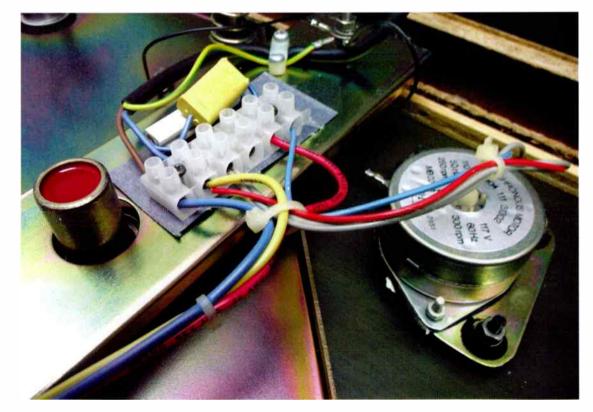
Carrick, a retailer, bought Ariston from the receiver - and from its ashes rose Ariston Acoustics. This incarnation produced more affordable sprung-subchassis turntables. One of these is the RD80, as featured here.

The RD80, introduced in 1980, was a turntable pitched at the middle of the market - and indeed the middle of Ariston's vinyl-spinning wares, being a rung above the distinctively-circular

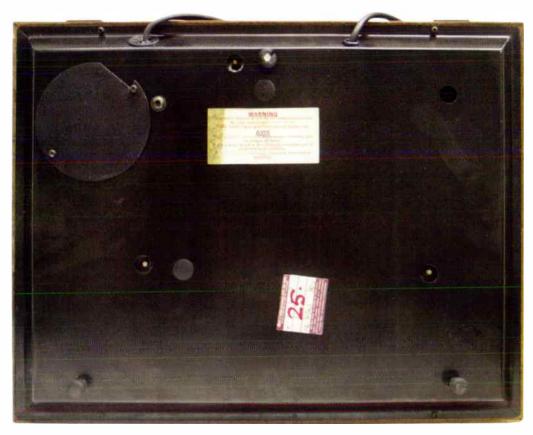
RD40. In terms of basic design, though, the deck shared much with Ariston Acoustics' range-topping RD11 - then in its 'Superieur' form. The gimmick-free RD80 featuring an attractive MDF plinth finished with real-wood veneer. It relies on manual pulley-shift speed change instead of the RD11S's more sophisticated electronic two-speed system, an inner platter being coupled to a 24-pole synchronous motor identical to types fitted to

many turntables of the era. The deck's only control is a neon-lit rocker power switch. Nice touches are the threaded record clamp, claimed by some to upset sound staging but useful if you're playing a warped record. A moulded plastic base had three adjustable rubbertipped feet.

This example of minimalist audiophile record-playing technology was slightly more expensive than Rega's very different



Ariston specified a 24-pole synchronous motor for the RD80. The '9904-111-31302', used in other turntables of this type, is still made today by McLennan Servo Supplies. To the left can be seen the platter bearing – also key to turntable performance.



The moulded plastic base contacts a mounting surface with three rubber-tipped feet, attached via threads to achieve levelling. Suspension can be adjusted without taking the deck apart, thanks to the three strategically-positioned holes you can also see here. Note the "£25" price sticker...

Planar 3, then in short supply on account of its Essex creator being overwhelmed by demand. Fitted with a Linn Basik LVV tonearm – as with the sample featured here – an RD80 could have been yours for £235 (less cartridge, but with thick rubber mat) in early 1983, had you lived within practical distance of a Hi-Fi Markets' member dealer.

The S-shaped medium-mass Basik LVV arm was Linn's Japanese-made budget proposition at that time, and not the world's best-sounding tonearm in the early 1980s – never mind by today's standards. It is however fitted with a SME-type detachable headshell for speedy cartridge changes. It's suited to highish-compliance moving-magnet cartridges.

My RD80 came from the late and lamented Notting Hill Music and Video Exchange in the mid-1990s. It was rather tatty with a damaged cartridge, and the cracked lid obviously wasn't the one supplied by Ariston. Still, for twenty-five quid – this was the CD era, remember – I was hardly in position to complain. Mine is the later 'SL' version with minor electrical reworks to meet Scandinavian safety standards, a new machined platter, motor

positioning adjustments and a removable base cover to provide access to the tonearm base and wiring.

Perhaps unsurprisingly, all was not well. Clearly unloved, the deck's suspension was so out of whack that a 180g LP was heavy enough for moving parts to noisily rub against the metalwork! Furthermore the LVV arm was set too low in its base to achieve a suitable vertical tracking angle (VTA), and there was considerable play in its pivot bearings. Needless to say, the deck sounded pretty awful in this state.

These problems attended to, followed by a good relube and the drive belt replaced for good measure, the RD80 proved to be a decent musical performer – for several years it was used to digitise singles and album tracks for playback on my then-ubiquitous iPod. With an Audio-Technica AT440MLb in an ADC magnesium headshell, it proved to be lively and communicative. Bass was deep and tuneful, and rumble inaudible to all intents and purposes.

Detail retrieval and pitch stability are also excellent for a 40 year-old deck without high-end pretensions, and although obviously not up to the standard of a recent LP12 – a 'looseness' is perceptible on occasions – it nevertheless makes for a satisfying listen.

I can imagine that a new arm would improve matters, but one mustn't go overboard or the law of diminishing returns will apply. Some have reported good results with a Rega arm like the RB250 or RB300. The good news is that because the RD80 never achieved the cult status of other turntables, decent specimens can – complete with arm and cartridge – be acquired for less than £200. The RD80's commendable standard of performance will be difficult to beat with a new £200 turntable.

The news is even better for bargain-hunters prepared to indulge in a spot of DiY. Tatty (and thus cheap!) examples can, thanks to Ariston Acoustics' excellent engineering, can be brought back to spec. Funnily enough, a failed motor need not be a hurdle. The '9904-111-31302' is still made today, by McLennan Servo Supplies. Electronics suppliers like Farnell and RS will sell you one for just under £100, although at that price the viability of replacement is somewhat questionable.

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## What's on.



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LECTURES AND PRESENTATIONS



LIVE



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U.K. SUBS

A Punk Rock Anthology 1978-2017 Demon aybe it's just me and I'm not looking in the right places but I tend not to see modern releases of single punk band hits collections on vinyl. I'm not saying that they don't exist or even that there are none on the shelves as I speak but they're not exactly numerous. So I wanted to highlight this one.

This collection spans two discs (one pressed on red vinyl, the other pressed on yellow) in a single outer sleeve. The discs themselves are held within a pair of inner sleeves that hold a simple track listing plus original sleeve art images.

In addition, there is expanded information on the same inners. The latter includes the full line up on any one particular track plus a couple of lines of additional information such as the label, release date, catalogue number and more.

The band themselves were

part of the second wave of punk who hit their stride in 1979 with the album 'Another Kind of Blues', mixing rage with humour - a difficult balancing act to accomplish but the Subs did it. You'll find the likes of Crash Course, C.I.D and Tomorrow's Girls from that debut on this new collection.

The group moved on from their Clash-like rage to a punchier, heavier, metal-influence sound later in their career and this collection tracks that evolution well indeed. It is an effective 'Crash Course' in U.K. Subs-flavoured punk.

In mastering terms? Well, although this music is packed with a high energy, raucous presentation it still retain discipline and control in the mids with a slightly recessed bass. Part of me wanted a more forceful lower frequency but I can also appreciate that the latter might have swamped the mids — so I'll take this approach, no problem.



MELODY GARDOT & PHILLIPPE POWELL

Enter Eux Deux Decca f you ever see Melody
Gardot's eyes. Savour
that moment. She doesn't
reveal them too often.
They normally hide behind tinted
glasses.

I was first introduced to the jazz vocal stylings of Gardot via her 2009 release 'My One and Only Thrill', an album of largely self-penned tracks plus a single standard from Harold Arlen, I think it was. Her delivery was warm, rather husky and romantic. Since then, her album releases have continued every two to three years and now she's back in tandem with Mr Powell.

The fact that pianist Powell receives top billing indicates the scope of this release. It is, in fact, lacking in it. There's no orchestra or backing band here. Powell is it and that gives the album a sense of intimacy. Gardot, at times sounds like she's staring into the distance and thinking aloud. Her singing our

intrusion into her private thoughts.

There's a real low-key minimalism here, whether Gardot sings in English or French. Again, the album consists of original compositions, although Powell plays a full part in that creation. Even so, you'll be wondering if some of these ditties are not lesser known entrants in the Great American Songbook. They are draped in a classic shroud of considered jazz. Although Gardot herself doesn't necessarily recognise herself as a jazz vocalist. She does her thing and lets the genres take care of themselves.

As for mastering? This is a low noise recording, you'll be able to up the gain on this one. Saying that, though, Gardot is often close miked so she can be a little 'in yer face'. Nevertheless, mostly that just allows her husky vocal textures to swamp over your senses. Well balanced and neutral, you can let your hi-fi loose on this one.

will always hold a special place in my musical heart for the original Penguin Cafe Orchestra, founded by Simon Jeffes, who sadly left us in 1997. The music itself offers a unique take in classical melodicism. Qulrky. Light. Combining mostly organic music but adding electronic punctuation, the nature of the original band's experimentation can be revealed by their first public concert. As support for Kraftwerk in 1977. Now that's a debut!

What I liked about the original group was its ability to combine avant experimentation with pop accessibility and to welcome the melody. Many avant-leaning collectives fear melody as if it might harm their street cred. Not the PCO.

Ten years after Simon's death, the old band members got together for a celebration of the man and the music for a London concert. Part of that concert

was Simon's son Arthur who, I guess, was affected enough by the occasion to trigger thoughts of injecting new life into his father's vision with new, original music featuring fresh band members but following the same stylistic path as Simon Jeffes.

This is Arthur's debut as, simply, Penguin Cafe. And it's rather lovely. And it sounds like his father's son. And I approve. What Arthur is doing here is exploiting the still warm fashion for neoclassical album releases. I've been receiving them regularly for review for some time now. This album lives within that framework but it adds a light playful Penguin sheen. The track, 'Landau' is a good example of that. A classical-framed foot tapper, if ever there was one.

In mastering terms, I was happy with the broad presentation which was even, neutral and balanced. There were no wayward frequencies to spoil the sonic party here. A fine recording.



PENGUIN CAFE

A Matter of Life... Erased Tapes

riginally released in 1958, this album takes a swathe of Monk's own bop catalogue and re-presents it through a Messenger filter. Blakey's influence is important in adding a twist to the Monk machine.

Blakey sits in on drums here while the keen sax you'll hear from the off is blown by Johnny Griffin, Bill Hardman riding as wing man on trumpet and the wonderfully monikered Spanky Debrest on bass.

Griffin dives straight in on the lead track 'Evidence'. The man doesn't wait. He doesn't ask if everyone's ready. The man fires on all cylinders, forcing everyone else to up their game. The album maintains that pace from there on in. Its great to hear Griffin and Monk bounce off each other in melodic terms here.

It's also interesting to hear how the group switches into blues

mode during Blue Monk. The sense of lazy swagger and emotional lethargy comes naturally it seems, adding to the power of the song itself and again, Griffin's almost laconic delivery during his solos.

Speaking of Griffin, his Purple Shades is the only non-Monk track on this album. Another blues outing, this final track on the album is a 'one for the band' track because if wanders off the Monk track. It's enjoyable, nevertheless.

In mastering terms, this music is beautifully presented with a bucketful of gorgeous texture around the upper mids. The rasp from the sax is both focused, precise yet full of human error – just the way it should be.

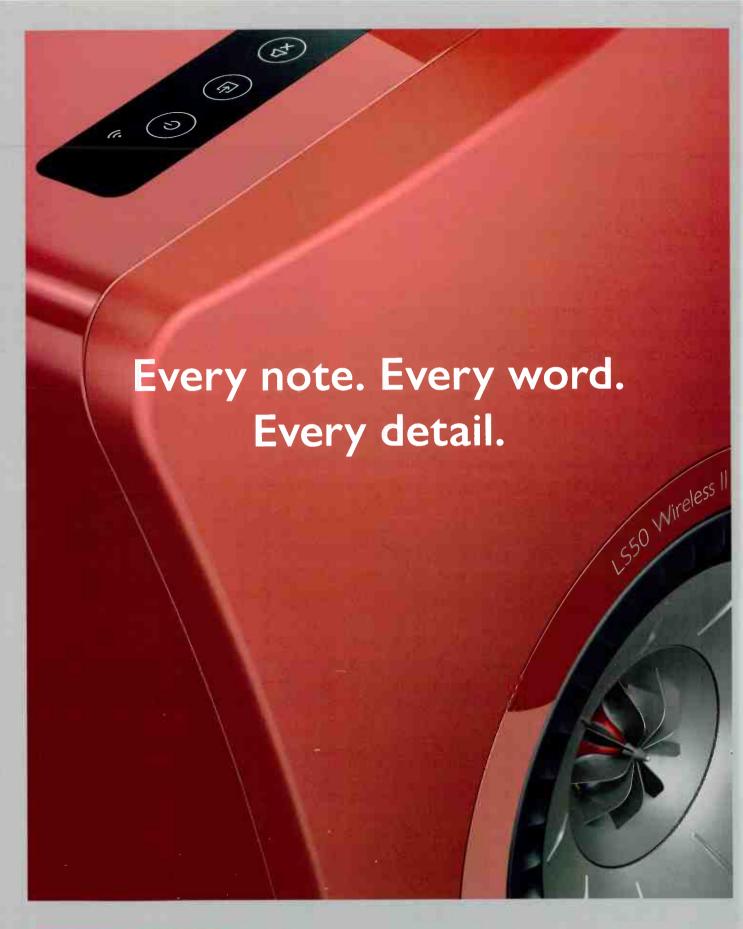
The percussion has an almost visible distance between it and everything else on the soundstage while the piano is encased within its own sonic bubble, with a unique flavour. In fact, the entire album is quite delicious.

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# "LP has its own magic – but it's an illusion. Digital will never sound like LP, nor will master tape.



Noel Keywood

top thinking vinyl is perfect" struck a chord with me. I was casually looking at YouTube early in the morning

over a stiff black coffee and gently enjoying "5 Things I Wish I Knew Before Collecting Vinyl Records" by channel poster Too Many Records. What Matt had to say wasn't earth shattering perhaps but he had a different slant to most others, talking gentle truths I needed to be reminded of. When you start getting technical and over-complicated with vinyl you lose the reason it became important to you in the first place.

Vinyl is not perfect as Matt says – quite the reverse, it is deeply imperfect. Not only at a technical level but also in terms of variability, something that is explained here. Variability means sound quality can vary hugely in completely unpredictable manner: old LPs can sound better than new ones; new LPs can sound thoroughly mediocre – or better than just about anything out there, including the best digital (the reason I'll explain later). Some LPs age disgracefully whilst others seem not to age at all.

Then there's those ticks and pops that throw another spanner into the sonic works. These issues, Matt says in 'thing No4', you have to put up with to enjoy vinyl's great benefits. True, very true. If not something classical lovers were ever willing to countenance, even though all-analogue recordings onto vinyl better convey the properties of classical instruments than all else. Classical on vinyl sounds lovely, but ticks and pops don't so distortion on CD gets acceptance instead.

This was never my choice because strings and close-miked violin suffer especially in the conversion to digital, taking on a coarse, screechy quality I don't hear on vinyl. But I understand a massive "tick - pop - tick" is pretty disturbing when you are trying to follow a slow, reflective violin solo, like Massenet's Meditation. Matt says he had to train himself to ignore such defects for the benefits of a unique sound. And if you can't then digital is for you.

Hmmm... interesting. Having grown up with LP I never had any option so just had to accept it; having to "retrain the brain" to enjoy LP is new to me.

When CD came along I could not retrain. It was so coarse and unnatural I could not accept it. Which is why I never for one moment considered abandoning my LPs. But for anyone born after 1970 their experience of growing up with music will not include vinyl's obvious drawbacks. Nice to be reminded by Matt that these have to be – are being – mentally tuned out by vinyl users,

What Matt does not say though, is why vinyl has a unique sound. There is an obscure technical reason the LP sounds the way it does – and quite different from analogue tape. They're both analogue sources and should sound the same, but they don't.

Why? LP has its sound tweaked by RIAA replay equalisation (EQ), tape does not. Nor do any other sources. This EQ boosts bass and cuts treble by massive amounts, changing the nature of background groove noise. The shaped noise introduces a feeling of low frequency presence that invokes a sense of size, scale and stage depth unique to LP.

I was alerted to this when playing LP without RIAA correction through a special measurement preamp I built — and it was not a nice experience. Surface noise became fierce, ticks and pops bullet like and there was seemingly strong distortion — a coarse sound. I had to ignore the imbalance in the music of course.

Switching in RIAA on this preamp changed the sound radically to that we know.

What RIAA correction does in practice is perform a psycho-acoustic trick, suggesting to the ear/brain the music is in a big space having strong low frequency reverb content, whilst at the same time attenuating distortion harmonics to give a more amenable delivery. Clever stuff, if entirely unintentional.

But I'm getting side tracked here. As millions of people around the world know, LP sounds good – well, amenable – through a half-decent system. Its sins are mostly minor and not too upsetting. Through a good system it morphs into CD challenger and through a very good system to something superior – superior even to 24bit digital. The reason being RIAA correction:

LP has its own magic and this is where it lies. Digital will never sound like LP, nor will high speed master tape. It's an illusion then. But one we like, because to our sophisticated interpretational hearing system it best matches the world around us. And that's one reason vinyl has revived.

Another reason little mentioned is that a lot of people – young and old – recognise and want to hear great performances from the past. Even when I was young these included the old US blues men for example, available only on LP; they intrigued

It's no different today. The LP is an extraordinary window into the past that is movingly authentic. With so many greats to be discovered in a catalogue of at least 25 years duration it's nice to see this recognised today as an invaluable treasure trove of music. Explaining why YouTube is brimming with fascinating insights into what the LP has to offer, like those from Matt of Too Many Records. Nice to be reminded!

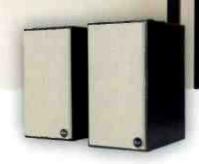
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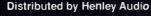


Twichell









# "Over 150 police charged the crowd with tear gas. That was Saturday"



**Paul Rigby** 

n 'The White Album', The Beatles presented a song that confused more people than it delighted. With 'Revolution No.9', John Lennon tried to prove his artistic relevancy. "Don't do it", said Macca. But Lennon did. Some nights, I still wake up screaming.

Thinking about this song, my mind did what if often does. It flew off in twenty lateral directions. All at once.

I thought about revolutions. Not the 'royalty wars' in which every other poor sap was plucked from the fields and told to fight whether they knew what was going on or not (mostly not). I'm talking revolutions of global consequence.

I need to write a book about this, actually.

What follows may very well be complete tosh. It was a theory cooked up in an afternoon and too much coffee, so it probably is. Even so, I push it out there, still in its nappies, as my pet theory of the moment.

It begins, thus. If the Beatles talked about 'Revolution No.9', I reckon we are currently in Revolution No.6.

More research is required yet I reckon Revolution No.I spanned 1848-1914, No.2 spanned 1914-1939, No.3 ran from 1939 to 1962 and Revolution No.4 spanned 1962 to 1982 (or possibly 1984). Number five ran from 1982 to 2005 and here we are currently in No.6.

It's Revolution No.4 I want to discuss here.

The focus is this. There was no such thing as the Sixties. In date terms there was, of course. In cultural terms? No.

History tends to be divided into Lego-like blocks we call decades which is a hubristic, human construct of stunning conceit. It's tough for us to divorce the shifting sands of time away from this familiar format. We are naive and childlike in our devotion to the calendar.

For example, you look at any written cultural history of the Sixties and every account says that it ended at the Altamont Music Festival.

It apparently ended because of a single violent death and the atmosphere of violence that surrounded the Festival as a whole. Altamont took place in December of 1969. How very convenient for the jobbing social and music historian.

Let me tell you this, revolutions may start because of a single, tragic death (i.e. WWI) but they don't end because of them.

My quick and dirty research tells me that three people died at the Woodstock festival early that same year (no knives were involved but stick with me) while personal accounts inform me that there were many, unpublicised scary confrontations throughout the period. Even The Who's Pete Townshend physically assaulted activist Abbie Hoffman with his guitar at Woodstock. Today, it would be a serious criminal assault subject to a court appearance. Townshend publicly declared, "The next flools n' person that walks across this stage is gonna get floobs'n' killed! [crowd cheers] You can laugh, I mean it!"

Summer of Love? Don't make me laugh.

The only people who used the Summer of Love tag was the media, after the event. The majority of the actual event wasn't about 'love'. 'Love' was already part of the hippy ethos. That was a given. The actual event ended up as a political protest against the Vietnam war and for social and personal freedoms. The only thing that brought most of the audience together as one harmonious collective was their group fear that they'd be drafted the next day.

Critically too, the only reason we actually remember Woodstock at all is because of the film and, more importantly, because it was distributed by 'The Man' in the form of Warners. In effect, Warners invented the Summer of Love for marketing purposes.

Summer of Love? Before Woodstock, there were other festivals featuring plenty of violence. Take the earlier, three-day Mile High pop festival in Denver attended by 50,000 people which featured a full-on riot. Over 150 police charged the crowd with tear gas. That was Saturday. Sunday saw police dogs ravaging the audience, mace was sprayed. No-one looked at this violence and declared the death of the Sixties then, did they? Maybe because it wasn't filmed, perhaps?

The Sixties didn't end at Altamont. Revolution No.4 evolved. It continued into the Seventies. The hippy ideals were still present in the Seventies. The musical styles were there too, the clothes hadn't changed too much. The anti-authoritarian position of the young remained, sexual liberation continued, required freedoms were still a source of anger, money was still in short supply. Older generations continued their rearguard battle.

Punk was just an evolution of the same battles. Read the above paragraph, change the fashion, rinse and repeat.

The Sixties actually ended in 1982 (possibly 1984) for too many reasons that I can provide here but one notable event was the final end of the British Invasion. There were much more important things going on at the time which actually ended Revolution No.4 but the final, spluttering end of the British Invasion was a symbol of that change.

Now excuse me while I call my agent.

# Sonus faber

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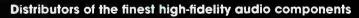












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# "Currys' skips followed an in-store 'Cash for Trash' month, giving £5 vouchers to participants"



Martin Pipe

ere's a possible news story for you," said Hi-Fi World's hardworking

production/design editor Faiza, "although the events referred to would have happened by the time this issue's published". Fair enough, thought I; after all, this situation isn't unknown to anyone familiar with the product launch-cycle. However, the press release came from "omnichannel retailer of technology products and services" Currys - and was concerned with the opposite end of the 'consumer experience'.

Currys attempted to highlight the "worst e-waste offending cities in Great Britain" by commissioning YouGov to ask Brits "why they do not recycle their unused tech". Its survey found that 23% of respondents with unused or 'hoarded' tech found recycling their electronics to be "confusing or inconvenient", a further 21% admitting they "didn't know how to dispose of e-waste responsibly".

To translate concern into visual spectacle, Currys set up "large pop-up tech recycling skips, urging Londoners and Brummies (the worst offenders) to spring-clean and recycle their old tech responsibly". Above the 'Long Live Your Tech Skips', which had side-mounted windows to bare all, were prominent numerical displays: "we've recycled xx.xxkg".

Naturally, there was an incentive to draw in the punters; the publicity stunt rewarded locals depositing "old, broken, or unused electronics" with (Currys) vouchers worth £5 "to spend instore or online". These could be put towards the e-waste of the

future...and so the cycle continues.

Currys' skips followed an in-store "Cash for Trash" month, which also involved giving £5 vouchers to participants. During the first three weeks of the campaign, 120 tonnes of e-waste (the equivalent of 10 double-decker buses, the PR explained) were allegedly prevented from "entering landfill".

Despite Curry's mission to "give tech a longer life", we should never forget that ultimately its core business is selling us new 'stuff'. The use of a skip suggests a container into which people simply tossed their unwanted items. If they were working, they wouldn't be for much longer!

I'm sure such schemes would be greeted with more enthusiasm were donors to be individuallyinformed as to the fate of their once-prized items. If recycled, there should be an explanation as to why repair wasn't viable. Was it because they were obsolete, no longer supported by the manufacturer or simply 'fashion victims'? Such information could lead to more responsible buying choices in future.

And of the items given new leases of life? I would feel more comfortable discarding a surplus PC if I knew it had been securely 'wiped', and was now logging donations at a local food bank. Currys did assure me that "tech containing sensitive information... goes through a stringent datawiping process".

Still on the mass-market retail trip, many of us will remember Dixons — whose remaining shops were rebranded Currys. Dixons outlets sold hi-fi (some of it 'ownbrand') during the boom years. On the high-street, Dixons fought

it out with competitors like Comet and Laskys.

Laskys were big in their day but, like the Dixons name, have disappeared into history. Their flagship store in London's Tottenham Court Road was a two storey wonder of latest audio technologies back in its day but ciosed long ago, as did all the many other hi-fi retailers (and camera shops). It became a Natwest bank, although ironically they have become a new refugee from the high street and so the site now sells bananas, having become Sainsburys!

The Southend Laskys, where I once bought an Akai cassette deck, was transformed into a Virgin Megastore the following decade. When that (or rather its oddly-named 'Zavvi' successor) folded, the unit was extensively rebuilt and became a Metro Bank. During the refurbishment, everything was stripped back to the brickwork – and, for a short period, curious onlookers could see traces of its Laskys past.

Currys, it could be said, acted in the spirit of the EU's WEE Directive whose solution to this issue was that electronic goods should be returned to their retail source for re-cycling – but that proved unrealistic and now we have Amazon to complicate such a methodology.

This is a problem still awaiting a realistic solution, one people can understand and comply with in easy fashion. Perhaps we should have electronics skips in the street, as Curry's would seem to suggest? Companies that recycle e-waste exist, should local councils assist in allocating them roadside skips? There are lots of possibilities here but little sign of any being widely exploited.



# SOUNDECK

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"It's hard to put into words the dramatic improvement the PM brings to my SL-1200" Frank T

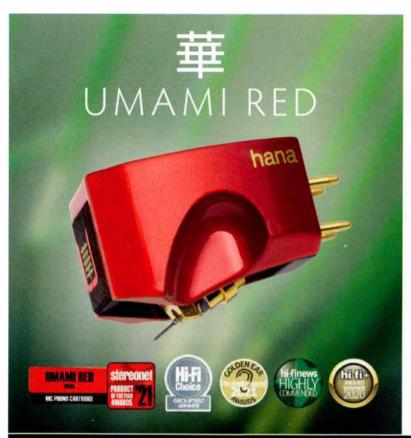
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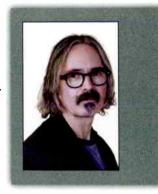




INFORMATION AND UK DEALER LIST www.hana-cartridges.co.uk

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# "Imagine the glorious toffee-flavoured midrange of a vintage valve Leak Stereo 20"



John Pickford

traddling the worlds of hi-fi and pro-audio, I'm often intrigued by both the similarities and differences between them. One thing I've noticed is the appetite for retro-styled products, which has been commonplace in the sound recording world for quite a while but is now becoming increasingly popular within our hobby.

I'm currently auditioning a pair of JBL loudspeakers that look as if they've come straight out of a swanky LA recording studio circa 1977. They sport a blue front baffle with two visually indiscreet front-firing ports along with JBL's pro-looking flared horn, underneath which shows the model number (4309) along with the epithet Studio Monitor. Funny thing is, they're not being targeted at the recording industry, but rather the domestic hi-fi market.

As it is, the 4309s would struggle to find favour in a modern recording studio as they are a traditional passive design and these days the vast majority of studio monitors are active, with bespoke onboard amplification. Having inbuilt amps tailored to power the drivers optimally makes a lot of sense, which is why they have been enthusiastically embraced by studio professionals, however this type of design remains rare in hi-fi. When we do see powered speakers for the domestic market it's more often in low-cost all-in-one type systems rather than the higher end of hi-fi. One explanation for this is that part of the fun of hi-fi is building a system with the option to swap-out, or upgrade, any component in order to tweak the sound to taste; recording engineers just want to get on with the job of tweaking audio elsewhere.

That's not to say that engineers are disinterested in gear though, quite the opposite in fact. All studio professionals have strong opinions on which piece of kit is ideal for any given task and the more 'golden eared' among them will even have a preference for, say, a particular microphone within a collection of six of the same model.

This reminds me of a famous little speaker that successfully made the leap from promonitoring tool to hi-fi component - the BBC LS3/5a. Originally designed in the early 1970s to provide accurate monitoring within Outside Broadcast vans, the Corporation's mini-monitor now enjoys something of a cult following among hi-fi geeks, particularly those who collect audio equipment. While collectors obsess over the merits of this or that particular variant (the BBC design was licensed to several manufacturers), others point out the idea behind the BBC's design was that any given example could be mated with another with no difference in sound quality. Despite the irony of this, it doesn't stop LS5/3a aficionados from preferring one manufacturer's version from another's. Last time I looked Chartwell was the prized variant while Goodmans models seemed to be far less desirable.

My first outing for Hi-Fi World was a review of the vintage-styled Leak Stereo 130, which despite its 1960s looks is a thoroughly modern amplifier that easily outclasses any ancient solid-state design. No one would want to recreate the performance of the original transistorised Stereo 30 from 1963. In contrast though, the studio world is awash with microphone amplifiers (and indeed

microphones) that recreate the sonic character of designs from the 60s and 70s as engineers embrace their inherent colourations, which defined the sound of classic recordings from those decades.

Arguably the most famous and certainly the most copied of those old studio pre-amps is the Neve 1073, launched in 1970. It's still in production, however there are numerous copies or reimaginings of the design produced by others. While they avoid any copyright infringement by not saying 'Neve-styled' (they leave that to us reviewers!), they almost always include 73 somewhere in the model number to flag up the intended inspiration.

One of the pre-amps I often use in the studio is a most interesting design. It's stock sound is incredibly transparent and clean, however it has two 'Mojo' filters allowing vintage characteristics to be dialled in at will. The first of these filters is named Thump and aims to replicate the larger-thanlife character of classic solid-state heavy hitters such as the Neve 1073, while the second filter (Cream) produces a silky-smooth tone reminiscent of classic valve mixers, which were used almost exclusively until the late 60s.

How long will it be I wonder, before someone produces a piece of kit with that type of user control for audiophiles? Imagine an amplifier claiming to be the most neutral, 'straight wire with gain' hi-fi amp ever produced, while incorporating a feature allowing you to dial-in, say, the classic Pace, Rhythm and Timing of a Naim or, at the flick of a switch, the glorious toffee-flavoured midrange of a vintage valve Leak Stereo 20. Who would be in the market for a product like that?

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

### **TURNTABLES**

### AVID INGENIUM

eson

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 tumtable, 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 Orive, 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 tumtable, the legendary Sondek goes from strength to strength. New Keel sub-chassis and Radikal 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 tumtable 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

£300

£1500

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 lapton.



### **REGA RP3**

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

A one-piece tapered 9in arm finished like a cam-

A one piece tapered casting makes this arm's

structure almost unrivalled. Great dynamics and

superb imaging, for MM and MC. Reference qual-

Twelve inch magnesium alloy tapered arm tube plus SME V bearings. An insightful yet smooth and relaxed sound. Superlative build completes the

The famous Technics SL-1210 Mkll 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. Dur in-house reference



### **TONEARMS**

ORIGIN LIVE ENCOUNTER MK3C

Origin Live combines carbon fibre and ebony to marvellous effect in its new 12-inch arm. Creamy and rich in presentation, the Encounter delves deen into the mix for a satisfying listen.

### **HADCOCK GH-242 EXPORT**

Consummately musical, lyrical sounding tonearm, but needs the right turntable.

### ORIGIN LIVE ONYX

6450

6810

£1 745

Easy, smooth, creamy nature that reminds you why you're listening to vinyl in the first place. Essential audition at the price.



REGA RB303

ity for peanuts.

package. Dur Editor's steed.

**SME 309** 

era and slick to use. Superlative SME quality and sound at affordable price

### SMF V 63000

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

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 £945

Highly finessed Swiss moving coil that plays music with riflebolt precision.

### **DENON DL-103**

A popular and much loved budget MC with big bass, smooth treble and deep sound stage. Fantastic value.



LYRA TITAN I MC

Breathtaking speed and dynamics from LP, helped by diamond coated, boron rod cantilever.

£3.500



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. Highend 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

A glorious sounding cartridge with solid bass and strong dynamic punch, plus excellent treble from its Fritz Geiger stylus. Fun and affordable.

£250



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

MM and MC, oodles of gain, a volume control — and valves! Looks superb and sounds even better: smooth, atmospheric and big bass.

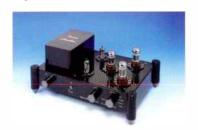
TIMESTEP T-01MC £99

New, minimalist phonostage that sonically punches well above its weight.



ICON AUDIO LA-4 MKIII

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

Pure single-ended valve magic. Low-powered but immediately gorgeous, easy-going yet forcefully dynamic at the same time.



AUDIO RESEARCH VSI60 £3,500

Power house sound with enormous pace and punch from traditional U.S. 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

£995

£1,400

£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

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**

CQ25

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

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

£4.995

Big Russian transmitter valves deliver 200W from these massive monoblock amplifiers. Frightening in every sense.

### MCINTOSH MC-152

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.

### OHAD ILEIGHTY MONORLOCKS 66.000 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

£1,600

£1.400

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**

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** bargain price. Utterly superb - a must hear.

£2.500 Excellent U.S. planar magnetic loudspeaker at

£1.000 EPOS K2

A fun sound that is tidy all round and very engaging, with solid bass. Music as you hope it to be.

### **FOCAL ARIA 926**

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.



### **OUADRAL CHROMIUM STYLE 8**

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

Active loudspeaker with tight, powerful bass perfect accuracy and detailed treble from a ribbon tweeter.



### Q ACOUSTICS 2050i

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 lowend 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

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

### **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**

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

£1,000



### **EMINENT TECHNOLOGY LFT-16A** £1,200

U.S. planar magnetic bookshelf loudspeaker with unrivalled mid-band and treble. Hear it before

### **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**

Transmission line loaded standmount with a big box sound from a compact cabinet. Punches well above its weight.

£1.575



### 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

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.



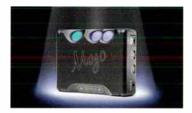
### **HEADPHONE AMPLIFIERS**

### **CREEK OBH11**

Designed specifically for low to medium impedance (30 0hm - 300 0hm) 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**

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

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

£650



### FIDELITY AUDIO HPA 100

Great little headphone amplifier with a lively yet refined and open sound.

### MUSIC FIRST PHONE BOX

Brings a big stage, plenty of detail and rich, deep colours to the sonic spectrum.



### OPPO HA-2

£500

£250

Remarkable performance and sound from ESS Sabre32 DAC in a slim portable package.



### **CD PLAYERS**

AUDIOLAB 8200CDQ

£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 modem 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

### **ELECTROCOMPANIET EMP-1/S**

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

Universal player and DAC that makes CD and Bluray (+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

A charmingly musical performer at the price - this is a surprisingly sophisticated CD player for the money.



### TUNERS

**CAMBRIDGE AUDIO AZUR 651T** £299

Value-packed AM/FM/DAB and DAB+ ready tuner. Precise and detailed with excellent resolution of spoken word.



### **CREEK DESTINY 2**

9550

Creek's tuner expertise shines through in the Destiny 2. This AM/FM receiver is wonderfully three-dimensional and smooth.



### MAGNUM DYNALAB MD-90T

£1,900

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



### DACS

AUDIOLAB M-DAC

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

9600

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

### ANTELOPE 20DIAC 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 20UTE HD** 

Superb build quality and exceptional sound from this compact unit. Boasts the ability to handle DSD direct via USB and has an exceptional soundstage. One of the best DACs you can buy.



### DCS DEBUSSY

28,000

caan

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

Packed full of features, including Bluetooth and USB, this ESS Sabre32 equipped DAC offers crisp, insightful sound at low price.



### **METRUM OCTAVE**

Unique two-box digiral-to-anlogue convertor with great sound at a great price. Cuts upper treble, though.

£2,400

Superb high-end digital convertor with a probing, punchy and forensically-detailed sound.



### TEAC UD-501

£699

Feature-packed DAC with benefit of DSD playback. Superb sound means little to touch it at the price



### **RESONESSENCE INVICTA MIRUS**

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

Budget offering from Cambridge offers a great introduction to network streaming.

### CYRUS STREAM X

£1,400

Gorgeous sound quality even from compressed digital music. New control app makes everyday operation a doddle.



### CONVERT TECHNOLOGIES PLATO £2999.00

A network player with amplifier that does it all, including turn LP to hi-resolution digital, and add

cover artwork from the 'net.



£2,995

Clean, incisive and very detailed sound with Naim's traditional pace and timing make this one of the best network music players around.

Great sound quality with traditional Naim heft. A wonderful DAC with full 24/192 handling. Only the display could be better.

### **NAIM NAC-N172 XS**

£1.650

A pre-amp/DAC/streamer package provides a taught, rock-solid presentation with a tonally rich midband and a superior sense of rhythm.



### 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.

### **OUAO PLATINUM OMP**

£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.



### **DIGITAL SOURCES**

ASTELL&KERN AK100 MKII

£569

Portable high-definition digital player with superb sound quality. Punchy and fast.



Fabulous value player with nice easy sound and full range of abilities. Small and light. For newbies.

### LOTOO PAW GOLO

Reference quality sound; it's like carrying your hi-fi in your pocket. Equivalently large too, but stunning headphone quality,



### **NAIM HOX**

€4,405

Interesting one-box network-enabled hard-disk music system that gives superb sonics together with impressive ease of use.

### NAIM UNITILITE

£1,995

A 50W amplifier with traditional Naim heft, a CD player and vhf/fm radio, plus network input and Bluetooth make this a great all-in-one.



### PORTABLE SPEAKERS

### BAYAN SOUNDBOOK

£149.99

Superb design and great sound make for one of the best portable Bluetooth speaker/radios on the market. Not the cheapest - but worth every



### IRIVER IBA-50

Big, warm sound with plenty of volume and clean at high levels. Muscular sound compared to many rivals.

### **CABLES**

**BLACK RHODIUM TWIST** 

£71/3M

€69

Twisted to fight off radio frequency, the Black Rhodium speaker cable is easy on the ear with a fine sense of clarity and focus. A remarkable performer at the price.



### MAINS CABLES R US NO.27

695 Offers a sprightly pace with a precise nature. Fast

performance enhance frequencies and beautifully etched detail.



### CHORO SIGNATURE REFERENCE

£900

Majors on timing, detail and openess. Capable of getting the best from most systems and a recommended upgrade.



### TELLURIUM Q BLACK

A deep, dark, velvety performer that's nevertheless highly musical, it represents excellent value as mid-price cables go.

### **TELLURIUM Q SILVER OIAMONO**

An open, natural and transparent sound that is difficult to beat, from these great loudspeaker cables.



### **HEADPHONES**

**AUDEZE LCD-3** 

£1.725

A planar magnetic 'phone that offers monitor quality. Strong sound with silky, dark quality that others struggle to match.



Beautifully presented headphones from the loudspeaker specialists. Feed them a good quality source signal and they reward with excellent

### JAYS V-JAYS

Wonderful little budget over-ear portable 'phones with a clean, clear sound to beat the best of the rest at the price.



### **NOBLE K10**

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INC. FITTING

Custom fit in-ear phones with 10 drivers deliver a sound that is out of this world. Personal and perfect.



### **OPPO PM-1**

Planar magnetic phones with a warm, easy but big bodied sound that draws you in. Need a lot of drive, but deliver superb bass.



### SENNHEISER H0700

Tremendously fast with a strong, focussed, lowerfrequency range and a firm bass punch.



### YAMAHA HPH-MT220

£150

Purposed for indoor monitoring yet light and comfortable enough to be used on the move. Excellent sound quality marred only by a slight warmth to vocals.



Acoustic Energy's AE1202 lõudspeakers stand tall but cost little. Noel Keywood listens.

ig floor standers at a low Acoustic Energy's AE120<sup>2</sup> tasty proposition for this purpose with their array of drive units and retail price of £800. That's well below most big floor standers, if not rivals from Q Acoustics and And I liked these speakers, as I'll

Standing 960mm tall, 165mm appear tall and slim. To aid stability a spikes can be attached to make firm comment applies to all manufacturers who use spikes of course, as most rubber pads, Blu Tack or pennies under the spikes. Spikes are good for stability if bad for floor boards. Weighing 9kgs the cabinets feel heavy so have to be walked into place.

As you might expect for what is a budget loudspeaker, the veneer finish is a vinyl wrap, with slim open weave black cloth grilles attached by magnets to cover the wire only through a single pair

of terminals that accept bare wire, spade terminals or 4mm banana plugs. All satisfactory if a little uninspiring. These are very sensitive loudspeakers so need little amplifier power: they'll go very loud with 40W.

As with most modern floorstanders what you get is a two-way comprising 25mm (Iin) soft dome tweeter with 130mm (5.2in) treated paper cone bass/midrange drive unit directly below it, crossover between them at 2.7kHz. Our measurements showed the bass/midrange unit worked down to low frequencies, being supplemented by the two bass units below it that came in around 300Hz and peak at 120Hz. The rear slot port extends output down to 40Hz.

### **SOUND QUALITY**

The AEs best suited our PrimaLuna EVO 300 Hybrid amplifier with its fast, detailed sound, since they are mild mannered by current standards – unusually so in fact. I used Chord Company Signature Reference cables for connection. Signal source was our Oppo BDP-205D silver disc player with its ESS ES9038 Pro DAC and a MacBook Pro with the Audirvana+ player app, connected via USB to the Oppo, to play hi-res including DSD.

Antonio Forcione's Tears of Joy (CD) sounded slightly warm and muggy at low-ish listening levels, with some apparent lack of detail and insight. Had I not measured

the AEs first I would have suspected a crossover suckout. In use they sounded a lot different to what measurement had predicted. This was an easy going, mellow presentation where his guitar strings were no threat to bats - as they can be with some loudspeakers - and guitar body had firm presence. Some of the bass whoomphs from guitar body that exist in this recording were captured well enough, giving useful depth and strength to the sound. No lack of bass here then.

With the bigger performance of Skunk Anansie's Hedonism (CD) it was time to turn volume up and this made quite a difference. The AEI 20<sup>2</sup>s then started to move the room nicely and show their mettle. Their lack of bite or sharpness made high volume an easy listen and things started to happen. Drums took on good strength and had a decent snap to them, the distorted guitars didn't grate, and Skin was clear centre-stage, her vocals satisfyingly clear yet without shout. That made high level Rock an easy experience if not one that was fierce or challenging. The fulsome balance and a small sense of box warmth (colouration) brought a big, meaty delivery

into action

- more so
than most
others out
there at present.

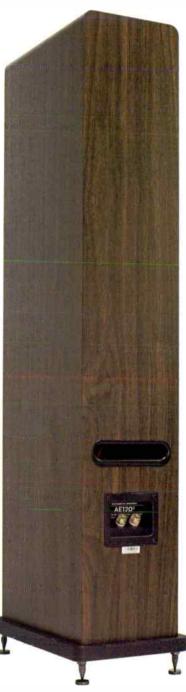
So as to say, as I ploughed through a wide range of music the AEI20<sup>2</sup>s had their own distinctive sound that is different to the norm, but not necessarily worse than the norm. They are not loudspeakers to jump out at you, until volume goes up, then they get motoring in their own confident way.

The rear carries a slot port that loads the lower bass units. The terminal panel allows mono wiring only, with terminals that accept bare wire, spades or 4mm banana plugs.

With classical the issue of box colour was occasionally more obvious, giving an enclosed 'from the box' feeling to the Trondheim soloists backing Marianne Thorsen playing a Mozart Violin Concerto (24/96) where cellos of The Trondheim Soloists were invoking a small degree of chamber echo ("box whoomph"). This was not woodenness from cabinet colouration so much as returns from an undamped chamber



The 1in (25mm) silk dome tweeter fires out through a shallow horn that helps raise sensitivity and smooth response.







## **RA180**

# Powerful. Elegant. Complete Amplification.

The RA180 integrated amplifier has been carefully considered, crafted and constructed to challenge contemporary expectations and deliver a near-perfect, natural sound that defies entrenched beliefs. Unique input and output options alongside user-adjustable features to suit any premium audio system ensures the use of this elegant 800W Class AD amplifier is an experience to behold.

Find out more and view the full feature set online: Henleyaudio.co.uk/Products/RA180



behind the bass/mid unit it sounded to me, having wrestled with this issue in the past. All the same, I enjoyed the basic delivery here, there was plenty of insight into violin and a big space behind the Trondheim soloists that came over as convincing. Also, Marianne Thorsen's violin sounded smooth and natural, lacking coarseness or screech — a problem with metal dome tweeters that are given prominence. Acoustic Energy specif-

and relaxed as volume was cranked up.

### CONCLUSION

Acoustic Energy's tall, slim AE120<sup>2</sup> loudspeakers have a different take on things to most else. But that's good. Not everyone wants overemphasised treble from metal dome tweeters, for what is described as "detail" in the show room. I'm very biassed toward sonic accuracy and this means the balance on offer

### "Marianne Thorsen's violin sounded smooth and natural, lacking coarseness or screech"

ically and consistently avoid this problem, even if so many others are deaf to it.

Mercedes Sosa singing Misa Criolla was convincingly chiselled at centre stage, with the backing Creole Singers clearly laid out behind him as backing. This was just one time I noticed how well ordered and defined was the sound stage: the 'speakers have superb imaging, a feature that struck me across much classical where imaging is usually more mellifluous than Rock, but well established here.

Bass quality? There was all the sense of strength and solidity I hope for from floorstanders; the AEs sounded big and ran deep, with strong definition to drum and bass lines: with the synth kick drum of Safri Duo's Samb Adagio the speakers thundered, remaining clean

Acoustic Energy's treated paper cone drivers have a neutral sound. The central cone handles high frequencies smoothly.

here, our measurements showed. The sound was certainly on the mild side yet with a bit of volume applied it is big bodied and easy on the ear. The sound stage was unusually tidy and stereo images clearly focussed.

A relaxing and tidy sound then that has its own merits, including the sense of scale a floor stander is expected to provide. Well worth an audition.



The tweeter and associated bass/midrange unit at top are closely spaced for best phase matching. Below this pairing lie two additional bass units for extra low end punch.

### **MEASURED PERFORMANCE**

Our frequency response analysis shows a reasonably flat response from 600Hz up to 20kHz, with no upper midband dip at crossover to the tweeter (3kHz) nor any lift or peaking at high frequencies, suggesting naturally balanced treble free from sharpness. There is an unusual downward shelving effect below 600Hz that lowers output by a few dB and forward output from the drive units drops away fast below 80Hz, the port taking over below this frequency. The two lower bass units peak at 120Hz and output is strong here, a dip in the impedance curve showing extra current being drawn. The port is tuned 45Hz and its output is strongest at this point, but acoustic output is broad all the same (red trace) suggesting good acoustic damping. Overall, the AE1202 doesn't look to be warm or bass heavy but it may well suit smaller rooms with a lot of low frequency room gain, meaning around 17ft long or below. Smooth extended upper treble suggests an amenable high frequency delivery.

Sensitivity was on the high side at 88dB sound pressure level for one nominal Watt of input (2.8V), making

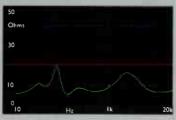
amplifiers of ≥40W suitable. Overall impedance, measured using pink noise, was 7 Ohms and lowest value (d.c.r.) 5 Ohms, all normal enough values.

The AE120<sup>2</sup> measures well if with some slightly unusual characteristics that will likely give it a dry sound but with fast bass and smooth treble. NK

### FREQUENCY RESPONSE Green - driver output Red - port output



### **IMPEDANCE**



### ACOUSTIC ENERGY AE120<sup>2</sup> £800





VALUE - keenly priced.

### VERDIC1

capable.

A big bodied, smooth sound. Mild mannered but entertaining.

### FOR

- smooth, mild sound
- powerful bass
- superb imaging

### AGAINST

- some boxiness
- lack detail at low volume
- mediocre finish

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# vinyl section contents

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A quality two-speed, belt drive turntable package with Ortofon Quintet Blue MC cartridge, reviewed by Noel Keywood.

### **AUDIOPHILE BOOKS 77**

Prog to Punk – three books reviewed by Paul Rigby: Genesis, Radiohead and John McGeoch.

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Peter Bardens Long Ago, Far Away, reviewed by Paul Rigby.



### **CENTURY MEDIA DUO**

Danish heavy metallers Slægt offer a new, gatefold, five-track album, 'Goddess' (Century Media) complete with growly vocal that contrast with surprisingly classic guitar-based rhythms.

that contrast with surprisingly classic guitar-based rhythms.

Also from Century is this – um – intense, cold slice of Belgium black metal from Wiegedood. 'There's Always Blood at the End of the Road' which starts in extremis, dips for an occasional breather and then you're back into the madness.

# news



### **RICHARD THOMPSON**

On '(guitar, vocal)' (Island), this double album gatefold hits its 45th anniversary and includes the man's 1976 collection of rarlties and then unreleased fare from his solo efforts, his work with Linda Thompson and Fairport Convention from 1967. Essential for fans, it includes outtakes, BBC sessions, B-sides, you name it.

### **CASUALLY HERE**

...offer a new electronica album, 'Possible Worlds' (casuallyhere. bandcamp.com/album/possible-worlds). I looked at the clear vinyl edition, limited to 100 copies (well, 99 now). Although offering complex beats, there remains a wheery, light, pastoral simplicity to these tracks combined with a child-like wonder.



# Shows Calleyin

### **GERRY RAFFERTY**

'Rest in Blue' (Rhino) is Gerry's farewell, you might say, the great man was working on this new album from 2006 to 2011 when he sadly left this world.

Rafferty's daughter Martha curated this gatefold double album featuring new songs, reworked classics, older originals. She apparently stripped the synths from many of her father's original demos to better focus on the voice. A wise decision. I like this one a lot.



### **BEAR FAMILY**

New from the German audiophile outfit is Stomp Gordon on 10" vinyl. 'Damp Rag' packs 10 tracks of jump blues on vinyl, a further twenty-two on an included CD, a postcare

and eight-page booklet. Dead at just thirty-one, this flamboyand artist did his thing bare footed! Oh yes.





### TINARIWEN

Two for world music fans featuring the Tuaregs, descendants of the nomadic, Saharan Berber tribe who's home is now lost due political machinations. Their desert blues mixes rock and West African vibes.

'Amassakoul' (2003) has been newly remastered while 'The Radio Tisdas Sessions' (2002) was the band's first official studio album.

Combining a jauntily melodic line, a tribal delivery and blues rock foundation, both albums are immensely appealing and ripe for a musical crossover. Well worth investigating

### **NORTHERN UPROAR**

Two releases on clear vinyl from the energetic, bright and poppy Britpop outfit from Stockport via the UK audiophile label, Demon (www.demonmusicgroup.co.uk), including the 1996, self-titled debut featuring the singles 'Rollercoaster', 'From A Window' and 'Livin' It Up'.

Also check out the follow up 'Yesterday Tomorrow Today' (1997), the group's final LP including the singles 'Any Way You Look', 'A Girl I Once Knew' and 'Goodbye'.







### MADNESS



Keep Movins

### **MADNESS DUO**

Two from the Nutty Boys who were less than nutty in style, via BMG includes 'Wonderful' (1999), from the reformation of the group since the 1985 split. It harkens back to their early-80s style. Not the best but certainly not the worst album from the boys, it was a worthy release.

Speaking of the mid-eighties, also look for 'Keep Moving' (1984) which veered towards a more considered, serious style wrapped in pretty melodies.

The band reportedly grew tired of their 'wacky' image. This album is physical proof. Sometimes dismissed, this album features mature and clever songwriting.



### RICHARD FEARLESS

Yes, he's still breathing, still creating. Fearless presents 'Future Rave Memory' (Drone; www.droneout.co.uk) which he describes as industrial ambience. Slow, meditative yet covered in a hard chrome, this is a work of quiet intensity.



### **AEROSMITH**

'1971: The Road Starts Here' (UMC) was originally a Record Store Day release, covering seven demos recorded a year before signing to Columbia and recorded by guitarist Joe Perry. This gatefold release include the well-known track, 'Dream On'.









### ...AND FINALLY

Norwegian Øyvind Holm's neo-psychedelic singer-songwriter outing 'The Unreliable Narrator' (Crispin Glover; crispingloverrecords.com) features a CD and bonus 7" single. Competent but unremarkable.

Disassembler's 'A Wave From a Shore' (Western; westernvinyl.com) offers violin and electronica to form moody drones and loops from an epic soundstage.

An original soundtrack for Wes Anderson's 'The French Dispatch', this is a 2LP compilation featuring works from Jarvis Cocker, Charles Aznavour, Grace Jones and the composer Alexandre Desplat.

Check out The Police's 'Greatest Hits' (Polydor), mastered at Abbey Road as a half speed gatefold production spanning sixteen tracks over two discs.

Ex-Prisoners vocalist and Buff Medways' bassist, garage rocker, Graham Day has released his solo debut, 'The Master of None' (countdown-records.bandcamp.com/album/the-master-of-none). There's something distinctly Humble Pie about this one.

Damian Lazarus has released an album of experimental electronica, utilising Chinese instruments, recorded in Bali and inspired by the documentary film 'Beijing Spring' (Secret Teachings; secretteachings.org).

Finally, brothers Peter O'Doherty and Reg Mombassa were founder members of Mental as Anything. Both are here as Dog Trumpet via the albums 'River of Flowers' (2010) and 'Antisocial Tendencies' (2007). Quirky, idiosyncratic and slightly whimsical there's a bit of folk here, a bit of country, psychedelia and...lots of other things. It's an appealing sonic stew.









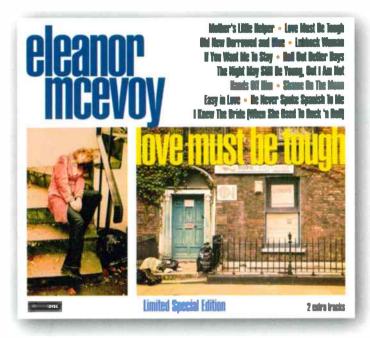




# eleanor mcevoy love must be tough

LIMITED SPECIAL EDITION OF LOVE MUST BE TOUGH AVAILABLE AS SACD (PLAYABLE ON ALL CD PLAYERS).

THE ORIGINAL LP IS AVAILABLE FROM DIVERSE VINYL.



eleanormcevoy.com

A homage to Americana, further tales of love and passion gained, lost and fought over, including songs written by Eleanor McEvoy with Johnny Rivers, Rodney Crowell, Brad Parker and Dave Rotheray.

Featuring tracks originally recorded by Terry Allen, Priscilla Bowman, Rodney Crowell, Nick Lowe, The Rolling Stones, Sly Stone & The Texas Tornados, with two extra tracks—The Fratellis 'Whistle For The Choir' & 'Please Heart, You're Killing Me'.

"Eleanor is the most real-sounding woman you'll ever hear on disc. The album is a great mix of originals and well-chosen covers that she makes entirely her own." — Classic American

"This is a superb blend of covers & originals. Like a female Van Morrison. she swings from the Stones to Dave Edmunds and from country to jazz, the most booze-sodden balladry since the Pogues. McEvoy sounds like the sort of woman who might greet you with a bottle of red one night and a rolling pin the next". — Truck & Driver \*\*\*\* Album of the Month

"This is a band album, rich with brass and hammond organ, and we're back in the Sixties again in some smokey nightclub... Love Must Be Tough may have been around for a while but it still may be the best thing you'll hear this year." —Dai Jeffries RnR, May 2021



# Xtra X

### A turntable ready for balanced connection. Noel Keywood looks at the Pro-Ject X8.

ith this turntable
Pro-Ject X8 talk
up the fact that
it comes with
True Balanced
Connections, for
lower noise and increased dynam-

ics. So I looked for an XLR connector at rear and couldn't find it! This puzzled me, but I suddenly realised what they were doing here. The X8 is a high-end all-in-one package complete with moving coil cartridge, priced at £2099. As standard

it comes with a conventional unbalanced signal cable. But it can be upgraded to balanced working.

How? With a balanced-input phono stage, Pro-Ject quoting their own \$3 B priced at £349 or DS3B (dual input) priced at £529

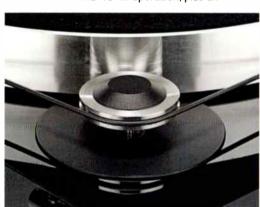




Pro-Ject's light, stiff carbon fibre arm with flat integrated headshell platform and finger-lift. Strongly built and with good bearings, it can be fully adjusted. An undamped lift/lower lever sits at right for manual control.

 relatively low prices for what are specialised, fully discrete preamps.
 A custom interconnect cable is needed too.

The X8 is a two-speed belt drive turntable, driven by an electronically controlled a.c. motor, making speed selection (33/45rpm) by push button, no belt fiddling required. It comes with a tapered carbon-fibre arm that is strictly manual in operation, plus an



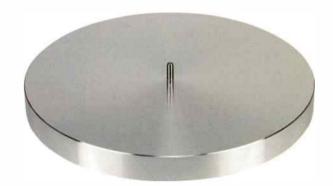
The single-step motor pulley of its synchronous motor is on display. Speed change is electronic, by push button.

Ortofon Blue moving coil cartridge that if bought alone costs a modest £349 – a very low price as MCs go. Put this little lot together and you can see the X8 package is an entry to high-end techniques, insofar as balanced working has yet to be taken up seriously – for reasons I'll come to explain.

In keeping with its high-end pretensions the X8 is weighty, coming in at 15kgs, so if it goes on a shelf it needs to be a strong one. Some 10kgs of this lies in a solid

height increases to 415mm and depth (lid overhang at rear) to 420mm (17in) so some space is needed for placement.

The 9in (230mm) arm uses high quality bearings with minimal play and is constructed in one pièce from wrapped carbon fibre, having a tapered profile for stiffness. The head shell is part of the arm tube, which makes cartridge changing more fiddly but improves the arm's structural integrity. In Pro-lect fashion a flat finger lift is fitted, which I found all but unusable because it is too close to the LP surface and slips out of the fingers. However, most people use a lift/lower I believe and this is fitted, but it is not damped to provide slow descent, so a little dexterity is required. The arm must



The heavy (5.1kg) machined alloy platter eliminates flutter (high rate speed variations). On top sits a simple felt mat.

plinth that sits on three damped, height-adjustable legs. There's a clear acrylic cover that sits on friction hinges. Mounted on the plinth is an inverted bearing with ceramic ball at top, in the plane of

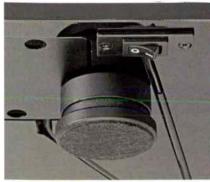
the stylus tip, to lessen the effects of precession in the bearing – and this worked well measurement showed. Magnets are used to lessen the load on the bearing since it supports a 5.1 kg machined alloy platter with damping ring on its underside.

Plinth dimensions are 465mm wide, 150mm high with lid closed, and 350mm deep. With lid open be manually lowered and lifted: there are no auto-mechanisms of any sort, nor auto-stop.

To ease set-up Pro-Ject include a big, colourful and clearly written manual with excellent pictures,



Pro-Ject's inverted bearing. The lower part is male, not female. This puts the contact area in the same plane as the stylus – not below it – minimising the effects of wobble in the bearing.



Three damped and height-adjustable legs steady and enable levelling of the plinth. There is an underside power switch.

rather than simple line diagrams. However, the procedure remains on the complex side, since there is a weight-on-thread anti-skate system to play with, rather than a dial. However, the arm's counterweight does get a rotating dial to show downforce, even if here it must be set to 220 we are told. What they mean is 2.2gms though, the tracking force of the cartridge. Under measurement the stylus let

go equally on both channels during tracking tests so bias force has been calibrated correctly.

As delivered the platter ran 0.5% fast but speed can be adjusted so I tweaked it using our W&F meter, cross checking it with an RPM iPhone app (that is very accurate). Around I% error is acceptable before pitch change can be heard as either fast or slow tempo. The speed adjust screw is underneath so this process is a bit of a fiddle; I hung the plinth over the edge of the test bench to get access from below.

Ortofon's Quintet Blue is a budget moving coil (MC) type. MCs are known for having a clearer, deeper sound stage than 'lesser' (cheaper) MMs, with the drawback that if the stylus get damaged the cartridge must be exchanged since it is not removable. There's no doubt that for top quality MC is a must, but the Quintet Blue is uberbudget I'll note since around £500 or more is a common starting point for MCs. It has an alloy

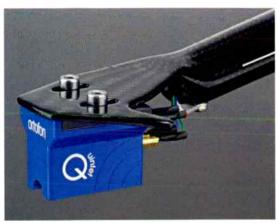
"The X8 gave a usefully authentic take on things, putting plenty of weight into the sound to anchor drums and bass from John Mayall's All Your Love, for example"



n under-side shot of the power upply showing speed adjuster screw. iet an RPM app for the 'phone to use his.

cantilever and nude elliptical stylus as a result, but silver wire signal coils. To run balanced it is best to use an MC since the right channel ground (green) is not attached to a screening can for earthing purposes. I'll note here that the Blue had quite strongly falling treble under measurement, so a warm sound balance was expected.

And now to the issue of being "balanced", as Pro-Ject present it here. The arm has a 5-pin SME-style plug in its hollow pillar, with pins for left and right channels (2) plus one for earth, allowing fully balanced output. Our review sample came with an unbalanced lead 1.23m long terminated with RCA phono plugs, where green and blue cartridge pin grounds were connected to amplifier ground through the outer shield as usual.



The arm's thin, flat headshell with slippery finger lift that's difficult to use. Most people will use the mechanical lift/lower, but it is undamped.



Anti-skate (bias) is applied by a simple weight-and-thread system at rear. It was well calibrated measurement showed.

To run balanced a lead terminated either in separate (left and right) XLR plugs is needed, or in a single 5-pin mini XLR plug that is smaller and more convenient and used on their S3 B phono preamp, but not on the more expensive RS2 we use in-house which has X1 Rs

There's no doubt that running balanced with an MC cartridge is the way to go: it banishes noise and hum, providing a clearer, more insightful sound. A must-have for modern high quality LPs in particular. There are no drawbacks other than the need for a phono stage with balanced inputs and balanced internal circuitry, which those from Pro-Ject have. Plus balanced cables of course.

Another point to note is that the turntable has an external



Pro-Ject fit a damping ring to the platter's underside, to silence bell-like ringing modes.

power supply that provides a safe 15V (0.8A). This means there is no earth to the mains, avoiding a hum loop. There is an earth wire from arm to amplifier only.

### **SOUND QUALITY**

I connected up to the unbalanced inputs of our Pro-Ject RS2 phono stage that in turn fed a PrimaLuna EVO 300 Hybrid amplifier, used here for its top-end push because the Quintet Blue needs assistance here. Loudspeakers were our Martin Logan ESL-X hybrid electrostatics connected through Chord Company Signature Reference screened cables.

That the Ortofon Quintet Blue was soft up top was abundantly clear immediately, spinning Neil Young's After The Goldrush (allanalogue re-master) that is usually quite strong in treble content, especially when the mike is close to his strummed guitar (as it often is). Here the Blue lacked differentiation between strings and muted their bite, for example at the start of Only Love Can Break Your Heart. But the upside was an easy demeanour that many people want or expect from vinyl, with no high end spit.

What you get is the total opposite to CD then, if in emphasised extent here. However, the sound stage was wide and images on it generous in size and solidity. Backed by stable tempo the whole came over as slickly confident – and very relaxing. There was no hint of uncertainty as the RX8 went about its business.

Another plus point was strong, firm bass and the sense of dynamic push that comes from it. In appropriate high-end fashion the X8



Speed change is by push button: 33 or 45rpm. This changes frequency of the on-board drive oscillator/amplifier: more stable than relying on local power station frequency!

sounded big bodied and muscular. With Alison Goldfrap's Lovely to CU the stabbing synth had weight and menace, rising from the vinyl in mighty form it seemed. Funny how LP can achieve this sense of visceral power, something CD never did. But it takes a solidly built turntable, like



A simple but heavy plinth (10kg) supports a similarly heavy 5.1kg platter that sits on the central inverted bearing. Magnets are used to oppose weight and stabilise platter movement, smoothing speed. This gave near Direct Drive performance.

the Garrard 401 on a massive plinth, to show what's possible and the X8 managed very well in this area.

Spinning noisy oldies like Decca's The World of Blues Power (1969) from Britain's 1960s blues era, the X8 gave a usefully authentic take on things, putting plenty of weight into the sound to anchor drums and bass from All Your Love for example, making John Mayall's vocals firm and clear. I was little aware of ticks and pops, my attention drawn instead to the

realistic solidity of images, the slick nuances of Peter Green's playing made obvious in Greeny. I was drawn in and enjoyed in simple fashion an LP once played to death! The X8 brought it to life.

### **CONCLUSION**

I felt in the end this was a package with a serious turntable, a decent arm but a somewhat limiting cartridge. I struggled with the Ouintet Blue's lack of treble detail. speed and insight. But at the

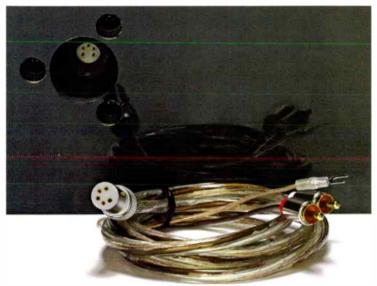


The counterweight has a calibrated dial to apply tracking force.

same time it did deliver powerful dynamics and a big meaty sound much in keeping with vinyl's perceived heritage. Add in its completely inoffensive nature and you have a perfect counter to dodgy digital, for all those who want to relax when listening to music, especially from old, worn LPs.

The X8 is a high-end starter package best upgraded with a better MC cartridge and the balanced working method Pro-Ject talk about, using their SB3 phono preamp with balanced connecting lead.

With an easy and enjoyable sound the X8 is a turntable package worth considering.



At left the five pin SME-style arm pillar socket of our unbalanced cable, gold plated phono plugs at right. This socket allows balanced connection also.

### **MEASURED PERFORMANCE**

The 3150Hz test tone of a DIN 45-452 test disc measured 3170Hz on our Wow&Flutter meter, a +0.6% speed error which is on the high side. Around 1% is considered audible as a change of pitch so this is still acceptable and speed can be adjusted.

The amount of speed change (wander) was very small, resulting in a very low DIN weighted Wow & Flutter value of 0.06% (0.04% to Japanese JIS standard), this comparing well with Direct Drives. There was no DD cogging flutter at 6Hz either our analysis of Wow&Flutter shows.

The arm has a first bending mode at 175Hz, our analysis of vibration with a Bruel&Kjaer accelerometer on the head shell shows, and there was significant second order flexure at 350Hz. Dips at these structural resonant frequencies appear in the Ortofon cartridge frequency response trace, an unexceptional result. The arm is lively.

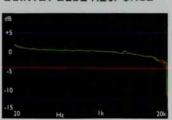
Ortofon's Quintet Blue MC cartridge tracked reasonably well, just clearing a 60µm lateral cut at 300Hz on a CBS

STR-112 test disc. The maximum 45µm vertical cut was cleared too, albeit with obvious second harmonic distortion from VTA error. Frequency response (JVC TRS-1007) rolled down slowly toward high frequencies, measuring -2dB at 10kHz - enough to give a slightly warm sound, somewhat in vinyl tradition, if less accurate than is possible nowadays.

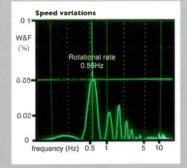
A good if not perfect set of results, speed being a tad fast, and the arm lively.

### TURNTABLE Speed error +0.6% Wow 0 1% Flutter 0.04% Wow & Flutter (DIN wtd.) 0.06%

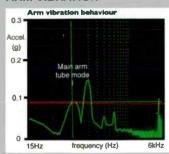
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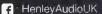
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# From Prog To Punk

Here we're looking at Radiohead, Genesis and the guitar genius that was John McGeoch.

### **GENESIS**

We at Rigby Towers are in a state of celebration. Why? Because this book, subtitled 'The Peter Gabriel Years' occupies a space on my Kallax.

I reviewed the 'Phil Collins era' sequel in an earlier column but lamented the absence of the first part which was out of print.

I expressed my grief to the publisher, who promptly took pity, switched on the printer and immediately reprinted the lost first portion of this duology. I have to say, it's just as good as the Phil Collins edition. And it's just as weighty.

Replete in heavy-gauge paper, the format follows the Phil Collins edition. Arriving with a forward penned by keyboardist Tony Banks, the book features rare photos, record sleeves and label images, posters, tour lists, album-by-album breakdowns, ticket-stub images, indepth examinations of each song from the era, sleeve art investigations, concert reports and more. The book is stunning. If you're a Genesis fan and you don't have a book of these books...why?

### **RADIOHEAD**

A small format book offset by small, closely-spaced type and an EdgyTM title, this band biography starts in school and revolves around friends, acquaintances and family. Come page thirty-five, the band hits the music industry.

From that point on you're looking at – give or take – twenty pages per album with development details, band evolution, third-party characters coming and going, interaction with the media and anecdotes all interspersed with brief quotes to grease the literary wheels. Basically, the whole razzmatazz surrounding each and every album.

Within the allotted chapter, you also get a sort of data sheet detailing the album's track listing, label, release date, chart position plus extraneous notes. For example, on the album 'Kid A', you're told about the two samples used on the album and where they come from.

Don't think I'm dismissing this tome in any way. It might not be 'the history' for the dedicated fan/ geek/obsessive but it does serve as an ideal introductory history for everyone else. Think of it as a super detailed magazine article surrounded by a hard back. Ideal for beginners.

### JOHN MCGEOCH

McGeoch, who influenced many a great guitarist, was a member of Visage but more importantly Magazine and Siouxsie and the Banshees, plus Public Image Ltd.

He was only forty eight when he died. His increasingly serious epileptic condition triggered a seizure when he was asleep, temporarily switching off his brain and stopping his breathing.

Why that happened is really the point of this book. As his wife Denise stated, the music business "... wasn't him as a person and he didn't suit it".

This book remains fascinating though, both in personal terms as it relates to McGeoch and also in broader cultural terms as it related to the music and bands of the time.

Thus, the book is awash with original interviews from Siouxsie Sioux, Howard Devoto and Johnny Marr to Peter Hook, Billy Idol and Keith Levine. For this account, more importantly, we hear from McGeoch's family. It's his family who declared that McGeoch fell into music. He could (and for his personal well-being possibly should) have done many other things in his life but he 'did' music instead and he was very good at it.

Fame was the problem. McGeoch suffered from nerves and anxiety so alcohol became the coping mechanism. Fame started his health issues. As it was, the health issues hampered his creativity. And this lead to frustration. Yet, as we hear, music may not even have even been is over-riding passion.

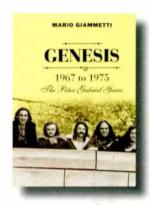
This book is educational but also enlightening and moving. It's a tragic tale but it's a book that needs reading.

Title: Genesis, 1970 to 1975

**Authors: Mario Giametti Publisher: Kingmaker** 

Price: £24.99

**Pages: 252** 



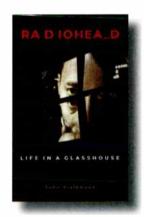
Title: Ra d iohea\_d, Life in a Glasshouse

**Authors: John Aizlewood** 

**Publisher: Palazzo** 

Price: £14.99

**Pages: 192** 

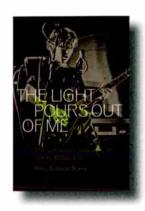


Title: The Light Pours Out Of Me, The Official Biography of John McGeoch

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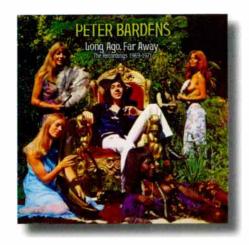
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# PETER BARDENS

# THE ANSWER ESOTERIC



"Bardens was at the very heart of classic British prog during the seventies" ou might know Peter Bardens as the keyboard-toting co-founder of the classic seventies prog outfit, Camel. A band who were originally called The Brew, trivia fans. Before that fateful meeting of minds in 1972, Bardens had been busy.

He began in the early sixties when he was an art student (I wonder how many early music heroes began as art students?) as part of Hamilton King's Blues Messengers (who featured future Kinks man, Ray Davies). After that he joined the R&B outfit, The Cheynes who also featured future Fleetwood Max man, Mick Fleetwood, managing to grab an EMI contract for their troubles. One of their three singles was even produced by Rolling Stone bassist, Bill Wyman.

The celebrity connections continued when The Cheynes broke up and Bardens accepted an invitation to join Van Morrison in his band, Them, in 1965. That lasted all of six months.

Bardens then left to join Peter B's Looners which featured friend Mick Fleetwood – but also guitar legend, Peter Green. That band then evolved into Shotgun Express with the addition of Beryl Marsden and one Rodney Stewart.

The band dissolved in 1967. That's what used to happen back then. The scene was supremely fluid. Bands formed and broke up with the frequency of those lumpy bits in a lava lamp.

Next up was a real underground psychedelic band called Village, known for their interesting psychedelic single called Man in the Moon, issued in 1969. That band died a death when the label, suitably known as Head, also died a death.

After that, another label, Transatlantic, picked Bardens up from the wreckage and offered him a solo contract. Bruce Thomas joined Bardens on bass, Andy Gee arrived on guitar with Reg Isadore on drums. Old friend, Peter Green joined on three tracks (i.e. 'Let's Get it On, 'I Don't Want to Go Home' and the superb first track on the album 'The Answer') but wasn't credited. He is now.

So Bardens would co-found the classic prog outfit, Camel in 1972. We're talking about this album in 1970. Are we also talking prog then?

Well, let's not forget, Peter Green is on this album. If Green is going to be

attracted to a musical style then blues is where he's at and yes there is a blues-based song to much of this album – but even the blues is wrapped in proto-prog as well as psychedelia.

Then you must factor in Bardens and his quite delicious keyboard techniques, techniques that are the core of classic Camel outings in the seventies, over six albums. So, whenever Bardens enters the fray, he pushes the music towards a prog path so a lot of this album has a real proto-prog feel to it or, even when Peter Green is involved, a psychedelic or hard blues flavour.

When you get to the side-long final track, spanning around thirteen minutes, a ditty called 'Homage to the God of Light', that's when you hear more of those early prog themes poking through. To such an extent, during early concerts with Camel, the band would perform this very track. Again, Bardens' own excellent keyboard work nestles nicely with driving drums and complex lead guitar.

That first album is now available with Barden's second solo album, simply called 'Peter Bardens' (1971, released just before Camel was formed) on Cherry Red's 'Long Ago, Far Away: The Recordings 1969-1971' as a double CD release, sitting within a multi-gatefold sleeve and complete with that Village single I mentioned above, an unreleased and previous lost Bardens' instrumental solo work called 'Long Ago, Far Away' plus the epic 'Homage to the God of Light' as a two-part French single from 1971.

Mastering for this set is very nice indeed. There may be a touch of compression here but it's at a pretty minimal level. On a broader basis, there's plenty of space around the midrange which does have a slightly golden presentation, notable of seventies productions with a cuddly yet impactful bass response. The soundstage is broad, allowing the musicians plenty of elbow room.

To me Peter Bardens doesn't get the prog-based recognition that he deserves. He was one of the pioneers, an innovator. In fact, Bardens helped to build prog as a musical genre. His talent was that significant, in my opinion.

Bardens was at the very heart of classic British prog during the seventies and he left us too early back in 2002. I, for one, miss him very much. **PR** 



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