

The Special One

Tannoy Revolution DC6T SE





tannoy.com

World Radio History

welcome

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verdicts	
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£	VALUE

ELECTRONIC MAGAZINE

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I hardly need mention the fact that Germany is doing rather well

things the world wants to buy. Quite how Germany managed to

make a world-wide success out of Mini and Bentley is a story to be told I suspect. I frequently find myself in Munich, or Hamburg

Schwarz visit, a Yamaha press conference and such

or Berlin on audio business, such as the High End Show, a Rohde &

at the moment and much of its success lies in engineering - making

AV receivers are a technological tour-de-force that I believe no one understands. They are barking mad electronic contrivances – just try and read the Owners Manual for Onkyo's TX-NR828 Martin Pipe manfully reviews in this issue! Yes, I've done it and been left wondering if it means anything to a normal human being. But on the other hand big Onkyo receivers like this one are awesome in what they can do, as Martin explains on page 14.





At the other end of the technology scale lies Ming Da's lovely Dynasty Duet 300B Single-Ended valve amplifier on page 36. Tony

swooned over its sound – and I understand why. Good SE valve amps are the most seductive creatures you'll ever meet, second only to – hmmm – Rachel Weiss. It's otherwise the most seductive thing you'll ever meet – and listen to.

High quality audio comes in all shapes and sizes, from Germany, China and countries around the world, as this great new issue of Hi-Fi World once again testifies.

Noel Keywood, editor

sonic experiences on page 10.

testing (see www.hi-fiworld.co.uk for full explanations of all our tests)

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

Loudspeakers are measured using a calibrated Bruel & Kjaer microphone feeding a Clio-based computer analyser, using pulsed and gated sinewaves, in a large room to eliminate the room's influence. Pickup arm vibration is measured with a Bruel & Kjaer accelerometer.

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

simply the best extremely capable worth auditioning unremarkable seriously flawed keenly priced



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email:news@hi-fiworld.co.uk

AUDIOLAB'S NEW DAC

The Q-DAC is based on the M-DAC. Priced at £399.95, it utilises the ESS Saber32 D/A converter chip, a 32-bit processor. The included USB input is asynchronous: data is regulated by the Q-DAC's master clock, rather than by the computer at the source, thus helping to minimise jitter. Triple cascaded jitter attenuation stages help further. The USB and coaxial inputs handle data up to and including 24bit/192kHz (24bit/96kHz via the optical input) and, like the M-DAC, it sports seven digital filter settings, enabling you to tailor the sound to suit your taste.

Also new to Audiolab's LAB Series is the M-PWR (£499.95), a compact stereo power amp. The M-PWR incorporates both single-



ended RCA and balanced XLR inputs and supplies 40W of power. Click on <u>www.audiolab.co.uk</u> for more information

CONNECT TO KRELL

Krell's first streaming device, the Connect, supports FLAC, WAV, Apple Lossless, MP4a, MP3 and WMA and plays back up to 24bit/192kHz audio plus internet radio. The Wi-Fi equipped box is available in two forms: digital only or with a built-in DAC module. The DAC-equipped Connect sports a 32bit ESS Sabre chipset with discrete, direct-coupled analogue circuitry outputting via RCA or balanced XLR outputs. The digital-only version has both coaxial and Toslink optical outputs.

Audio libraries are navigated via the Connect's built-in 3.5-inch QVGA LCD screen.

Alternately, iOS and Android apps offer full control from anywhere in the home.

Gapless playback is possible, allowing for no breaks between album tracks. Live concert albums, for example, can be played as a seamless, uninterrupted experience. The Krell Connect costs £2,500. Add an onboard DAC and the bundle costs £3,500. Click on www.absolutesounds.com or call 020 8971 3909 for more information.

ADL HEADPHONES

closed-backed circumaural headphones boast **Furutech Pure** Transmission technologies including high noise attenuation and 40mm highresolution extra-large highflux neodymium drivers. The 'phones arrive with a 3m cable and 3.5mm and 6.3mm plugs. Price is £225. Call 01276 501 392 or click on

www.soundfowndations.co.uk for more information.



RAISING THE BAR

The Roth BAR3 has been released to raise the sound quality on today's flat screen TVs. The wireless subwoofer-equipped soundbar offers Bluetooth capability, meaning you can wirelessly connect a multitude of media devices, from smartphones, to tablets and laptops.

Table mounts and wall brackets are supplied plus a pair of 3.5mm stereo mini jacks. Other features include a dimmable LED display. Price is $\pounds 249$.

Click on www.rothaudio.co.uk or call 01753 682782 for more information

MARANTZ SLIM AV

Two new slim network AV receivers have been announced by Marantz.

The £549 NR1604 and £399 NR1504 features built-in AirPlay to allow users to playback their music library on their iPhone, iPod touch and iPad wirelessly while DLNA allows streaming music from a local

storage device (NAS). You can also listen to thousands of Internet radio stations or online music services like Spotify and Last.fm. Audio formats, like Apple lossless and FLAC HD 192bit/24kHz, are also supported.

The NRI504's amplifier delivers 85W across each of its five channels. Its total of six HDMI inputs is joined by a front panel HDMI and USB input. You can also use an Android or iOS device to operate the NR via the Marantz Remote App.

The NR1604 offers a seven-channel amplifier with 90W per channel, support for 4k Ultra HD video, 4k and 3D pass-through and video upscaling technology to 1080p and 4k. Music multi-zone functionality is also included.

The NR1604 and NR1504 will be available in black and silver-gold. Call 02890 279830 or click on <u>www.mgrantz.co.uk</u> for more information.

JONGO JANGLE

Pure has announced the Jongo A2, a wireless multiroom hi-fi adapter with wi-fl and Bluetooth to transform any audio system into a music streamer. Jongo A2 also offers a way to integrate an existing hi-fi product into the Jongo multiroom music system, it comes with a 24bit internal DAC as well as optical and coaxial digital and dual (RCA) phono analogue audio outputs.

Jongo A2 is the second product in Pure's new Jongo multiroom music system and works with the free companion Pure Connect IPad, iPhone and Android app. You can also access a 30-day free trial of Pure Music, Pure's on-demand music service.

The Pure Jongo A2 can be used on its own or combined with Jongo S3 portable, rechargeable wireless speakers ($\pounds 170$)

Jongo A2 is available in a range of colours. You can choose from a black or piano (white with black covers) base unit and then purchase clip on covers in burnt orange, lime green, mango or white (from $\pounds 12.99$). Price of the Jongo A2 is $\pounds 100$. Look out for our full review in next months issue.

For more information, click on www.pure.com, www.pureconnect.com or call

0845 1489001.

MOON NEO

Simaudio has announced the Neo range that includes the Neo 380D DAC using the M-AJiC32 asynchronous jitter elimination system performing in 32bit fully asynchronous mode, built around the ESS SABRE32 Ultra DAC operating in 32bit Hyperstream. There are eight digital inputs covering AES/EBU, S/PDIF, Optical and USB. All of these inputs can accept a signal up to 24blt/192kHz resolution. There's a full digital monitor loop to accommodate external devices such as a room correction component. Two additional options include the MOON MiND music streamer module which is actually a digital ninth input via wi-fi or Ethernet connection and a remote-controlled volume circuit feeding both balanced (XLR) and single-ended (RCA) analogue outputs. The Neo 380D balanced DAC with MiND module and variable volume is available at £4,850.

The Neo 250i integrated amp (£1,890) is a 50W machine featuring a pre-amp socket and headphone support while the Neo 340i Integrated amp (£3,525-£4,575) is a 100W amp featuring an options package including an internal DAC (USB-2, S/PDIF & TosLink digital inputs), an internal RIAA phono preamplifier (MM & MC) and a balanced line-level input. All three of these options are available in any combination, either at the time of purchase or as a future upgrade.

The Neo 330A (\pounds 3,350) is a differential stereo power amplifier producing 125W with a zero global feedback, DC-coupled circuitry and Moon's own proprietary bipolar output transistors.

The Neo 400M (£6.600) is a differential mono power amplifier that produces 400W. Based on Moon's Advanced Renaissance amplifier circuitry, the class A/AB, zero global feedback, DC-coupled amp features in-house designed heat-sink geometry.

Finally, the Neo 350P (£2,150-£2,600) is a differential preamplifier, using circuitry derived from the Evolution Series. It is a modular design that accepts optional plug-in modules: a 24bit/192kHz D/A converter with USB, optical (TosLink) and RCA (S/PDIF) inputs, and a configurable MC/MM Phono stage. A headphone stage is also included.

Click on www.renaissanceaudio.co.uk or call 0131 555 3922 for more information.





CYRUS CADENCE

Cyrus has made its Cadence iOS streaming app available to control its streaming hardware range. The app has been designed to complement, rather than replace, Cyrus's n-remote, a device that controls Cyrus streamers in a technically similar way but also has the useful ability to 'learn' IR remote codes for other devices.

Cyrus has also made a number of improvements to the Cadence app since its launch in November, including enabling 'favourites' for radio stations as well as music libraries, plus advances in the interface.

The app will 'drive' many features, such as changing inputs and browsing connected devices, as well as offering individual control of multiple Cyrus streamers on a network.

The Cadence app will be free to customers purchasing any new Cyrus streamer and free to existing customers with V2 variants from the streaming range. Customers with earlier streaming models will need a hardware upgrade to use the app, which is chargeable.

Call 01480 435577or click on www.cyrusaudio.com for more information.



i-box

The new i-box earphones promise a big bass response while keeping the balance of the overall presentation. Including elements of noise isolation, these metal bodied 'phones include a tangle-free cord and three sizes of silicon tips and a durable carry case Price is £30.

Click on www.iboxstyle.com for more information.

KIMBER USB

Russ Andrews Accessories is introducing the new Kimber Select USB cables, handbuilt in the USA, including bespoke USB plugs. A four wire brald Incorporating large-gauge, vari-strand conductors is used for the 5VDC power feed and is geometrically isolated from the solid core signal conductors. Additional performance benefits are derived from careful use of different types of shielding – layers of Aramid fibers, tinned copper and conductive carbon are used. Copper foil encapsulates all the conductors, the shielding and the connector as it is neatly inserted into an ebony headshell USB-A plug at one end and a similarly constructed USB-B at the other end.

In the KS-2416Cu model, solid core copper signal conductors are partnered with the VariStrand power conductors. The KS-2426HB, hybrid variant introduces solid core silver signal conductors alongside the copper.

The range topping KS-2436Ag cable features nothing but solid core silver conductors within its construction.

All models purchased through Russ Andrews feature Deep Cryogenic Treatment as part of the specification and are available in a variety of lengths from 0.5m to 3m. Prices for the KS-2416Cu are £371 for 0.5m, £398 for 0.75m and £425 for 1m. The KS-2426HB is priced at £499 (0.5m), £590 (0.75m) and £681 (1m) and the KS-2436Ag is priced at £686 (0.5m), £847 (0.75m) and £1,008 (1m). Click on <u>www.russandrews.com</u> or call 01539 797300 for more information.

SANUS

With the increasing importance of phones and tablets as hi-fi controllers for streaming, the notion of buying a supporting stand for an Apple iPad or iPad mini is increasingly important.

The Sañus IPad mounting system is already out there. Now the smaller iPad mini variant has been released to enable users to position their device on a desk, wall, under a kitchen unit or on almost any metal surface such as the side of a fridge.

The aluminium arm is designed to fix under a kltchen cupboard, screw to a wall or stand on a horizontal surface. The magnetic fixing method enables the iPad mini to be rotated through 360 degrees for a vertical to horizontal orientation.

The VTM11 iPad mini mount, including the mag fit case and arm is £90. The VTM16 iPad mini mag fit case is £25 while two VTM8 wall pucks will fetch £13. Click on www.sanus.com/eu/en/ for more information.





DENON: MORE X-SERIES

Denon has released two additional X Series 3D AV receivers: the £1,199 AVR-X4000 (silver or black) and £799 AVR-X3000 (black). Each of the AVR's seven channels is equipped with an identical power amp of equal power (AVR-X4000: 200W per channel, AVR-X3000: 180W). Signal paths are as short as possible to keep signal degradation in the audio circuitry to an absolute minimum and both support DTS-Neo:X, Audyssey DSX and Dolby ProLogic IIz to fire front height and/or front wide speakers.

While the AVR-X3000 allows up to 7.1 processing, the AVR-X4000

can even handle 9.2 with two independent subwoofers. AirPlay, Internet radio, DLNA 1.5 are supported as well as FLAC HD or WAV HD up to 24bit/192kHz plus network attached storage devices. A Denon Remote App is available for iOS and Android devices. The AVR-X3000 is fitted with seven, 4k-capable HDMI inputs including one on the front offering a quick connection for portable devices

such as camcorders and HDMI-equipped smartphones and tablets. All inputs feature InstaPrevue to preview the HDMI source in a small picture-in-picture on the screen. It is further equipped with two HDMI outputs capable of driving two systems with different or same source.

The AVR-X4000 comes with Denon's proprietary Dynamic Discrete Surround Circuit D.D.S.C.-HD technology with AL24 Processing. Denon Link HD audio transmission technology is added to reduce jitter when connected to a compatible Blu-ray Player. Click on www.denon.co.uk for more information.

NEW MCINTOSH TURNTABLE

The new MT5 is supplied factory-adjusted: tracking force, antiskate force, cartridge overhang and arm height are all preset which means that the new McIntosh turntable is almost ready

to play from the box. Coming complete with a high-mass silicone-acrylic platter and motor drive assembly, Dural-Aluminium tone arm, a high-output Sumiko Blue Point 2 (BP2) moving coil cartridge compatible with moving magnet inputs, and a dust cover. The MT5 also features a magnetically suspended platter, spun by a beltdrive motor. The platter and glass fascla panel

are illuminated using custom-designed fibre optic light diffusers and extra-long-life LEDs.

The three playback speeds include 33, 45 and 78 rpm, all with a separate trim adjustment. The MT5 sells for £7,495.

capabilities.

Call 01202 911886 or click on for more information www.jordanacoustics.co.uk

CONTROL4

Control4 Wireless Music Bridge enables you to wirelessly connect smartphones, tablets or computers and all the music stored on those devices to a Control4 system, allowing everyone in the house to enjoy their personal music collection through the home's audio system. With the Control4 Wireless Music Bridge, if you can listen to it from your smartphone, tablet or computer, you can listen to it in any audio zone in your home. In addition to stored music libraries, the new Control4 Wireless Music Bridge also provides a path for Control4 customers to connect to streaming music services such as Pandora, Spotify or Rdio from personal smart devices all while preserving full phone and smart device browsing and app

MeIntosh

Control(4

The Control4 Wireless Music Bridge is shipping now at an introductory price of \$300. For more information visit www.control4.com.

OOBUZ

Following the integration of the QOBUZ PREMIUM streaming service with the SONOS Wireless HiFi System last October, QOBUZ has extended its True HiFi streaming service to Sonos customers in France, Belgium, Switzerland and Luxembourg. Reportedly, QOBUZ is the first service to offer uncompressed streaming music at CD quality. With a matching Sonos system, that means streamed music in multiple rooms simultaneously or independently controlled by the free Sonos controller app for iOS, Android, Mac and PC.

QOBUZ will be released in the UK market "soon", says the company. Click on www.gobuz.com/sonos for more details.

SONOS

REVIE W









White Light

German loudspeaker specialist Quadral has revamped its popular Platinum range - and they're sounding better than ever says Jon Myles.



adrai will be a familiar name to regular elders of Hi-Fi Nor d The German company's up-market Aurum range of loud-

speakers has garnered enthusiastic reviews with us - especially for its in-house designed ribbon tweeter.

But the Quadral product line is nothing if not comprehensive. So if your pockets (or, indeed, living space) cannot stretch to the likes of the massive £6,600 Aurum Vulkan VIII then the company can offer up its Platinum range for consideration - and more specifically the new Platinum M50 floorstander I am reviewing here.

The model sits at the top of the Platinum series and is a replacement for the wellregarded M5 - with significant improvements aimed at lifting its overall performance. Changes include new drivers for the high and low frequencies and a reworked crossover.

Berlin-based designer Sascha Reckert says the main goal was to develop an exceptionally clean and accurate speaker while retaining the dynamism that is a natural attribute of good metal-coned drivers. "The main changes on the new speaker are in the woofer and tweeter design. "The woofer has new motors and cones for a better frequency response. The M5 was

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slightly bloomy around the 100Hz mark. With the M50 we've tuned the speakers for a smoother but deeper and cleaner bass".

The RiCom-M tweeter used in the M5 was also reworked. Its RiCom-V replacement is a ring-dome unit said to give better dispersion and also extending lower in frequency to give better integration with the midrange drivers (for technical details see Measured Performance).

Sascha explains: "The tweeter is a ring radiator with a titanium diaphragm that is stable and clean, playing up to the highest frequencies of about 50 kilohertz. Acoustically for us this is the best alternative to ribbons because the sound characteristics are similar".

Standing 113mm tall, the Platinum M is a full three-way, reflex-loaded five driver design. That tweeter is placed D'Appolito-style between the flush to the fascia and an understated Quadral logo adorning the top of each cabinet.

SOUND QUALITY

Quadral's claim to have voiced the Platinum M50s for a smooth, natural sound certainly rings true. But if you think that's a euphemism for laidback and polite then think again.

Instead the Quadrals reproduce music with a confident, unforced ease but with plenty of dynamic thrust, without imposing too much of their own character on it.

Sited firing straight down the listening room and powered by a pair of Quad QMP monoblocks, the M50s produced a rich swathe of sound with a hear-through quality that evinced masses of detail.

The textures and delicate sonic touches of Radiohead's 'Kid A' were finely etched and easy to follow

"Only a special few manage to put it all together in one elegant, eminently enjoyable package. But that's exactly what the Platinum M50 does"

two 135mm mid-range drivers which in turn sit above a lower chamber housing the pair of 180mm bass drivers that are recessed slightly from the fascia and protected by a row of seven metal struts.

All four cone drivers – the two midrange and the two bass units – are made of an in-house developed membrane constructed from a highstrength aluminium-magnesium alloy.

The front of the cabinet features chamfered edges to aid sound dispersion and the grille affixes to the front via concealed magnets to cover all the drivers.

Round the back are a large bass port and two sets of speaker binding posts to facilitate bi-wiring. In a nice touch Quadral supplies a set of Real Cable jumpers for those opting for single-wired operation – an improvement on the pressed metal links provided by many other manufacturers.

The supplied units came in a white gloss finish – although black is also available – and the whole package is undoubtedly well-finished and elegant for the price, with the drive unit's metal surrounds fitting with the mid-range drivers snapping into action with admirable precision when the music moved up a pace.

It's clear the ViCom-R ring-dome tweeter is a well-designed unit. Its ability to go lower than conventional units means there's never a hint of crossover suckout ensuring smooth integration with the relatively speedy mid-range drivers.

And those mids can deliver the pace when the music demands. Parts of Acoustic Ladyland's 'Last Chance Disco' collection positively charges along with a sax/drums/bass/ keyboards frenzy but the Quadrals never missed a beat. Nor did they miss any of the detail in the mix – managing to delineate the little flourishes and background sounds which can often be missed by lesser speakers.

Bass response is also impressive. There may not be the visceral slam of a 12-inch driver but the large rear port enables the M50s to go impressively low when the music demands. The beginning of Bach's 'Passaglia in C Minor' spirals down with real power through the Quadrals until its final organ note hits you with the required sub-sonic punch.

It is perhaps a little drier in the lower registers than some other speakers. Bass notes stop and start without any obvious bloom – although replacing the Quads with a Naim SuperNait for a while did add a touch more fruitiness in this area.

Playing some Eleanor McEvoy saw her voice relayed with sparkling clarity and precision. Being hypercritical you could argue the slightly hard-edged sheen of metallic drivers can be detected at times – but all cone materials have their own characteristic and here it is very well-controlled, the midband never

A large rear bass port provides in-room response down to 25Hz.

sounding anything but civilised. While there's no midband lift

to project vocals artificially forward, image placement is nevertheless supremely natural and true to life. On well-recorded acoustic material you hear not only where the musicians are placed but also just how they are playing their instruments. When William Parker solos on the Gayle/ Parker/Ali collection 'Touchin' On

Messal.

World Radio History



World Class Valve Amplifiers From Leicester

LDT Low Distortion **Tertiary Transformers**

Designed to get the best from the Tung Sol KT120

The Stereo 60 MK IIIm is actually 2 amplifiers in one! A full 40+40 Watts of liquid gold triode sound will drive almost any speaker to perfection. Switch into Ultralinear mode and a massive 80+80 Watts of valve power is available for huge dynamics and those "hard to drive" speakers. All in one neat package! The new MK III version of the Stereo 60 now comes with several improvements in sound and performance, and build quality. This is our biggest integrated amplifier. It is ideal for someone wanting a very dynamic fast sound. It has a big power supply, big output transformers, and uses the excellent new KT120, and comes with many features. The new super strong KT120 has caused a storm in the hi fi world, with 50% more power than the KT88. It enabled us improve the sonics, power, distortion and reliability. An excellent alternative to a fast modern transistor amplifier, the ST60111m will deliver the finest detail of modern recordings in a more vivid way and present jazz and rock music without harshness or tizz.

Two Amplifiers in One. The importance of Triode The triode sound is preferred by many hi fi fans, although the power is lower in the ST60 is still ample for all but the most demanding levels. Ignored or neglected in the past we gave equal priority to the triode function so the full quality is maintained. With our UL/Triode switch you can change from 80 watts to 40 watts of pure triode sound at the flick of a switch.

New Pure Power Amplifier 60 IIIPm made by popular request, a pure power amplifier version of similar looks and identical specification. This matches virtually any high quality valve or transistor pre amplifier. It may even be driven directly from a single source already having variable output.

Now with "Easy Bias" Meter We think of our amplifiers as musical instruments. Like a piano needs occasional tuning, big amplifiers need the bias checking. This way you can be sure of 100% performance all of the time. Simple with our "easy bias" meter. If the pointer is in the "black" it's correct! Also useful to check if your valves are worn or faulty. Long term performance is important to us and this useful aid will take the guesswork out of maintaining your amplifier.

Altractive Valve cover Most valve amplifier covers look as though they were done as a cost saving after thought, and don't exactly enhance the look of the amplifier. They are rarely seen in advertisements. We think that something you will use every day should look attractive. That's why we use 18 pieces of laser cut Perspex assembled with a further 20 precision components. See picture on our website.



Our new series of "Low Distortion Tertiary" output transformers are the best we have ever made, enabling us to reduce global feedback by about 40%. All our amplifiers are designed and finished in Leicester. Warranty and service is done by the engineers that designed them so you can be sure of long term performance. Includes a "standby" switch in order to protect those precious cathodes from damage until they have warmed up. All our amplifiers are hand made using "point to point" soldering without using printed circuit boards. We are convinced this sounds better. It allows for very easy servicing, upgrades and modifications. Remote controlled volume included for fine tuning your listening. High quality components are used throughout including an "ALPS" volume control, silver plated PTFE audio cable SCR capacitors audiophile resistors. Loudspeakers of nominal impedance between 3 ohms and 12 ohms may be used with virtually no reduction in power or quality. A choke regulated power supply adds a richness to the sound quality that silicon devices alone are unable to do. Recording and playback are catered for by the "Tape Monitor". Also useful for Home Cinema applications. In short we have created an amplifier of excellent flexibility and quality which retains the qualities traditional of traditional design and performance. Bespake upgrades available including silver/copper capacitors, valves and design.

From £2,399.95 (in LK VAT) Integrated. Power Amplifier version from £1,999.95 Upgradeable See also our and other award winning amplifiers on our website

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Leicester UK

Trane' you can sense his fingers moving along the double bass before Charles Gayle's saxophone cuts in, seemingly suspended just in front and above his playing partner.

OK, it's a sonic illusion – but it's exactly what a good loudspeaker should do. And the Platinum M50 is a very good loudspeaker indeed.

Some may crave a little more edge or so-called zing to their sound – which is probably where Quadral's ribbon tweeter-equipped models come in to their own. Toeing-in the M50s does lift the treble to a degree – but essentially this is a superbly neutral and well-balanced speaker that just sounds right.

CONCLUSION

Some speakers impress with clean



Quadral's new RiCom-V ring dome tweeter gives an exceptionally smooth and flat response.

treble, low-end power, mid-range detail or out-of-the-box imaging. Only a special few manage to put it all together in one elegant, eminently enjoyable package. But that's exactly what the Platinum M50 does.

Quadral's engineers have managed to integrate its five drivers superbly to produce a cohesive whole that sounds clean and musical from top to bottom without overemphasising any area of the audio spectrum.

It has both scale and control and the ability to get down and boogie when the occasion demands yet stay smooth and refined when that's what the music requires.

Other speakers may sound subjectively better in one area or other in the short-term – but the M50 is the one that will reward much more over the longer listening period.



MEASURED PERFORMANCE

Our frequency response graph told me immediately that the tweeter in Quadral's new Platinum M50 is of 'ring dome' construction, it is so flat. This new form of tweeter, comprising an annular ring driven close to its periphery, gives a smooth response free from the peaking of conventional domes, and none of their sharp sonic character.

Quadral's own RiCom-V design uses a neodymium ring magnet and a silk diaphragm, set into a short horn to control dispersion, in order to give smooth off-axis response in the 2300Hz crossover region. Quadral point out that the RiCom-V goes lower than dome tweeters, easing the crossover transition due to the longer wavelengths involved. Our graph clearly shows an unusually **FREQUENCY RESPONSE**



Green - driver output Red - port output

IMPEDANCE



smooth, flat response 20 degrees offaxis. On-axis treble lifts a little, by +1dB or so, in plateau fashion. So the M50 will sound most accurate when pointed straight down the room, but for those who find this too neutral toeing-in lifts treble a little. Absence of a crossover suckout means detailing will be strong, with no softness in the sound.

The important midrange region is smooth too, which suggests low coloration and correct tonal balance. Our 200mS decay spectrum (not shown) backs this up, showing little coloration exists.

Quadral do not lift bass output so the M50 may sound dry in its balance compared to some loudspeakers, but bass from the large port goes very low, the red trace of port output shows, down to 25Hz. This loudspeaker will produce subsonics, in a room large enough to support low frequencies.

The impedance curve shows the port damps the bass units superbly, resulting in an almost flat impedance plot below 100Hz. This will ensure good power transfer, whilst even electrical and acoustical damping suggests excellent bass quality. The rise in impedance below 20Hz is due to the use of a high value blocking capacitor; the M50 is not direct coupled and will resist subsonic LP warp information, suppressing cone flap.

The Platinum M50 is a thoroughly well engineered loudspeaker that measures superbly in all areas. It has not been tuned for showroom effect, but for a high degree of accuracy and neutrality, suiting long term enjoyment. NK

QUADRAL PLATINUM M50 FLOORSTANDING LOUDSPEAKER £3,150



OUTSTANDING - simply the best

VALUE - keenly priced

VEROICT

A superbly engineered loudspeaker that combines low-end authority with mid-band detail and clean, spacious treble. Highly recommended.

FOR

- smooth and accurate
- powerful bass
 detailed mid-band

AGAINST - nothing at the price

Quadral

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Net set go!

Doesn't seem that long since we praised Onkyo's TX-NR818 AV receiver. Martin Pipe is surprised to find its successor, the TX-NR828, is already here...

his replacement for the VR818, which arrived only last October, is the imaginatively-named TX-NR828. Appearance-wise, new follows old - but that's no bad thing as it's visually attractive. Peer beneath the surface and it becomes obvious that changes have been made. Much of the advanced gadgetry that appeals to AV geeks (such as ISF calibration readiness and Audyssey's top-of-the-line MultEQ XT32 room acoustic correction) have gone. They've been replaced by Bluetooth playback, and an onboard wi-fi alternative to the Ethernet port.

And yes, the TX-NR828 is compatible with your iPod and iPhone – provided you buy the optional DS-A5 'RI Dock'. As with the previous model, this one can be controlled via a smartphone via freely-downloadable 'apps'. This is perhaps just as well, because the supplied remote handset lets the side down. Different buttons have multiple functions according to the selected mode, and this operational quirk takes getting used to.

Annoyingly, you cannot engage

said Bluetooth mode from the handset – although handset-driven menus are needed to 'pair' your device with the receiver. But to initiate playback, a front panel button needs to be pressed. If you subsequently select another input with the handset by accident, you have to walk over to the receiver to resume Bluetooth playback.

Given Onkyo's desire to give its receivers more universal appeal, it's good to see that the TX-NR828 retains its predecessor's MM phono stage. The TX-NR828's tuner is FM/AM only, although as with the previous model an Internet radio option is available in 'net' mode, making DAB unnecessary as most stations are on-line too. Other options included here are support for streaming music services like Spotify and Last.fm. Note that it's incompatible with the 'free' version of Spotify.

Although Apple's AirPlay protocol isn't supported, you do get an on-board DLNA audio client for streaming music from locallynetworked storage devices like PCs and NAS boxes. A wide range of 'codecs' are handled; MP3, AAC, WMA, FLAC and uncompressed PCM are all grist to the Onkyo's mill.

They can also be read from a USB memory stick. I discovered that the TX-NR828 will support hi-res WAVs and FLACs with 24-bit resolution and 96kHz sampling rate. Furthermore, 24/192 FLAC - but not WAV - will play from USB memory! The handbook and spec sheet don't mention any of this.

Although the Onkyo has 192kHz/24-bit TI Burr-Brown DACs for all channels and plays 24/192 over HDMI, our lab tests show that, via the optical and coaxial digital audio inputs, high-resolution 176.4kHz and 192kHz sample rate audio files cannot be handled.

Other varieties of hi-res audio are catered for too. DSD streams from SACDs and DVD-Audio content from HDMI-connected universal disc players can be handled; naturally, Blu-ray's codecs (such as Dolby TrueHD and DTS-HD Master Audio) are supported. Trondheim Solistene's Divertimenti Blu-ray sounded great – and the TX-NR828's on-screen display indicates the correct 192kHz sampling rate. HDMI doesn't suffer from the 96kHz sampling-rate ceiling imposed on the other digital-audio connections. The handy front-panel HDMI port, incidentally, supports MHL-compliant smartphones.

Dolby's Pro-Logic IIz extracts surround information, including height, from stereo using a 32-bit DSP chip. For regular DVDs you'll find Dolby Digital, DTS and their various derivatives. On top of all this, the TX-NR828 is – like its predecessor – THX Select 2 Pluscertified. All the necessary audio features are supported, which is good news for movie-fans with a suitable speaker system.

I won't dwell too much on the video, but the TX-NR828 will 'pass through' 4k and 3D video sources. Analogue sources (component or composite) can be converted to HDMI, upscaling to HD or 4k if necessary courtesy of a Marvel Qdeo video-processing engine.

Much of the TX-NR828's 15kg bulk can be laid at the door of the seven channel amplifier – and the heavy-duty power supplies that sustain it, this being a 7.2 design (0.2 meaning up to two active subwoofers). Those amps can be used in 5.1 configuration with the two superfluous amps used to biamp suitable front (the all-important 'stereo') speakers and/or drive speakers in another room from an independently-selected source.

This is so-called 'Zone 2'; a third 'zone' is also supported, although this

is line-level and needs off-board amplification. Alternatively, the extra amps can drive frontheight, front-width or surround-back speakers – but not simultaneously.

All speakers are attached via bananaplugs or bare wire to substantial bindingpost terminals. No analogue multichannel input is provided, but a 7.2 line output is available should you need more power.

In addition to the seven HDMI ports, rear-channel inputs comprise three audioonly inputs (phono included) and four AV inputs (with composite





video). Two component inputs, two optical digital inputs and three coaxial digital inputs can be assigned to the source of your choice.

PERFORMANCE

Yes, the TX-NR828 is about as far away from hi-fi minimalism as it's possible to get. For all this, it's capable of a satisfying sound from most sources. I'll start with vinyl. Spinning a variety of discs ranging from Beethoven's 5th (a celebrated 1962 Deutsche Grammophon recording of von Karajan conducting the Berlin Philharmonik) to an enjoyable early '80s funk LP from Nick 'Walk in the Park' Straker revealed a character that's very similar to that of the phono stage built into the 818 - in other words a tad 'warm', with a masking of fine

detail, even in 'gadgetry-off' pure-direct mode.

With a good signal, the FM tuner is capable of conveying a believable performance from the likes of Radio 3. In pure-direct mode, those lunchtime concerts rewarded me with a pleasantly-neutral character and solid soundstage.

The Internet radio tuner can, if tuned into a station that pays attention to its technical quality, reward you with a delivery that puts UK DAB to shame. Closely-linked to this is the DLNA networked audio player, which dealt admirably with everything I threw at it. Ripped BBC iPlayer (AAC) streams will play, but you can't wind through them – annoying if you want to find a specific piece of music in a long Radio 3 concert.

The Bluetooth audio mode sounded rather cluttered and on occasions coarseness intruded, possibly because the smartphone was itself decoding the audio during playback and then re-encoding it into the form needed for Bluetooth transmission. If you plan to use this feature a lot, use WAV or lossless compression (e.g, FLAC) for your smartphone music collection.

It's important to choose the right listening mode. For normal two-channel stereo, there are three such modes - stereo, direct and pure-direct. 'Stereo' passes through the DSP, providing access to the compressed-music enhancer. Designed with low bitrate MP3s and Internet radio in mind, this can improve the sound of compressed FM popmusic stations too - notably at the frequency extremes. The various surround-soundfield modes also contrived in DSP are rather hit-andmiss, but they do have their place - enhancing live albums, for example.

Switching to CDs, played on a Cambridge 751BD via HDMI, revealed that despite its inner complexity the TX-NR828 can be a surprisingly musical performer. The Roland drum machine that underpins the sparse synthetics of John Foxx's Ballardian classic Metamatic demonstrates an ability to cope with timing and rhythm; it's fast and pacy. The textures of the analogue synths (and Foxx's distinctive vocals) retained their place in the mix; the overall impression was one of balance.

Next in the Cambridge player was a DVD-A of a rather more sophisticated work – Donald Fagen's



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HI-FI WORLD

Simple design, elegant construction and does not miss a beat!

16



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Slack Shodium

+44 (0)1332 342 233 samba@blackrhodium.co.uk www.blackrhodium.co.uk/samba/ Nightfly, with its teenage-fantasies of Cold war-era America set against a cinematic backdrop of late-night jazz and soft-rock.

The 5.1 remix featured here wraps around the listener, and brings out some of the musical elements – notably some delicious acousticguitar flourishes that the TX-NR828 reproduced impeccably.

Then there are the movies - and as one might expect these are a particular Onkyo strong point. Dynamic fare (such as the destruction of Parliament while the 1812 blasts through PA systems, in a DVD version of V for Vendetta) shows no sign of strain even at fairly high listening levels, and the sonic picture is locked tightly to the visuals playing onscreen - after tweaking AV sync to bring actors' dialogue into registration with their lip movements.

A Blu-ray of Skyfall, the sound track of which boasts the latest in high-res audio, demonstrates that subtlety and power need not be mutually-exclusive.



Wi-fi aerials at top supplement an RJ45 ethernet input socket. There are seven HDMI inputs and two outputs. Digital audio S/PDIF inputs, optical and electrical, are at left.

CONCLUSION

Once again, Onkyo has proved it can deliver a stonking AV receiver capable of delivering the goods from both musical and cinematic fare; the TX-NR828 successfully combines muscle and finesse. Onkyo's decision to sacrifice features of an audio-visual nature for those of more practical benefit to the average user is, in my view, a sensible one considering the state of the market. AV geeks might, however, be able to snap up its predecessor (the NR818) for a bargain price.

MEASURED PERFORMANCE

The TX-NR828 produced 160 Watts into 8 Ohms and 272 Watts into 4 Ohms, so there is plenty of power available for loud volume. The power stages remained fairly cool under test.

Distortion was low, as always with Onkyo, the critical 10kHz value being just 0.01%, primarily third harmonic our analysis shows, a very good result. There was little change in the distortion pattern with level or frequency too, so harshness is unlikely. Frequency response was wide, measuring 2Hz-100kHz with Direct selected to bypass the input ADC.

The input ADC was linear however (likely 24bit) but limited bandwidth to 22kHz (48kHz sample rate). Distortion at 10kHz, -60dB below 2V in – a stringent test – rose from 0.01% to just 0.03% – impressive.

The S/PDIF digital inputs, both electrical and optical, accepted up to 96kHz sample rate but no higher, with up to 24bit resolution. Frequency response measured flat to 46kHz at 96kHz sample rate, and distortion was low at 0.06% at -60dB with 24bit, so the Onkyo offers very high quality here and gets the full benefit of 24/96. However, inability to cope with 176.4kHz and 192kHz sample rates is a surprising limitation these days.

The VHF/FM tuner possessed flat frequency response so will sound tonally even – neither bright nor dull. Output rolled down slowly above 10kHz. Having low distortion and noise Onkyo's VHF tuner will sound neutral, clean and easy on the ear.

The phono stage was accurately equalised all the way up to 20kHz, a small loss in the 75 μ S characteristic possibly adding the slighest warmth to treble when compared to phono stages with a lift. There is no warp filter; full gain down to 5Hz exists so cone flap will occur with warped LPs. Overload was high at100mV and hiss was very low at -82dB; this input is well designed.

The Onkyo TX-NR828 measured well in all areas, as Onkyos usually do; they deserve their good reputation. But it cannot play hi-resolution digital files of 176.4 or 192kHz sample rate over the S/PDIF inputs and this may disappoint some. NK

Power CD/tuner/aux.	160watts
Frequency response	2Hz-100kHz
Separation	89dB
Noise	-106dB
Distortion	0.01%
Sensitivity	440mV
Damping factor	25
Disc Frequency response	2Hz-20kHz
Separation	71dB
Noise	-82dB
Distortion	0.008%
Sensitivity	8mV
Overload	100mV

S/PDIF (24/96) Frequency response Distortion (-60dB)	2Hz-46kHz 0.06%
VHF/FM	
Frequency response	35Hz-11kHz
Separation	45dB
Noise	-70dB
Full quieting at	0.67mV
Distortion (50% mod)	0.12%

REQUENCY RESPONSES PL





OUTSTANDING - simply the best

VERDICT

This sensibly-featured AV receiver is a strong performer; however, usability needs a few tweaks here and there.

FOR

- detail and slam in sound
 bluetooth and wi-fi network
 playback
- useful features

AGAINST

- ergonomics need attention
 bluetooth usability issues
- no 24/192 over S/PDIF

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World Radio History



send your emails to letters@hi-fiworld.co.uk. Letter of the month wins a pair of KEF 0100 loudspeakers.

Answers by: NK - Noel Keywood; PR - Paul Rigby; TB - Tony Bolton; MP - Martin Pipe; RT - Rafael Todes; JM - Jon Myles.

LETTER OF THE MONTH PRIZE



KEF Q100 LOUDSPEAKERS

For more advice see Letters from earlier issues at www.hi-fiworld.co.uk/letters

A pair of KEF Q100 loudspeakers are on their way to RICHARD BAKER, Letter of the Month winner in our August 2013 issue.

Letter of the Month

SUPPORT YOUR HI-FI RETAILER

I have been a music listener – both live and hi-fi – for the past 40 years and although I have kept my turntable all these years it has had little use this past 18 months as I was setting up my music server to go with my new PS Audio Perfect Wave DAC.

After a good amount of success and very satisfied with the sound using WAV files and Jriver, I then turned to the possibility of digitising my vinyl.

First job, full set up of turntable to achieve best quality. Wow – I should not have been distracted from vinyl for so long!! Then the dreaded upgrade bug bytes and I start to look for dealers to listen to stuff, just as I would have 25/30 tears ago. Unfortunately, it is not as easy now so I start with a sale or return on some phono leads to replace the stock items, do loads of internet reading of reviews and manage to get a good cable.

Now for the cartridge I have just about convinced myself after the numerous glowing reviews that the Ortofon 2M Black is the way way to go, but could not easily get a listen and there were cheaper prices advertised on the internet to consider. After several weeks of historic experience of listening vs my pocket, I finally bit the bullet and arranged a proper demonstration at HI-FI Sound Stockton with my chosen cartridges and a Grado reference Sonata 1, suggested by Simon at the dealers, and to my surprise the



Dave Swithens spent a day listening to cartridges at dealer Hi-Fi Sound in Stockton. And "I saved £70" he says.

Grado was by far the better sounding cartridge. I am so glad I did not go with the cheap internet price, I would be listening with regret forever at the worst, or another upgrade at the best.

So no matter how how much a good deal you think you are getting, for me it would be wasted money if you are not completely happy with the sound.

Finally, the demo had taken the best part of the day with a couple of technical issues, this particular dealer earned every bit of his money on this day, and I can honestly say I am glad I spent that extra £50, which I actually didn't because the preferred cartridge was approx. £70 cheaper than the one I had chosen by reviews. How's that for a happy ending! I won, the dealer won, ho *bay lost! Keep up the good work. Best Regards, **Dave Swithens**

That must a digital bug that "bytes' methinks! And when you say "25/30 tears ago" was the experience really that upsetting? Or is that just a typo? Typos can be amusing and yours are spot-on Dave. And it's interesting to hear about a dealer able and willing to demo cartridges, a rare event. Thanks. **NK**

World Radio History



Bob Parsons is "delighted with the music I am getting" from Triangle Antals, driven by Croft valve amplifiers, with "credit to Russ Andrews and Ray Kimber for giving me a very low noise floor".

ANTAL DRIVE

As an owner of a pair of Triangle Antal ESs I read with interest Gareth Williams's letter and your reply about suitable amplification for his 30th Anniversary Triangle Antals. Mine is an earlier model of course, and I think the later versions go a bit deeper and are a little drier than mine, but perhaps I can offer my experience.

When I first bought my Antals I drove them with a GRAAF Ventecinque (all valve 25w+25w integrated). The midrange was superb, but I found the bass a little weak and so eventually replaced the GRAAF with Croft amplification – Micro 25R Pre (all valve) and 7R Power (valve/MOSFET hybrid).

I have been using this combination, with Russ Andrews/Kimber power block, cords, interconnects and speaker leads for nearly three years now and remain delighted with the music I am getting. The mids are just as sweet as before but there is much more definition in the treble and bass areas, and much more precise imaging. Certainly worth investigating for real value for money and great music, although I should also give credit to Russ Andrews and Ray Kimber for giving me a very low noise floor.

On a different subject, I missed George Hulme in the June issue, until I read Haden Boardman's reference to him. George and I are fellow members of Big Bands Windsor and I find his recitals, often using material from his collection of transcription discs, are always interesting and the music he chooses good to listen to. I am the deejay and occasional recitalist myself. Second Wednesday in the month all year round at Datchet Village Hall. I perform the same function at Pinner Big Band - first Wednesday every month at Pinner Hall. Both kick-off at 19:45. This is a great evening out for very little money, and with as much modesty as I can muster the sound from my Mackie PA system is pretty good too. Best wishes,

Bob Parsons

That's all very interesting Bob. The Antals suit valve amps I felt, their damped bass avoiding the common 'softness' in the bass of a valve amplifier, due to its low electrical damping.

And if my visit to ClassicAlbumSundays (see http:// classicalbumsundays.com) is anything to go by your music evenings are likely to be popular. I hope Hi-Fi World readers will be interested. **NK**

SEETHING

Hello. Seething here. Let me get straight to the point. Its all about the music, right! Or at least it was in the good old days. Unfortunately now, its all about the convenience, accessibility and coolness of the equipment, with the quality of music reproduction being well down the list on most youngsters butterfly minds. Personally I blame the cassette tape! This changed things for good, for with it came the prospect of portability and convenience, but only if you carried a pencil to wind the tape back into the cassette. At the end of the day the cassette was happily found to be, in the modern vernacular, "pants" and we returned to our beloved vinyl. A decade or so later the digital train rolled into the station and the red braced, gelled up marketing men saw an opportunity to sell us a dream of ultimate portability combined with unsurpassed digital sound quality. For many years the digital dream was also pants, but eventually it came to pass that the men in braces were right, to an extent. The CD evolved to become an effective portable media, and in a high quality audio system it was, and still is, capable of musical greatness.



"Do you know how much of the music you have been missing with MP3", say HDtracks, echoing Dean Marshall New's thoughts on the format.

Later still the combination of falling hardware costs, improvements in digital technology and the advent of the internet led to the final blow for audiophiles everywhere. The work of Satan to which I refer is MP3. This highly compressed and low quality format enabled the development of what every teenager craved, true portability and ultimate musical convenience, but was it music as we (the audio elders) had come to love it? Unfortunately, so called progress has led to a world flooded with MP3 devices that are more about convenience and coolness than music reproduction, thank you very much Apple!

The availability of downloaded music has led to a generation to whom music is a utility, like electricity or gas, that is on tap 24/7, but is it actually heard? And now, not satisfied with lowering standards, MP3 is leading to the demise of the last bastion of high quality music media, the CD.

But hang on! What about lossless digital music formats I hear you ask? Whilst I accept that such formats may be high fidelity, the problem is that lossless formats will never become a globally available media that covers anywhere near the range of music that MP3, CD or even vinyl has achieved. The reason for this is simple; there is no business case for the large music vendors such as Amazon or Apple to put pressure on the music industry to make such formats available. The vast majority of purchasers no longer want high fidelity, because it is not part of the cool culture, and because they wouldn't know

what high fidelity was if they ran into it on their BMX!

The reason for this is that appreciating music requires a couple of ideas that are alien to modern culture. Firstly music appreciation requires massive pieces of reasonably expensive equipment that don't fit in a pocket and that look really ugly dude!

Secondly it requires the user to actually sit down for more than five minutes to listen, without feeling the urge to tweet something inane, or check on Facebook that they are still alive. What the punters want is what iTunes gives them; fast downloadable music that is available 24 hours a day on a cool piece of technology that can be played through a cheap pair of headphones (now back in fashion apparently), or through a dreadful IPod Dock thingy, both enabling their brains to be turned to mush and desensitised to what music can truly offer.

Do I own an MP3 player? Of course I do, it's the only thing that gets me through chair aerobics on Thursdays, but it in no way replaces the emotions and sheer joy brought about by active listening though a high fidelity system.

So this, my friends, is the brave new world of MP3. So why not rely upon the goodness of the major music vendors to rectify this situation? Well for Amazon, or a similar sized supplier, to offer a reasonable percentage of its music library in lossless format would require an approximate tenfold increase in their data storage capacity! This isn't just a case of adding a few drives to their servers, but requires building and maintaining new data storage facilities at huge cost – and for what return! Are the vast majority of MP3 junkies going to pay a premium for a media that takes far longer to download, fills up their device with less music, to then hear no real benefit through their cheap and cheerful headsets?

No, the truth is that lossless makes no business sense in today's world and this will remain so as long as IPods and Onesies rule the roost. I know Mr Editor that you will attempt to be positive (pointless by the way) by listing several websites that are offering lossless files, but with all the best will in the world they are, and will remain, a drop in the musical ocean.

This situation will leave the audiophile high a dry. With the demise of the Compact Disc we will be left with the pickings on the floor, trying to source high fidelity recordings from any format we can find. This means that I will eventually succumb to spending a small fortune on some device so as to play the relatively small number of lossless files I can find from new artists.

However, it gets worse. There are worrying signs that some artists are already only offering their art on MP3 format! What on earth makes them believe that such a poor media can in any way convey the subtleties, passion and emotion of their music, oh I forgot, they grew up with MP3!

The irony is that it is these very artists who are the only ones who can change the game and demand that their music be heard as it should be, and make lossless media available to the



The Diamond Rio MP3 player, the world's first solid-state media player, played compressed MP3 files and started it all. They are the "work of Satan" says Dean Marshall New!

masses, but I fear this will not happen; I am afraid all is lost. Anyway, the nurse is coming around with the trolley and Home and Away is on in a minute, so over and out for now. Regards.

Dean Marshall New

Er - yes, thanks Dean! Very little music is originated in MP3, thankfully. And what is likely deserves its fate. I see MP3 more as a transmission medium, one that goes back a bit to times when dial-up-modems were the norm and data rates slower than an arthritic snail. It doesn't have a future; it's a technology of the past.

The move to high quality headphones, as a replacement for ear buds, gives us all hope that the issue of quality hasn't quite died and may well return. Hi-res music files sure are big, but then we thought that of 40GB hard drives five years ago – and now 2TBs are the norm. With BT infinity offering up to 76Mbps download speed there's plenty of bandwidth for audio. So the infrastructure is emerging.

A financial case? If music exists in decent quality in the first place, as an analogue tape or half-decent digital recording, it isn't a big deal to turn it into a high resolution digital

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file fit for sale and the end result will be worth paying for. The issue here is price. Deriving high quality files isn't an expensive process, unless you are talking about re-digitising the Beatles 1960s tapes perhaps. So quality music files shouldn't be overly expensive. Apple encourage artists to supply their material in 24/96 quality and it's a short step to making this available on-line. I don't see any big barrier to quality music becoming available and affordable, so I'm not too worried about it yet. Hope the nurse is nice! **NK**

ON THE KLYDE

At the tail end of my letter published in the September 2012 issue, I briefly asked if there were good alternatives to a Linn Klyde cartridge that would suit my Linn LP12 ('just short of SE' spec)/ Lingo 1/Ekos/Linto, and have been trying to follow Noel's advice to check out examples such as the Ortofon Cadenza Bronze/Black, or others from Benz Micro or Van den Hul.

Since my letter I have had the LP12 upgraded with the Inspire Hi-Fi sub-chassis and arm board, which I can highly recommend. The rest of my system consists of Kairn pre-amp, Musical Fidelity XA50 monoblocks with J S Audio upgrades, and Tannoy M20 Gold MkII speakers upgraded by Derek Gilligan of Kudos fame. Russ Andrews / Kimber cabling is used throughout.

All vinyl is wet cleaned using L'Art Du Son in a Knosti. Whilst both local hi-fi dealers are happy to order and install any cartridge for me, the one who has supplied much of my Linn gear is only familiar with Linn cartridges. The

other has wider experience, was a Linn dealer some years ago, and agrees with Noel's preference for Ortofons but warns that there is some difficulty in fitting Rondos and particularly Cadenzas into the Ekos headshell, "although it can be done".

Your comparative test a while back was interesting, when the Rondo Bronze was found superior to the Cadenza Red. Advice elsewhere has suggested that I should first improve on the Ekos arm (which incidentally had the 'mk II' bearing upgrade done just before I bought it), with SME and Origin Live being recommended.

'Checking out' is therefore proving difficult, not to say confusing, so I am returning to HFW with this update and a more detailed description of my problem. Budget? I suppose I would be loath to go further than £1000 for what is effectively a consumable(!) for a system that is certainly not 'high end', so this takes more expensive Linn cartridges out of the equation, and makes Noel's preferences for a Cadenza Bronze or Black a bit of a stretch.

But with Linn's reluctance to allow comparative reviews of its products and no dealers available who offer comparison demos, I really have no clue as to how well the Klyde compares sound-wise with other cartridges. Some people seem to suggest it can be easily improved upon at its price point. As well as overall sound quality however, I am particularly sensitive to what appears to be its relatively poor tracking ability, commonly on some female vocals.

Whilst the Klyde represented a significant improvement in overall detail retrieval and sound quality over the Linn Adikt cartridge that preceded it, there were no evident 'mistracking' distortions with the Adikt. My Klyde is nicely settled in after about 300 hours, but quite a few albums exhibit a tendency to 'edginess' and very occasional sudden distortion that has been there since it was new. Indeed this aspect seems to be inherent to the model as this Klyde was a free replacement for one that was the same, but also suffered channel imbalance - suggesting some quality



"The very best of Diana Krall mostly sounds great, but in a couple of places suddenly distorts badly on the vocals and piano", says Prof David A Deeks. Replace the cartridge? Replace the arm?

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Just go to *www.hi-fiworld.co.uk* and click on Letters in the left hand menu list, under the FEATURES category. This will take you to the individual months of issue. To see the full list set the 'Display' drop-down list to 'All'. control problems at Linn!

Until recently there was also incidentally a tendency to 'end of side' distortion that had plagued both the Adikt and then the Klyde but I have very effectively sorted this using an Avid alignment gauge - I was amazed at how a small alteration from the Linn dealer alignment instantly did the trick. Examples of this mistracking? These include 'The very best of Diana Krall' which mostly sounds great, but in a couple of places suddenly distorts badly on the vocals and piano.

Christine Collister's 'Love' exhibits the same very occasional problem. Heidi Talbot's 'In love and light' mostly sounds lovely but there is a slight 'edge' to her voice some of the time. There are no problems with an elderly original pressing of Ella Fitzgerald's 'The incomparable ...'. It doesn't appear that the mistracking is necessarily linked with cutting level/dynamics. All Dire Straits albums sound great - 'Brothers in arms' was used by Robert Isherwood on my deck as a great demo of his Inspire Hi-Fi mods. Scritti Politti's 'Provision' sounds superb throughout. Bernstein's Deutsche Grammophon West Side Story Symphonic Dances' is cut at a high level, and has wonderful dynamics and overall sound without any audible distortion. But Explosions In The Sky's 'All of a sudden I miss everyone' lacks dynamics yet distorts badly in one or two places.

So, how would you describe the Klyde's sound against the Ortofon's. Micro Benz's etc? Do you consider the mistracking I am experiencing to be an inherent Klyde weakness? Or might something else be the matter? The Ekos? Should I in any case consider replacing this because other arm/cartridge combinations would make a happier pairing? If absolutely necessary I could probably justify another £1000 towards an arm but would prefer to stay with the Ekos if possible. So, replace the cartridge? Replace the arm? Both? I really would value your advice. Thanks again for an excellent mag. All best wishes,

Prof David A Deeks www.davedeeks.com

Hi David. If you keep the Linn arm you will be forever limited in cartridge choice. I am no expert with the Klyde (I don't run a Linn system) but Linn cartridges I have reviewed in the past did not track well (as well as having very low output). From what you are saying the Klyde is mistracking occasionally. Make sure the stylus is clean and tracking force set to the maximum specified of 1.75gms. Or even make that 1.8gms, as most MCs track at 2 - 2.2gms maximum. It may even be that the spec for tracking force is too low; what manufacturers decide isn't always right.

Alternatively, replace the arm with an SME309, which is a gorgeous arm and then the MC world is your oyster. The only difficulty is the SME assembly is heavy and a corner brace in the plinth will need trimming. That's why SMEs on Linns are not so common.

Simpler and lighter as a total assembly is a Rega so perhaps you should buy an RB303 or RB1000, and spend your remaining pennies on a cartridge. I run an Ortofon Cadenza Bronze and love it, but the higher models have a smoother, darker sound (no treble lift) you may prefer. Generally, as the price of Ortofons goes up, treble level goes down!

Our group test of budget MC cartridges that you can now find on the website (www.hi-fiworld.co.uk) identified many good ones, from Denon, Audio Technica through as chips systems that sound really rather good.

I am currently at the beginning of a two year self-build house project (footings going in almost as I type this) and while this is taking place, we are residing in our double garage (complete with toilet/shower and kitchenette area, so snug and comfy). As it measures in at a bijou twenty-six square metres, my partner and I have been quite ruthless in just what possessions we allowed ourselves to have whilst compact living.

This extended to the hi-fi system too, with all my Naim kit now boxed up and stored in my sister's spare bedroom for the duration, but as we both like to relax with music and a glass of vino after a hard day at the coalface, a small (and cheap) audio solution was required.

I had an old Audiolab 8000A tucked away in my former (now demolished) loft, which is about a mid-nineties unit given to me by a former work colleague several years ago, so a free one!

Added to this I had a pair of original Castle Richmond stand mounters (immaculate condition, lovely wood veneer and twenty quid from

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	A ST 1007, 150MR, 3x250RI TAL EQUIPMENT-S000CD, 5000CDW 8000DAC, 8000DAX for TMA CD28R	

- OTHER ITEMS- 8000T, 8000PPA (or TMA 720, PPA20)

"I have had the 8000A re-capped and serviced by Kevin Green over in Bicester (check out his website http://www.theaudiocellar.co.uk) and it sounds even better still" says Gary Capon.

to Benz Micro and Ortofon. It's an active market nowadays and I think you will be surprised at how good modern budget moving coil cartridges have become. For you, it is time to move on from your current set-up and for £1000 I think you will be pleased with the outcome. An RB303 costs £350, leaving £650 for the cartridge – enough for a Benz Micro Ace SL or Audio Technica AT-OS9 MLIII for example, both good trackers. I see no problems here. **NK**

CHEAP AS CHIPS

Sometimes in life pleasant surprises can happen really quite by accident. I know its often been touched on by your excellent magazine and in readers letters before. I am talking about cheap a local newspaper ad.) and a pair of stands (Atacama SE 24) which I had filled with kiln dried sand years ago and again were in the loft (another £15 bargain).

Finally, a source was needed which came along in the shape of an Arcam DV88 DVD Player. This time a second hand Ebay purchase, in immaculate boxed condition for fifty quid! I read up that for a DVD player Arcam had made a bomb proof unit which can give most mid-price CD spinners a run for their money, so it seemed a good punt.

So on moving-in day (well weekend), after all the furnishings were complete, I set up this little system. The amplifier was hooked up to the speakers with Naim NACA5 speaker cables (from my boxed up kit) and I used a budget QED RCA cable for the DVD player. I mounted the Richmonds onto the stands with a bit of blue-tack under the speakers and gave all the terminations a quick clean-up with Kontact fluid.

With all that done, sitting back on the sofa, I popped on a bit of Porcupine Tree (Signify) and to my utter amazement I was totally blown away! Thinking I had possibly fluked the perfect choice of music, my missus and I started listening to all sorts of genres. On went Depeche Mode's latest offering (Delta machine) and again we had a fast, precise, really exciting sound filling the room. We followed that with Diana Krall (A Night in Paris) where we seemed to join the audience for this gig - and on and on, Portishead, Pink Floyd, Wynton Marsalis, Donizetti, Mahlereven. A thrash of Never Mind the Bollocks had Mr. Rotten sounding at his twisted, snarling best!

The most impressive thing was the imaging which seemed to place you so far into the sound stage like my Naim system could never manage!!

I have since had the 8000A recapped and serviced by Kevin Green over in Bicester (check out his website http://www.theaudiocellar.co.uk/) and it sounds even better still.

So my £4k Naim kit may now be going onto the Bay to help pay for a bathroom and I will carry on with my £300 system instead (£220 of that was in the re-furb and the Naca5 cable don't forget). Just goes to show that in this time of austerity you really can get pretty decent results on a shoe-string. Best regards.

Garry Capon Aylesbury.

Sounds wonderful Gary. Hi-fi does not have to be expensive to be enjoyable. It doesn't even have to be perfect to be enjoyable either, as you – in effect – point out. And well made UK products do stand the test of time. **NK**

QUAD ESL-57s

Thank you very much for replying to my enquiry about the space needed behind a pair of Quad ESL-57 electrostatic loudspeakers. Your advice was much appreciated. I was unable to get them 6 feet from the back wall as there is a door in the way and having them further out would mean that they are just too far into the room. I did manage to get them about four and a half feet out and as you suggested I got a couple of rugs which I have placed behind them and that has certainly helped.

I also changed to a slightly more powerful amp. I brought an old Icon



Quad ESL-57s need space behind them and William Ford used rugs to absorb their rear sound. But how much power do they need?

Audio Stereo 40 that I have out of retirement to run them.

In your reply to my last letter you suggest that a Quad Il-forty amp is a good amp to partner them with. Would something like the Icon Audio MB845i drive them or would that be too powerful? I have read that you have to be careful about arcing if you put too much power through the Quads. The Quads have been checked and serviced. I have a maximum of £4000 for the power amps and most of my listening is done with vinyl.

William Ford

Hi William. As you say, the ESL-57s will arc if you over-drive them and around 60 Watts is enough. The Quad II-eighty power amplifiers are your best choice if you want a little more bottom end push. Designed by Tim de Paravicini, they really are superb amplifiers. The MB845 MkII is overly ambitious I feel, although a nice subjective match as it has a big, solid bass.

I believe I am right in saying One Thing Audio can fit a diode protection kit to the ESL-57s to prevent arcing, by the way. **NK**

WHICH TURNTABLE

I am looking for a little advice about what to do with a collection of record decks I have amassed over the years. They are (in order of acquisition):

Dual CS701 (semi-automatic direct drive complete with it's own arm and Shure V15111 cartridge).

Linn (Valhalla'd, but now with a DC motor), Hadcock 228 export arm, no cartridge.

Michell Orbe with longer Hadcock

arm (not sure of the model name) with Lyra Lydian Beta cartridge.

Thorens 125(?) deck (the one with the square buttons), SME 3009 Improved arm, B&O cartridge with no stylus. I found this unit in a dump. Chassis only, no base, but seems to work OK.

I will probably sell the Linn and maybe the Thorens but am wondering if there is any merit in retaining/ refurbishing/converting the Dual. Any thoughts?

I am also surprised not to have seen any reviews of my current PA monoblocks — Puresound M845s. They are truly exceptional, as they ought to be at the price. I listened to them compared to Belles solid state amps, which are a couple of grand cheaper, and which the dealer personally preferred for their more incisive and detailed sound (I didn't). Does Hi-Fi World have any plans to review the M845s? I really recommend you give them a listen.

David Rogers Oxford

Of those decks I would gravitate toward keeping the Thorens and updating it with a better arm and cartridge. Sounds like it needs a service, as well as a plinth. In the first instance you should clean the belt or renew it, clean and oil the main bearing, clean the motor pulley and ensure it is running true (it is not bent) then perch the thing on some form of support so it is level, fit a cartridge to the arm and play an LP with sustained piano notes, like Beethoven's Moonlight Sonata. If they wobble furiously, there's a problem

no measurements).

I currently have an EMU 0404 which is good for the price and very versatile (around £110 a few years back) but not so good sonically. I also have a Meridian 221 MP MAX which converts analogue to 24/96 only (which is fine for me), but only has an electrical SPDIF output which I then have to convert to USB using the EMU. It sounds better than just the EMU, but not a lot. I suspect I need a better S/PDIF-to-USB convertor.

So, I am looking to improve on what I have. Your comments are eagerly awaited!

On another subject, a while back I bought two 96/24 downloads from Linn records (Emily Barker and The Red Clay Halo Fields of June & Every Season). Finding it a bit digital sounding (played via Foobar), I checked it with Audacity which indicated that some portions of it were clipping. I wrote to Linn about this, and they replied that they had had issues with Audacity in the past and that there is no audible clipping within our recordings (full letter at end). This raises the questions: is Audacity at fault?; does Audacity show inaudible clipping; is it a Linn recording? Is Linn's definition of audible different to mine? Again, I would be interested in your comments, Regards,

Nick Pledger

Dear Nicholas, Thank you for your email.We wouldn't recommend using Audacity as we have had issues with this software in the past. I can advise that there is no audible clipping within our recordings. Best Regards, Colin, Customer Support,

Linn Products.

Hi Colin, No one at the magazine has experience of comparing the Furutech with the DACs you mention so we cannot truthfully comment on comparative performances. However, as digital technology moves on at a cracking pace I rather suspect that a good new product like the Esprit, that I was thoroughly impressed with, will come out looking good.

We reviewed a group of USB-to-S/PDIF convertors (March 12 issue - and see website) and found the Halide Bridge very good. But surely you need to replace the current setup and for recording vinyl the Esprit was superb at the price, eliminating your need for such a convertor. You will find Furutech's reply to your queries about the Esprit below.



Furetech Esprit preamp has a high quality Analogue-to-Digital convertor (ADC) on board, able to digitize LP and send it to a computer through a USB link.

I am not aware of any problems with the free Audacity music editor and I have been using it for some years now. You may well not hear short term clipping. This will only affect sound quality if it is consistent and severe.

More likely, if the recording "sounds digital" it was made using a poor ADC and/or it has been compressed or distorted in the editing process by cheapskate digital techniques, and possibly jittered within the recording system too. Two people told me recently that top quality recordings they made were turned to sonic dust in the editing process, by engineers who had little idea of how digital can be degraded there. The idea that "bits are bits" still holds sway in large swathes of the music world, it is sad to say. To be specific, one recording was compressed on the fly by the editing software and the other was edited on a cheap home PC. Digital recordings are commonly mangled at birth in this fashion, sad to say, which is why digital has gained a bad reputation. NK

FURUTECH say -

I) Does recording / playback work off USB power - without the unit's own power supply plugged in?

Playback is possible with USB BUS Power only via the TOSLINK output only. All other functions require the AC adaptor to be connected.

2) Does recording support ASIO (I've read that playback does)? Yes, if the recording software

supports ASIO for recording.

3) Is the Esprit compatible with Windows XP, Windows 8?

Yes, but please note that sampling and bit rates cannot be adjusted on Windows XP.

4) Does it do 88.2 kHz - recording/ playback?

No, Sampling rates supported are: 8 /16 /32 /44.1 /48 /96 kHz.

THE DRIP, DRIP OF VINYL

The May issue has a letter which deals with one of your reader's (David Jarvis) journey to what he feels is musical nirvana. As I have come to expect there was the usual drip, drip of "vinyl is better, it sounds better, it's more natural" etc

Well, fair enough, Noel has never really had much of a good word for CD since it started and if nothing else he has least been consistent. However, I do feel that sometimes the vinyl case is pushed a bit beyond its limits in many of articles. Vinyl is a very good medium for getting music in your life, but often it needs a fairly large investment in the turntable, arm and cartridge - and then just as much again in phono stage amplification and set up. You also have to be pretty dedicated to find the vinyl LPs you are looking for, as they are not easily found in the High Street anymore.

There is also the cost to be considered, which at this time is very high for a brand new release and still quite high even for reissue. In my case I would also cite the lack of catalogue for vinyl as a problem. Of the current 1500+ CDs I own only about 600 are currently available in vinyl and those that are not are also unlikely to ever see the light of day on that medium. This would seriously reduce my current listening pool.

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It was noticeable that Mr Jarvis, while he says that he prefers to listen to LP, when tried side by side he could not hear much of a difference between his CD and LP. Given that most current LP, either new or reissue, are high price items there is often great care taken to master these albums over and above the often slap dash way CDs are issued.

If you do not think this is the case I would suggest you compare the standard issue of a CD with the CD layer on its SACD equivalent. In every case that I have heard the SACD layer copy is much improved over the original CD because SACD is marketed as a high quality medium and care is taken in the mastering of both layers (it might also be that the CD layer while improved is not as good as it could in order not to embarrass the SACD layer, but there is no way to prove that unless you were there at the original mastering).

I would also wonder what steps have been taken in Mr Jarvis system in the set up and choice of interconnects, power supply and all the other finer points to maximise his digital replay? In almost every vinyl fan's system I have heard they go to very great lengths from replacement bearing oil, arm wire, cartridge tags through additional power supplies, to get the last bit of quality from their system, but it is not always the same sort of trial and error work they do for the digital side.

This is just a personal observation but in general if you make all the effort in your system to get the best from your vinyl it will not always be the best way to get your digital sounding as good as it should. If on the other hand you look at the digital side and work



"Compare the standard issue of a CD with the CD layer on its SACD equivalent. In every case that I have heard the SACD layer copy is much improved over the original CD because SACD is marketed as a high quality medium" says Andrew McBride.

as hard as possible to improve that and get it sounding as good through your equipment as you can this almost always improves the vinyl side as well. So if you want to get the best out of your vinyl and use digital as well, then get your digital in shape first then work on your vinyl – you might be surprised.

I have not bought an LP in over 25 years and I am not going to change now. I currently own a Logic DM 101 fitted with a Rega RB300 plus Rega cartridge and while I would never claim this to be state of the art it is pretty good.

My digital system is Theta Data Basic II, Squeezebox Touch (Toolbox 3.0, Triode Digital output), Perpetual

Server Farm Realty's new 450,000 square foot data center in Chicago. Cloud servers feeding the internet are where music is stored nowadays.

Technology P-A1 Decoding Engine, Antimode 2.0 Dual Core Digital Room correction, Concordant Exhilarant Pre, Krell KSA 50 Power, Harbeth Compact Monitors II. For me at least they currently produce some of the best music I have ever heard in my home and they keep me scouring Amazon for the latest bargain used CDs, which unlike vinyl where you are taking a chance with second hand, in all of the discs I have bought the case may be damaged or scruffy but none of the discs were ever unable to be ripped to my music ITB hard drive.

I appreciate that many on your magazine prefer vinyl and quite possibly many of your readers do too but l think this has now been done to death. Like many I have grown tired of the equipment and hi-fi for hi-fi's sake and want something that suits my taste and lets me enjoy all of the wide range of music that I own and will own. Music is what I feel most of us love and no matter how you listen to yours and what side of the divide you find yourself on music is what is important; all the rest is just the fuss that gets in the way of listening. I have never gotten too much enjoyment from giving anyone advice on what equipment they should buy but I have to admit to getting a really great kick out of introducing people to new music. Regards.

Andrew McBride

The magazine features far more digital coverage than vinyl in truth

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"Whatever you do, don't audition the Ultra Black. As I said before, once you do, there's no going back."

Steve Dickenson, Hi Fi Plus 2010

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Noel Keywood, Editor, HiFi World 2012

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Munu

Andrew. Perhaps we are growing cool on CD, but then you rip your CDs to a hard drive, so differences between us are not so great! Ripping LPs to a hard drive isn't so easy, but now old analogue master tapes are being transferred to high resolution digital files, you can store these on your hard drive and not bother with LP.

What we are talking about here is the disappearance of the hard-formatted physical carrier, first the LP, then CD, then Blu-ray. Now digital files can be transferred to any storage device - they are agnostic. We still need physical storage, be it a hard disc or memory card, but we are now moving away from commercially mandated formats, of which CD was one. This is good in that it allows greater freedom of choice; if you want to listen to CD you can, and if I want to avoid it in preference to high res or analogue, I can too. This ease of access is introducing me to new artists as well, so it is liberating. And I promise to say nothing here about CD sound quality! NK

CABIN FEVER

It's been a long, wet winter here in British Columbia, Canada. Yours truly, in a fit of late spring cabin fever, decided to try the near-field listening mode so favoured by our American cousins. After a strategic retreat to the man cave (after the third pair of Yamaha NS 1000M loudspeakers somehow found their way chez nous) I settled on the pictured stacked set up, still driven by the Monarchy SM 100s paralleled. The maximum tweets driven by a prole Rotel (I took pity on the Monarchy's).

Front end. As pictured i.e. Pioneer PD 9 j transport and two DAC set ups. The primary system uses an old Perpetual Technologies PI a up-sampler set to 24/96 driving an Arcam rDac. The PI a feeds off a Monolithic PSU, the rDac also enjoys a dedicated regulated PSU.

It sounds quite amazing. The NSI 000s are completely divorced from the sound field. I remain enthralled by beryllium...who knew what Yamaha wrought in 1977 with their beryllium midrange dome.

The secondary DAC is the Perpetual Technology P3a also feeding off the Monolithic PSU...its outputs (confession time) drive a Carver "Sonic Hologram Generator" – ultimate audio cheese? Perhaps, but until you hear giggleinducing sounds coming from under the couch and swirling around the ceiling, don't knock it. It is far, far from the absolute sound but great fun – which is



"The man cave after the third pair of Yamaha NS 1000M loudspeakers arrived" Andy Smith explains.

what this pursuit, hobby or whatever you want, surely is all about.

Once you liberate yourself from the sourpuss orthodoxies of our shared madness it gets way more enjoyable.

Well, got to go...going to see Taj Mahal tonite – full on geezer blues. Great mag keep it up. Spring's here. Andy Smith Canada.

THE ONLY ONE?

Regarding the review of Astell&Kern AK I 20 portable digital player, July 2013 issue. First let me say that I appreciate that Hi-Fi World has measured the player and not only listened. It seems (mostly) to be a well done review. However, the article as a whole seems to assume that there are no other portable players at this sound quality level, and I specifically find that the following statement is quite misleading: "... no one puts top Wolfson DACs into a portable player – but this player has them."

Several portable players have DAC chips designed for high-end home stereo gear – and some have been on the market for several years. These are (from memory only): 1) HiFiMan HM-801 (it uses Burr

Brown PCM1704UK - by some reviewers judged as the best DAC chip ever and used in high end DACs and CDPs to this day). The HM-801 has native 24-bit playback up to 96kHz and has been on the market for several years. It has user replaceable amp boards – including an optional balanced amp (with balanced outputs af course) having 440mW output. Voltage swing is not stated, but the battery of the player is 14.8 V giving it a much higher voltage output than AK120. 2) iBasso DX100 (uses Sabre ES9018 DAC chip - needs no further introduction). Has 24-bit native playback up to 192kHz. It has an amp spec'd to 5.0 Volts or 245mW.There is also a Japanese version called Hibino HDP-R10 which basically is a DX100 with larger battery and other opamp (OPA627). http://www.ibasso.com/en/products/show. asp?ID=78

3) Colorfly C4 (uses CIRRUS LOGIC CS4398 DAC chip). Also a high end portable player with 24 bit native playback up to 192kHz. Jitter is stated to be less that 5ps, which is one tenth of the AK120 jitter. http://www.colorfly. eu/product_index.html

4) FiiO X3 (also uses the Wolfson 8740 DAC chip). This is just/barely on the market, so not at the time of writing/publishing. At the price of around US\$200 it really demonstrates that it is possible to make a high quality portable player using a top DAC chip for a reasonable price.

HiFiMan HM-901 is also featuring the Sabre ES9018 DAC chip - in fact two of them. This player is on the market in Asia, but still not internationally.

I think the review makes the impression that the Astell & Kern portable players are the best portable players available today, but in fact people who have heard the AK100 and AK120 say they are clearly inferior to the DX100 and also the HM-901.The FiIO X3 is just below these two in terms of sound quality.

I hope you take this as it was intended: to help you — and perhaps also to make some correction of the article in order to make it more credible. As it is now, it seems like there is lacking research and knowledge about the



iBasso DX100 Digital Audio Payer (DAP) and HiFiMan HM801 (right) both offer high resolution digital replay like the Astell&Kern AK120, says Lars Harrekilde.

portable player market - in my opinion. Best regards,

Lars Harrekilde

Thanks for the update Lars. I'm sure readers will be interested by the alternatives you quote, but whilst your descriptions are detailed there are many points I would challenge.

What seems to have upset you and John Calderbank (below) is the suggestion this is the only high resolution digital player available, but the review did not say that. I apologise if it gave that impression.

Most portables are low resolution, and I was alluding to this larger rump of the market. Specifically, most portables, bar a few you mention, support 24/48 WAV replay maximum data rate (2.3Mbps), and use headphone driver chips in which low current consumption that maximises battery life, together with low cost, take precedence. Sound quality is not a priority, because these players will be used with heavily compressed files, MP3 and the like.

There are other high resolution portables on the worldwide market as you point out, but we don't list all alternative products in our reviews and are unlikely to do so for many reasons; it was a review, not a listing.

This is a UK based magazine and we focus mainly upon products that have UK distributorship and are backed by Britain's Sale of Goods act, so purchasers are protected by the law. In the case of Astell&Kern, Air Audio, on a stand next to us at the Bristol Show, are well known. If you knew what I know about the shenanigans in some overseas companies who set up and then disappear, you would appreciate the importance of our focus on products that are locally supported, rather than just available. The statement you find misleading about use of Wolfson DACs you go on to confirm by stating only one other player barely on the market has them. The Wolfson DAC used by iRiver can handle DSD, which is why I specifically mentioned it, since this allows the AK100/120 to play DSD at a later date. The issue was not that it has a high-end DAC.

Now let me cover some specific technical points you raise. The internal line voltage (14.8V) of the HiFiMan HM-801 does not automatically give it greater output swing. The output stage used and design factors such as maximum current draw and power dissipated are all issues.

The use of line driver chips on these players, rather than headphone driver chips on most others, is more about low output impedance, coupled with low noise and high dynamic range than it is about sheer voltage swing. The headphone output of the Astell&Kern players uses line drivers, so it can be connected to a hi-fi through its headphone output. Try this through a headphone driver chip and you'll get poor sound quality, due to excessive noise and distortion. Measurement shows 95dB or so dynamic range from a typical headphone output, whilst the AK120 has 115dB dynamic range, a significant 20dB advantage.

Finally, as the AK 120 was not released until mid May there would be very little time for anyone to compare it with another player, so I am sceptical about claims for other players superiority at your time of writing in early June.

It was our ability to measure the AK120's dynamic range that persuaded iRiver of Korea to give Hi-Fi World exclusive review of the AK120. It is a technology led company run by ex-Samsung people and having met them, including CEO Henry Park, at the High End Show of this year I realise why their players are so good.

It is helpful for readers to know there are other high resolution players out there, but it remains the case that until we measure and review them, claims for their superiority remain just that. We will try and get them in for review, however, and I accept players like the iBasso look serious. Our Rohde&Schwarz UPV analyser and our listening tests will find out.

Whether they are a sensible purchase, according to geographical location and local distributorship (or lack of) is another issue, raised below.

EVIDENT BIAS

I read your AK120 article with interest, but was disappointed by your extremely evident bias. You elected to make no mention whatsoever of other high-end digital players such as iBasso's DX100/ HDP-R10 or HiFi/Man's HM-901, both players with exceptionally good sound quality within their market sector – and direct competitors to the AK120. Is this because iRiver/Astell&Kern are advertisers on your site, whereas iBasso & HiFi-Man are not?

You may have your general readership convinced that the AK100/ AK120 are without competition but for those of us who know the high-end digital player sector well, your blatant bias casts your magazine in a very bad light, and that is a pity because I have respected your magazine, on the full size domestic hi-fi side of things, for almost two decades. Sincerely,

John Calderbank

As I mention above, this was a review of a specific player, not a listing of all

LETTERS & EMAILS

players. We don't list all alternative products worldwide in reviews – and this really isn't bias. **NK**

USEFUL AS A DAC

I have just re-read your article on the Astell&Kern AK I 20. I purchased one of these last week; it arrived on Monday.Yesterday I wrote to iRiver to make my observation that it did not transfer data from our computer (iMac, 10.8.4); I do not expect a reply. Claims for the wonders of this muchine, based on computer audio, are therefore false. It is useful as a DAC for our DVD player, nothing else.

Yours faithfully, C. Paul Barreira, Oakbank, South Australia

Hi Paul. I have had no trouble transferring data from a Mac running Snow Leopard or Lion (10.8.3) operating systems, with an AK 100 and an AK 120. Reviewer Rafael Todes has had no difficulties either. Since the player is seen by the Mac as removable memory I don't imagine that Mountain Lion (10.8.4) will have any problem. You must switch the player on first, then it appears as memory on the desktop and music files can be saved to it in the same way as any other data to memory.

You do not say where you bought the player. If from an importer, then they should be the first point of contact, as Australia likely has similar consumer protection laws to Britain. If it is faulty then they should swap it. If you bought it from an overseas trader, perhaps lured by price, then you must contact that trader, but don't hold your breath waiting for a reply.

I will forward your complaint to both the UK distributor and iRiver in Korea, for comment.

Once you get over these teething issues you'll find that the wonders are valid, not false! **NK**

Michael Osborn of Air Audio Distribution, Astell&Kern's UK distributor says -

There are a couple of things this customer could try himself and then if he still has a problem, he should get in touch with the Dealer he bought the unit from for further help and advice. The Astell and Kern players do work with Mac operating systems. Firstly, make sure the battery is fully charged then re-boot the AK120 software by holding down the on/off button and the top button on the side panel for 7 seconds; then re-check if the AK120 is 'seen' by the Mac as a removable device.

If this does not work, there might be a 'bug' in the software on his AK120. He could try connecting to a friend's Windows based PC and checking if it is 'seen'. If it is, he could go to the iRiver Astell and Kern web site and download the AK120 firmware, 'drop' it into the player and try again with his Mac.

If these procedures fail to get the unit 'talkIng' to his Mac, there may be some other connection fault or software issue that needs rectifying and a conversation with his Dealer is necessary. It could even be the connecting lead at fault.

Talking of Astell and Kern firmware, I would like to confirm the estimated dates for significant feature enhancements for both Astell and Kern players, on or about the following dates: AK100 Gap-less play 18th June; AK100 USB-DAC 27th June; and AK120 USB-DAC 14th June; DSD playback 15th July.'

LOVELY LEAK AMPLIFIERS

I've just finished reading Haden Boardman's piece about the Leak EL84 amplifiers (Feb 2013 issue). I'm afraid I'm going to have to disagree with his view that their stock circuits and sound are a "bit rubbish". But for now that's by the by: we're all entitled to our views.

Mr Boardman did think better of the earlier Leak TL/12 Point One though, famous for being the first widely available amp to deliver just 0.1% distortion. However he went on to say by modern standards, I have yet to find a Leak TL/12 Point One that actually manages this.

I just couldn't let this sorry state of affairs continue. So here, to put Mr B's mind at rest, are my two TL/12s set up on my kitchen worktop and connected to some relatively modern test equipment. They're running at 1kHz and 10W, Leak's specified test point and both are delivering less than 0.1% distortion + noise.

The audio analyser (HP8903A) shows that the better of the two is managing 0.077%. The scale on the spectrum analyser (HP3561A) is too fine to read in the photo. But the large vertical divisions represent 10dB and the



Make sure your AK120 player is switched on first, or it won't appear on your iMac as memory.

> second harmonic is nearly 7 divisions - in fact 69dB - below the fundamental. The third harmonic is a further 6dB down. All the higher harmonics are negligible. The other amp has a second harmonic level of -70dB, essentially the same as the first one. But in this case the third harmonic is at -64dB which explains why this amps distortion + noise is 0.092%. Its still within the 0.1% specification though.

The trick for restoring the amps to their as-new performance was to concentrate on the resistors. Many of these are Erie ceramic-bodied carbon compositions and it's well-known that these will often have drifted high in value and developed significant noise over the 60 years or so since they were made.

What's less well-known is that they can also have become non-linear. If this has happened to one which is in a critical circuit position then it can easily push the amps distortion level well above 0.1%.

For the sake of authenticity I have restored my amps using only the resistor types that they were originally supplied with. I had to sort through quite a few Erie carbon comps before I found enough which still worked like new. But having done so my amps are now proof that Harold Leak really could deliver on his promises. Oh, and they sound lovely too! Best regards.

Graeme Hirst

Hi Graeme. Thanks for your letter, and in particular for the carefully

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staged picture showing an HP8903B and HP3561A in action – both great analysers we use today.

I agree with your sentiment that "a bit rubbish" is over-exaggerated and they were never quite this, but I hope the rest of the piece was interesting.

The difference between renovation and restoration is rarely made. Most people renovate with new components I believe. Finding and using original parts strikes me as a challenge. Are electrolytics a problem? Do you have a source of New Old Stock, or do you use your own scavenged parts? True restoration, including its merits, is rarely talked about. The amps look lovely, by the way. **NK**

Yes, finding and using original parts is indeed a challenge. It's just about possible with resistors, although you may well have to accept some compromise in performance. I suspect I could improve the less good amp, at least to the standard of the better one, if I was prepared to use new metal film resistors. But I prefer to stick to originals if I can.

This is often impossible with capacitors though. I used new replacement caps throughout these amps, with two exceptions. The InO's in the feedback paths were originally TCC films. These had both drifted quite a long way. I replaced them with Mullard mustards which are still widely available, excellent performers and contemporary with at least the later TL/12.1s.

The smoothing block in one amp was still in good order so I left it that way. In the other I needed to re-stuff it and I used modern polypropylene film caps rather than PIOs. I couldn't find any pre-canned PIOs that would have fitted and I felt that in the power supply, of all places, the impact on the amp's sound of any change would be least.

For the new caps I did try to use exactly the old technology. So I replaced the 0.25uF PIOs with 0.22uF ones from Jensen, who went to the trouble of selecting out high-value ones from their stock for me (and not charging me for this :-)).All of mine are between 0.24uF and 0.25uF. The Jensen caps are also very similar in physical size to the originals.

The electrolytics are modern ones, chosen again to be roughly the right size. I didn't like the look of the plastic sleeves so I stripped them off and re-labelled the caps using waterslide transfers before covering with transparent heat-shrink. They wouldn't fool an expert for a moment. But at a glance I think they don't look too bad (see attached pic).

Concerning the analysers, I actually own two 8903As which I bought as non-workers. So I have been inside them. In the end the problems were just with the power supplies and these were easy to fix, which is a good job since I'm less familiar with solid-state fault finding than with thermionics. However they looked like they would be very easy to work on All the components are mounted on removable cards and there is sufficient room inside to get your fingers to where they're needed. The only problem was that the plastic levers which are fitted to the cards to allow easy removal have embrittled, and the edge connectors have, over the years, got a tenacious grip of the cards themselves. So quite a few of the plastic levers snapped as I took the cards out to get to the psu wiring.

Once the 8903As were fixed I cross-checked them against one another and found them to be in pleasing agreement. They also agreed well with the results from the 3561A which I bought from a dealer and which was working fine straight out of the box. I confess I haven't been inside it nor do I have any plans to. At some stage I will set up a check of its performance using the high quality oscillators in the 8903As and some precision resistive dividers. But for now I have no reason to believe that it's acting up. I only have one experience of working on a piece of kit like this. One busy week, in what was effectively an emergency, I had to replace the rare/expensive/ultra-low noiseRF mixer in the front end of an HP3585A at work. This analyser was enormous - 2 feet deep and 5U high in a 19" rack and weighing in at 40kg and I swear when I got the lid off there wasn't room to squeeze an extra Rizla paper inside it. Taking a soldering iron to it was pretty intimidating. I fear the same may be true of its little brother, so



Leak TL12 amplifier under test, the Hewlett Packard 8903A analyser showing 0.0765% distortion, whilst the Hewlett Packard HP3561A spectrum analyser (top) shows it is primarily second harmonic in nature. Not bad for such a venerable old amplifier, proof of Leak's claims, the reason they sound gorgeous – and why they now fetch big prices!

I'm going to let this sleeping dog lie.

The only issue I have with the analysers is the 8903As' tendency to pick up low level noise. If I'm careful with the earthing (which I wasn't for these tests incidentally), I keep other items with big power supplies at a reasonable distance (which I didn't - the 3561A's sitting on top !) and I switch off any nearby fluorescent lights (which I didn't) then I can get their noise floor down so that the agreement with the 3561A is pretty good. But I'd always expect the distortion + noise number on the 8903As to be larger than the sum of the harmonics measurable on the 3561A, if only because the former instrument is designed to pick up all the noise (including, perhaps, even IM products between the test tone and the 100Hz HT ripple in the amps). The eagle-eyed will have noticed that in the figures I reported for the TL/12.1s the 8903A says they're doing worse than the 3561A says. But at least the 8903A fails 'safe', reading high rather than low. Best regards, Graeme



Da Ming Dynasty!

Tony Bolton gets his ears tingled by triodes as he listens to Ming Da's single-ended 300B amplifier.



hen I was at the Bristol 'Sound and Vision Show' last February, I visited the Ming Da (UK) room and was rather

taken with the new single-ended 300B amplifier that was on display. My interest was initially stirred by the looks. I liked the gentle curves to the cast aluminium chassis (a design that has been patented by Ming Da)

and the big VU meters mounted on the facia. I also like the concept of single-ended triode amplification for its purity of sound. However, it is not a circuit topology that will suit everyone.

To start with, power output is very low by modern standards, so high efficiency speakers are a must, and fans of rock music should, as a general rule, look elsewhere. Since I don't tend to play much rock (the occasional burst of Hendrix being about as far as I go) and I have my Kelly KT3 loudspeakers, which are rated at 95dB efficiency, I felt that I was a suitable candidate to explore the capabilities of the Ming Da 300B single-ended amplifier.

This unit forms part of the new Dynasty series which the company are introducing. They are all housed in variations of the curved, cast alloy casework. Initial manufacture is carried out in the company's factory in China. The ones imported by Ming Da UK are given a certain amount of tweaking to tune it to Western tastes and ears. This is carried out in Malvern by Ming Da (UK) co-founder, Mark Manwaring-White.

Most of the manufacture is done in-house in China. The transformers are designed and hand wound by Ming Da and there are the usual names that crop up in good quality units, such as Alps motorised volume controls and Jensen capacitors. A hefty remote for the Alps control is provided.

The power supply rectifier is a 5U4C, and the pre-amplifier stages use JJ ECC82 and ECC83 valves. The output valves are Full Music 300Bs. All of the circuit is connected by point-to-point wiring and there are the usual gold plated phono sockets at the back for the four line level inputs, alongside the speaker terminals, 8 Ohm with a 4 Ohm tap.

The VU meters display output power, reading on a scale of -20 to +3dB.As a UK only option, for an extra £150 they can also be equipped so that they can be used for bias monitoring.

Beyond making sure that the valves were correctly seated, the only thing to do to get the amp up and running was to plug it in. This I did in the upstairs system and left it to burn in with the Isotek Burn-In disc, running on repeat for 48 hours from my Njoe Tjoeb 4000 Reference CD player. This player has a valve output stage, and I had the Pro-Ject Tube Box DS, which I reviewed in the July 2013 HFW, and the Ming Da 2006 phonostage (June 2013 HFW) so I was nicely equipped to run a totally

The top panel carries control knobs – as well as all else!



Neat internal hard-wiring laid out in trad. style.

valve powered system.

I started off listening in a jazzy mood with an MFP compilation of some of Harry Roy and His Band's more uptempo numbers. The Casa Loma Stomp was recorded in 1934. This is a cover of the track recorded by the Casa Loma Orchestra in America, with the same hot pacing as the original but with the smoothness and chic sophistication to the sound suited the music and it's fast beat. The bass line romped along, sounding both solid and agile, with a quite well defined shape. It started and stopped very accurately, making the beat seem tight and cohesive. I also enjoyed the cleanliness and purity of the mid band and higher frequencies. Everything seemed to share the spotlight equally and I found myself wandering off into my jazz collection

".... the treble had that beautiful openness that seems to be able to go on upwards into the sky."

that often differentiated the British and American dance bands.

I was impressed with the speed and positiveness of the beat and the very three dimensional image produced in front of me. This is, of course, a mono recording but, with

> the spread of the sound between the speakers and the way it extended both forward and behind the speakers, you could have been forgiven for thinking it was in stereo. The sound was very spacious, and seemed to project itself into the room with a vibrancy that

for several thoroughly enjoyable hours.

Sometime later I had left the jazz environs and was exploring the 1960s section of my collection. Having discovered this amp's rather convincing way of transmitting rhythms, I was quite happily listening to Otis Redding singing soul, and specifically his version of the Rolling Stones' 'Satisfaction'. He takes this song at a cracking pace, and

combined with the openness of the presentation, it made for such an exciting listen, that it was absolutely impossible to sit still. I hold my hand up and admit that I was boogying around the room, as I changed records and searched the



The 300B valve was first introduced by Western Electric in 1938. They are directly heated power triodes, originally introduced to amplify telephone signals. I have so far found eleven companies manufacturing of these renown valves, including the Westrex Corporation who market them at \$900 per matched pair, no less! They are made in the old WE plant in Kansas City. The valve is popular as a classic audio triode, designed for low distortion. Even today it sounds as smooth as silk, but it's expensive.



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Chunky gold plated input sockets and loudspeaker terminals sit on the rear panel.

shelves for more music.

I was surprised by this because, in my experience, 300B based amplifiers are not always the most sprightly when presented with such beat driven material. In fact I would go so far as to say that this 300B sound was considerably more assertive, especially in the leading edges of notes, than I have found with other examples of the breed that I have listened to.

After all this excitement, I slowed things down with some very gently paced trance. The album 'Colours of the Brainbow' is available as a free download (legally) from ektoplazm. com, which I then burnt to a CD. Although the beat is slow (70bpm to 123bpm) I would not normally expect 300Bs to be comfortable with the combination of electric guitars and electronic noises that characterise this music, but I found the sounds flowing as convincingly as the jazz had done, leaving me to sit back and float away with the music.

I finished my listening with one of my favourite arias, 'O terra adio/ La fatale pietra' from Act 4 of Aida. I normally listen to the Tibaldi recordings on Decca, but I have a fondness for Leontyne Price's 1962 performance with Solti at the helm. The spaciousness of the stereo image, and the gently rendered flow of the orchestra were mesmerising. I found myself effortlessly drawn into the music, and the interaction of the voices of Price and Vickers as they slowly die in each other's arms with the chorus of priests chanting in the background. It sounded beautiful.

As I mentioned earlier, I have enjoyed 300B based amps in the past, but have tended to find them a bit restrictive in the genres of music that they will play comfortably. The rather more assertive nature of this amp's sound both surprised and pleased me. I still wouldn't want to put really hard driving electronic beats or rock music through it, but it handled everything else that I threw at it with aplomb.

I have one gripe, and that is the position of the control knobs for the volume and source selector. They sit on top of the casework, and are obscured by the acrylic valve cover when it is in place. I used the cover because of space and safety considerations, but found that I was able to slip my fingers under it to operate the knobs.

Apart from this, I find the Ming Da Dynasty Duet 300B amplifier difficult to fault. It is very well put together, looks good – and sounds

MEASURED PERFORMANCE

Power output measured 4.5 Watts for a 5% distortion limit, into 8 Ohms. The 4 Ohm tap gave identical output, so tap efficiency is good; there are no losses here. Power output from this SE is limited and it needs sensitive loudspeakers, typically large floor standers,

Distortion levels were high, measuring 1.8% in the midband at 1 Watt, and 4% at -1dB below full output, but our analysis shows this was second harmonic. This lightens timbre a tad, rather than adding roughness to the sound. Bass distortion was moderate, amounting to 2.5% at 1 Watt, 40Hz and 6% at -1dB below full output, good figures showing the transformers were

FREQUENCY RESPONSE



lovely, with the delicacy and detail for which these valves are renowned.

This, combined with a compelling treatment of rhythms and less musical genre dependency than a lot of it's competitors has won me over. I can only recommend that you listen for yourselves. I will be amazed if you don't enjoy it as much as I have.

SYSTEM USED:

Linn Sondek/ Hadcock 242 Cryo/ Clearaudio Concept MC/ Benz Ace Mono. Luxman E200, Ming Da 2006, and Pro-Ject Tube Box DS phonostages. Njoe Tjoeb 4000 Reference CD player. Kelly KT3 loudspeakers.

MUSIC USED:

Verdi 'Aida. Highlights'. Price. Vickers. Gorr. Merrill. Tozzi. George Solti conducting the Rome opera House Chorus and Orchestra. RCA Victor Records. LSC 2616. 1962.

Harry Roy and His Band. 'Hotcha-Ma-Cha-Cha.' Music For Pleasure Ltd. MFP 1135.

Otis Redding. 'Otis Blue/ Otis Redding Sings Soul.' Volt Records. VOLT 412. 1965.

Globular 'Colours of the Brainbow.' http://www.ektoplazm. com/free-music/globular-colours-of-the-brainbow 2010.

working within their core saturation limits and bass should not sound coloured by magnetic overload (3rd harmonic). Damping factor was a low 1.4, as expected from a triode SE. Best to use loudspeakers with good acoustic damping, as the Ming-Da does not apply electrical damping.

Frequency response stretched from 10Hz to 41kHz (-1dB), bass roll off helping minimise core saturation in the output transformers. Sensitivity was high at 240mV.

This is a low power triode SE with the sort of figures expected. They don't look good by today's standards but a consistent distortion spectrum under all output conditions, largely second harmonic, will ensure a sound that doesn't challenge the ear. **NK**

Power	4.5watts		
CD/tuner/aux.			
Frequency response	10Hz-40kHz		
Separation	68dB		
Noise	-82dB		
Distortion	2%		
Sensitivity	240mV		

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TELLURIUM Q ULTRA BLACK INTERCONNECT £380/M

The company doesn't reveal much about its cables and this new Ultra Black is no exception except to say that the Tellurium Q uses its own RCA connector which is manufactured with a specific mix of Tellurium.

Playing the Beatles' 'Free As A Bird' and using the Avid SCT interconnects as reference, the first few seconds of play were more than enough to realise that Tellurium Q has got a very special design on its hands. The sheer rich flavours of sonic information that rolled forth like a slow motion, tidal wave of dynamism was truly stunning. Trebleinfused cymbals were not so much struck as emerged like a mushroom cloud of information that spilled over the soundstage. The Ultra Blacks provided space in between each instrument and each vocal. This was critical for this track because of the amount of processing done on the Lennon sample to bring the demo vocal up to scratch. Any cable that cannot cope with the capacity allows these sonics to crash like a car into a wall. Not with the Ultra Blacks which provided room to spare. The accompanying acoustic guitar strums were also sumptuous. Bass, meanwhile was lavish, opulent and powerful.

Switching to vinyl and Handel's 'Messiah', the choral sequence from 'Behold the Lamb of God' was uplifting and ethereal. The rising midrange vocals enhanced were texturally and tonally fascinating, voices benefitting from the separation caused by low distortion. The result was a strength and an emotive force that thrilled my ear. Strings, meanwhile, were smooth yet detailed while the soundstage was broad and mature in its construction.

The Tellurium Q is a major entrant into the cable market. Even at this price, it offers excellent value for money. **PR**

[Contact: +44 (0) 458 251997 ww.telluriumq.com]

SOUNDBITES

XTZ EARPHONE 12 £70

Swedish-based outfit, XTZ has released a new set of earphones using 8.6mm dynamic drivers along with neodymium magnets. Offering a chrome finish, XTZ's ear pieces have a disconcertingly cheap plastic air about them, but they have nice touches too, such as a flat ribbon cable to reduce tangling and twisting and magnets that are fitted to the rear of each ear piece. Hence, when each earpiece is near to the other, they snap together which helps storage and, again, reduces tangling - but will they adversely affect sound quality?

Sound tests began by plugging the Earphone 12s into an iPhone S and playing a 320kbit/s MP3 and then a WAV of Paul McCartney's 'Glory Of Love'. The XTZs sounded bass light when compared to my reference Sennheisers, but the balance, in terms of detail and tonal reality, was excellent. Midrange offered more air while treble was delicate and fragile. I then installed XTZ's free iTunes-

linked music player app that also modifies sound output via DSP technology supplied by Dirac Research. With DSP turned On, McCartney's vocals were more detailed and prominent, the soundstage had a better 3D structure while bass was more characterful. firm and reactive. An additional app 'Boost' button acted as a subtle Loudness control.

Playing Signe Bakke's avant-piano piece, 'Crystalline' at 24bit/192kHz via my Epiphany Acoustics EHP-O12 headphone amp, connected to an SSD-equipped Apple MacBook, the XTZ's showed that there is life after DSP after all. The Swedish design exhibited a stark clarity that kept pace with Bakke's fleet of fingers performance. The edges of each



note were laid bare while decay was continual and informative.

The Earphone 12s may not be pretty but, in terms of sound quality, they excel, providing superb value for money. **PR**

[Contact: www.xtz.se]

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Hi-Fi World, Tony Bolton, March 2012, Overall: 5/5 Hi-Fi Choice, Ed Selley, January, 2012 Overall: 5/5



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Particles State Strangington These





TURNTABLES

REGA RP1 2010 £225 Pleasing sound, fine build and ease of setup and use make this a great first 'real' hi-fil turntable.

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

REGA P3-242008£405Seminal affordable audiophile deck with fine
bundled tonearm. Tweakable, and really sings
with optional £150 outboard power supply.

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

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



MICHELL GYRODEC SE 2005 £1,138 Design icon with superlative build and finish. Sound is beautifully smooth, effortless and exceptionally expansive. No longer peerless at the price, but still a brilliant platform.

MARANTZ TT-ISSI 2005 £1,299 Cracking all in one deck/arm/cartridge combination, this must surely be the best sounding 'plug and play package at this price point.

ROKSAN RADIUS 5.2 2011 £1,450 Although getting expensive, the latest Radius is a highly grown up package with a flowing yet engaging nature; a fine package.



AVID DIVA II SP 2010 £2,000 New twin belt drive and power supply make this a more commanding performer, although there's a substantial price hike. Speed, dynamics and detail are hard to beat anywhere near the price.

INSPIRE ECLIPSE SEv2 12 2010 £2.349

Finely engineered, smooth and detailed sounding deck offering valuable twelve inch tonearm compatibility.

NOTTINGHAM ANALOGUE HYPERSPACE 2010 £2,390 Deliciously spacious, lyrical and beguiling sounding turntable, but lacks ultimate grip.

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

DR FEICKERT WOODPECKER 2010

£3,445 Elegant deck with great low frequency solidity, coherent soundstaging and a precise midband.



LINN LP12SE 2010 £3,510 Surely hi-fi's most iconic turntable, the legendary Sondek goes from strength to strength. New Keel subchassis and Radikal DC motor add precision and grip to one of the world's most musical disc spinners.

ACOUSTIC SIGNATURE

Expensive, though,

STORM 2011 £3,612 An excellent high end design with a smooth, solid, open and lyrical sound and razor sharp styling and build.

FLETCHER AUDIO OMEGA .5 2010 £3,699 Charming high end turntable that's a fitting testament to the late Tom Fletcher.

PALMER 3 2010 £3,750 Eccentric hand built high end turntable with a pleasingly smooth, sweet and lucid sound.



E.A.T. FORTE S EVO 12 2010 £4,750 Excellent premium price turntable with power, precision and passion aplenty, but relaxed and easy going by nature too. Geat value package with the Pro-ject Evo 12" arm option.

ACOUSTIC SOLID

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

SME MODEL 10A 1995 £4,556 Exquisitely engineered deck and SMEV tonearm combo that's an extremely accomplished performer with classical music.

AVID VOLVERE

SEQUEL 2007 £4,600 Stylish high end vinyl spinner with industrial strength build quality and a sound to match. Exceedingly neutral yet powerful sound is edgee-of-the-seat stuff.

BRINKMANN BARDO 2010 £5,845

Unique high end direct drive turntable with amazing grip and focus, albeit not the most romantic of natures.



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

EAT FORTE 2009 £12,500

Lavishly finished two box, two motor turntable with gorgeous Ikeda 407 tonearm bundled. Exceptionally stable and unfussy performer with a relaxed but highly enjoyable gait.

TONEARMS

 REGA RB251
 2009
 £136

 Capable way past its price point, the new
 3-point mount version of the classic RB250

 serves up a taut and detailed sound. A little lean for some tastes, but responds well to rewiring and counterweight modification.

MICHELL TECNOARM A

The late John Michell's clever reworking of the Rega theme, using blasting, drilling and rewiring! Surely the best overall performer under £500.

2003

£442

STANDARDS

ORIGIN LIVE SILVER 3C

SILVER 3C 2010 £599 Excellent mid-price tonearm with a clean and open yet lyrical sound.



HADCOCK GH-242 EXPORT 2010

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

£770

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

FUNK FIRM FXR II 2010 £1,175 Clever reworking of the ubiquitous Rega platform, the FXR II gives a wonderfully musical,

almost unipivot like performance.

AUDIO ORIGAMI PU7 2007 £1,300 The classic Syrinx PU3 updated to spectacular effect. Hand made to order, with any mass,

length and colour you care for. Fit, finish and sound truly impressive.

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

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

SME SERIES IV 1988 £1,620 Offers nine tenths of the SMEV's magic at just over half price. Exquisitely built and finished, and a design classic. Faces stiff competition these days, but lovely nevertheless.

SME 312S 2010 £1,750 Twelve inch magnesium alloy armtube plus SMEV bearings makes an impressive transcription tool with an insightful yet composed sound. Superlative build completes the package.



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

TRI-PLANAR

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

SME SERIES V 1987 £2,389 Vice-like bass with incredible weight, ultra clear midband and treble astound, although some don't like its matter of factness!

LINN EKOS SE 2010 £3,700 Subtle mods over the years, including revised bearings and the recent new wiring has kept it a serious contender in the superarm stakes. Has a commanding musicality all of its own.

OL ENTERPRISE 3C 2010 £4,500 Few if any pivoted arms come close to this arm's combination of liquid musicality and forensic grip.

CARTRIDGES

AUDIO TECHNICA AT-95E 1984 £25

Great starter cartridge that's detailed and musical beyond its price. Superglue the stylus in for better sound!

AUDIO TECHNICA AT-F3/III 2010

Great value entry level moving coil with detail and grip you just can't get from similarly priced moving magnets.

ORTOFON 2M RED/BLUE 2007 £60/£120

Modern, high resolution budget moving magnets that are always an engaging listen.



GOLDRING G1042 1994 £239 One of the best MMs going, with sweet and extended treble and punchy, muscular bass.

ORTOFON VIVO BLUE2011 £275 Super new budget moving coil cartridge from respected Danish manufacturer; a real step up from previous efforts.

DENON DL103R 2006 £295

Awkward to get working properly with a poor mounting arrangement, yet it rewards with a musical performance that makes similar priced cartridges sound cold.

DYNAVECTOR DV10X52003 £295 Distant descendent of the classic Ultimo 10X, this has warmth and sweetness in spades, allied to a punchy bass. Beats G1042 comfortably.

ORTOFON 2M BLACK 2007 £350 Staggeringly good high-end MM that uses a stylus from the MC Jubilee and easily rivals similarly-priced MCs

DYNAVECTOR DV20X-H2003 £395

Deliciously sweet sound with fantastic get-upand-go makes this a great value budget MC. High output version works a treat with valve phono stages too.



AUDIO TECHNICA AT-OC9MLIII 2010 £399

New stylus and cantilever breathe life into this feisty, punchy and detailed performer.

ORTOFON RONDO BRONZE 2005 £500

Excellent mid-price moving coil with real rhythmic alacrity and a decent deal of finesse.

LYRA DORIAN 2007 £649 Incisive and musical, this baby Lyra is one of the most powerful and revealing MCs at its price point. Beware the sharp treble, though!



BENZ MICRO GLIDER L2 2008 £650

Crisp, clean and detailed MC; particualrly impressive at both ends of the frequency spectrum

ZYX R-100H 2005 £799

Exceptionally tight sounding and detailed cartridge with the musical skills to match, this is up with the best at the price, with a presentation all of its own.

TRANSFIGURATION

AXIA 2007 £890 Musically adept and highly resolute cartridge with impressive tracking abilities. Top end lift means careful matching required, however.

BENZ MICRO WOOD SL 2010 £945

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



ORTOFON CADENZA BLUE 2009 £1,000 Musical, out of the box sound, allied to real

Musical, out of the box sound, allied to real finesse, makes this a great do-it-all high end moving coil.

ORTOFON CADENZA

BRONZE 2010 £1,350 Smooth and engaging high end MC with a slightly warmer and more relaxed presentation than its superb bigger brother.

ORTOFON CADENZA

BLACK 2010 £1,650 Ultra incisive, transparent and dimensional moving coil with grip and punch aplenty.

ORTOFON MC WINDFELD 2008 £2,250

Ortofon's new flagship MC is a sophisticated and alluring performer that takes the vinyl experience to a new level.

KOETSU RED K SIGNATURE

SIGNATURE 2007 £2,399 The new K Signature adds a hefty dose of insight and finesse to the already impressive Red and the results are fabulous.



DIGITAL SOURCES

MUSICAL FIDELITY V-DAC £170 Clear, concise, low distortion sound belies giveaway price. Supelative value for money.

CAMBRIDGE AUDIO

DACMAGIC 2010 £230 A flexible new DAC, this is an impressively rhythmic and detailed performer.

2010 ARCAM rDAC £300 Cracking budget DAC sporting a fulsome and musical sound with gorgeous build and styling.

MUSICAL FIDELITY

2010 £400 MI DAC Surprisingly sophisticated upsampling DAC with oodles of detail and air, but bass isn't quite as powerful as it could be.

STELLO DAIOO SIGNATURE

£750 Superbly finessed sounding DAC at the price, with strong driving bass and plenty of air and space.



CAMBRIDGE AZUR 840C

2006 £800 Well built CD player with a silky, yet detailed sound and a whole host of useful facilities. Excellent value for money.

NAIM CD5/ 2008 £895 Naim's new italic 'i' variant improves even further on the original mid-price classic, offering super tight, grippy and musical sound.

ROKSAN KANDY

2010 £900 K2 CD A charmingly musical performer at the price, this is a surprisingly sophisticated CD player for the money.

BENCHMARK DAC-152009 £930 Power, precision and poise - allied to real seat-of-the-pants musicality, this DAC justifies its premium price.

MUSICAL FIDELITY

2011 M3 CD £995 Excellent mid-price machine with slick slot loading and an open and inviting sound.

ELECTROCOMPANIET 2011 £1,250 PD-I

Quirky but highly capable digital convertor with an effective wireless radio option (£250) and balanced outputs.

SIMAUDIO

MOON 300D 2010 £1.290 Lovely fluid sounding DAC with a deep, dark, velvety tonality.



CYRUS CD8 SE 2008 £1.350 Bespoke Servo Evolution mech makes this the most musically engaging machine at the price, with super smooth tonality to boot.

Optional PSX-R adds bass and dimensionality.

DENON DCD2010AE 2010 £1,700 Powerful, open sound allied to a rich tonality and satisfying subtlety make this an excellent mid-price buy.

2010 £1,995 NAIM DAC Superb high end digital convertor with a probing, punchy and forensically detailed sound.

£2,400 **MERIDIAN GO8.2** 2011 Everyman's modern high end CD player, the stylish, well made Meridian has an extremely enjoyable yet refined and accurate sound.

MARANTZ SA-KI

PEARL CD 2010 £2,500 Finely honed affordable high end silver disc spinner, this has a musical lucidity that's unexpected at this price.



LEEMA ANTILLA

IIS ECO 2011 £2,995 Stable and smooth yet superbly detailed and musically engaging, this is class of the £3,000 CD player field.

CHORD QBD64 2008 £3,000

Bespoke architecture gives a uniquely musical sound that's beguiling yet proffers dizzying incision and grip.

ELECTROCOMPANIET EMC-IUP 2009 €3.450

Quirky yet extremely capable high end upsampling CD spinner, with a musical fluency that beguiles more than it impresses.



ACCUSTIC ARTS CDPIMK2 £3.985 2007

Styling not to everyone's taste but build quality is impeccable and the performance is stunningly musical.

ESOTERIC X-05 2010 £4,495 Superlative 'affordable high end' CD/SACD spinner with excellent build, massive detail and great poise.

WEISS DAC202 2010 £4,600 Brilliantly open and insightful sounding DAC with a range of useful features.

ELECTROCOMPANIET EMP-1/S 2011 £4,650

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

2003 £4,950 NAIM CDX2-XPS2 A fine high end machine, but add an XPS2 and it becomes one of the most charismatically engaging 16bit machines we've ever heard. Plays music with such passion!

2003 £7,050 NAIM CDS3 The most polished Naim CD to date; tre-

mendously capable and musical, but lacks the Rottweiler quality of the cheaper CDX2-XPS2.

dCS DEBUSSY 2011 £7,500 Compact, stylish DAC bringing the gloriously smooth, svelte, spacious sound of dCS to a wider audience.

ACCUSTIC ARTS DRIVE | MK2/ TUBE DAC 2 2007 £7.980 Superbly built high end CD transport and DAC combo that shows just what the format can be capable of.Very tangible, musical sound with wonderful dynamics and glistening harmonics. Only curious styling and clunky build detract from its brilliance!

DCS PAGANINI DAC £9,599

Digital rarely sounds better; dCS's bespoke Ring DAC makes for power, punch and insight on an epic scale. Add clock and upsampler for an even more profound experience.



NAIM CD555/555PS 2006 £14,000 Very probably the best CD player yet made - certainly the most expensive; a digital tour de force.



NETWORK

2009 £4,405 Interesting one-box network enabled hard disk music system gives superb sonics together with impressive ease of use.

LINN KLIMAX DS 2007 £9,600 Landmark network music player, offering brilliant sonics at up to 24/96 resolution from hard disk/NAS. Expensive, but you can hear why...

PHONO STAGES

CAMBRIDGE AUDIO 640P 2009 £99 Excellent entry level design that raises the bar for budget phono stages. Crisp, smooth yet brightly lit sound on both MM and MC that's a vast improvement on most budget inboard designs.

GRAHAM SLEE ERA GOLD V £370 2004

Warm, open and musical nature makes this a great budget phono stage.

ASTIN TREW AT8000 2010 £880 Expansive, detailed, powerful sound makes this a leading sub-£1,000 contender.

CHORD CHORDETTE DUAL 2010 £799

Well presented mid price designed with detailed sound and USB input for archiving.

NAIM HDX

ICON AUDIO PS1.2 2007 £599 Excellent valve phono stage with good range of facilities and fine imaging abilities.



A.N.T. AUDIO KORA 3T LTD 2010 £995 Exceptionally musical and natural sounding all discrete transistor phono stage, with highly lucid, valve-like presentation.

AVID PULSUS 2010 £1,100 Powerful, propulsive, expansive sound puts this right at the top of the £1,000 phono stage tree.

QUAD QC24P 2007 £1,200 Dynamic performer that can be used on its own as a complete phono-level preamp.

ICON AUDIO PS3 2008 £1,500 Super sounding valve phono preamplifier, with an expansive, engaging and organic nature that makes vinyl sheer joy!

SUTHERLAND 20/20 2010 £1,999 Well engineered, smooth sounding solid-state phono stage with a charm of its own.

EMILLE ALLURE 2010 £2,495 Just as the name suggests, this is a lovely way to play LP with an exceptionally open and lucid sound.



AVID PULSARE 2010 £3,800 This superbly built, well specified phono stage has a powerful and authoritative sound that bristles with detail and energy.

WHEST PS.30 RDT SE2011 £4,500 The least solid-state sounding Whest we've heard, this builds on the family strengths of precision and grip but adds a welcome poise

precision and grip but adds a welcome poise and fluidity. NAT AUDIO

 SIGNATURE
 2011
 £5,633

 Sophisticated sounding, unusually engineered
 MM and MC phono stage, but faces stiff competition at this lofty price.

AMPLIFIERS ICON AUDIO STEREO 40/III

2010 £1,200 Excellent starter tube integrated, with plenty of detail and an expansively musical sound.



NAIM NAIT 5; 2007 £725 The italic 'i' version remains one of the most musically competent and dynamically engaging integrateds at the price.

AUDIOLAB 8000S 2006 £400 In another life, this sold for three times the price, making it a stand-out bargain now.Very clean, powerful and tidy sound but not the world's most beguiling.

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

SUGDEN MYSTRO 2010 £1,225 Sugden's first Class AB integrated in a long time surprises; rollickingly good fun, it loses surprisingly little in smoothness to its Class AB siblings.

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

CREEK DESTINY 2 2010 £1,445 Beautifully voiced integrated amplifier with a distinctly seductive, tube like sound. A solidstate superstar!

SUGDEN A21A S2 2008 £1,469 Crystalline clarity, dizzying speed and forensic detailing makes this seminal design the most musical at the price, but power limited so needs sensitive speakers.



CYRUS 8XPD 2010 £1,500 A quality integrated that suits all genres of music providing insight and clarity in a compact but flexible package.

ANATEK A50R 2007 £1,600 Simple integrated amplifier with super bass grip and effortless dynamics.

VINCENT SA-236MK 2010 £1,749 Big, powerful and expansive sounding hybid transistor amplifer, with a lively, musical nature.

NAIM SUPERNAIT 2007 £2,475 Integrated *tour de force* from Naim that combines impressive functionality and connectivity with super sound.

AUDIO RESEARCH VSI60 2009 £3.298

Load of tube power allied to a strong bass and smooth open midband makes this a grininducing listen.

LEEMA TUCANA II 2010 £3,495

Polished high end integrated amp that combines power, detail and genuine musicality with a good range of facilities.



SUGDEN 1A4 2007 £3,650 Goodly amount of Class A power, icy clarity and a breathtakingly fast, musical sound make this one of the very best super-integrateds. QUAD II CLASSIC 2010 £4,500 Beautiful retro styled integrated amplifier with a subtle, supple sound - although needs matching to speakers that are easy loads.

QUAD II CLASSIC INTEGRATED 2010 £4.500

Thoroughly modern music maker with classic style and great pedigree, this amp sings with gentle music but is no headbanger!

MOON 600i 2010 £5,750

Sturdy build, useful facilities and a wonderfully relaxed, seamless and even-handed sound will win this many friends.

MUSICAL FIDELITY

AMS35I 2010 £6,000 One of the best high end integrateds we've come across, this combines hear-through transparency with musical get-up-and-go.

DARTZEEL

CTH-8550 2010 £16,500 Charismatic and quirky high end solid-state integrated amplifier with superb sound and a charming visage.

HEADPHONE AMPLIFIERS

FIDELITY AUDIO HPA 100 2011 £350

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

MUSICAL FIDELITY X-CAN V8 2008

X-CAN V8 2008 £350 Open and explicitly detailed sound plus serious bass wallop and the ability to drive anything to very high levels makes this a great partner for most mid-to-high end headphones.

PREAMPLIFIERS

MING DA MD7-SE 2012 £1520.00 A valve preamplifier with an open, effortless sound and big sound stage. It has plenty of gain so will accept any source and drive any power amp. A tuneful beauty.



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

ICON AUDIO LA-4 2011 £800 Uses early 6SN7 triodes for liquid sound, has plenty of gain and remote control.

DPA CA-I 2010 £2,650 Excellent solid-state preamp with a meticulously detailed and propulsive sound, but a deep velvety tonality.

MELODY PURE

BLACK IOID 2007 £3,295 The clarity and openness of valves plus firm grip and fine detail make this a preamplifier masterclass.

MUSICAL FIDELITY PRIMO 2009 £7,900

Seriously expensive, but one listen explains why. Wonderfully exuberant sound that can only come from a top quality tube design.

HI-FI WORLO AUGUST 2013

MF AUDIO CLASSIC CII SILVER

2010 £4,500 One of the best preamplifiers we've heard at any price, this transformer coupled marvel does very little wrong; its powerful, clean, open yet delicate sound is unmatched at or near the price.



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

POWER AMPLIFIERS XTZ AP-100 2010 £5

XTZ AP-100 2010 £520 Decently smooth yet usefully muscular, this power amp punches way beyond its price point in sonic and value terms.

QUAD 909 2001 £900 The latest current-dumper has a smooth and expansive character with enough wallop to drive most loads. Not the most musical, but superb value all the same. Lovely build, finish and Quad's legendary service are nice.

NUFORCE REFERENCE 9SE V2 2006 £1,750

Brilliant value for money monoblocks with massive power and super-clean, three dimensional sound.



DPA SA-1 2010 £2,850 Pacey, engaging and rhymic almost to a fault, this solid-state power amplifier isn't the world's most powerful but is none the worse for it.

QUAD II-402005£3,230Modern tube monoblock power amplifierswith plenty of power, liquid and open mid-
band and spacious, airy treble. Explicit, engag-
ing sound, but not as euphonic as some.

ELECTROCOMPANIET NEMO 2009 £4,450 (EACH)

The Norwegian power station is as cool as a glacier tonally, yet impresses with its sheer physicality and fleetness of foot. 600W per channel makes for a massive bang per buck.



ICON AUDIO MB845 MkII 2010 £5,500

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.

QUAD II-80 2005 £6,000

Quad's best ever power amplifier, this is a dramatic performer with a silky but dark tonality, blistering dynamics, serious power and a compellingly musical sound. They don't come much better.

MUSICAL FIDELITY AMS50

2010 £7,000 Mighty, assured high end full Class A integrated proffering icy clarity allied to real musicality. Lacks the lucidity of the best tube amps but redeems with power and punch.

LOUDSPEAKERS

Q ACOUSTICS 2020 2010 £140 Great little standmounters with a friendly, fun yet surprisingly refined gait. Excellent value starter speakers.

ACOUSTIC ENERGY NEO I

2007 £199 Tidy and well balanced standmounters with pleasing clarity and detail.

MISSION MX2 2011 £200 Sophisticated sound alloyed with real musical insight makes these small standmounters super value for money.

ACOUSTIC ENERGY NEO I v2 2010 £225

Civilised sounding speaker with fast and tuneful bass.

B&W 686 2007 £279 B&W's new baby standmounters offer a sophisticated and mature performance that belies both their dimensions and price tag.

WHARFEDALE DIAMOND 10.3 2010 £290

Great small standmounters for audiophiles on a budget; dry punchy sound with impressive soundstaging at the price.

MORDAUNT SHORT

AVIANO 2 2010 £300 Classy sounding standmounter at a still affordable price.

 KEF IQ30
 2009
 £330

 Beautifully built, classily styled standmounters with exceptional image projection and a very clean, detailed sound.
 a very



USHER S-520 2006 £350 Astonishingly capable budget standmounters that offer detail and dynamics well beyond their price and dimensions.

MARTIN LOGAN SOURCE 2008 £1,600

Brilliant entry level electrostatics, giving a taste of loudspeaker esoterica for the price of most moving coil boxes. Tremendous clarity, eveness and delicacy, although not the world's most powerful sound. XTZ 99.25

2010 £640

Disarmingly open and refined at the price, these standmounters bring unexpected civility, refinement and insight to the price point. Exceptional value for money.



ACOUSTIC ENERGY AEI CLASSIC 2006 £845

Brilliantly successful remake of an iconic design; not flawless, but surely one of the most musical loudspeakers ever made.

SPENDOR \$3/5E 2004 £950 A natural successor to the BBC LS3/5a, whose impressive neutrality, imaging and evenhandedness makes this a superior, if less charismatic, loudspeaker.

 MY AUDIO DESIGN

 MY1920
 2011
 £1350

 Exceptionally smooth, spacious and refined mini monitors that beguile and excite in equal measure.
 in equal



ELAC BS243 2010 £1,000 More transparent and spacious than they've a right to be at this price, these refined midprice standmounters represent top value.

RRR FS100 2007 £1,055 Mind-boggling amount of loudspeaker for the money. Big and sturdily built with serious bass and awesome soundstage scale. A real bargain.

ONE THING AUDIO ESL57 2007 £1,450

One Thing Audio's modifications keep the good old ESL57 at the very top of the game.

GURU QM-10P 2007 £1,595 Quirky but adorable standmounters that are way off the pace in respect of detail and power, but well capable at playing a tune and pulling you in to the music.

USHER BE-718 2007 £1,600 Beryllium tweeters work superbly, allied to a fast and punchy bass driver. The result is subtle, smooth and emotive.

ISOPHON GALILEO 2007 £2,100 Big standmounters that really grip the music and offer quite startling dynamics and grip.

MY AUDIO DESIGN MYCLAPTON SE 2010 £3,299 Powerful, dynamic, musical yet refined, this unconventional point-source design yields dramatic sonic benefits.

STANDARDS

SPENDOR S8E

Generously large, silky smooth delivery, this dynamic sounding floorstander is an excellent all rounder.

2008 £1.895



MONITOR AUDIO PL100 2008 £2,300 The flagship 'Platinum' series standmounter has a lovely warm and delicate sound with

PMC OBII 2008 £2.950 Cleverly updated floorstanders give scale and solidity in slim and well finished package.

EMMINENT TECHNOLOGY 2010 £2,300 LET8B

superlative treble.

Brilliant ribbon/moving coil hybrid with seamless, delicate and expansive yet tremendously musical nature.

MAD MY CLAPTON GRAND MM 2010 €3.599

Distinctive coaxial standmounters with wonderful soundstaging, bright lucid midband and true musical insight.

YAMAHA SOAVO I.I 2009 £3,000 Musical, transparent large floorstanders with impressive dynamics and cohesion. Excellent build and finish.



MOWGAN AUDIO MABON 2007 £3,995

Massively capable loudspeakers that offer dynamics, scale and clarity in an elegantly simple package.Wide range of finishes, too.

B&O BEOLAB 9 2007 £5.000 Technically impressive and visually striking loudspeakers with sound quality that more than matches their looks.

TANNOY DEFINITION DCIOT 2010 £5.000

Wonderfully wide and open, super fast and amazingly engaging to listen to.

ISOTEK AQUARIUS 2010 £795

Highly accomplished premium priced mains conditioner that delivers the sonic goods, unlike so many others.

ECLIPSE

TD712z/2 2011 2011 €5,100 Flawed genius, and wilfully so. These loudspeakers don't do everything well, but what they can do is profound and enthralling; rhythms, dynamics and soundstaging,

ARS AURES MI 2006 £5,995 Sublime build and finish allied to an insightful, assured and even-handed musical performance makes these an essential high end



QUAD ESL-2905 2006 £5,995

The old 989 with all the bugs taken out, this gives a brilliantly neutral and open sound like only a top electrostatic can; still not a natural rock loudspeaker, though.

SPENDOR ST 2010 £5,995 This classy sounding, superbly presented big floorstander will appeal to those seeking high end sonics with subtle looks.

REVOLVER CYGNIS 2006 £5,999 Revolver pull out all the stops and show what they can do with this magnificent flagship loudspeaker. A superb monitor that is like a mini B&W 801D in many ways.

VIVID VI.5 2010 £6,000

Breathtaking transparency, superlative coherence and dizzying speed make these one of the best standmounters ever made - providing you like their 'studio sound'.



GERMAN PHYSIKS LIMITED 11 2011 £7.800

Don't be fooled by the austere looks; this is a superbly enjoyable omnidirectional speaker with a wonderfully fast, expansive sound.

USHER BE-10 2009 £10.500

Clever high end moving coil design with immense speed and dizzying clarity allied to epic punch. Needs the best ancillaries to fly, though ...

REVOLVER CYGNIS GOLD

2010 £15,000 Vast in scale with effortless dynamics and an easy, barrel chested bass, these big bangers are great for lowish power tube amps. Large room needed!

MARTIN LOGAN CLX LINEAR 2010 £15,990

Meticulously crafted electrostatic that's free from traditional limitations, this is one of the very best loudspeakers money can buy.

B&W 801D

In many respects, the ultimate studio monitor; dazzling clarity and speed with commanding scale and dynamics.

2006 £10,500



ISOPHON CASSIANO

2007 £12.900 Drive units featuring exotic materials allied to superlative build quality result in an immensely capable loudspeaker. Not an easy load to drive, however,

ACCESSORIES

WADIA 1701 2010 £349 The first iPod dock to extract the music digitally, letting you hook your little Apple direct to a DAC for superior sound.

TOWNSHEND MAXIMUM

2003 £800 Classy ribbon supertweeter with flexible level settings and cool styling - you'll be amazed at the difference it makes, especially with Quad electrostatics.

HEADPHONES

JAYS V-JAYS 2010 £49 Wonderful little budget over-ear portable phones with a clean, smooth sound to beat the best of the rest at the price.



SENNHEISER MX-550 2005 £19 Our unqualified recommendation for those seeking a serious sounding pair of in-ear phones. Smooth, detailed and musical.

SENNHEISER PX-100 2002 £29 Cracking pair of lightweight open back cans ideal for personals, but good enough for real hi-fi use. Superb build allied to a smooth and engaging performance make them the spiritual successor to the HD400s

GOLDRING DRISO 2006 £70 Excellent build and fine sound makes these budget cans superlative value for money.

SENNHEISER HD-590 1998 £199 The company's best real-world cans to date.

Open and smooth with plenty of detail. Brightly lit midband makes them an ideal partner for a valve headphone amp.

SENNHEISER HD-650 2004 £250 A super all round reference design with crisp, detailed and even sound allied to superlative build and comfort. Cable upgrade yields great results.

HI-FI WORLD AUGUST 2013

SENNEISER HD800 2010 £1,000 The ultimate expression of the Sennheiser philosophy offers massive speed, clarity and insight, although lacks some of the charm of the softer, more beguiling rival Staxes.



STAX SR-007T OMEGA II/SRM-007T 2006 £2,890

Simply the best headphones we've ever heard at any price, these sweetly translucent electrostatic earspeakers are like no other headphone, or loudspeaker for that matter...

INTERCONNECTS TELLURIUM Q BLACK 2010

BLACK 2010 £276/3m A deep, dark, velvety performer that's nevertheless highly musical, it represents excellent value as mid-price cables go.



TECHLINK WIRES

Highly accomplished interconnects at an absurdly low price. Stunning value for money.

2007

£20

WIREWORLD 04515 5 2003 £99/M

Excellent mid-price design with a very neutral, silky and self-effacing sound. Superb value for money.

CHORD COMPANY CHAMELEON 2

CHAMELEON 2 £90/M One of our favourites, these are musical performers with a smooth yet open sound.



DNM RESON 2002 £40/M Neutral and transparent - a steal!

VDH ULTIMATE

THE FIRST 2004 £260/0.6M Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency. Tight and tuneful bass mixed with air and space results in a cracking cable for the money.



TCI CONSTRICTOR

13A-6 BLOCK 2003 £120 Top quality 'affordable' mains outlet block, with fine build and good sonics. Well worth the extra over standard high street specials, which sound coarse and two-dimensional by comparison.

MISSING LINK CRYO REFERENCE 2008 £375

Currently our favourite 'affordable high end' interconnects, with a deliciously smooth, open and subtle sound without a hint of edge or grain. Superb value, inasuch as it's as good as some designs at three times the price.

TUNERS

DENON TU-1500AE 2006 £120 Excellent entry level analogue tuner; slick sonics and fine feature count make it a bargain.

CAMBRIDGE AUDIO 640T 2005 £250 Sweet sounding digital/analogue hybrid with fine build and finish at the price.

ARCAM FMJ T32 2009 £550 Excellent hybrid FM/DAB+ tuner with a smooth, engaging sound. Factor in its fine build and it's a super value package.

CREEK CLASSIC TUNER 2006 £550 No tuner offers better sound per pound; wonderfully three dimensional and smooth from bottom to top.

MICROMEGA FM-10 2010 £750 Don't let the modest proportions fool you, this is a state-of-the-art modern analogue tuner with bespoke internals giving a warm, expansive sound.

MYRYAD MXT-2000 2005 **6800** Sumptuous sound and excellent build is all most will ever need in a tuner; superb.

MAGNUM DYNALAB MD-90T 2010 £1.295

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

MAGNUM DYNALAB

MD-100T 2006 £1,895 One of the best ways to hear FM that we know; superbly open and musical sound in a quirky but characterful package.



SYSTEMS

YAMAHA CRX-MI70 2007 £200 One heck of a lot of quality performance on DAB, CD and FM for £200! Optional matching £120 NX-E300 loudspeakers aren't too shabby either.

TEAC DR-H300DAB 2008 £329 Nicely built and styled mini with fine performance on all sources that even plays DVDs!



NAD C-715DAB 2008 £429 Small, neat looks cover a truly capable system that shows just what a compact design can

achieve.

ARCAM SOLO MINI 2008 £650 Half the size and two-thirds the price of a full-sized Solo, the Mini gives very little away in terms of performance to it bigger brother.

SHANLING MC-30 2007 £650 Quite possibly the cutest all-in-one around with fine performance from the CD player, tuner and MP3 player input. Very low power, though.

PEACHTREE AUDIO iDECCO £1,000 Excellent sounding iPod dock, impressive

DAC and fine amplifier section make this an excellent one box style system.

ARCAM SOLO 2005 £1,249 Excellent all-in-one system, with a warm, smooth and balanced sound to match the features and style.

LINN CLASSIK MUSIC 2008 £1,250 Neat update of the original and best one-box stereo system; superbly musical sound beats equivalently priced separates.

NAIM UNITIQUTE 2010 £1,350 Great little half width one-box system with truly impressive sound allied to a wealth of source options.

MERIDIAN F80 2007 £1,500 Fantastically built and versatile DVD/CD/ DAB/FM/AM unit, designed in conjunction with Ferrari. Ignore nay-sayers who sneer that it isn't a 'proper' hi-fi product; most see sense when they listen to it...

AURA NOTE MUSIC CENTRE 2007 £1,500

Lovely shiny CD/tuner/amplifier with fine sound quality and dynamic abilities.

 NAIM UNITI
 2009
 £1,995

 Uniquely versatile one box music system with excellent ergonomics and sonics to match. A landmark product for Naim.
 Example 10,000

LINN CLASSIK MOVIE

 MOVIE
 2007
 £2,250

 Superbly built all-in-one that offers excellent sound across all formats and is surprisingly easy to use.
 easy to use.



MERIDIAN SOOLOOS 2.1

2010 £6,990 Thanks to its crisp styling and bright, colourful touchscreen, plus excellent search facilities this is one hard disk music system with a difference. Best partnered to Meridian active loudspeakers.

MARANTZ 'LEGEND' 2007 £22,000 The combination of SA-7SI disc player, SC-7S2 preamp and MA-9S2 monoblocks delivers jaw-dropping performance.



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Head Music

Introducing a new hybrid design, Paul Rigby reviews Canor's TP-10 headphone amplifier.

he popularity of headphones continues unabated and is reflected in the continuing appearance of hardware devoted to the genre. Canor is a prime example of how the hi-fl industry is establishing a reinvigorated headphone lineage by refining and improving upon its established SH-1 headphone amplifier. Although, for the designer, Zdenek Brezovjak, the impetus for the TP-10 was initially more self-serving, "I wanted to listen to music so that I would not disturb the people around me. In the evenings, when I would work on designs on the computer, I wanted the freedom to listen to music of good quality. That's when the idea to make our own headamp struck me"

Improvements to the initial SH-I design are many and begin in the power supply, although the 16V, IA transformer in the form of a wall wart found as part of the TP-10 package is apparently not one of them. We have to look inside the ehassis for that. "The circuit that creates the anode voltage has been improved", said the designer, Zdenek Brezovjak. "Also, we retained the wall wart to distance the transformer from the PCB components to avoid electromagnetic interference". At this price, however, I would have appreciated a more robust approach to power than the wall wart attached by a bell wire connector. Failing that, an upgrade option would have been welcome.

The core of the improvements, however, revolves round the PCB and how it is treated during construction. "We approach all the solutions as precise as we can, and we always strive to get 'blood from a stone' from a given solution", commented Brezovjak. Known as CMT (Canor PCB Milling Technology), each PCB is milled to improve the dielectric of the board itself.

"Within a hard-wired circuit board, you can use high quality cabling which can feature an efficient 'air' dielectric to improve sound quality. This is fine but the use of hard wiring on a circuit board has limits in terms of precision of the layout. You end up with spaghetti wiring all over the place, with no consistency and lots of stray electromagnetic fields hanging around. CMT removes part of the PCB Itself to reduce the dielectric coefficient of the circuit board. Doing it this way improves the accuracy and consistency of placement while approaching direct wired, low resistance and dielectric-coefficient

audio cable".

Other improvements to the TP-10 include packing Burr-Brown Op-amps and polypropylene capacitors into the chassis. The TP10 is a hybrid design and, for the valve element, the new design includes a 12AT7 input tube instead of the SH-1's 12AX7. "The hybrid design originated as a trade-off between sound quality and price. If we wanted to manufacture an all-valve system and have the option to connect low impedance headphones, the price would have trebled", said Brezovjak.

Canor takes the valve element of the TP-10 very seriously. In fact, the valves are extensively tested by the company's own Aladdin II system and then burned in by another in-house system, the BT-2.

The TP-10 arrived in a silver and black chassls that rings like a bell — most disconcerting. Again, for the price, I would have expected something a little more acoustically neutral, As it is, that chassis weighs in at 3kg without the power supply and spans 210x88x295mm, features a volume knob and full size headphone socket on the front, alongslde a push button power switch while, on the rear is a pair of inputs and a pair of outputs along with a socket for the power supply.



TP-2.5 series II

Phono pre-amplifier

A new entry point to true High-End analog sound...







Crafted with a similar high quality build and finish as VTL's more expensive models, the TP2.5II has an elegant silhouette, and the features to match. With an eye toward flexibility and user friendliness, the 2.5 offers user-adjustable cartridge impedance, and two levels of gain, with inputs for both MC and MM cartridges. JFET/tube hybrid circuitry is used for the MC stage, and all-tube circuitry for the MM stage.

The signal path is purposely kept simple and direct, with audiophile-grade components throughout, for ultimate sonic purity. With the new TP2.5II phono stage, we have created an entry to true high-end analog sound. The VTL 'family' genes of highly resolved detail, linearity and controlled bass are all there, along with a musicality, depth and spaciousness you won't find in most phono stages.

For the true music lover seeking to capture the special magic that only a fine analog system can provide, the new TP2.5 Series II phono stage is an essential component.



Low noise hybrid JFET/tube active MC stage, and pure tube MM stage Separate MM and MC inputs User-switchable MC resistive cartridge loading with 6 settings User-switchable MC gain settings of 62dB and 56dB Innovative low feedback, low insertion loss split pole RIAA filter User-switchable Enhanced RIAA function Buffered output for driving low impedances through any cable Zero microprocessor noise Front panel Power, Rumble and Mute switches Audiophile-grade components throughout, including REL caps Toroidal power transformer with comprehensive AC RF filtering UK models feature a selected NOS CIFTE tube in the MC stage

"VTL's new 2.5 phono preamp is chock full of good parts and built beautifully within a solid chassis.

I got a chance to listen to it...and it sounded full bodied, detailed and dynamic on an upcoming double 45rpm LP from Analogue Productions of Elvis Presley's experimental 1957 binaural recordings produced when RCA Nashville received its first two-track tape recorder.

The sense of Elvis on the microphone right in front of you is chillingly real on this recording and the 2.5 did a very good job of reproducing that..."

Michael Fremer, Analog Planet, January 2013

IT-85 Integrated amplifier

"...such a great amplifier, it becomes something of a natural choice for those after a really right sounding device that will give you years of pleasure."

"The only thing I can't imagine is someone entertaining another amplifier brand after buying your first VTL."

"..this is the kind of amplifier you could use for a long, long time."

Alan Sircom, HIFI+ magazine issue 76

"With a well recorded source, the VTL made me forget that I was listening to a hi-fi system at all. The music existed like a sonic projection.

That's what the VTL is capable of doing, becoming seemingly invisible. It is one of the most 'realistic' integrated amplifiers on the market I feel and highly recommended."

Paul Rigby, Hi-fi World October 2012





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SOUND QUALITY

Using my Sennheiser HD800 headphones plugged into an Icon HP8 Mk.II headphone amplifier as a reference and spinning the original version of Manfred Mann's Earth Band's 'Tribal Statistics' from the 1983 album, 'Somewhere In Afrika', the most obvious sonic change when listening to the Canor was the impact of the lower frequencles, Bass was tight and hard, punching its way through the track, giving it forward momentum.

I was surprised also to experience such a wide soundstage from the Canor. There is an enormous amount of space within its soundstage that helped the instrumentalists to relax into their performance. I never felt at any time that the band suffered from a lack of elbow room, allowing the song to be delivered with ease. This allows the ear to hear more from each instrument, giving a 3D view of the presentation. Secondary rhythmic instruments, such as synths, had a prominent role in the mix.

Changing to jazz and Ella Fitzgerald's interpretation of 'Bewitched' from the Speakers Corner audiophile reissue of 'The Rodgers and Hart Song Book', bass was a notable part of the mix. This lower frequency extension provided a rhythmic drive to the track, adding depth and richness to its presentation. Fitzgerald's delivery was also particularly open and airy in its tone.

The Canor's midrange provided a large capacity for complex frequencies to be extended without any sign of compression or bloom. Upper mids had a particularly natural tonal aspect with piano providing a natural flow to the melody while the percussion, languid and unhurried on this track, was informative with extra detail on the brushstrokes. It seemed that a sonic ceiling that can be heard on this track was removed.

Moving to CD and my Densen two box B-475, I inserted The Beatles' 'Anthology I' CD and selected 'Free As A Bird'. Right from the off, the Canor proved to be dynamically exciting with Ringo Starr's drum strikes being sharp, hard and characterful, confidently announcing the opening of the song. Within the upper mids, the acoustic guitar strumming proved to be full and rich. Intriguingly, the minor role of the synth, there to give a fuller sound to the rhythm section, was more noticeable and forward in the mix, as was John Lennon's final sample vocal on the outro, where he says, "Made by John Lennon" over the George Harrison ukulele (which is "Turned out nice again" when played backwards!)

Turning to Handel's Messiah, conducted by Sir Charles Mackerras and backed by the Huddersfield Choral Society, the grand scale of the vocal on 'Behold the Lamb of God' and Felicity Palmer's aria, 'He was despised', was impressive. The sound moved in a rich swell that was uplifting. The air and space of the TP-10 added an ethereal element.



CONCLUSION

REFERENCE SYSTEM

Icon PS3 Phono amplifier

Aesthetix Calypso pre-amp

Tellurium Blue power cables

Tellurium Black power cables

Icon HP8 Mk.II headphone amplifier

Avid Acutus/SME IV/Benz Glider Densen B-475 CD player

The Canor TP-10 is the result of much thought and planning: this is one hybrid design that truly works. Because of the issues with the power supply and the chassis, I wonder if the potential of the TP-10 has actually been reached. For now, it offers a tight, punchy bass but set within a delicate, airy soundstage. The TP-10 successfully combines toughness and delicacy, providing a big sound.

CANOR TP-10 HEADPHONE AMPLIFIER £850

OUTSTANDING - simply the best

VERDICT

Offering a rich clarity with a roomy, expansive sound, the Canor TP-10 allows your headphones to truly sing.

FOR

- capacious midrange
- tight bass response
- instrumental separation
- broad soundstage

AGAINST

ringing chassis
 weedy power supply

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Bass Hace

Promising extra bass, can Sony's smart new MDR-XB910 headphones lead the race? Noel Keywood listens.

limitation here. Press the button twice to skip forward and three times to step back a track. All this worked well with an iPhone 4S running iOS 6.1.3.

ony's MDR-XB910 headphones are bulky – and heavy too at 305gms. They are not pocketable, even when folded flat, but they will go into a bag or briefcase. To limit size the ear pieces fold into the headband, or flat.

Big, chunky and very well finished, the shining spun and anodised aluminium ear pieces, headband and brackets have been crafted to look good even up close on crowded train carriages. Fellow sardines will notice the discrete white Sony logos on either earpiece, and when you leave the station pigeons will notice the bold Sony logo over the headband. The headband is padded for comfort and each earpiece slides to accommodate head size-variation. Being closed-back designs, sound leakage was minimal, and probably inaudible on a noisy train.

More than just headphones, the Sonys also have a microphone and remote control unit in the lead. Press once and playback pauses, allowing a call to be taken, press once again and it ends. There is no volume control. Voice quality was good from the tiny mic – there was no obvious an iPhone 4S running iOS 6.1.3. The lead needed for this has a four-pole 3.5mm jack plug, but Sony provide an alternative lead without remote control, terminated in a conventional three pole 3.5mm plug. Our review sample lacked a 3.5mm-1/4in adaptor, so this must be bought separately if needed. The 4ft non-tangle lead supplied locks into the Left earpiece, using a proprietary locking collar. Standard 3.5 terminated leads can be used instead, but they won't lock.

Sony claim Extra Bass from these headphones - it's their unique selling point in fact. And I found the MDR-XB910s do provide extra bass just as Sony claim, but there are some issues here. To get strong bass you need a good ear seal, meaning reasonably strong headband pressure to keep the earpiece against the ear, plus ear pads that mould themselves to provide a good seal. Sony's use of memory foam and strong pressure was OK for a short time I found, but a little too much over a long one. At home in a warm room, my ears also got hot after a time and these phones became uncomfortable. On a short commute or a cold day - fine. At home for longer listing periods the MDR-XB910s are not ideal.

Bass truly was large: Within

Temptation's 'Iron' thundered along, heavy drumming pounding my ears, but Sharon den Adel was swimming in the background. Her voice was soft, warm and muted at the top end because treble is limited. The performance sounded epic, as it is meant to with this sort of Goth Metal (mp4 on an iPhone). I wanted a more explicit midband though, more dynamic push to vocals and stronger treble as well as.

Kettle drums of the Minnesota Orchestra boomed away and horns boomed too (no other word for it!) as they worked their way through Rimsky-Korsakov's 'Snow Maiden: Dance of the Tumblers' (24/96 WAV on an Astell&Kern AK120). I could hear the triangles, but with difficulty.

Intelligibility of Otis Redding singing 'The Dock of the Bay' (24/192) was again mediocre, compromised by a sound far too warm due to lack of treble.

At times a peculiar warbling distortion set in too, heard with Diana Krall singing 'Narrow Daylight' and The Eagles singing 'Somebody', both tracks that pushed lows into the phones from the AK120's line drivers. Heavy bass was producing heavy distortion, as it does from loudspeakers when pushed hard.

If you want heavy bass, the MDR-XB910s meet Sony's claims. That apart they were bulky, not especially comfortable, and bass was – by hifi standards – excessive, producing a boomy sound. Sony have more balanced sounding headphones; get these only for heavy bass.

SONY MDR-XB910 £199.00

GOOD - worth auditioning

VERDICT

Good if you want strong bass, but audition first to be sure.

FOR

- look good
- well finished
- take phone calls

AGAINST

- heavy - overpowering bass

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ModWright has carved itself a loyal following in its home country of America. But can it make a similar splash on this side of the pond with its first integrated amplifier? Jon Myles discovers.

ngraved on the back panel of the KWI 200 is the proud logo "Designed and handcrafted in U.S.A. by ModWright Instruments, Inc".

Not that it's really needed. Any hi-fi enthusiast taking even a cursory look at this substantial beast would probably be able to make a pretty informed guess that it hailed from across the Atlantic.

Its cosmetics have all the muscular, confident and everso-slightly retro feel of many high-powered US amplifiers from the early days of Krell onwards.

Not that there's anything wrong with that. Nor is there much wrong with the ModWright's layout – which is a model of simplicity.

The front panel has just four controls: one knob for source selection, another for volume with separate buttons for power on/off, and home-theatre bypass (or poweramp-section input).

Completing the fascia are two blue display windows which are large enough to be read from across a decent-sized listening room and the illuminated ModWright Instruments logo.

Round the back are three pairs of line-level RCA inputs, one set of XLR inputs, RCA poweramp section in and preamp out connections plus the sturdy speaker binding posts.

A small, plastic remote comes supplied for on/off, volume control and dimming the display – although a more substantial, metal unit is apparently available at extra cost, as are a 24/192 on-board DAC module for £925 and an mm/mc phono section at £280.

ModWright Instruments

KWI 200

Purchasers will also need a sturdy rack to accommodate the unit – weighing in as it does at a hefty 55lbs and stretching back some 17 inches in depth.

SOUND QUALITY

There's no doubt about it – the ModWright KWI 200 both looks and Inputs include three pairs of RCA phonos, XLR plus home theatre by-pass and pre-amp out. Also note the blanking plates for optional DAC and mm/mc phono card modules.

REVIEW



World Radio History

Can you feel it?

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World Radio History

is impressively powerful. Its 1.5kVA toroidal transformer and 234,000uF of power-supply capacitance equate to some 200Watts into 8Ohms giving it the power to grip almost any sensible pair of loudspeakers.

But power doesn't always equate with performance – and the ModWright is a curiously mixed bag when pressed into action.

First impressions are of a big, bold sound with an extended and fulsome bass. Placed on the end of Quadral's exceptional Platinum M50 floorstanders the likes of Leftfield's 'Dusted' came across with impressive bass heft and power without ever descending into lumpiness.

There's a touch of the Naim to the bottom registers – probably due to its relatively low damping factor – which adds a rich tone to rhythmdriven rock. High-energy tracks like The Who's 'Won't Get Fooled Again' are portrayed with enormous vigour – Pete Townshend's crunching guitar lines ringing out in all their glory.

And yet – very much unlike a Naim – there's occasionally something just a little mechanical about the presentation. Everything is present and correct in the mix and detail levels are very much up to standard but the nagging suspicion remains that the ModWright is missing a little bit of that extra snap which marks out the best of the breed.

The superb syncopation which characterises Madeski, Martin & Wood's 'Friday Afternoon In The Universe' seemed to go slightly awry with the Hammond organ, bass and drums seeming to operate in their own separate spaces instead of weaving intricately around each other.

Less complex music fared significantly better with the likes of Barb Jungr's 'Stockport To Memphis' coming across as beautifully scaled with her vocals sharply etched and well to the fore against the restrained backing.

Arvo Part's 'Spiegel im Spiegel' also proved refreshingly clean and well-reproduced – the ModWright throwing out a respectably wide and deep soundstage with decently defined images.

CONCLUSION

ModWright has won many admirers in America with its range of both valve-based and solid-state pre and power amplifiers since the company's launch just over a decade ago.

The KWI 200 is its attempt to

broaden that range and customer base with a well-built, massively powered and adaptable integrated.

its looks and operational functionality certainly do justice to its near-£4,000 price tag. However, sound-for-pound wise it's hard to rate it as an unqualified success.

On the plus side its generous reserves of power mean it's capable of handling almost any loudspeaker you're likely to throw at it which in turn translates into a big, meaty and eminently tuneful bass performance.

It also guarantees masses of headroom. There's never even the slightest hint of strain as you turn up the wick.

But the downside is a slightly matter-of-fact performance that at times doesn't manage to put all the musical strands together as well as some others at – and even below – this price range.

To put it in some context, the ModWright followed a pair of Quad

MEASURED PERFORMANCE

The Modwright KWI 200 produced massive power, 200 Watts into 8 Ohms and 340 Watts into 4 Ohms. It has a very large mains transformer and excellent power supply regulation, so should have a lot of bass heft. A low-ish damping factor of 15, much like a Naim, will likely give it fairly 'obvious' bass, less dry than many amplifiers.

Distortion levels were on the

FREQUENCY RESPONSE



DISTORTION





Elite QMP monoblocks (264 Watts) into the listening room and managed to provide a cleaner, clearer and more musically engaging sound at a price with the matching Elite preamp. of £750 less. A 1.5kVA toroidal transformer and 234,000uF of power supply capacitance adds up to a meaty 200Watts of power into an 8 Ohm load.

high side all-round, especially at high frequencies where a figure of 0.43% was produced at 1 Watt output into 4 Ohms, with a 10kHz test signal. Higher order harmonics were present too, our analysis shows, and this looked like classic crossover distortion on one of our analysers. Even mid-band distortion levels were higher than is common nowadays. The only good point here was that the extended distortion spectrum did not modulate heavily with signal level, as some do. The harmonic pattern was reasonably, if not totally stable.

Sensitivity was low, measuring 600mV needed for full output, through the phono socketed line inputs and the balanced XLR input. This is suitable for silver disc players, but not for low gain external phono stages and such like.

Frequency response was wide, reaching 160kHz with a few shallow dips and peaks at supersonic frequencies, probably due to an output stability network.

The Modwright KWI 200 is massively powerful. The output stages produce significant levels of distortion and this may well affect the sound. NK

Power	200watts
Frequency response	5Hz-160kHz
Separation	87dB
Noise	-99dB
Distortion	0.43%
Sensitivity	660mV



000 R R

GOOD - worth auditioning

VERDICT

Despite its massive reserves of power and classy construction the ModWright KWI 200 lacks the all-round sparkle and refinement of some of its rivals. Try before you buy.

FOR

- powerful - well-built
- DAC and mm/mc phono
- card options
- deep bass

AGAINST

- matter-of-fact presentation
 above-average distortion levels
- BD Audio +44 (0)1684 560853 www.bd-audio.co.uk

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"This level of performance, convenience and style makes for an award winning product." Jeff Dorgay, Tone Audio Magazine, January 2013

> "Oozes quality in both construction and sound" Paul Rigby, Hi Fi World, March 2013

> > 1.10



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ICON AUDIO'S SUPERB HP8 MK II HEADPHONE AMPLIFIER IN THIS MONTH'S GREAT GIVEAWAY!

ere's your chance to win the superb HP8 MkII headphone amplifier we reviewed in the April 2012 issue. Read the review excerpt below and answer the questions.

"I saw further improvements could be made to the HP8. The earlier version used an EL84 valve, probably the smallest in the range of hi-fi output valves. It was used in the Leak TL-12 and Stereo 20 and it's often used in headphone amplifiers today but I thought that the 6SN7, which is a very versatile valve, had exceptional audio qualities and there are various kinds available. I thought that it would be a better valve to use".

VOLUME

OUTPUT D

The output from the HP8 Mk.II is about half what it was before, but it still provides a good sound level. Shaw also upgraded the transformers. "We wind our own transformers. They now have improved bandwidth and definition. We've found better quality copper now and the way that they are wound is slightly different".

Looking at the HP8 Mk.II, you really get a sense of how mechanical this little beast is. This is a pure valve unit. It's not a hybrid, a box with a valve output stage or a part valve construction. It is a pure, miniature mains valve amplifier complete with a miniature transformer and power supply. On that subject, it doesn't offer a plug in the wall supply as many other products of this type do. Instead, it has a built-in power supply along with good quality components and hard wiring. It's also very simple, featuring just three valves.

"That is very important," emphasised Shaw. "Partly for reliability but also it's easier to build something that's relatively simple, then you can predict the result. It's one of the beauties of valves that you can get great results from just a few of them."

For a chance to win this great prize, just answer the four easy questions at right. Send your entries on a postcard only, by 8th August 2013 to:

August 2013 Competition, Hi-Fi World magazine, Unit G4, Argo House, Kilburn Park Road, London NW6 5LF

QUESTIONS

[1] What valve is used? [a] EL84 [b] 6SN7 [c] KT88 [d] 5771

[2] Who wind the transformers? [a] Ferrari [b] Heinz [c] Icon Audio [d] Siemens

[3] Is the HP8 MkII -[a] hybrid [b] pure valve [c] water powered [d] surface mount

[4] Is the power
supply [a] built-in
[b] hydrogen
[c] wall wart
[d] nuclear

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SAXON

Dogs Of War Edsel

classic New Wave Of British Heavy Metal outfit who found fame after the release of their 1980 LP. 'Wheels Of Steel', a worthy, heavy and metallic production. Oddly, in 1983, after the release of a series of classic albums, the quality bombed. Maybe it was the failure of France-based record label. Carrere, to push them into the USA. What followed was a disastrous move to EMI and a peroxide makeover that horrified the band's loyal fan base. As the nineties began, Saxon realised that they had turned into a 'me too' outfit and that they were far too ugly to continue in Lycra and pretty-boy hairdos. Leaving EMI was the best thing that they ever did.

Off came the mascara, on came the T-Shirts and jeans and everyone breathed a big sigh of relief. This album, released in 1995, was nothing short of massive. Many fans wondered if it really was Saxon on the LP at all. From the thunderous beginning of the title track, there followed a slew of distinctive and memorable songs that amazed the fans. Tracks such as 'Demolition Alley, 'Great White Buffalo' and 'Hold On' showed just what the group was capable of – this was the band acting their age and, to be frank, cutting through the corporate crap and embarrassing image rebranding. This album is packed with straight ahead rock. God bless 'em!

Edsel has also released two additional Saxon CDs to run alongside 'Dogs...'. 'Solid Ball Of Rock' (1991), complete with Spinal Tap-esque album title, was the band's response to being dumped by EMI after a string of poor album releases. A return to British rock values. 'Forever Free' (1992) saw the band back to their best with a riff-packed, catchy, and very heavy album packed with excellent songs.





RAY CHARLES

Modern Sounds In Country And Western Music Jasmine

harles, during his fifties period, was experimental and expansive. He took, often brave, steps into the music that fell outside of his comfort zone. To protect his curiosity, he signed with ABC Paramount and triggered a clause in his contract that referred to 'artistic freedoms'. Most labels of the time were notoriously conservative - a tradition has continued to the present day.; any music that might be too risky in terms of profits is frowned upon. Hence, the contract was important for Charles and quite prescient. The revamped country classics found on both of these albums feature material spanning 1939 to the early sixties, including songs from Hank Williams, Eddy Arnold and Floyd Tillman.

The album includes contributions by Gerald Wilson who adds charts for a big band backdrop with added strings and choirs via Marty Paich.As for Charles? His delivery was one of low-key blues of the type that a country crooner might employ. The difference here is that Charles also added plenty of gospel flavourings that gave his work a definite edge. You won't find the staple country sounds of fiddles or pedal steel guitars that, for some listeners, does nothing but irritate. As such, the songs stand more on their own two feet with Charles holding them up to the light. 'Volume Two', also present on this CD was, fortunately, just as good as the original.

This month, Jasmine has also released Al Martino's 'Take My Heart', a two CD collection of hits and lesser known tracks; Johnny Rivers' 'This Could Be The One', some of his earliest recordings and Aretha Franklin's 'The Princess Of Soul' which compiles 'Aretha Franklin' (1956), 'Aretha!' (1961), 'The Electrifying Aretha Franklin' (1962) and 'The Tender, the Loving, The Swinging' (1962).

azz was seen as America's plaything for most of the 20th Century while the Brits where viewed as little more than copyists until the British voice began to be heard via upcoming talent. One of those was a certain Tubby Hayes, one of Britain's best hard bop stylists of the fifties and sixties on tenor sax but also, you may be surprised to know, flute and vibes. Hayes began by playing in bands fronted by the likes of Kenny Baker and Vic Lewis but lead his own outfits during the mid-fifties, co-leading the Jazz Couriers with Ronnie Scott.

It was during this time that he lead a number of sessions for the Tempo record label, which this collections covers. In fact, this six CD box set covers the lot – everything Hayes did during his time at the label.

In addition, there are the experimental solo recordings, the London Jazz Quartet material was never intended as a commercial album and wasn't even Tempo created. Leased from Ember, it was supposed to be background theme music for TV programmes that triggered Hayes' debut on flute.

Sound quality is admirable on this box set; Hayes is lively with a clear and vibrant presentation that keeps the toes tapping. His sax work is always animated, precise and rhythmic. A highly enjoyable suite, it provides the Jazz roots that would lead to his sixties peak.

Also look out for other Acrobat releases this month including two, four CD box sets based on 'America's Greatest Hits Volume 12 (1961 & 1962)' featuring every record that entered the Top 10 Billboard charts for each year; also from 1962 is the 'Embassy: British Hit Parade 1962' including Woolworth's budget label featuring cover versions of the hits performed, often, by top artists under pseudonyms.



TUBBY HAYES

The Complete Tempo Recordings Acrobat

andie Shaw, practicing Buddhist and qualified psychotherapist, was known

as the 'barefoot pop princess', principally because of her lack of footwear while she performed on stage. Although the reason that she never wore her shoes was less an artistic statement and more because she had a terrible sense of balance. She would always fall off her high heels.

Discovered by then pop sensation, Adam Faith, Shaw fell into the pop world with a fragrantly footed hit at the age of seventeen, 'Always Something There To Remind Me', the first of what would eventually total twenty hits, including 'Puppet On A String', a song she hated because she considered it so much fluff and nonsense – but it was still a Eurovision hit. In fact, Shaw was the first ever UK winner of the contest. This album was released in 1965 and proved to be a major improvement over her debut, released the year before. The latter wasn't executed well while the quality of the original material on that LP was distinctly average.

In contrast, Chris Andrews, the writer of a large amount of Shaw's hits, penned a lot of the content for 'Me' which gave the album a solid foundation to begin with: 'You Don't Love Me No More' and 'I Don't Need That Kind Of Lovin'' were stand-outs of this album.

What makes this particular CD reissue a must-buy for all Shaw and sixties' culture fans is the quality of the bonus tracks. The twelve on offer include Shaw's subsequent six A and B sides that are all of the highest quality. The sound quality is also recommended; Shaw fans will be delighted with the remastering. All in all, this is a high quality, value for money release. **PR**



SANDIE SHAW

Me Salvo

Mode master

Banish room modes to get perfect bass. That's what DSPeaker's Anti-Mode 2.0 Dual Core processor promises. Noel Keywood tunes in - and tunes 'em out!

oom-boom is a problem we can cure with computer processing power, promising us better bass by suppressing the room's influence. Well, I say

"cure" but looking at what Wikipedia has to say about Room Modes reminds me that when you flatten the modal bumps at one position the rest of the room doesn't benefit.

If you think I'm getting ahead of myself here, you are right, but that's because room tuning soon gets to be a complicated, even contentious subject. The Wikipedia author says the sort of tuning provided by the DSPeaker Anti-mode 2 Dual Core I'm reviewing here "is of very limited use".

I don't quite agree with that: it has use, but perhaps we have to keep our feet on the ground here! The Anti-mode 2 Dual Core can smooth out bass and lessen boom at the listening position, and it can tweak frequency response generally, behaving as an audio equaliser. It's a preamp too, and a digital-to-analogue convertor (DAC). You get a lot for the £680 asking price, as you'll find out in this review, because the Antimode 2 Dual Core has a lot of tricks up its sleeve.

The case measures 235mm wide, 135mm deep and 60mm high and is light, since the power supply is in an external wall wart. The handy carrying carton comes with these two items, a very small remote control powered by a flat button battery, and a 16ft long microphone lead with mini mic at one end and 3.5mm jack at the other. This is needed for room measurement: it plugs into the unit and the mic is placed at the listening position, ideally where the ear is. It must be held still in this position during room measurement, a camera tripod being useful for this.

In spite of its small size the DSPeaker Anti-mode 2 Dual Core has a wide range of inputs and outputs, allowing connection into most systems. There are standard unbalanced analogue inputs and outputs via phono sockets, and balanced inputs and outputs through XLR sockets. The inputs run in through an ADC that turns analogue to digital, as they do in an AV receiver, so digital audio can be processed in a Digital Signal Processor (DSP). After processing it's then turned to analogue again through a DAC, so the DSPeaker Anti-mode 2 Dual Core can be connected into the analogue tape loop (i.e. Tape Out through to Tape In) of an amplifier.

Audio Processo | USB DAC with Room Correction

Alternatively, there are S/PDIF and USB digital inputs and an S/PDIF optical digital output, so the unit can be inserted into a digital signal chain, bypassing both its ADC and DAC. In this scenario, only the DSP (Digital Signal Processor) is used to apply digital room correction. The S/PDIF digital sockets are optical only though, and whilst the unit works up to 96kHz sample rate it's not purposed for high resolution audio, measurement showed. The ADC, DSP and DAC were all noisy enough to swamp the benefits of 24bit linearity; the DSPeaker Anti-mode 2 Dual Core is aimed at CD and has a 44.1 kHz CD clock on-board; it didn't like 48kHz (see Measured Performance)!

The USB connection is a small USB B socket of the sort used on cameras and is an input only. It will



Balanced analogue inputs and outputs at left, normal phono sockets at centre and optical digital input/output at right.

accept the output of a Mac or PC, but it will not transmit to them, so you cannot record LP to your computer through the analogue input and the ADC.

The DSPeaker Anti-mode 2 Dual Core can be easy to set up and use, or as tweaky as you wish. The easy way I found easy enough, being the same sort of routine used for room tuning an AV receiver. Plug in microphone, set to Calibration and press OK on the remote. Levels must be set first, then the unit produces a slow gliding sine wave tone that runs from 16Hz up to 200Hz. It runs many times (best to leave the room!) before finishing. Before and after responses are then shown on its tiny screen.

This is where using the DSPeaker



Anti-mode 2 Dual Core got a little awkward. The screen measures 38mm wide by 30-mm high, making it almost postage stamp size. Peering at a room response on a screen this size is a little challenging and it's no use using a magnifying glass because this is no Mac-style Retina display! Resolution is strictly limited.

All the same, what I got was exactly what I expected from acoustic analyses of my lounge, made over the years using a variety of methods, from a measuring microphone and spectrum analyser through to a complete Clio room analyser. So the DSPeaker Anti-mode 2 Dual Core passed the first hurdle: it gets the room analysis right and it applies an inverse correction.

In my case the inverse curve was quite dramatic, rather too dramatic

I felt, as the unit doesn't just tame peaks it also counters room gain. That's all very well and academically correct, but it isn't what the ear is used to hearing and, sure enough, DSPeaker do warn that this may give a bass-light sound balance – and it did.

Here's a quick aside on this very subjective issue. Recently, when we took on a big room suitable for large loudspeakers visitors disliked it, saying it sounded "too dry". It had no room

gain (at frequencies where the ear is sensitive), something we are used to hearing. When we moved into a smaller room, visitors all said how it sounded warmer and they preferred "its acoustics". This was unanimous and illustrates how people expect certain characteristics, 'warmth' being one of them (I liked the bigger room because I knew it would suit big Tannoys!).

Having tuned or 'Calibrated' the DSPeaker Anti-mode 2 Dual Core to a room, the basic tune process is finished. It has eliminated room boom and off you go. Connected up the way I used it, it acts as a DAC and a room correction unit – sounds good, no?

Er - no! I ran through this procedure in a quick initial acclimatisation ceremony and bumped into limitations. Firstly, the Electomotion loudspeakers are a tad bass light and didn't benefit from the drastic EQ applied. When I switched it out using the Bypass function, I was aware immediately that the DAC didn't sound so nice after Teac's UD-501. Measurement showed why:

MENU () Volt OK () BACK () Volt BACK () Volt (

it produces distortion and noise, and the DSP adds to it. This is not a problem I've encountered in AV receivers; the ADC,

> DSP and DAC of the DSPeaker Anti-mode 2 Dual Core do not match their standard. DSPeaker have foreseen the need to further adjust the

to further adjust the sound balance after the room's modal peaks have been tamed in the initial Calibration process. They include a bass lift and tilt function under a menu called House Curve, that

The specialised remote has Volume and Bypass, filter tune and four room EQ preset options, A,B,C,D.

adds weight to the bass and warms the sound, without disturbing the benefits of tuning. In my case I found the tilt function worked best subjectively, gently increasing bass weight whilst retaining its improved quality, meaning removal of the bloated sound (in my room) given to bass by the room's modes.

Although this is the way DSPeaker expect the Anti-mode 2 Dual Core to be set up, it can get quite long winded. It's important to be able to switch the room equali-



sation (Calibration) and subsequent additional filters in and out to judge their effect and here it got long winded. The basic Calibration can be switched out using Bypass on the remote control, but the filters remain operative and must be switched off individually – quite a long and fiddly button pressing process with Parametric filters working, I found.

Here I admit to cheating a little: inevitably, to check the effectiveness of the DSP filters, I had a spectrum analyser running at home so I could see what was happening – and I found myself running from lounge to lab to check settings frequently. Peering at the small screen in the lounge wasn't so easy, and lack of any graphic readout makes the fine tune process a grope in the dark. Or perhaps hours of fun – depending upon how you look at it.

To summarise, room tuning or Calibration was straightforward, the equalisation applied arguably too drastic, at least in my case, but House



Curve fixed this issue and I ended up with better defined bass. Notes started and stopped properly and the bloom of the room had vanished. This provided useful improvement for the Electromotions, and rather better results for a pair of large World Audio Design KLS9 floorstanding loudspeakers that produce heavier bass.

For those that want complete control over room tuning the DSPeaker Anti-mode 2 Dual Core can be manually tuned using a parametric equaliser that can notch



out bumps in a room's response, in order to suppress boom. This is a long tuning job and although the room curve automatically generated shows where notches should be placed in the frequency spectrum, the instruction manual doesn't explain how to exploit this by translating the data into manual settings, a missed opportunity.

You need know-how and time to tweak the Parametric equaliser. It has no fewer than 16 filter settings that are additive, so if two notches are set, then both operate (not one or the other). It can be used to insert peaks too and it did speed up bass a little when a 70Hz peak was inserted, using +4dB lift. This is the sort of EQ commonly used in studios when mixing and balancing, to 'speed up' bass. The Anti-mode 2 Dual Core can insert peaks or dips right across the audio band with a wide range of Q values and gains/losses, up to +12dB and -36dB. House Curve equalisation can be applied too, additively, and one of three Infrasonic filters can be selected to prevent excessive loudspeaker cone excursion if bass is lifted a lot.

In all there are twelve user adjustable functions, represented by icons, six on-screen at a time. In addition to those I have described so far, that affect the room tune process at bass frequencies, a Tilt Curve alters treble levels, offering lift or cut with various turnover frequencies from 1500Hz to 10kHz. Four room equalisation profiles can be set and stored, for different listening positions or music profiles.

PC link brings up a window in Windows 7 when toggled, and a drive icon in Mac OS (Lion in my case) for data-list retrieval only. This is limited, not providing a better resolution repeat graphic of the screen, for example.

A Factory reset function clears all settings for a clean start.

The remote control can adjust volume, switch inputs (Analogue, S/PDIF, USB) and outputs (Analogue, Digital). It can select a profile (4 of them), Mute, Bypass (room Calibration equalisation only) and scroll the menus.

SOUND QUALITY

Because of its complexity I used the Anti-mode 2 Dual Core in home and office systems, with a variety of other items. Primarily though, I fed music into the unit from an Astell&Kern AK120 player via a optical S/PDIF digital cable and fed its analogue output into a Marantz SR-8002 receiver, and alternatively a WAD KLPPI and WAD 300B amplifier, driving Martin Logan Electromotion loudspeakers; in effect I used it as a DAC, initially at least, feeding valve



and solid-state systems.

I also looped through into the Marantz's own digital input, then into the Teac UD-501 DAC, then a Furutech Esprit digital preamp, to check sound quality with external quality DACs.

As I mentioned earlier, in an initial familiarisation process using the handbook to run through set up, in order to pick up problems - something I do with AV receivers - I noticed the DAC was a little sharp sounding and lacked the smoothness and image separation of Teac's UD-501. Measurement showed why: the on-board DAC is none too sophisticated and the DSP adds noise and distortion (by what mechanism in the digital domain I do not know). Running 24/96 high resolution tracks it was obvious the Anti-mode 2 Dual Core was loosing their attributes of smoothness and general couthness. It is for CD use, and with CD its gains may outweigh its drawbacks, according to the sensitivities of the listener.

This begs the question: does it sound better in an all-digital signal chain that avoids the internal DAC? I plugged its digital output into the Teac UD-501 and straight away images separated, treble lost its astringency and bass gained muscle, so this worked nicely. The sound was still not as couth as that from the Teac alone, for the DSP adds noise and distortion, but bass was tighter and cleaner and the bloom of the room had gone of course.

I then put the Anti-mode 2 Dual Core into an analogue tape loop and it worked well enough in such an arrangement. This tests the ADC and whilst it is band limited to 21kHz and is a little noisy, as most are, I suspect the noise might even have improved

68

the sound a bit by adding dither and making it a tad less edgy! There was still a lack of deep insight or smoothness, but it was acceptable.

CONCLUSION

If you've read the preceding review rather than jumping straight to the conclusion (shame!), then you'll realise that the DSPeaker Antimode 2 Dual Core is a challenging device to set up and use, if it is to be fully exploited. The small screen and mini-menus, oft circuitous selection routines and technically opaque acoustic adjustments (Q, bandwidth, gain etc) don't make life easy, but there's plenty to play with and I got better bass in the end. Pressing Bypass allowed me to hear the room, then switch it out – fascinating!

But the DAC in particular is out-dated, and the DSP adds to its noise and distortion; the world has moved on and I have acclimatised to better. If you have a good DAC already, however, then this appears to be the best way to use the Antimode 2 Dual Core. Yes, that makes both its ADC and DAC superfluous and compromises 'value', but the Anti-mode 2 Dual Core still retains masses of useful functionality. For those who crave exactly the bass they want from a room with a boom, its extensive and sophisticated filter settings can do a good job, and at present there is little else like it.

MEASURED PERFORMANCE

Although the DSPeaker Anti-mode 2 Dual Core handles up to 98kHz sample rate signals, bandwidth extends to 21kHz, the same as 44.1kHz sample rate CD. Lowest distortion was recorded at CD sample rate of 44.1kHz and its multiples (88.2kHz), distortion rising substantially at 48kHz and its multiples, suggesting a 44.1kHz clock has been used and nonetoo-good sample rate conversion. The Anti-mode 2 Dual Core is best used in CD based systems; it will negate the benefits of high resolution digital.

With a CD digital input (16/44.1) distortion measured a high 0.5% at -60dB,

ROOM EQ



with all processing switched out. With processing in, this rose to a searingly high 0.9%, and at 96kHz sample rate no less than 1.8%. Although 24bit resolution improved the figures, it isn't available at 44.1kHz in real life, and 48kHz sample

PARAMETRIC NOTCH



rate negated its benefits. EIAJ Dynamic Range with CD was a low 98dB.

Running the digital output into an external DAC, a Furutech Esprit, to avoid this distortion surprisingly gave similarly bad results, around 1.8% distortion and a lot of noise (the same test signal connected directly into the Esprit produced 0.02% distortion and no noise). So using an external DAC offers no improvement in this area.

Output was very high at full volume, no less than 7V, and gain through the analogue stages, input to output, was a useful x3 with volume at maximum (+13), about right for general purpose pre-amplification.

The analogue inputs go into an ADC (as in AV receivers) and input overload was 2.5V, just high enough to accept a CD disc player's analogue output (should there be no digital output). The ADC was a little noisy, like many, and its -60dB porformance was poor, distortion measuring 0.5% – borderline for hi-fi.

The high pass (Infrasonic) filter had a slow roll off, but high ultimate attenuation rate (18dB/octave), and needed to be set to 15Hz to have little affect above 40Hz. Set to 20Hz it will audibly lighten bass, but the 15Hz setting worked well.

The bass lift and tilt function (House Curve) was also well tailored to give useful but not excessive amounts of lift and general tilt upward at low frequencies. Similarly, the Tilt function, that affects treble level, worked well.

Our Room EQ analysis shows the correction automatically applied to the room, with some House Curve boost: substantial changes.

The Parametric equaliser is the function that counts most when it comes to manually tuning out bass boom and again it was well proportioned all round. Set to 40Hz, with the narrowest bandwidth (1) and -10dB attenuation our analysis (Parametric notch) shows that it did usefully offer a very narrow notch at precisely 40Hz, if not quite of -10dB attenuation, but there is plenty more attenuation range to go, -36dB max. Adding in some bass tilt to warm up bass did not compromise the notch either, so the functions can be combined without mutual interference. The parametric equaliser will also boost bass by up to

 \pm 12dB, over a narrow to wide band, so it is an alternative to the House Curve function.

The DSPeaker Anti-mode 2 Dual Core is purposed for CD, measurement showed. It's DAC is not linear by today's CD standards, producing larger amounts of distortion than is common. The DSP added to this and an external DAC offered no cure, measurement revealed. So although the DSPeaker Anti-mode 2 measured well in most areas, it's distortion and noise figures were poor by absolute standards, and compared to the similar ADC/DSP/DAC signal path found in AV receivers. **NK**

Frequency response (-1dB)

CD	4Hz-21kHz
Distortion (CD)	%
OdB	0.008
-60dB	0.5
Separation (1kHz)	88dB
Noise (IEC A)	-88dB
Dynamic range	98dB
Output	7V

FREQUENCY RESPONSE



DISTORTION, CD -60dB



DSPEAKER ANTI-MODE 2 DUAL CORE £680

GOOD - worth auditioning

VERDICT

Effective room tuning routines that improve bass quality, let down by poor DAC and ADC.

FOR

- auto Calibration - numerous tune options
- good connectivity

AGAINST

- poor DAC and ADC
- small screen - difficult set up routines
- BK Electronics +44 (0)1702 527572 www.bkelec.com

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PERFECTION SELECTION

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"you often had to be quick to catch it. The guy was funny"



Paul Rigby

y musical education took place by my mother's side, sitting in front of the TV, watching classic films. She was

devoted to the things and is currently a walking encyclopaedia on the culture of the Hollywood studio system, knowing what colour socks Jimmy Stewart wore on any given day and what Barbara Stanwyck ate for breakfast.

My most striking memories were of classic Hollywood and UK movies and, especially, musicals of all types. This is where my fascination with the Great American Songbook, Tin Pan Alley and other nooks and crannies of the songwriter's art, on both sides of the Pond, lies. This is also why I am very picky about watching new films ('new' being anything after 1970).

The classic films informed me about some of the best vocalists that the world has ever seen. People like Frank Sinatra, Howard Keel, Doris Day and a certain Bing Crosby.

Two things always struck me about Crosby. Firstly, and this is often ignored...his wit. The man couldn't help but sneak an aside in between two lines of a song or as a quick retort to a piece of film dialogue before he returned to the script. You often had to be quick to catch it. The guy was funny.

The second thing that hit me square between the eyes was his demeanour. This aspect has often been reported upon. Crosby was so relaxed during his film, TV and vocal performances that he almost fell off his chair. I would venture to suggest, however, that he used his relaxed persona to make time for himself.

It's like being asked a difficult question, pretending not to have heard it, then having it repeated to provide more time to consider the answer. I wonder if Crosby utilised the 'bending time' tactic because, within himself, he didn't necessarily need it – his quick wit proved that. If he could slow time down with his relaxed demeanour, he could give himself more space to consider his next move, his next line and how he would deliver his next song.

I recently watched a documentary on The Sex Pistols, the best I've ever seen on the group, incidentally, 'The Filth and the Fury' (only a fiver from Amazon) in which John Lydon ('Johnny Rotten') confessed to the fear of going on stage because "I never knew what I was going to do next". Crosby always did, he always thought ahead and manipulated time and events to suit his performance, aiding his longevity as a performer.

These thoughts were triggered while I was in a local record shop - yes, a few still exist - stumbling upon ten, newly reissued CDs from Universal. For any fans out there, they include: 'El Senor Bing, 'On the Sentimental Side', 'Return to Paradise', 'A Southern Memoir', 'Seasons', 'Bing in Dixieland', 'Bing on Broadway', 'Bing Sings the Great American Songbook', 'Bing Sings the Sinatra Songbook' and 'Bing & Rosie: The Crosby-Clooney Radio Sessions'.

One thing, though, they all looked rather familiar but I couldn't place them so I talked to a man who knew, the magazine editor for the International Club Crosby (www.club-crosby.org), Malcolm MacFarlane (check out the mag at www.bingmagazine.co.uk, they offer a regular print version for members, back issues are available).

"All of these CDs were issued by Collectors Choice Music in 2010," confirmed Macfarlane, "and were becoming hard to acquire so it was good to see that Universal Music Enterprises and the Crosby family have forged a new partnership to make these albums available again".

Some of the CDs available in this batch are of particular interest, as Macfarlane can attest. 'A Southern Memoir', from 1975, has never been issued on CD and it was a delight to have it in such wonderful quality with some alternative takes.

'El Señor Bing' was a little unusual because it contains the tracks from this 1960 album in both mono and stereo. There are also a few rare radio tracks included too.

Something we Crosby fans knew about but had never heard was 'On The Sentimental Side'. This was a sing-along type album laid down in 1962 but never released. Robert Bader, the producer of all of these new albums, had found separate master tapes for the vocal and the backing and he has done a grand job in putting them together.

Similarly with 'Return To Paradise Islands', Robert had to remix the album, because the original issue was poorly put together. What was a poor-ish LP has been improved by bringing Bing's voice forward so that it was not drowned by the Nelson Riddle accompaniment.

The album everyone had been waiting for was 'Seasons'. This was Bing's final album and there were a lot of requests for it to be issued on CD. Mr. Bader has also added the songs Bing did for the BBC in his last radio broadcast in 1977, plus some poems that he did for a charitable venture.

It's good to see that amongst the host of Internet-related music currently deluging the market, that the legends have not been forgotten. My mum will be pleased.



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"the sound from this 35 year old equipment was still more than acceptable"



Tony Bolton

periodically get approached by friends to sort out their hi-fi for them. Sometimes the wants list and the budget are so far from reality I cannot help. Often though, a few compromises here and there can result in a tight budget being stretched quite a long way.

A few weeks ago a friend was complaining that he didn't bother listening to his music at home anymore, and that he enjoyed it more in his car and on other people's systems. After a little investigation I found that he had been using a fairly cheap iPod dock as his main music source at home, while playing CDs in the car and listening to vinyl at my house, so I was fairly unsurprised to find that he found the MP3 sound quality (OK, AAC!) a little lacking.

Having just moved house he felt that this was a good time to remedy matters, but having little money left after the move, and having two children, his budget was tight. He worked out that he could spare £300 to throw at this project, so obviously new equipment was out of the question. There was also the 'Wife Approval Factor' to consider here.

To get an idea of what would be acceptable, we sat down with a photograph of the sitting room displayed on their computer, and photoshopped in various images of differing styles and periods of equipment until something suitable was found. Their style is quite contemporary, with the strong 1970s influence that is currently fashionable, and it was decreed that whatever audio equipment went into the sitting room had to be silver, to match the other electronics on display. Since this included a DVD player that could double as a CD player, one component was already sorted out.

I was left with the task of finding a suitable amp, tuner and turntable at an affordable price that were in immaculate condition. As has happened before, our local auction house came to my rescue. One of the lots for sale was a Pioneer system, that had all the required components and a cassette deck as well. It was a little dusty but looked to be in good shape otherwise. Items like this don't make a huge amount of money these days, but can be capable of very good results when fitted with modern cabling, so I crossed my fingers and started bidding. In the end I got the system, along with some Eltax loudspeakers from the mid '90s, for £25.

I took them home, cleaned them up and plugged them in. The amp is a SA-706 model, a midrange unit from the late 1970s, with the matching tuner and tape deck, and a black bodied PL-518X turntable. All felt reassuringly heavy, indicating that there were reasonably substantial transformers on board.

I was pleasantly surprised at how well the amp drove my Chario Ursa Majors. The sound was very direct, as is typical of solid-state designs of the period, with strong imaging and a fairly fast and deep bass. Modern designs have a smoother treble response but the sound from this 35 year old equipment was still more than acceptable.

The turntable was fitted with a Stanton 680EE cartridge which seemed to be functioning well, so I gave it all a clean up and took it over to their house. Having wired it up with the cheap and cheerful cables that it came with, we sat and had a listen. It passed the WAF test (thankfully) so I proceeded to demonstrate how it could be improved with the remaining £275 being devoted to interconnects, speaker cables and mains leads. My friends wife, having announced that she wouldn't be able to hear the difference that they made, was rather surprised to find that she could, and much to my friend's delight, proceeded to get very involved in the whole listening and tweaking process. There were enough inputs on the amp to wire in the television, as well as the DVD and other components, so all sitting room entertainment now runs through this system.

Several hours later, the furniture had been moved around a bit to accommodate the speakers and other equipment, and a plan and budget had been agreed to gradually bring the system up to more modern performance levels.

The first change will be the speakers. They have the typical 1990's black ash finish and are, in my opinion, the weakest part of the setup. They will be changed as soon as something suitable and affordable, in a light wood finish turns up. In the meantime, money has been spent on some lsotek Evo3 Premier mains cables for the amp and tuner, and I have lent them some interconnects and Chord Company Odyssey 2 speaker cable until they can afford to buy their own.

In the meantime, my friend has exhumed his record collection from a box in the garage and has custody of my Moth record cleaning machine while he removes years of accumulated finger prints and dust from the grooves.

The most pleasing thing from my point of view, is that instead of the hi-fi being something that only he was interested in, the whole family have got involved, and I have noticed that when I have visited recently the television has been turned off and the music has been flowing. Not a bad result for a £25 initial investment.

Vinyl is black!



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74
"that's sexy isn't it Well, if you're a geek!"



Noel Keywood

've read a lot about the days of mechanical music carriers – LP, CD and what have you – being over. And I've dismissed it all as shallow conjecture. Now, I'm not so sure.

Much like every one else it seems, I find older mechanical devices, ones that needed a modicum of skill to use, like the LP and motorcycle kick-start (once tedious, now awesome!) hopelessly engaging.

But at the same time the insidious limitations of mechanical music carriers – if not kick-starts – are captivating in a literal sense: we are locked into their usage. If you want to play the disc you must have the player, and they determine both quality and ease of use.

I mentioned in a previous column about the peculiar experience of playing Otis Redding songs laid down to analogue tape in 1968, followed by jangly low-res Eagles CD tracks laid down in the early 2000s, followed by high resolution material from the likes of Diana Krall, track after track in an agnostic stream from an Astell&Kern AK120 portable digital player.

Playing music files like this takes mechanical format out of it: I don't have to thread up an open-reel recorder or get out my Otis Redding LPs; I don't have to ferret around piles of CDs in the lounge, trying to find Long Road Out of Eden; I don't even have a Diana Krall CD, LP, Bluray or any other such thingy. Her music isn't my cup of tea.

Or so I thought. After hearing it, I succumbed to the deep warmth of her voice and understand why everyone quotes her. They're not all Ray McVeigh fans after all (or perhaps they are and I'm becoming one!). It's easy to hear new music from a player that can play anything.

Not having to root around the house looking through the LP racks,

CD piles, SACD collection, DVD-A row and bookcase of Blu-rays and video DVDs is liberating.

I know this is heresy, especially for a man whose only grave goods will be a Garrard 401, but I don't have to have all those boxes of cogs and wheels oiled and waiting to go any more. I don't need analogue cables with tarnishing plugs, a mains cable for each and every box, numerous multi-way I3 Amp mains distribution boards, webs of cables across the floor and the dust that accumulates around them. Is this the light I see?

In some ways, yes. I'm not about to scrap the record deck, that's for sure, but I am thinking my CDs at least will be committed to file format.

No big deal there of course; most people these days have already ripped their CDs to a NAS drive or possess a massive iTunes collection on their computer. You could say I've finally joined the iPod generation, just many years late! Perhaps. But I dismissed iPods and iTunes a long time ago, their quality was so abysmal.

I am getting ever more used to 32GB and 64GB MicroSD cards, the size of a fingernail, for camera and portable player storage. Flash memory has no life span limit for read operations, only a re-write limit, suggesting that MicroSD cards can be used to store music forever. Memory is being used ever more widely; Solid State Disc (SSD) sales are on the rise, whilst Hard Disc Drive sales are in decline, in spite of the price differential. The suggestion here is we'll be serving music from memory in future, not hard drives.

If all those mechanical music carriers – including hard drives – and their cables go, what about the ethernet cables that replace them? I turned off my wireless links some years ago because of their low speed, poor security and tendency to collapse for no apparent reason, installing wired ethernet that's proved fast, reliable and secure. I now find myself wondering whether all this is about to change as well. New super-speed wireless technologies are on the way, even here today, to be deployed when everyone can agree on a universal standard.

Likely future candidates are WirelessHD and WiGig, operating at 60GHz, way higher than current wifi transmitters (2-4GHz). They have a high enough data rate to stream AV around the house. We may finally have a decent home technology network that feeds from solid-state memory (let's say an SSD drive for now) to send music around the house using steerable 60GHz aerial arrays: awesome!

This is why I don't buy NAS drives and cabled home networks; they may work well but are conceptually archaic and likely doomed.

I do buy digital life stored on MicroSD cards that may in the end hold a lifetime's data (2TB cards are possible), music, pictures and video, in a matchbox needing no power supply. That's sexy isn't it? Well, if you're a geek! The only challenge is archiving these things: it's like herding ants.

With all this going on and me facing new music and enjoying old music in great quality, in a way I have never done before, I am beginning to realise that commercially mandated formats such as CD, DVD and Bluray are stultifying: all those cases, cables and machines. All that dust!

Mechanical formats have finally had their day. Newer technologies have reached a point where they offer better quality as well as portability. Now I'm playing high quality music that's seductive to listen to – as LP always was – without spinning anything.



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

We do not sell these products. It is for your information only.

DIGITAL

CAMBRIDGE AUDIO CD1 1986 £1500 Inspired Stan Curtis redesign of Philips CD104, complete with switchable digital filter.

Lean but tight and musical performer.

CAMBRIDGE AUDIO CD4SE 1998 £200 A touch soft in the treble and tonally light, but outstanding in every other respect.

LINN KARIK III 1995 £1775 The final Karik was a gem. Superb transport gives a brilliantly tight, grippy dynamic sound, albeit tonally dry.

MARANTZ CD731983£700A riot of gold brushed aluminium and LEDs,
this distinctive machine squeezed every last
ounce from its 14x4 DAC -super musical



 MARANTZ SA-I
 2000 £5,000

 The greatest argument for SACD. This sublime Ken Ishiwata design is utterly musically convincing with both CD and SACD, beating most audiophile CD spinners hands down.



MERIDIAN 2071988£995Beautifully-built two-box with pre-amp stage.Very musical although not as refined as modernern Bitstream gear. No digital output.

MERIDIAN MCD1984£600The first British 'audiophile' machine was a
sweeter, more detailed Philips CD100. 14x4
never sounded so good, until the MCD Pro
arrived a year later.



MUSICAL FIDELITY

 TRIVISTA
 2002
 £4000

 When playing SACDs, the sweetest, most
 lucid and lyrical digital disc spinner we've

 heard. Old school stereo, pure DSD design.
 CD sound is up in the £1000 class, too!

 Future classic.
 Future classic.

NAIM CDS 1990 £ N/A Classic Philips 16x4 chipset with serious attention to power supplies equals grininducing sonics.



SONY CDP-101 1982 £800 The first Japanese CD spinner was powerful and involving. Brilliant transport more than compensated for 16x2 DAC, and you even got remote control!

SONY CDP-RI/DAS-RI1987 £3,000 Sony's first two boxer was right first time. Tonally lean, but probably the most detailed



 SONY CDP-70IES
 1984
 £890

 Sony's first ever bespoke high end audiophile machine used a 16x2 DAC to provide a clinically incisive sound; supreme build quality allied to the pure unadulterated luxury of a paperbook-sized remote control.

TECHNICS SL-P1200 1987 £800 CD version of the Technics SL-1200 turntable. Massively built to withstand the rigours of 'pro' use and laden with facilities - a great eighties icon. Sonically, it's pure fun, with hefty bass that can still show weedy modern players a thing or two!

YAMAHACD-XI 1983 £340 Nicely built 16x2 machine with a very sharp and detailed sound, sometimes too much so. Excellent ergonomics, unlike almost every other rival of the time.

COMPACT DISC TRANSPORTS

TEAC VRDS-TI19946600Warm and expansive sound made this a mid
price hit. Well built, with a slick mech.a mid



ESOTERIC PO 1997 £8,000 The best CD drive bar none; TEAC's Tokyo boys pushed the boat out in style. Brilliantly incisive, ridiculously over engineered.

KENWOOD 9010 1986 £600 The first discrete Jap transport was beautifully done and responds well to re-clocking even today.

DACs CAMBRIDGE AUDIO DACMAGIC

DACMAGIC 1995 £99 Good value upgrade for budget CD players with extensive facilities and detailed sonics.



DCS ELGAR 1997 £8500 Extremely open and natural performer, albeit extremely pricey - superb.



DPA LITTLE BIT 3 1996 £299 Rich, clean, rhythmic and punchy sound transforms budget CD players.



HI-FI WORLD AUGUST 2013

PINK TRIANGLE DACAPO 1993 £ N/A

Exquisite; the warmest and most lyrical 16bit digital audio we have ever heard. Clever plugin digital filter modules really worked!



1991 OED DIGIT £90 Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now past it.

TURNTABLES

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

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

PIONEER PLI2D 1973 £36 The beginning of the end for the British turntable industry. When vinyl was the leading source, this bought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PLI 12D was off the pace compared to rivals



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

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



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

bland sound.

GOLDRING LENCO GL75 1970 £15.6S

Simple, well engineered motor unit with soft. sweet sound and reasonable tonearm. Good spares and servicing support even today from specialists. Eminently tweakable. Similar 88 and 99 motor units are budget 301/TD124 rivals.

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

MARANTZ TTI000 1978 £ N/A Beautiful seventies high end belt drive with sweet and clean sound. Rare in Europe, but big in Japan.



MICHELL GYRODEC 1981 £599 Thanks to its stunning visuals, this bold design wasn't accorded the respect it deserved until recently. Early examples sound cold and mechanical, but now right on the pace. Clean, solid and architectural sound.

TECHNICS SPI0 1973 £400 Seminal Japanese engineering. Sonics depend on plinths, but a well mounted SP10/II will give any modern a hard time, especially in respect of bass power and midband accuracy.

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

GARRARD 301/401 1953 £19 Heavy metal - tremendously strong and articulate with only a veiled treble to let it down. In many respects, better than the seventies 'superdecks' that succeeded it.



£550 **ROKSAN XERXES** 1984 Supposedly the first to 'better' the LP12. Super tight and clean sound, with excellent transients. Less musical than the Sondek, but more neutral. Sagging plinth top-plates make them a dubious used buy,

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

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



TOWNSHEND ROCK 1979 £ N/A The product of academic research by the Cranfield Institute, this novel machine has an extremely clean and fluid sound. Substantially modified through the years, and capable of superb results even today.

TRIO LO-7D 1978 £600 The best 'all-in-one' turntable package ever made, Trio/Kenwood threw their 'engineering best practice' book at this one with startling results. Clean, powerful and three-dimensional sound, ultimately limited by the tonearm.

TONEARMS

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

AUDIO TECHNICA 1978 AT 1120

€75 Fine finish can't compensate for this ultra low mass arm's limited sonics - a good starter arm if you've only got a few quid to spend.

ALPHASON HRI005 1981 £150 First class arm, practically up to present-day standards. Buy carefully, though, as there is no service available now. Totally under priced when new, exceptional.



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

GRACE G707 1974 £58 This early Japanese example of the tonearm art has a smooth, lyrical sound. Imported by Linn, fitted to early LP12s. Sonically way off the pace now, though.

REGA RB300 1983 €88 Inspired budget esoterica. Detailed, tight, neutral sound but tonally grey sounding in abso-lute terms. Responds well to tweaking, and its cheaper RB250 brother better still.



SME SERIES III 1979 6113 Clever variable mass design complete with Titanium Nitride tube tried to be all things to all men, and failed. Charming nonetheless, with a warm and inoffensive sound.

1978 LINN ITTOK LVII Arguably the first 'superarm'; Japanese design to Linn specs made for a muscular, rhythmic sound with real dynamics. Now off the pace, but the final LVIII version worth seeking out. **HADCOCK GH228** 1976 **£46** Evergreen unipivot with lovely sweet, fluid sound. Excellent service backup.



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



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

INTEGRATED AMPLIFIERS/COMBOS DELTEC 1987 £1900

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

 ROGERS A75
 1978
 £220

 The prototypical Audiolab 8000a – lots of sensible facilities, a goodly power output and nice sound in one box. The later A75II and A100 versions offered improved sonics and were seriously sweet and open to listen to.

EXPOSURE VII/VIII 1985 **4625** Seminal mid-eighties Exposure pre-power, offering most of what rival Naim amps did with just that little bit extra smoothness and sweetness. Still, it's by no means 'sweet' by today's standards, being lean, punchy, musical. It's also possessed of that quintessentially eighties look – frumpy black steel boxes with rough silk screened logos!



SUGDEN C51/P51 1976 £130 Soft sounding early Sugden combo with a plethora of facilities and filters, complete with seventies-tastic DIN sockery. A sweet and endearing performer as you'd expect, but lacking in power and poor load driving ability, so partner carefully.

VTL MINIMAL/50W

MONOBLOCK 1985 £1,300 Vacuum Tube Logic was one of the Europe's biggest tube names in the eighties, and it shows. Rugged, professional build and finish allied to a lively and punchy sound (albeit with limited power) make them an excellent used buy.

A&R A60 1977 £115 Sweet and musical feature-packed integrated; the Audiolab 8000A used its blueprint to great effect.



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

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



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

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

MISSION CYRUS 2 1984 £299 Classic eighties minimalism combines arresting styling with clean, open, lively sound. Further upgradeable with PSX power supply.



MUSICAL FIDELITY AI1985 4350 Beguiling Class A integrated with exquisite styling. Questionable reliability.



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

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

NAD 3020 1979 £69 Brilliantly smooth, sweet and punchy at the

price and even has a better phono stage than you'd expect. The archetypal budget super-amp.



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

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



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

PREAMPLIFIERS

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

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

AUDIO RESEARCH

SP-8 1982 £1,400 Beautifully designed and built high end tube preamplifier with deliciously sweet and smooth sound. Not the last word in incision or grip, but that didn't matter to those who aspired to it.

CONRAD JOHNSON

MOTIV MC-8 1986 £2,500 Minimalist FET-based preamplifier from the Yank valve specialists is brilliantly neutral and smooth with a spry, light balance in the mould of Sugden high end stuff. Something of a curio, but worthwhile nonetheless.

LEAK POINT ONE STEREO 1958 £ N/A Good for their time, but way off the pace

Good for their time, but way off the pace these days. Use of EF86 pentode valve for high gain rules out ultra performance. Not the highest-fi!

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

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

QUAD 33 1968 ¢43 Better than the 22, but Quad's first tranny pre isn't outstanding. Responds well to tweaking/ rebuilding though... LECSON AC-1 1973 £ N/A Amazing styling courtesy of Allan Boothroyd can't disguise its rather cloudy sound, but a 'design classic nonetheless.



NAIM NAC32.5 1978 £ N/A The Salisbury company came of age with this, their classic high end pre. Brilliantly fast and incisive sound that's a joy with vinyl but a tad forward for digital.

POWER AMPLIFIERS HH ELECTRONICS TPA-50D

AMPLIFIERS 1973 £110 Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not exactly stylish, however.

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



LEAK STEREO 60 1958 £N/A Leak's biggest valve power amp offers 35 Watts per channel and more low end welly than the smaller Stereo 20. Despite concerns over reliability their rarity means high prices are the order of the day.

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

LEAK POINT ONE, TLI0, TLI2.I, TL/I2 PLUS 1949 £28

Early classics that are getting expensive. Overhauling is de rigeur before use, using original parts if possible. Surprisingly crisp and musical sound, that's far more modern than Quad IIs. Deeply impressive when in fine fettle.



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

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

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



QUAD II1952£22The all-time classic valve amplifier, with a
deliciously fluid and lyrical voice. In other
respects though, it sounds hopelessly dated.
Low power and hard to partner properly



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

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

RADFORD STA25 RENAISSANCE 1986 £977

At the time, very possibly the least cool amplifier on the planet – and we're not talking heat dissipation here. This reworking of Radford's original late sixties design was possessed of a wonderfully rich, old school valve sound with enough power (25W) and lots of subtlety.



KRELL KMA100 II 1987 £5,750 Ludicrous monoblock version of the giant KSA-100 is one of the seminal eighties transistor power amplifiers. Massive wallop allied to a very clean and open Class A sound makes this one of the best amplifiers of its type, ever.

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



PHONO STAGES CREEK OBH-8 SE 1996

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



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

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

TUNERS

 MARANTZ ST-8
 1978
 £353

 Marantz's finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.
 5



CREEK CAS3140 1985 £199 Excellent detail, separation and dynamics brilliantly musical at the price. T40 continued the theme...

NAD 40401979£79Tremendously smooth and natural sound
allied to low prices and good availability make
this budget analogue esoterica. Needs a good
antenna to work properly, however.

NAIM NAT03 1993 £595 The warm, atmospheric sound is further proof of Naim's proficiency with tuners.

PIONEER TX-9500 1976 £295 Another of the serious classic solid-staters. Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build.

YAMAHA CT7000 1977 £444 Reputedly the best of the classic Jap analogues, this combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

NAD 4140 1995 £199 Brilliant affordable digital tuner has a smooth, detailed musical sound plus sensible realworld facilities. LEAK TROUGHLINE 1956 £25 Series I an interesting ornament but limited to 88-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket. Fed to a modern outboard decoder they're deliciously lucid with true dimensionality.



QUAD FM41983£240Supreme ergonomics and styling allied to a
pleasingly lyrical sound with plenty of sweet-
ness and detail made this one of the best
tuners around upon its launch.



REVOX B760 1975 €520 More of a semi-pro machine than a domestic bit of kit, the Revox offers superlative measured performance although the sound isn't quite as staggering as the numbers. Fine nonetheless, and surely the most durable tuner here?

ROGERS T751977£125Superb mid-price British audiophile design,
complete with understated black fascia. Fine
sound in the true Rogers mould – smooth
and sweet with fine dimensionality.

 SANSUITU-9900
 1976
 £300

 A flagship Japanese tuner designed to steal sales from the likes of Accuphase and Revox, it boasts superlative RF performance and an extremely smooth and lucid sound, along with very fine build and finish.
 4076

SONY ST-5950 1977 ¢222 One of the first Dolby FM-equipped tuners, a format that came to nought. Still, it was Sony's most expensive tuner to date, and boasted a very good sound quality allied to brilliant ergonomics.

SEQUERRA MODEL I 1973 £1300 Possibly the ultimate FM tuner. Massive in terms of technology, size and features dedicated to extracting every ounce of performance from radio, including impressive multi-purpose oscilloscope display.



TECHNICS ST-8080 1976 £180 National Panasonic's specialist hi-fi brand was a big hitter back then, and this is no exception. Superb FM stage makes for a very clean and smooth listen with lots of detail and depth.



ANALOGUE RECORDERS

YAMAHA TC-800GL 1977 £179 Early classic with ski-slope styling courtesy of Mario Bellini. Middling sonics by modern standards, but cool nonetheless!



AIWA XD-009 1989 £600 Aiwa's Nak beater didn't, but it wasn't half bad nonetheless. Massive spec even included a 16x4 DAC!

NAKAMICHI CR-7E 1987 £800 The very best sounding Nakamichi ever - but lacks the visual drama of a Dragon.



PIONEER CTF-950 1978 £400 Not up to modern standards sonically, but a great symbol of the cassette deck art nonetheless.

REVOX A771968£145The first domestic open reel that the prosused at home. Superbly made, but soni-cally off the pace these days. B77better, butcouldn't match the Japanese.



SONY WM-D6C 1985 £290 Single capstan transport on a par with a Swiss watch, single rec/replay head better than most Naks. Result: sublime.



SONY TC-377 1972 £N/A A competitor to the Akai 4000D open reel machine, the Sony offered better sound quality and is still no slouch by modern standards

DIGITAL RECORDERS PIONEER PDR-555RW 1999 £480 For a moment, this was the CD recorder to have. Clean and detailed. SONY MDS-JE555ES 2000 £900 The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding.



MARANTZ DR-17 1999 £1100 Probably the best sounding CD recorder made; built like a brick outhouse with a true audiophile sound and HDCD compatibility.



KENWOOD DM-9090 1997 £500 Serious and sophisticated sound thanks to well implemented ATRAC 4.5; surprisingly musical MD recorder.

SONY TCD-8 DATMAN 1996 £599 Super clean sound makes this an amazing portable, but fragile.

LOUDSPEAKERS ACOUSTIC RESEARCH

not their forte ...

AR18S 1978 £125 Yank designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great speed from the paper drivers, although finesse was most definitely

BBC LS3/5A 1972 £88 Extremely low colouration design is amazing in some respects – articulation, stage depth, clarity – and useless in others (both frequency extremes). Came in wide variety of guises from various manufacturers building it under licence. Partner with Rogers ABI subwoofers for an extra two octaves of bass!

LOWTHER PM6A 1957 £18 EACH This seminal full-range driver is still manufac-

tured. High sensitivity, as fitted to many classic horn designs. **HH ELECTRONICS TPA-50D**

AMPLIFIERS 1973 £110 Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not

exactly stylish, however.

JR 149 1977 £120 Infamous cylindrical speaker that was ignored for decades but now back in fashion! Based on classic KEF T27 / B110 combo as seen in the BBC LS3/5a. Doesn't play loud, needs a powerful transistor amplifier, but rewards with fine clarity and imaging.



HI-FI WORLO AUGUST 2013

TANNOY WESTMINSTER

1985 €4500 Folded horn monsters which certainly sound good if you have the space. Not the last word in tautness but can drive large rooms and image like few others.

SPENDOR BCI 1976 €240

Celestion HFI300 tweeter meets bespoke Spendor Bextrene mid-bass unit - and the result is a beautifully warm yet well focussed sound. A little bass bloom necessitates careful low-stand mounting, but these prove that the seventies did have some fine designs after all!

QUAD	ESL57	1956	£45
			EACH

Wonderfully open and neutral sound puts box loudspeakers to shame. Properly serviced they give superb midband performance, although frequency extremes less impressive. Ideally, use in stacked pairs or with subwoofers and supertweeters.



MAGNEPLANAR SMGA 198X £800 Technological loudspeker with genuinely musical abilities; fast, smooth, open, dry.

KEF RI05 1977 £785 Three way Bextrene-based floorstander (complete with castors!) gave a truly wideband listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace. The quintessential nineteen seventies loudspeaker.

€550 IMF TLS80 1976 Warm and powerful nineteen seventies behemoth with transmission loading and a mixture of KEF and Celestion drive units. Impressively physical wideband sound but rhythms aren't its forte.

MISSION 770 1980 £375 Back in its day, it was an innovative product and one of the first of the polypropylene designs, warm, smooth, clean and powerful sound.

LEAK SANDWICH	1961	£39	
		EACH	
Warm sounding infinite baffle	e that, with	1 a	
reasonably powerful amplifier can sound quite			
satisfying.			

HEYBROOK HBI 1982 £130 Peter Comeau-designed standmounters with an amazingly lyrical yet decently refined sound. Good enough to partner with very high end ancillaries, yet great with budget kit too. A classic

QUAD ESL63 1980 £1200 An update of the ESL57, with stiffer cabinets. Until the 989, the best of the Quad electrostatics.

1984 £350 **CELESTION SL6** Smallish two way design complete with aluminium dome tweeter and plastic mid-bass unit set the blueprint for nineteen eighties loudspeakers. Very open and clean sounding, albeit course at high frequencies and limp in the bass. Speakers would never be the same again...

MISSION 752 1995 £495 Cracking Henry Azima-designed floorstanders combined HDA drive units and metal dome tweeters with surprisingly warm results. Benign load characteristics makes them great for valves.

YAMAHA NS1000 1977 £532 High tech Beryllium midband and tweeter domes and brutish 12" woofers in massive sealed mirror image cabs equals stunning transients, speed and wallop allied to superb transparency and ultra low distortion. Partner carefully!



MISSION X-SPACE 1999 £499 The first mass production sub and sat system using NXT panels is a sure-fire future classic - not flawless, but a tantalisingly unboxy sound nevertheless!

CLASSIC CONTACTS

When a classic goes 'pooof' your troubles have just started, but there may be a good ending. Replacing failing parts can improve the sound, so here is a short listing of all these companies who specialise in getting a classic up and running again after its deposited a small ring of soot on your ceiling!

GT AUDIO

(Graham Tricker, Bucks) Leak Troughline specialists. Also Quad and most classic tuners, radios and amplifiers restored, repaired. Tel: 01895 833099 Mob: 07960 962579 www.gtaudio.com

TECHNICAL AND GENERAL

(East Sussex) Turntable parts - wide range of spares and accessories, plus arms and cartridges. Tel: 01892 654534

CARTRIDGE MAN

(Len Gregory, London) Specialist cartridge re-tipping service and repairs. High quality special cartridges. Tel: 020 8688 6565 Email: thecartridgeman@talktalk.net www.thecartridgeman.com

QUAD ELECTROACOUSTICS

(Cambs) Quad's service department, able to repair almost all Quad products, from the very first. (Also Audiolab, Mission & Wharfedale). Tel: 0845 4580011 www.quad-hifi.co.uk www.wembleyloudspeaker.com

Dr MARTIN BASTIN

(Shropshire) Garrard 301/401 restoration, renovation and service. Special plinths; rumble cures, etc. Tel· 01584 823446

ARKLESS ELECTRONICS

(Northumberland)

Specialist in repairs, restoration and modifications to all amplifiers, valve or solid state, ancient and modern. Tel: 01670 530674 Email: info@arklesselectronics.com www.arklesselectronics.com

CLASSIQUE SOUNDS

(Paul Greenfield, Leicester) ESL-57s restored, rebuilt, fully renovated or improved. Leak, Quad valves amps etc. Tel: 0845 123 5137/ Mob: 0116 2835821 Email: classique_sounds@yahoo.co.uk www.flashbacksales.co.uk/classique

WEMBLEY LOUDSPEAKER

(Paul MacCallam, London) Comprehensive loudspeaker servicing. Tel: 020 8 743 4567 Email: paul@wembleyloudspeaker.co.uk

CLASSIC NAKAMICHI

(Paul Wilkins, Worthing, West Sussex). Restore, Repair & Service Nakamichi Cassette Decks. Tel: 01903 695695 Email: paul@bowersandwilkins.co.uk www.bowersandwilkins.co.uk

ONE THING

(Coventry) Specialist in electrostatic panel manufacture and repair. Can refurbish ESL 57s and 63s as well as Leak Troughlines and Quad IIs. Email: one.thing@ntlworld.com www.onethingaudio.com

LORICRAFT AUDIO

(Terry O'Sullivan, Bucks) Garrard 301/401 and their own 501 repair, spares and service.: Tel: 01488 72267 www.garrard501.com

EXPERT STYLUS COMPANY

(Wyndham Hodgson, Surrey) Stylus replacement service for all types of cartridge. Including precise profiling for 78s. Tel: 01372 276604 Email: w.hodgson@btclick.com

OCTAVE AUDIO WOODWORKING (Bristol) Unit 2, 16 Midland Street, St Phillips. Bristol. Tel: 0117 925 6015

www.octave-aw.co.uk

REVOX

(Brian Reeves, Cheshire) Revox tape recorder spares, service and repair. Accessories also available. Tel: 0161 499 2349 Email: brian@revoxservice.co.uk www.revox.freeuk.com

SOWTER TRANSFORMERS

(Brian Sowter, Ipswich) Large range of audio transformers for valve amps, cartridges, line drive, interstage plus all associated services. Tel: 01473 252794 www.sowter.co.uk

LOCKWOOD AUDIO

(London) Tannoy loudspeaker parts, restoration and repair. Also Epos and TDL loudspeakers. Tel: 020 8 864 8008 www.lockwoodaudio.co.uk

ATV AUDIO

(Henry Dulat, Surrey) Repairs, restorations and upgrades to valve and transistor amps and all analogue audio including Revox. Tel: 01372 456921 Mobile: 07730 134973

OCTOFICIAN Masters of High-End Sound

MCLIMA

Xpression

Xpression



The new MC Anna from Ortofon sits at the highest echelon of Moving Coil cartridges. This state-of-the-art product is representative of numerous design elements and ideals pioneered by one of the world-leaders in analogue technologies. As a result, the MC Anna is truly capable of the highest degree of performance possible, and will provide a sound which is literally unsurpassed. The MC Anna is named after and inspired by the world-renowned operatic soprano, Anna Netrebko. The stylish Xpression cartridge from Ortofon bridges the gap between SPU-type designs and High-End models like the MC Windfeld and MC Anna, which are designed for headshell mounting. The result is a high-performance moving coil cartridge with the convenience of a standard headshell connector. By using some of the best technologies available to them, Ortofon have made the Xpression into not just a convenient and attractive design, but also one of the finest sounding cartridges available on the market.

Cadenza Series

The Cadenza series represents another example of Ortofon's constant push toward technological perfection. By laking various design characteristics acquired through market leaders, such as the MC Jubilee and Kontrapunkt series, Ortofon have developed Cadenza to elevate any decent Hi-Fi system to a whole new level. The range consists of 5 different models, including a Mono version, but they all adhere to Ortofon's core principles of accurate information retrieval and phenomenal sound performance.

> Ortofon is distributed in the UK by Henley Designs Ltd. W: www.henleydesigns.co.uk | T: 01235 511 166 | E: sales@henleydesigns.co.uk World Radio History



THE SILVER SURFER MK II £102 FOR 1 METRE (ADD £30 PER SUBSEQUENT 0.5 METRE)

This hand-built interconnect is based upon an 'ultrapure', silver-plated, oxygen-free, copper conductor with a PTFE Teflon insulator.

The Silver Surfer comes with a choice of terminations including Teflon insulated Reference RCAs.

Beginning with one man and his guitar, namely Leo Kottke's instrumental track, 'Bean Time', the obvious warmth and bass enthusiasm of the cable took a touch of extreme upper mid extension away from the finger-picking guitar. Hence, Kottke's prowess was slightly dulled by the Missing Link cables while the gaps between each note were 'heated' which meant that the dramatic use of silence was reduced a touch, giving the track less impact. Nevertheless, the complexity of the performance was well tracked by the Silver Surfer Ils while the lower midrange and bass performance was clear and concise.

Moving to a much louder and grander affair and the extravaganza

that is 'Pinball Wizard' from The Who's 'Tommy', the cable positively sprang to life in this rock environment. To begin, there was an imposing bite from the lead guitar of Pete Townshend that was bold and passionate throughout while the warm, mature sound only served, in this case, to be enhanced by the epic presentation. The attendant low distortion, for a cable of this price, helped to extend the reverb performance that was surprisingly deep and extended. Upper mids were incisive and detailed while bass, from both from John Entwistle's bass and Keith Moon's drums, was gloriously deep, massive in form with a punch and heft that, again for the price, was impressive.

Offering a stirring performance for those who like high-energy music, the Missing Link Silver Surfer IIs are the Jah Wobbles of interconnects, shifting bass by the bucket. **PR**

[contact 01623 844478 www.the-missing-link]

SOUNDBITES

FRANC AUDIO CERAMIC DISC SLIM SET OF 3 FEET (£199) OR 4 FEET (£229): FAT SET OF 3 FEET (£249) OR 4 FEET (£269)

These multi-layered isolation feet use four ceramic balls as the basis for the suspension system. More specifically, you place a metallic top cap upon a partly exposed ceramic ball that sits at the top of the main foot chassis to complete the minor assembly. An inner disc is further suspended from the main body by another three balls that aim to isolate the system from resonance. The feet arrive in Slim and Fat versions. A single slim foot can support 50kg whilst a single Fat can support 80kg. The feet are available in sets of three or four.

Playing The Who's 'Pinball Wizard' and adding the Franc feet removed unsettling upper frequency bloom and smearing that had attached themselves to the vocal and lead guitar. Intriguingly, the bass guitar now became a major part of the mix.

Although the Francs didn't quite have the midrange maturity and



richness of bass frequencies of my more expensive Hush reference isolation system (£525), the Francs retained impressive bass response in terms of its tonal characteristics becoming rounded in nature, while secondary percussion was audible for the first time. Treble was delicate in its delivery.

Turning to vinyl and Leo Kottke's 'Bean Time', the finer details of Kottke's guitar finger picking were now noticeable and the improved instrumental and string separation flowed from more space injected into the performance.

Greater emotivity was heard too, as physical emphasis upon the guitar became a part of the track.

A relatively low cost isolation system that makes a real difference to the performance of your hi-fi. **PR**

[contact

www.gpoint-audio.com/our-collection or buy direct www.f-franc.com]

vinyl section contents

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www.hi-fiworld.co.uk

INSPIRE BLACK MAGIC & BLACK MAGIC Si 86 Tony Bolton spins the platters of two attractive new turntables.

ANGLE AUDIO AUDIOPHILE PHONOSTAGE 91 A budget phono stage that works nicely, Tony Bolton finds.

ORTOFON 2M MONO CARTRIDGE 94

If you listen to old mono LPs, this is the cartridge you need, says Tony Bolton.

news

BRUBECK

New out from German audiophile label, Speakers Corner is Dave Brubeck's 'The Dave Brubeck Quartet At Carnegie Hall' (1963; www.speakerscomerrecords.com) one of the best live jazz albums of the sixties. Full of invention and shifting time signatures, this album swings so hard you risk your cartridge falling off the record.



JAMIROQUAI!

The first three albums from the jazz/funk/house outfit have been remastered and reissued via Music On Vinyl, along with notes via Jay Kay. 'Emergency On Planet Earth' (1993; a 20th anniversary reissue), 'The Return Of The Space Cowboy' (1994) plus 'Travelling Without Moving' (1996), range from very good to excellent. All masterings are top notch making them, in sonic and packaging terms, the best versions of these albums currently on the market.





ROCK ROARS!

New out from Porcupine lead singer, Steven Wilson, is 'The Raven That Refused To Sing (And Other Stories)' (Kscope; www.kscopemusic.com) featuring Wilson's new band previewed on the live release, 'Get All You Deserve'. Engineered by Alan Parsons, the six long



tracks over two LPs illustrate a superb rendering of 21st Century prog., Wilson's best solo effort so far.

Amaranthe's new album, 'The Nexus' (Spinefarm; <u>www.spinefarm.fi)</u>, is the band's second album. This Swedish metalcore outfit offer an attractive mix of melodic pop, harsh metal and techno-influenced hard rock.

Music On Vinyl <u>(www.musiconvinyl.com)</u> offers two for the rock genre. The first, Gillan's 'Glory Road' (1980), is an all-out, passionate, heavy metal party-fest, full of melodic riffs; second is Lynyrd Skynyrd's 'One More From The Road' (1976). Presented in a gatefold sleeve, this live double album is an essential fan buy. The band was always a prime live outfit and so this live work suits the group more than most.

In 1988, Jon Anderson quit Yes, releasing this, 'In the City Of Angels' (SPV: <u>www.spv.de</u>) in 1988, his first solo work for six years, mixing pop-oriented ditties and spiritual, ethereal tracks. A mixed bag in every way.

Also check out America's 'Hearts' (1975;MOV). Produced by George Martin, it includes the hit single, 'Sister Golden Hair'.





INCUBUS

Music On Vinyl has really spoilt fans of the alt.metal outfit, Incubus, with the reissue of five of the outfit's LPs. Starting with upbeat, style defining, 'S.C.I.E.N.C.E.' (1997), which reflected bands like Korn and added funk to the metal. 'Make Yourself' (1999), a sleeper hit, offered more maturity with Chili Pepper-like funk but it was 'Morning View' (2001) which was a better balanced LP: varying tempo, mixing song styles and improving the writing quality. 'A Crow Left Of The Murder' (2004) saw the band's rap-metal sound come of age. It is the most interesting album of the canon, exploring different musical styles and moods. 'Light Grenades' (2006) offered a lighter touch, slightly psychedelic with a Radiohead-like tone.



SCANDANAVIAN SONGS

First up is jazz from the Goran Kajfeš Subtropic Arkestra. Entitled 'The Reason Why Vol. I' (Headspin: www.headspinrecordings.com) it offers a conglomerate of often cool jazz, smoky fusion and imaginative, interpretive covers from the likes of Cluster, Soft Machine and Bo Hannon.

Honningbarna's (or Honey Children in English) 'Verden Er Enkel' (EMI Norway) features politically



infused punk rock. Hard rocking, spittle spraying, in your face, maximum decibel...noise.

From Carmen Villain, 'Sleeper' (Smalltown Supersound; www.smalltownsupersound.com) shows Carmen the outsider, the girl who was never part of a gang, unless she acted as inspiration to other misfits. The press release mentioned Royal Trux as an inspiration and I would concur,

Teño sax man, Edvard Lygre Møster's 'Møster'! (Hubro) is a collaboration, a Norwegian supergroup, consisting of members of Supersilent, Flephant 9 and Motorpsychö. An experimental rock LP a with jazz infusings, the band play with a confident freedom and are brimming with new ideas, Also look out for Splashgirl's fourth album, 'Field Day Rituals'

(www.hubromusic.com) that takes a moody post rock approach with a bassrich delivery and lots of atmosphere.

...AND FINALLY

Lord Tang aka Dominic Cramp (Alarm; alarm.bandcamp.com) has just released this self-titled album, filled with mystic soundscapes, playful electronica and disturbing sonic constructions.

Onto The Everly Brothers' self-titled debut from 1958, divided between original compositions and covers, packed with under appreciated gems, this is a corker of an album (www.discovery-records.com).

From Kent (<u>www.acerecords.com</u>)Ty Karim's 'Wear Your Natural, Baby' was also under appreciated. Offering top quality LA soul with a swish of elegance and an emotionally cutting delivery, this compilation is essential for soul fans.

Up to date now and Helldorado's 'Bones In the Closet' (CCAP) crosses many boundaries but they describe themselves as sleaze metal. But there's alt,country and swamp blues in there too. An accompanying 7" single is presented with a 3D cover, complete with 3D glasses!

Henry Fool's 'Men Singing' (Kscope <u>www.kscopemusic.com</u>) is an intriguing instrumental album populated by members of No-Man, I Monster and Roxy Music (Phil Manzanera). Combining lazy prog and slow jazz styles, it arrives as a long-form, 4-track LP.

From Matador (<u>www.matador.com</u>) is Kurt Vile's latest LP, 'Wakin On A Pretty Daze' sees Vile extend the exploration into more expansive songs. They're longer and even more introspective while his languid, almost wistful rock tempo mixes a deep thoughtful nature with foggy day-dreams.



World Radio History i-fiworld co uk



Platter Magic

That old black magic has Tony Bolton in its spell, as he listens to two new turntables from Inspire Hi-Fi

erbyshire based Inspire Hi-Fi seem to be extending their range of turntables on an almost monthly basis. Two new models, based around the same plinth, have recently come onto the market; the Black Magic and the Black Magic Si, priced at £540 and £690 respectively.

They share the same minimalist circular MDF plinth, which is available in either black or Nightfire red, the same motor units and an inner platter that is specially made for Inspire from a block of 2 inch thick Acetyl. Inspire feel that this has certain sonic benefits over the plastic material that they have used on previous turntables. The bearing assembly is also custom made for the company. I found the design to be aesthetically pleasing, with form following function, resulting in a shape that will sit comfortably in most contemporary surroundings. The only drawback is the position of the power switch at the back of the plinth. It is difficult to get at without potentially dragging sleeves over the record or getting uncomfortably close to the stylus, with the its associated risks. I would prefer to see it mounted at the front, underneath the deck, so that it was accessible yet did not interfere with appearance.

Aside from that, the finish is excellent, consisting of an undercoat and four layers of coloured lacquer which are then polished. All manufacturing and finishing is done locally in Derbyshire.

The physical differences between

the two decks are many. The Black Magic's platter is made from 10mm thick clear acrylic, topped with an Acri-mat, whilst there is a 20mm thick frosted acrylic platter on the Si model. The arms are bought in from Rega. The XI arm on the cheaper deck is an OEM version of the Rega RB101, and the X2 on the Si is an OEM Rega RB202. Ortofon cartridges, a 2M Red (retailing separately for £85) on the Black Magic, and a 2M Blue (£170) on the Si, are pre-fitted and aligned, so all a purchaser has to do is fit the counterweight, plug in, and play.

I started off listening to the regular Black Magic with the classic Clifford Curzon recording of Grieg's Piano Concerto. It sounded quite impressive, with the opening timpani roll having a fair weight and sense On the left is the Black Magic Si turntable with 20mm thick acrylic platter, and on the right is the Black Magic turntable with 10mm thick glass platter.

of impact, however, some of the piano notes seemed a little unstable. A little investigation revealed that the polished surfaces of the platter and Acri-mat lacked grip, both of each other and of the record. I tried putting a couple of strips of double sided sticky tape between the platter and the mat, to improve note stability. I also ended up using the Clearaudio Cleverclamp to secure the record against the mat which also helped. I was able to play the record without further problems.

The Black Magic sounded pleasant but classical music is not really its forte, so I moved on to Motown courtesy of Smokey Robinson and the Miracles. This sounded far better, with the deck getting to grips with the grooving rhythm of 'Going To a Go Go'.

The sound staging was good, with a strong central image and well defined edges. There was a reasonable amount of depth to the



The X1 tonearm on the Black Magic is fitted with an Ortofon 2M Red cartridge.

stage area that allowed me to locate the performers accurately.

After this, and a few other tracks, I changed over to the Si model and was greeted by a strong sonic family resemblance, except this sounded a more mature and grounded performer. The Grieg was handled with a certain amount of gravitas that suited the music, although I still felt that classical sounds were not these decks raison d'etre. The frosted surface of the Si's platter gripped the record better but there were still traces of wow in some of the piano notes. Again using the Cleverclamp helped a little.

Moving over to the Motown tracks confirmed the Si's preference for more pop orientated sounds. Compared to the Black Magic, the SI model had a tighter grip on the beat, which gave the rhythm a little more punch and precision. The staging was also better described, the edges of the soundstage being better defined, the whole image having the sensation of being viewed through a clearer lens.

Next I played a recording of Duke Ellington and His Orchestra in concert at the Carnegie Hall on December 11th 1943. This was the second such concert that the Duke gave in that year and displays the band in excellent form. 'Take The "A" Train' was delivered with a certain amount of gusto that suited the music, and the way the beat was delivered most certainly got my feet tapping away to the smoothly swinging rhythm. I think due to the more upbeat nature of the music and the fewer sustained notes, there was less obvious wow on the piano sounds, and the rest of the instruments sounded quite solid and grounded.

I turned to an old favourite for my last tracks, 'Friction' and the title track from Morcheeba's 'Big Calm'. The former has a rolling beat driven by the bass guitar that seemed to flow effortlessly from the speakers. Skye's voice was full



The X2 arm on the Black Magic Si is based on a Rega design.

of velvety, throaty textures and the whole sound was enjoyable and nicely timed. 'Big Calm' has a more complex hip-hop beat, which again the Si delved into and reproduced accurately. This track edges towards Rock in style, with some of its guitar sounds and presentation, and both turntables seemed totally at home with such music. Again the Si seemed to go deeper in the bass and to mark the beat more accurately, making for

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- REL 0400e, excellent Revel Ultima Studio, vgc Revel Ultima Centre Channel Revel Ultima Subwoofer with matching omp Ruark Prologue One, yew finish, excellent boxed Sonus Fober Grand Piano Home, excellent boxed Thiel CS7.2, vgc, just refurbished... Triongle Comete ES, excellent Usher S520 and motching Subwoofers Usher S520 in birch, excellent boxed Usher S520 in birch, excellent boxed Due in Due in Due in 99 2199 899 2999 249 699 279 399 Usher X616 centre speaker, excellent
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The Rega sourced inner platter and motor on the Black Magic Si turntable.

an enjoyable listening experience.

Out of interest, I transferred the Red stylus to the Si model to find how much difference the more sophisticated stylus profile of the 2M Blue was making. I estimate 50% of the sonic differences between the two decks were down to the stylus differences. However, the X2 arm and the thicker platter also played their part in providing deeper and more accurately timed bass sounds, and also in offering a more considered presentation of the music.

There is £150 separating the prices of these two decks, and I would consider the Si to be a comprehensively better performer, offering a more sophisticated, tighter timed and fuller bodied sound. The regular Black Magic has a joie de vivre that made it very suited to pop music, be it electronica or 1960s' Motown, but the Si seemed to add jazz to this collection of genres. If your taste runs to pop, rock, electronica or jazz then either of these decks, especially the Si model, will give a very satisfying performance. Neither were really comfortable with the more demanding nature of classical music.



The Black Magic Si comes fitted with an Ortofon 2M Blue cartridge.

MEASURED PERFORMANCE

The basic Black Magic ran at the right speed, with virtually no error. However, there was some Wow, as usual with the basic Rega mechanism, measuring 0.3%. Our analysis shows the main component was, as always, at basic rotational rate of 0.55Hz (33rpm), but there are many other components, probably from the motor, that both turntables suffered. The Red Si returned a better result than the Black.

SPEED STABILITY



This level of speed instability is OK for Rock music but will be heard as 'watery' or 'cracked' tone with sustained piano notes, affecting mostly classical music.

The X2 arm in the Red had a main bending mode at a high 600Hz, whilst the Black X1 arm's main mode was at 450Hz, our analyses show, both fitted with an Ortofon 2M Black for measurement purposes. This shows the X2 tapered

X1 ARM VIBRATION



This is another of those occasions where I wish we gave half globes in our markings, because the Si is a 41/2 globe performer. Since its performance is somewhat genre dependent I do not feel that I could give it five globes, but it plays most types of more contemporary music well.

If this fits in with your musical taste, and you want a well presented and finished turntable that has quite a big, bold presentation of sound, then I should certainly consider either of these. If you can afford the extra \pounds 150 then go for the Si model, it offers a more polished and upmarket sounding performance.

MUSIC USED:

Grieg 'Piano Concerto.' Clifford Curzon, piano. London Symphony Orchestra conducted by Oivin Fjeldstad. Decca Records. SXL 2173. 1959.

Duke Ellington. 'At Carnegie Hall'. Everest Records. FS 327. 1977.

Smokey Robinson and the Miracles. 'Greatest Hits'. Tamla Motown/ EMI Records. STML 11072. 1968.

Morcheeba. 'Big Calm.' Indochina Records. ZEN017LP. 1998.

cast tube is stiffer, and it is also a little quieter across the midband too. However, differences were small and both measured well in absolute terms. NK

Speed accuracy Wow	+0.1% 0.3%
Flutter	0.1%
W&F wtd	0.2%

X2 ARM VIBRATION



SYSTEM USED:

Luxman E200 phonostage. Townshend Audio Allegri pre-amp. 2 x Quad 303 power amps. Kelly KT3 loudspeakers.





EXCELLENT - extremely capable

VERDICT

Upgraded platter, arm and cartridge offer a more mature sound than standard Black Magic.

FOR

- more control to bass
- more mature sound
 more detailed soundstage

AGAINST

- best with rock and pop music
- location of power switch

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EXCELLENT - extremely capable

VERDICT

Good looking minimalist deck with a fast and punchy sound.

FOR

- snappy rhythms
- precise soundstage
- deep bass

AGAINST

- not good with classical music
- location of power switch
- Inspire Hi-Fi

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	Audiolab 8000Q british built mint boxed	£395	Mich
ł	Anatek monobiocs £2400 new	£995	(this
	Anatek A50R	£795	Mich
ľ	Arcam A32 integrated amp	£495	box,
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ł	Cyrus 2	£225	Nain
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1	EAR V20 valve amplifier	£2495	Pion
l	EAR 802 classic valve with pre amp phonostage	£1195	Pure
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	Naim Flatcap boxed	£225	top o
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Right Angle

Tony Bolton gets the measure of a budget Moving Magnet phonostage.

he affordable phonostage market has become quite busy in the last few years with various companies offering solid state phonostages housed in compact extruded aluminium cabinets. A new name to me is Angle Audio. Based in Suffolk, the name refers to the Angles, whose 5th Century invasion of Britain gave the East coast it's regional nomenclature. The shape of the coastline,

extending up beyond the Wash, is interweaved with the name on the front panel. The name, Angle Audio, is a recent incarnation, although the products have been out for a few years, They were previously sold under the name "Artisan Audio", whose battery powered MC phonostage I liked when I reviewed it in the July 2011 issue of this

The initial idea for making the phonostage came when proprietor Chris Gittins was less than happy with a phonostage that he had bought. His background is in

magazine.

electronics, specifically those relating to the video conferencing field, so he decided to put this knowledge into use. After he had built his first example, people stated to show an interest and the Company was born. There are now two ranges of products available, the Audiophile phonostage under discussion here and the Reference 2 phonostage, available from £249.

The Audiophile model can be configured for either MM or MC usage (£135) and is also available with battery power, from an internal NiMH battery, at £185. Other available options include a version that supports both types of cartridge for £180, or £230 with battery. Since each unit is made to order, variations in impedance and capacitance can be tailored to suit individual needs, and I was pleased to discover that there was an option of a Mono/Stereo switch being fitted (£40). There is even a version which has the EQ curve adjusted to suit 78rpm records.

Apart from the markings mentioned earlier, the fascla's only ornamented by the pleasingly subdued red LED for power. This is activated by plugging in the wall mounted mains transformer plug. There is no on/off switch. The back is equally simple with the four goldplated signal sockets, the power socket and a substantial earthing post.

Inside, the circuit uses additional filtering to the power supply, beyond that already in the plug, and Panasonic power capacitors to feed an op-amp based circuit that has a passive RIAA curve.

Installation took a couple of moments, since there is nothing for the user to do apart from plug it in, and I gave it my usual 48 hours of running in before getting to know it properly. It was installed in the upstairs system with a Goldring 1022 GX fitted to one of my spare Hadcock arms.

I started off with Ella Fitzgerald gently swinging her way through 'Manhattan'. The sound felt comfortable, with a slightly cosy feeling to the richness of Ella's voice. There wasn't the glowing warmth there that I would expect from a

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ANGLE AUDIO







Despite the compact dimensions of the casework, the spacing of the sockets allow for the usage of substantial interconnects without risk on them touching.

thermonic unit, but neither was there the cooler attitude that is more usual with solid-state electronics. The sound seemed pleasantly balanced somewhere between the two points. Although I would have preferred the Stereo/Mono switch to be fitted, the circuit was well enough behaved with

deep bass pulsated into the room in an hypnotic manner and I played the whole album through without making

a single comment in my notebook, such was the way the music flowed and caught my attention. That is what this

"the deep bass pulsated into the room in an hypnotic manner..."

older records that I was able to play a moderate condition disc without much surface noise intrusion.

After such smooth sounds I decided to try the opposite, and put on Suede's first LP. Now some 20 years old, the abrasive guitars and wailing vocals still sound fresh. Some budget 'stages costing a lot more, get a little confused with this record, creating a Phil Spector-esque wall of sound. The Angle Audio machine did its job well, disentangling the sounds so that I could follow individual guitar lines quite easily.

I kept things noisy by moving onto Carmina Burana. This was reproduced in a satisfactory manner, relaying the euphoria of these Medieval monk's beer drinking songs and creating a sensation of gothic intensity to the music. I did feel that there was possibly a little compression of the dynamic range of the music, but, given the price of this phonostage, I thought that it did very well.

I finished my listening on a quieter note with the Mad Professor's dub remix of Massive Attack's second LP 'Protection'. The phonostage does well. It lets the music flow in a very persuasive manner. It makes music sound right and although it had to work hard with heavy classical sounds, it still managed to convince me that I was listening to a

MEASURED PERFORMANCE

Frequency response measured flat from 6Hz to 20kHz our analysis shows, so RIAA equalisation accuracy was good. However, full gain exists right down to warp frequencies at 5Hz so loudspeaker cone flap is likely with warped records.

Gain was on the low side of normal for Moving Magnet cartridges, measuring x110. With a limited output swing of

FREQUENCY RESPONSE



4V low gain is necessary to avoid input overload occurring before 40mV and this is how the unit has been configured. Gain is adequate for most situations but volume will have to be wound up high on an accompanying amplifier to make up for low gain.

Noise was low enough not to be audible, as MM cartridges produce more hiss than the input stage of this unit.

The Angle Audio Audiophile measures well, but it is a bit low on output swing and gain. NK

4Hz-20kHz
82dB
0.48µV
0.01%
x110 (dB)
mV in / 4V out

SYSTEM USED:

Linn Sondek/ Hadcock 242 Cryo/ Goldring 1022GX. Townshend Audio allegri passive pre-amp. 2 x Quad 303 power amps. Kelly KT3 loudspeakers.

comprehensive rendition of the piece. I note that I did have the volume control a little higher than normal, and that occasionally there was a little foreshortening of the difference between quiet and loud, but I had to keep reminding myself that this phonostage only cost £135.

The performance belies the price, and I consider it to be excellent value for money for the level of performance on offer and very worthy of an audition.

MUSIC USED:

Carl Orff 'Carmina Burana'. Auger, Summers, Kesteren, Southend Boys Choir, Philharmonia Chorus and Orchestra conducted by Riccardo Muti. EMI Records Ltd. ADSD 3900. 1980.

Ella Fitzgerald. '.. Sings the Rogers and Hart Songbook.' HMV Records/ Verve Series, CLP 1116, 1956.

Suede, 'Suede', Nude Records, NUDE 1LP, 1993,

Massive Attack V The Mad Professor. 'No Protection'. Wild bunch/ Circa Records Ltd. WBRLP3. 1995.

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VALUE - keenly priced

VERDICT

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FOR

- honest, open sound.
- well defined imaging. - compelling rhythms.
- AGAINST
- output a little low

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World Radio History

Monophonic Musings

Tony Bolton explores his mono LPs and singles as he listens to Ortofon's new 2M Mono cartridge.

egular readers will know that I spin records in all three groove and speed formats and I have tuned my systems to cope with most things recorded in the last hundred or so years. One of the problems when playing older mono records is cutting out the surface noise which modern stereo pickups often emphasise. Mono records are laterally cut, and vertical movement of the stylus will only be due to groove damage or dirt, so I require either a phonostage that has a stereo/mono switch to cut out the electrical response to vertical movements of the stylus, or a cartridge that only responds electrically to the lateral movements of the needle.

The Ortofon 2M Mono, as the name suggests, comes into the latter category. It uses the same injection moulded polycarbonate body as the 2M 78 (see HFW April 2013) and 2M Red and Blue models. It also shares the 78 unit's generating mechanism in which the four coils are arranged with the polarity of two reversed, to allow electrical response only from lateral movements of the nude spherical stylus.

Having installed the 2M Mono on the Clearaudio 12 inch Universal arm, I started my listening by playing various classical pieces. I was particularly impressed with the levels of detail and texture that I heard when playing Rubenstein performing a pair of Beethoven Sonatas. The tonal balance seemed fairly accurate, although I did feel that the extreme treble was a little softened. Sustained notes decayed away in a graceful display of harmonics. Ambient sounds, such as the action of the mechanism, were just audible in between notes,

and helped to produce a sense almost tactile reality to the sound.

The 2M Mono felt quite direct, with a solidity to the heavier struck notes that reflected their impact. Softer sounds were floated towards me, leaving me impressed with this cartridge's ability to swing from soft to loud and back again without fuss. There seemed to be a big enough difference in the dynamic range of the sound that it felt both natural and real.

Some while later I had got to the jazz section of my collection and

"I was able to focus on the dissection of the harmonies, and the gentle flow of the rhythm."

again found the background noise of the audience, and the acoustic of the Royal Festival Hall laid out in front of me, as Humphrey Lyttelton led his band through the jazz classic 'Basin in far better condition than a visual inspection would suggest. Using a mono/ stereo switch has rarely given me the sensation of control and smoothness to the sound that using

Street

Blues'. The bold presentation of a Moving Magnet cartridge suited this style of music, and combined with the excellent manners of the 2M series, made for very enjoyable listening. Rhythms were quite tightly described, helping to keep a focus on some of the sonic pyrotechnics of the soloists as they took it in turns to play their own variations of the main theme.

I was also impressed with the way this cartridge made a 59 year old piece of vinyl, that is in good, but used condition, sound fresh and a dedicated mono cartridge seemed to do. When listening to this record with the amp or phonostage in mono, I am usually aware of a couple of bits of minor groove damage causing a swooshing noise as they go past the needle. Using a mono cartridge seemed to tidy up these loose ends, makes for a far more convincing rendition of the sound held in the grooves.

After this I stared digging through my 1950s and 1960s singles, the condition of which varies from mint to diabolical. I was impressed with the consistent way the 2M Mono played the music and only got caught out by really badly worn discs. My copy of the Mama's and the Papa's single 'Monday Monday' is in pretty good shape, so I was able to focus on the dissection of the harmonies, and the gentle flow of the rhythm with little thought or awareness given to the condition of the record. Cass and Michelle's vocals were beautifully described, surrounding Denny's lead, with John joining in with a counterharmony at various points. Again, it sounded fresher with this cartridge in charge than I am used to hearing. I am normally aware of the slightly compressed nature to the sound that singles are cursed with, but this time it seemed to have more openness and a wider dynamic range.

I finished listening with the Rolling Stones LP, 'Their Satanic Majesties Request'. Recorded in between drugs busts and court appearances, it is somewhat unfocussed in its content and presentation, partially due to the lack of producer (Andrew Loog Oldham having distanced himself from the band at this time). However, it is an interesting excursion into psychedelia with the usage of then unusual instruments such as a Theremin and synthesisers. The 2M Mono dug into the lightly worn grooves of this mono first pressing (complete with 3D picture cover) and produced the raw, slightly edgy sound that characterises so much of the band's work. The guitars sounded aggressive when required, while the gentler tracks had a more floaty feel to the sound that probably reflected some of the band's mental states at the time.

I found this cartridge to be a very well thought out design, that complements the sonic presentation of the conventional 2M series with an ability to play older, and sometimes more worn records, in an exemplary manner. The soundstage was wide



The nude, spherical, 18 micrometer radius stylus is claimed by the manufacturers to be the optimum size for tracking the wider grooves of mono era records. It rides correctly in the groove, avoiding dirt at the bottom, unlike a smaller microgroove stylus that rides too low.

and deep, inviting me to listen in to it, and the overall presentation of the music seemed balanced, detailed and rhythmically accurate. It was equally at ease with the rawness of the 'Stones, or the considered precision of Rubenstein. As an affordable solution to optimised monophonic replay I would regard this cartridge as excellent in both performance and value for money.

SYSTEM USED:

Clearaudio Master Solution/ Universal 12 inch arm. Leema Acoustics Agena phonostage/ Tucana II amplifier, Chario Ursa Major loudspeakers.

MEASURED PERFORMANCE

The 2M Mono has a relatively large spherical stylus with an 18 μ m diameter, where a 2M Red has a minor radius of 8 μ m and the Black just 6 μ m. As a result the 2M Mono's stylus cannot reach into short wavelength groove modulations so well and treble falls above 8kHz, although not by much, just a few dB at 20kHz. The most notable feature of this cartridge's frequency response is its flatness; the 2M Mono is a truly accurate reproducer, more so than most .

Treble response is most extended with low capacitance of just the arm leads. Switching in 200pF (300pF

FREQUENCY RESPONSE outer grooves



inner grooves



total) on our test bench amplifier rolled down treble above 8kHz. Inner groove losses where mechanical wavelengths are shorter were strong due to large diameter stylus, output being -3dB down at 8kHz, enough to result in a dull sound on inner grooves.

On a lateral (mono) microgroove cut tracking was surprisingly poor, a peak amplitude of 45µm at 300Hz being the best it could do, where Ortofons usually clear 80µm as claimed in the accompanying spec sheet. Results were unusually poor at 1kHz too, 12cms/sec being the best it could do (20cms/sec is common).

The 2M Mono was a poor tracker on a modern test disc. Whether it would hang on better in an earlier pure mono cut record with wider grooves we do not know, not having test discs from that era (if they exist). What is certain is that from a tracking viewpoint this cartridge is best not used on modern stereo records, even if they are cut in mono (i.e. laterally), as the Beatles Mono box set will be. **NK**

1.6-2gms
7.2gms
20Hz - 12kHz
90µm
45µm
23cms/sec.
0.6%
2.8mV

MUSIC USED:

Beethoven. "Appassionata" and "Pathetique" Sonatas'. Artur Rubenstein. RCA Victor Red Seal Records. LM-1908. 1955.

Humphrey Lyttelton and His Band. 'Jazz At The Royal Festival Hall'. Parlophone Records. PMD 1032. 1955.

Mama's and the Papa's. 'Monday Monday'. RCA Victor Records. RCA-1516. 1966.

ORTOFON 2M MONO CARTRIDGE £240.00

0000**0**

OUTSTANDING - simply the best

VERDICT

Well thought out mono version of the popular 2M series cartridges.

FOR

- fast, quite punchy sound
- very low surface noise
- good detail retrieval

AGAINST

- slightly softened treble extremes

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Sony PCM adaptors

Martin Pipe finds out how home video made digital audio recording a practical possibility in the 1980s



PCM adaptors like this Sony 701ES allowed well-heeled consumers and small studios to make digital recordings for the first time - using commonly-available videotape as the storage medium.

n this Olde Worlde, I'll focus on another product from Sony - the Japanese corporation that has done so much for audio - and, come to think of it, video! This particular product, as a matter of fact, actually bridged the two disciplines. In the 1970s, digital audio was becoming something of a hot topic. Analogue sound recording, in exclusive use at that time, had its limitations - noise of various types, distortion, restricted frequency response, wow and flutter, copying 'generation loss' and squashed dynamics. With digital, you could get rid of all that, it seemed. Sony had in 1977 introduced

- for home use - a digital-audio recording system. The massive PCM-1 was typically partnered with one of those new-fangled Betamax VCRs, but with a combined price pushing \$5000 not many were sold. It looked good with its vertical red bargraph PPMs, while its use of balanced XLR inputs and outputs gave it a professional feel. The PCM-1, which conformed to a newly-ratified EIAJ (Electronics Industry Association of Japan) standard, only offered a 14bit resolution. This was not deemed good enough by professional users, the only guys who could afford the unit. However, it set a precedent. The machine could be used with

any consumer or professional VCR without modification. It did this by turning the digitised audio into a video signal that could be recorded like one from a camera or offair broadcasts. This consists of a complex pattern of blocks divided into vertical columns. The appearance of this pattern rapidly-changes with the incoming audio. Visible alongside is error-correction data that allows the audio signal to be rebuilt in the event of tape dropouts.

Many of the first generation of CDs were mastered using a development of the PCM-1. Introduced in the late 1970s, the PCM1600 series – designed for

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Connecting the 701ES to VCR and audio gear was simplicity – note the use of phono connectors (the audio ones were goldplated). The monitor output enabled you to check the encoded video signal on a TV with AV input, while the 'copy' video output could be used during playback to make a 'clean' duplicate on a second VCR.

use with professional Umatic VCRs – worked at 16bit resolution and sampled at the familiar 44.1kHz (CD's sampling rate was imposed on the industry by these systems – and the picture repetition (field) rates of the worldwide video signals that carried their digitised audio).

The PCM1600 used an incompatible professional version of the EIAJ format, with more robust errorcorrection system than the consumer standard; after all, dropouts and other nasties could ruin a very expensive recording session.

In the early 80s came a video 'boom', and Sony used this opportunity to popularise home-use PCM recording adaptors. The first to gain popularity was 1981's PCM-FI, a compact unit with LCD metering designed to match a portable Betamax VCR (the sort of machine that was used with a separate camera to make home movies – the precursor of the camcorder).

The PCM-FI could capture with 16bit resolution; a 14bit mode was also provided for compatibility with older adaptors. Like the accompanying Betamax recorder, the PCM-FI could be run from a 12 Volt DC source like batteries; as a result, digital 'field' recordings could be made on-location.

Consumers had to wait until the following autumn for CD's official launch; being able to make CD-quality recordings before you could get your mitts on those eagerly-anticipated silver discs must have been exciting. Although they had marginal impact with consumers, smaller recording studios took to them in droves although expensive, they were considerably cheaper than the Sony professional equivalents being installed by the big-budget majors.
 Some effective live albums (including ones with simple 'crossed-pair' mike unit built around a VHS deck; other Japanese firms offered alternatives too.

Although a little tatty, the 701ES photographed here was bought for £15 at a car-boot sale well over a decade ago. This one came from a studio that had gone over to DAT. It still works, which is pretty impressive considering that it's now 30 years old. Not having a manual, it took me a while to realise that if you don't connect it to your video recorder the high-resolution fluorescent levelmeters don't register any input signal - which, additionally, isn't automatically-passed to the output when playback isn't active. Instead, the output and metering is connected directly to circuitry built around the CX20017 multiplexed DAC chip - as used in some early Sony CD players. The interesting result is that, with



Here's the 701ES with top-lid removed, exposing a collection of electronics that was state-of-the-art back in the early 1980s. It runs rather warm in use, and the top ventilation grille must never be covered!

setups) began their journey on a Sony PCM adaptor.

Others were used professionally to send digital audio across video links, while at least one radio broadcaster used them for 'logging' station output on videotape. Although the PCM-FI had obvious advantages, not everyone was totally enamoured with the 'digital sound', and some units were modified with esoteric filters from Apogee and the like.

In 1983 came Sony's fashionably-black PCM-701ES, with a VCR-magnitude price tag. This fullwidth F1-compatible 14/16bit PCM adaptor was intended for use with conventional hi-fi setups. Technics offered competition with a wonderful your VCR attached and set to its AV input (or the video input and output connected with a phono-to-phono cable), what you're listening to has been converted to digital and back to analogue again. I say 'analogue', because neither the F1 nor the 701ES have digital audio connectivity – a subsequent model, the PCM-601, was however suitably equipped.

Build quality, as one might expect of a Sony ES series unit, is serious. There's a massive copper chassis and audiophile components are used liberally; no wonder it's so heavy (nearly 10kg). The headphone socket is accompanied by a switchable attenuator, rather than the more usual continuously-variable control.

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Built around eighties-era audiophile components, this is the 701ES's audio board. Note the use of screening between sections and the early CX899 analogueto-digital converter chips. There's also a CX20017, a single DAC that uses multiplexing ('time-slicing') techniques to alternativelyconvert - at a speed considered too fast for human ears to notice - the left and right audio channels into analogue form. Dedicating a DAC to each channel would have been prohibitivelyexpensive at that time.

Audio connectors are gold-plated phono sockets; a few of these units were modified with XLRs for professional use.

Given the unit's age, its 16bit sonics came as a pleasant surprise. A taut and deep bass, extended frequency response, impressive dynamic capabilities and the replacement of noise with inky blackness must have been a revelation to those hItherto-rellant on cassettes or quarter-inch tape.

It's certainly not perfect, though; high-frequencies occasionally-tend towards hardness with some types of material. And you should never allow those meters 'into the red': digital distortion is much harder on the ears than analogue tape over modulation!

I used mine with a VHS VCR to time shift radio recordings; it sounded far better than the VCR's so-called 'hi-fi' audio system with its nasty compander 'breathing'. That you could cram four hours of continuous digital recording onto one cheap tape (the use of LP VCR modes isn't advised) was an added bonus.

Setting the VCR's tracking control



All that complex circuitry needed a beefy 40 Watt power supply, built around the large screened transformer visible on the top-right. The silver box occupying the left contains the digital circuitry that converts the digitised audio into video. This too was screened to prevent noise from contaminating the analogue audio.



Hard to believe, but what we have here is The Black Keys. This is what PCM audio looks like - after the PCM-701ES has converted it into a video signal that can be handled by a VCR. The complex monochrome pattern of blocks pulsates in time with your sound source.

correctly is imperative; to help you get this right, the right level-meter has a switchable indicator that must be 'peaked' for best results.

But it was worth it; tapes I made with the 701ES years ago still play, which is more than can be said for some of my CD-Rs - which have started to 'rot'; their audio is lost forever. Today, though, we have field recording on inexpensive solidstate media - using 24bit digital converters that are far superior to those ancient CX899s dwelling in the bowels of the 701ES. Sony's PCM adaptors are thus today no more than an interesting museumpiece, unless you have old tapes you want to listen to or convert into a modern format.



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Caples section

ou love 'em or hate 'em. Cables raise some people's hackles, but Hi-Fi World readers tell us repeatedly cables improve their sound and are a great upgrade. So here we are with Loudspeaker cables, interconnects and mains cables, as well as accessories such as connecting blocks in a dedicated section. If you hate 'em - don't look. But if you love 'em you now know where the goodies are.

We will look at affordable products across a single manufacturer's range.

This month Paul Rigby looks at Nordost cables

SPEAKER CABLES NORDOST PURPLE FLARE/NORDOST FREY 2 107

INTERCONNECT CABLES

NORDOST PURPLE FLARE/NORDOST FREY 2 108

POWER CABLES

NORDOST BLUE HEAVEN/NORDOST FREY 2 109

106

SPEAKER CABLES NORDOST PURPLE FLARE



rriving as flatline cables, the Purple Flare features banana plugs and Fluorinated Ethylene Propylene or FEP insulation. Packing in fourteen conductors, it includes a silver-plated, 99.9999 OFC core.

SOUND QUALITY

Using my Tellurium Q Blue as a

reference and playing The Beatles' 'Free As A Bird', on CD, from 'Anthology I', the most noticeable point was Paul McCartney's contribution. The Purple Flare showed fine detail during his acoustic guitar work but with a touch less exuberance, despite being rather lively in the upper mids. McCartney's work on the Oberheim OBX8 analogue synth was intriguing. There was plenty of focus from the Nordosts with similar separation but, again, slightly less verve and passion.

On vinyl, specifically Ella Fitzgerald's 'Bewitched', there was an admirable rendition of the vocal delivery that is tough to do well. The Purple Flares provided that classic presentation but also managed to etch it with emotive detail that gave the song character. The stereo image was rock solid, sitting in a broad soundstage that allowed the piano to stretch and dance, giving the song a swinging backdrop. There was also enough instrumental separation to present the percussion, which was low key and rather lazy, with enough pace to provide key supportive detail.

CONCLUSION

The Nordost Blue Heaven speaker cables provide a considered and detailed examination of music. Focus and instrumental separation were notable highlights.



EXCELLENT - extremely capable

VERDICT

An incisive cable that digs deep into the mix to extract a wealth of detail.

FOR

- detail - focus - generous soundstage

AGAINST

dry midrange

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SPEAKER CABLES NORDOST FREY 2



Iso insulated with FEP, this precision micro-monofilament constructed cable includes twenty-two conductors and is made from tixty micron, silver-played 99,99999%, solid core OFC.

SOUND QUALITY When you fit cables of this level of quality, you really do start to hear the sonic realities, for the first time. The Frey 2s provided a tremendous sense of depth within the soundstage. Be aware, though, that excitable upper mids can be produced if you mix and match cable brands and don't pay attention to other distortion issues. Properly installed, though, the rock solid stereo image provided confidence in the system while a great sense of focus offered excellent tonal characteristics.

A boisterous midrange delivered a wealth of detail. Harrison's rhythm guitar, midway through the song, was clear and distinct while McCartney's bass was solid and foundational.

Turning to Ella Fitzgerald and 'Bewitched', her delivery was effectively handled via the Freys. There was great depth to the soundstage that allowed Fitzgerald to emote effectively, altering the emphasis to accentuate each line or word. Meanwhile, the largely hidden guitar was heard effectively on the periphery of the soundstage while bass was subtle yet generated confidence in the rhythm.

CONCLUSION

A self-assured set of cables that allows the music to flow easily, giving each instrument and vocalist time and space to perform at the best of their abilities.

NORDOST FREY 2 SPEAKER CABLES £2,670 FOR 3 METRES



DUTSTANDING - simply the best

VERDICT

A complex aural layering, during playback, provides a sonic feast for the ears.

FOR

- tonal interpretation - animated midrange
- passionate delivery

AGAINST

- careful set-up

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INTERCONNECT CABLES NORDOST PURPLE FLARE

NORDOST PUPLE FLARE INTERCONNECT CABLES £200 FOR 1 METRE



OUTSTANDING - simply the best

VERDICT

Grabbing the music by the scruff of the neck, the Purple Flare exhibits both control and careful sonic management.

FOR

- focus
- low distortion
- detail

AGAINST - nothing at the price

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he Purple Flare is a fullyshielded design using six, silver-plated 99.9999% OFC solid-core conductors, precision wound in a minimum cross-section configuration, insulated via FEP, and hand-terminated in the USA.

SOUND QUALITY

Using a pair of Epiphany Atratus as a reference and spinning the 'Free As A Bird' track, the Purple Flare provided a mature level of playback, offering a high degree of control over the midrange while providing a richer suite of lower frequencies. Distortion was low which helped to reveal a host of detail in the centre of the soundstage. The vocal performance was quite calming, despite a rather lively upper midrange. George Harrison's Stratocaster guitar provided a welcome extra focus that settled easily into the mix while McCartney's analogue synth displayed a splendid instrumental separation.

Turning to Vivaldi's 'Four Seasons' on vinyl, the interconnects successfully navigated the violin solo which provided a rendition that was neither too aggressive nor too tentative. The emotion from the solo was plentiful while retaining an intimacy and delicacy that suited the mood of the ensemble. Supportive strings provided welcome texture and a sense of depth to the soundstage.

CONCLUSION

The Nordost Purple Flare interconnects provide a welcome focus to any soundstage, giving you a true rendition of the performing instruments.

INTERCONNECT CABLES INTERCONNECT FREY 2

NORDOST FREY 2 INTERCONNECT CABLES £1,150 FOR 1 METRE

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OUTSTANDING - simply the best

VERDICT

Providing a sprightly, clean bass response, the Nordost Frey 2s provide the ear will a full array of detail.

FOR

- shimmering midrange
- detail retrieval
- wide soundstage

AGAINST

- install with care

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uilt with Nordost's proprietary Micro Mono-Filament construction, to create a virtual air dielectric complete with suspension system, the Frey 2 provides silver-plated OFC solid-core conductors and FEP insulation throughout.

SOUND QUALITY

Spinning The Beatles' track, it was noticeable how up-front the midrange was with the Freys. This allowed the midrange details to be pushed from the rear of the mix to provide the ear with a broad sweep of the track's detail. Paul McCartney's vocal solo was etched

with further detail that sat firmly within the stereo image. Treble can be a little fizzy if you neglect distortion in other parts of your system: Nordost is keen on a 'whole system' approach when installing their cables so dealer advice is important. Bass, via Ringo Starr, was clean and fast in terms of transients with admirable weight. Turning to Vivaldi, the entire ensemble shone and fizzed with an enthusiasm and lively nature. You felt that the orchestra were keen to get on with something that they'd really been looking forward to: strings flowed with a underlying strength while violin soloist attacked the music with passion, midrange being clean, open and sparkling,

CONCLUSION

A vivacious suite of cables that will pick up your dozing hi-fi and inject life into it.

108

HI FI WORLD AUGUST 2013

POWER CABLES NORDOST BLUE HEAVEN





ncluding the recognised FEP insulation high-speed, low-loss Micro Mono-Filament construction plus three cores, the Blue Heaven also features 65 strands of 99.9999 OFC.

SOUND QUALITY

Starting the sound quality tests with

The Beatles' (often, in this guise, known as 'The Threetles' because John Lennon was only there in spirit) 'Free As A Bird' and utilising Black Rhodium's Cratos as a reference, the noted Blue Heaven focus was much in evidence. Paul McCartney's vocal solo was direct and fully formed as was Harrison's Stratocaster guitar

solo. McCartney's acoustic guitar rhythm play showed that the Blue Heaven couldn't guite reach those extended upper mid frequencies and that those same upper mids were slightly forward in nature. That said, the Blue Heaven did provide a solid, characteristic bass that rooted the track to the ground, allowing the mids to rotate around them. Playing the Vivaldi Four Seasons vinyl, the violin ensemble confirmed that forwardness within the upper mids but also how much detail that it could extract from the midrange, providing an additional sense of emphasis from the violin soloist.

CONCLUSION

The Blue Heaven power cord has a single-minded approach to sonic replication, providing a slightly bustling approach to detail retrieval while providing the ear with a perceptive approach to the music itself.

NORDOST BLUE HEAVEN POWER CABLE £155 FOR 1 METRE

0000Q

EXCELLENT - extremely capable

VEROICT

Offering a solid, textured suite of low frequencies, the Nordost Blue Heaven exudes energy and vivacity.

FOR

- focus
 characterful bass
- incisive midrange

AGAINST

forward upper frequencies
 recessed midrange

Nordost +44 (0) 1455 283251 www.nordost-cables.co.uk

POWER CABLES NORDOST FREY 2



he Frey 2 uses the Nordost Micro Mono-Filament construction combined with silverplated OFC solid-core conductors and FEP insulation. MMF conductors help dissipate mechanical energy while additional

conductors help further diminish low-level storage.

SOUND QUALITY

The Frey power cable was a bit of a bruiser, hitting the senses with a bass wallop. On The Beatles' track, bass guitar and Ringo's drum kit packed a powerful, mass-laden punch that provided weight to the overall track. The midrange remained open and transparent, allowing detail to flow uninhibited.

The Vivaldi piece was smooth and yet vivacious. There was no sense of familiarity with the orchestra keeping the music vital and alive. The Frey 2 maintained an incisive examination of the strings, providing a delicacy within the treble and upper mids that was quite remarkable at times.

CONCLUSION

The Nordost Frey is a jealous cable. That is, it doesn't get on well if there are non-Nordost cables within your hi-fi system. Ideally, with all of these Nordost cables, you really should also retain a single type throughout in addition to paying attention to distortion. Otherwise, the cables tend to get rather grumpy and shouty. More than any other cables, Nordosts benefit from dealer advice.

NORDOST FREY 2 POWER CABLE £1,350 FOR 1 METRE



OUTSTANOING - simply the best

VEROICT

Big and meaty, the Nordost Frey 2 power cable provides low frequency control combined with transparent mids.

FOR

-bass power -transparency -incisive detail

AGAINST

- Requires careful installation

Nordost +44 (0) 1455 283251 www.nordost-cables.co.uk

free reader Classifieds

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WANTED THORENS 124 or preferably 224 turnable and any interesting valve amps from 40's to 70's. Still looking for the elusive single Radford Auditorium speaker.Will travel, cash waiting. 0117 946 7188 slkw@btinetrnet.com

WANTED LARGE heavy power amplifier Sansui AU717, 919 or AU111, Pioneer A858, Rotel, Luxman, Quad, Leak, also valve pre-amplifier & Linn Sondek turntable or similar Any condition.Will collect. Tel: 01726812966.

WANTED: PAIR moving magnet boards for Naim NAC72, NA322 2mv/47kohm. Cash paid. Tel: Mr Johnston 0141 357 3604 (Glasgow)

BOSTON ACOUSTICS ACTIVE SUB. Can be driven from pre-amp or speaker output. Also has crossover and volume adjustment. Very little used. Offers or p/ex for mains cables. Tel: 01277 219639 (Essex)

PIONEER A502R amplifier, PDS503 CD, F303 tuner, CTS420 cassette. £200 the lot. Project Debut turntable, phono speed boxes, £90. Nakamichi BX2 cassette, £85. Garrard stylus balance, mint, £25. Tel: 01708 457 691 CUSTOM DESIGN Aspect 850, 5 tier hi-fi rack. Mercury colour, some skin oil acid marks. £100. Buyer collects. Tel: 01535 647 210

PROAC RESPONSE D1 speakers. Mahogany. Excellent condition. Boxed. Chord Company jumper leads. £850 ono. Tel: Stuart 07902 684 193 (Pontefract)

CHORD RUMOUR Two speaker cable, 8 metre pair, £70. Russ Andrews Silencer Block Classic Power Cord, £300 ono. Telephone after six o'clock. Graham 01482 641 261

TEAC VRDS 10, cosmetically good but needs surgery. Box, remote etc. Quick sale £35. Sansui TFL5 tuner. Seventies sweetness. £15. Tel: 0751 350 8898

AUDIO NOTE Arm One ALi, boxed, £450. Nakamichi DR3 cassette deck, £85. PS Audio phono amp, GCPH, £375. Clearaudio phono amp. Basic ' Symmetry', £275. Chord Chameleon Silver Plus interconnect, Im XLR, £65.Tel: 01474 326 220

LATEVAN Den Hul Frog Gold cartridge wanted. One requiring repair considered. Tel: 01505 346 791 (Renfrewshire) PS AUDIO GCC250 Class D stereo integrated amplifier. Remote, mint, with box (£2695) £800. Wilmslow Audio Rhythm King speaker, new £900. £500. Jolida 102B, 25 watts, EL84, £300. Wilmslow Audio Foxtex speaker, £200. Tel: 020 8531 5979

KEF REF 203/2 speakers. Mint/unmarked condition including care box and boxes. £2350 ono. Can demo. Tel: 01472 812 776 or 07919 068 595 (Grimsby)

MISSION 792 speakers, matching stands, black gloss, excellent, £350. Four Russ Andrews PowerMax IEC mains cables, 4x £90. Kimber 4VS speaker cable, terminated, 2.5 metres, excellent condition, £60. Tel:Tony 01772 468 116 anytime (Leyland, Lancs)

BOSE 601-111 classic direct reflective speakers. 2 x 8" woofers, 4 x 3" tweeters, 8 ohms, 200 watts handling.Walnut hardwood. 12 1/2" depth, width 12 1/2", height 29". Paperwork. £495. Tel: 01455 220 214 (Coventry)

SOUNDSTYLE AUDIO unit, 6 shelf, £150. Marantz ST17 tuner, boxed, £150. Rotel RB960 poweramps, RC960 preamp, £200. Trichord Dino phonoamp £75. Tel: 07884 410 359 RUSS ANDREWS HP-1 headphone/preamp, PA-1 poweramp. Both very good condition, excellent sound, happily demo. £400 no offers. Buyer collects. Phone for more information, Tel: 01483 891 925 (Guildford, Surrey)

B.A.T. VKD5 SE valve CD player, £600. Boxed with remote and instructions. Uses four legendary 6H30's. Keeps showing 'no CD'. Melody all valve monoblocks. As new, uses four KT88 = 90 w.p.ch each (£8.2k) Asking £2000 the pair. Quad 12E1 N.O.S. valves, (replacement N.O.S EL34) boxed, tested, £65.Tel: 0208 451 0353

NEAT PETITE SX loudspeaker, very good condition, boxed, current model . £700.Tel 01638 668299.

MUSICAL FIDELITY A308CR Pre £745, A3.2CR Power £445, A308CR CDP £775, A3.2RDS Tuner £375 All immaculate, complete, smoke and pet free, Mike (Cheshire) 07500 804700 michael.yates7 @ntlworld.com

SHANLING MC30 Class A music centre recently serviced. £435.00 ono T. 07976 621529. Robert Leeds ! Need sensitive speakers, headbangers need not apply! POWER SUPPLY for CLASS A amplifiers, ideal for John Linsley Hood's 1996/1969 or any other low power class A amplifier. Fully built, ready to use, in self contained enclosure, £279. Tel:- 0207 499 8729.

LYNGDORF SDAI 2175 integrated amplifier, 200w pc 8ohms. Silver facia. Vgood condition, boxed with instructions and remote. £1880 new, £700 ono plus carriage or collect Edinburgh.Tel. 07792414536 or email drherd@talk21.com

DENON AVC-AISR amp, champagne colour. With remote and manuals. £350. Daniel Tel 07767 270242.

KIMBER SELECT KS 3038 2.4m speaker cable £4500 Kimber Select KS 1136 Im interconnect XLR £1150 Kimber Select KS 1036 3/4m interconnect £95 All with cases Kimber select 9033 jumpers £200.01772 314151 (Lancashire) Jamesmckendrick @btinternet.com

ISOTEK TITAN mains conditioner in excellent condition, bought from new, complete with manual and original box. £975 ono. Tel: 01 303 863424

PERPETUAL

TECHNOLOGIES PIA digital resolution enhancer and Benchmark DAC1 with rack ears. £175 and £400 respectively.Tel: 01642 559078 or Email: gravespeter68 @gmail.com

KEF Q100, black ash, brand new boxed. Won in this magazine, documents to prove. Highly rated standmounter. £230.00. This is £150 below retail!! Dave 07884 430988 or 01782 397204 could maybe deliver. TELLURIUM Q Black Im Digital cable for sale. Locking RCA phono each end.As new, only a few weeks old. £195. (new price £390). Pictures available. Home: 01403 711778 Mob: 07813 367409 lyndon.taylor@tiscali.co.uk

PAIR OF AUDAX HM170C from KLS10 Gold. Excellent condition, £130 pair (free postage UK). Includes pair of Audax HD3P Gold-dome tweeters (which have 'wrinkled') on request, at no charge. Mathew on 07624 495398 or 2013@setupost.co.uk

WANTED A faulty or non working Quad 44 preamp later model grey with phono sockets.Contact Mike 01758 613790.

QUAD FM4 late model with grey/bronze buttons and phono outputs. Mint condition. £140.00 Radford STA 25 'Series 3' valve amplifier including hand written servicing details from when it was silver wired. Cherished for 15 years, now sadly downsizing. £1100 ovno Can be seen or collected in Coventry. Tel 024 7667 9165 or 07968769595

FOCAL-JM Labs Profile 908 standmount speakers in Classic with matching Focal S908 stands (£1600), £425 though buyer collects. Boxed with manuals. Best Buy, Hifi Choice. Partington Dreadnought speaker stands (£175), £75 - again, buyer collects. Tel Richard on (07772) 711432 (Bucks) or email richard.schofield @kcl.ac.uk.

LATEVAN Den Hul Frog Gold cartridge wanted. One requiring repair considered. Tel: 01505 346 791 (Renfrewshire) RUSS ANDREWS Yellow mains cable 2m length £40 Also Yellow 6 way extension with 4m cable Super Clamp spike filter £90 buy both for £125 items mint Condition cheaper if collected Tel: 01902 884694 Email: jukey39 @yahoo.co.uk

DENON DVD-A1 DVD player (not Blu-Ray) for sale. Champagne colour with Denon D Link and remote and manuals. £300. Daniel Tel 07767 270242

MICHELL GIRODEC ac motor, serviced in Oct. 2010. Excellent condition. boxed £450.00 AT-0C9ML/111 M/C Cartridge. New condition very little use.£450.00 (new is £540.00) REGA Planner 3, RB300 arm Dynavector DV-20X Low output M/C. Cartridge. Excellent condition. boxed £250.00 Tannoy revolution RV3 floor stand speakers in Cherry excellent condition with boxes £240.00. Email: nigelsach42@tiscali.co.uk Mobile 07917221033 (Wirral).

WANTED: PAIR moving magnet boards for Naim NAC72, NA322 2mv/47kohm. Cash paid.Tel: Mr Johnston 0141 357 3604 (Glasgow)

WANTED THORENS 124 or preferably 224 turnable and any interesting valve amps from 40's to 70's. Still looking for the elusive single Radford Auditorium speaker: Will travel, cash waiting. 0117 946 7188 slkw@btinetrnet.com

CHORD RUMOUR Two speaker cable, 8 metre pair, £70. Russ Andrews Silencer Block Classic Power Cord, £300 ono. Telephone after six o'clock. Graham 01482 641 261

GUIDELINES FOR BUYING AND SELLING SECOND-HAND EQUIPMENT

- I. Not everyone is honest - Buyer Beware!
- 2. Don't send cash!
- 3. Accept no verbal guarantees.
- Have you heard the item or something similar? If not, why do you want it?
- Don't pretend to have knowledge - it's your fingers that will get burnt!
- 6. Is it working? If not, why not? Can it be repaired and if so is it worth it?
- Has it been modified and, if so, have notes been kept?
- 8. Was it any good in the first place?
- 9. Don't send cash!
- 10. If you are in the slighest doubt, arrange an audition (see point 5) If it's too far, wait for another time.
- Either buy it or don't: vendors are excusably impatient with 'consultation' exercises.
- 12. Don't send cash!
- I. Not everyone is honest -Seller Beware!
- 2. Make no verbal guarantees.
- Even 'nearly new' is still second-hand. If the manufacturer's guarantee is no longer in force, your price should reflect this.
- There is very little intrinsic value in secondhand hi-fi; it's only worth what someone will pay for it.
- The best guide to pricing is last month's Classifieds: that a 'classic' was worth £xxx a year or two ago is no guide. Values fall as well as rise.
- 6. Amateur second-hand dealing is not a big money game: you win some, you lose some.
- 7. Be prompt with despatch. If in doubt about buyer's bona-fides, either wash out the deal or send C.O.D.
- 8. There will always be time-wasters; be tolerant within reason!

111

NEXT MONTH SEPTEMBER 2013 ISSUE

Rega have used a high technolog **Balanced Mode Radiator drive un** and Rega tweeter in their new RS 10 loudspeaker - and those are the drivers you can see. Covered in fal ric on the side panel are three mo supporting drive units. Find o what they all do and how the nov **RS-10** sounds in our forthcomin September 2013 issu Teac's UD-501 Digital-t Analogue Convertor is a great D we promised last month - whoop Sorry, we got carried away liste ing to SACD (DSD) music files. T review is sewn up and ready to - see our September issu

Also in the September 2013 issu we hope to bring you

AUDIOLAB M D

VAC PHI200 VALVE AMPLIFIE NEWCLEAR NC1000L AMPLIFI PURE JONGO NETWORK PLAYE PHILIPS FIDELIO X1 HEADPHON ONKYO ES-HF300 (S) HEADPHON FURUTECH ADL H118 HEADPHON MARTIN LOGAN MOTION 15 LOUDSPEAKE PRIMA LUNA PROLOGUE PREMIUM CD PLAY

> This is a selection of what hope to bring you, not a compl list. Unfortunately, we regret t due to a wide range of issu such as failure under review, cannot guarantee all produ listed above will app

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OCTOBER 2013 ISSUE - 5TH AUGUST NOVEMBER - 3RO SEPTEMBER

JIMI HENDRIX

ARE YOU EXPERIENCED? 1967



Mono UK version



Mono USA version

"he began his career as a solo artist in the UK" riginally released on 12 May 1967, in the UK (a significant point which we will get to soon), produced by Chas Chandler, who was also the band's manager, 'Are You Experienced' was one of the most

amazing debut albums in the entire history of Rock (and the first of only three fully conceived studio albums from Hendrix during his lifetime). It also quickly became a symbol of the sixties' cultural renaissance and revealed Hendrix as a guitar-toting genius, the pre-eminent exponent of the instrument and the man who expanded it's creative boundaries while revealing new potential.

Despite a thorough musical apprenticeship working with the likes of Little Richard, King Curtis and the Isley Brothers, Hendrix the 'rock star' seemed to appear, fully formed, into the UK music scene. But that belied the Hendrix capacity to look and learn. "My dad was very, very strict and taught me that I must respect my elders always. I couldn't speak unless I was spoken to first by grownups. So I've always been very quiet. But I saw a lot of things. A fish wouldn't get into trouble if he kept his mouth shut", Hendrix said.

This particular fish was discovered by ex-Animal band member, Chandler, during a stint in New York and became the centre of the new band, the Jimi Hendrix Experience.

The debut album not only revealed the Hendrix guitar technique but also the man's song writing prowess. His work on the album blended essential pop hooks with contemporary, cultural cosmic awareness melded with gentle moments that helped to promote a more balanced personality to a public that, in general terms, was still wary of the culture as a whole. We've all been educated to believe that this new musical culture was part and parcel of society. Not so, as drummer, Mitch Mitchell confirmed, in 1967."In other countries people look and laugh", he said. "Here they give you a hard time. In other countries they say he's probably in a group and excuse you, but not here".

The album showed Hendrix's blues roots but also revealed his so-so vocal performance: Hendrix was no Sinatra. Yet, the melding of gruff vocal and psychedelic wizardry set an eclectic tone that transfixed the entire scene. The release of the album warrants some explanation because it's relatively complex. We Brits can have some pride in our eye for talent because we, frankly, recognised Hendrix for the genius he was. He began his career as a solo artist in the UK and this album was initially released in the UK and Europe via the newly created Track Records. This LP's sleeve featured the cape-wearing Hendrix, sheltering fellow band members: Noel Redding and Mitch Mitchell. The LP flew up the charts, reaching No 2 that same month.

Bassist, Noel Redding, believed that the band was in the right place at the right time, "It was a lapse period. There was not much going on in England then. The fans were looking for something new. We jumped around, looked colourful and got very wellknown very quickly".

It wasn't until Hendrix was seen setting fire to his guitar at the Monterey Pop Festival that the USA finally noticed Hendrix and, even then, Paul McCartney had to insist to coorganiser, John Philips (member of The Mamas & the Papas), that Hendrix appear on the bill in the first place. 'Are You Experienced' was subsequently released in the USA on 23 August 1967, via Reprise. The exploitive sleeve was changed. Keith Ferris' fish-eye lens plus psychedelic font and art 'cashed in' on the new zeitgeist. That wasn't the only change from the UK version. The tracklisting was altered. Three UK hit singles ('Purple Haze', 'Hey Joe' and The Wind Cries Mary') replaced the UK version's 'Red House', 'Can You See Me' and 'Remember' while, oddly, 'Foxy Lady' became 'Foxey Lady'. Hendrix selected the running order for the US version but was unhappy to see the towering blues track, 'Red House', dropped. The album reached No 5 in the US charts.

Hendrix fans will be pleased to see that Music On Vinyl has released both the UK and US versions of the album, complete with changes and tweaks. More than that, both LPs are offered using the original mono masters that only saw limited use in selected territories and for a short period of time. Both will be of great interest to collectors while the final production shows typically fine mastering quality from the company. Superb editions of a ground-breaking album. **PR** The USHER Dancer Diamond Series features the world's first amorphous DLC (diamond-like carbon) diaphrāgm tweeter. This is a tweeter which is second to none in the current market. To find out more, visit www.usheraudio.com or your nearest USHER dealer...



"2012 Editor's Choice" Awards === AUDIO ART

Mīni X Diamond 2woy system: 1.25" Diamand DMD dome tweeter , 7" midrange Sensitivity: 87 dB @ 1 watt / 1m Nominal impedance: 8 ohms Frequency response (-3 dB): 41 Hz ~ 40 kHz Päwer handling: 100 wats Crossover frequencies: 2.3 kHz Weight: 15.5 kgs/34.2 lbs. per piece Dimensions (w x d x h): 26 cm x 37 cm x 43.5 cm;

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Dr. Joseph D'Appolito a world renowned authority in audio and acoustics designs the crossover and performs prototype testing/final fine tuning for Usher Audio. Consulting to a couple of famous audio companies, Joe always finds the tremendous value Usher Audio products represent a delightful surprise in today's high end audio world.

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"BOY OH BOY, CAN I EVER RECOMMEND THIS AMP!" STEREOPHILE

The living heart of your sound system.

hen Herman van de Dungen founded PrimaLuna, his mission was to create affordable valve amplifiers and CD players that not only harnessed the sheer, sensual musicality of valve technology, but also defied the issues of reliability that sometimes accompany it.

PrimaLuna's Prologue and Dialogue ranges continue to expand, featuring ground-breaking advances such as the unique Adaptive AutoBias[™] circuit that allows easy switching between valve types and the jitter-reducing SuperTubeClock[™], exclusively incorporated into PrimaLuna's CD players. These innovations help create a benchmark-setting suite of products that builds on the marque's past triumphs, combining excellent sonic definition with a beautifully balanced tonality.

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