

# HI-FI WORLD

JULY 2013

UK £4.10

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**WILSON BENESCH FULL CIRCLE**  
turntable



**KEF LS50**  
standmount loudspeakers



**ASTELL&KERN AK120**  
portable player **EXCLUSIVE!**

**PHONDE & SCHWARZ**  
MEASUREMENT



**EXCLUSIVE!**

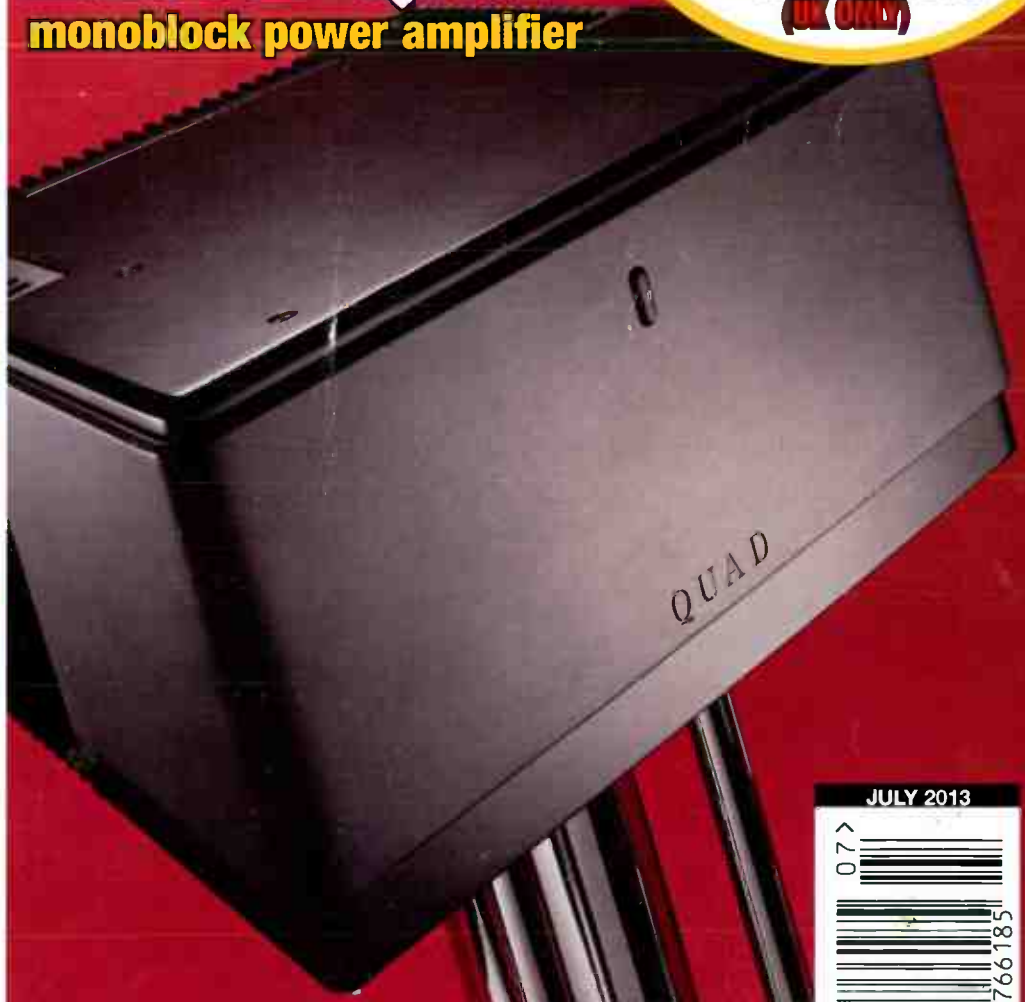
## QUAD ELITE QMP

monoblock power amplifier

**COMPETITION**



**WIN A ASTELL&KERN  
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**SANSUI DR201V DAB/FM TUNER** **EXCLUSIVE!**

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**NAD C390DD DIRECT DIGITAL INTEGRATED AMPLIFIER**



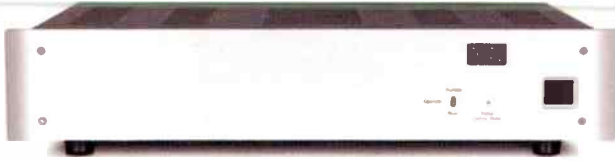
**11 PAGES OF LETTERS - THE BEST WINS A PAIR OF  
KEF Q100 LOUSPEAKERS! (UK ONLY)**



## TP-2.5 series II

Phono pre-amplifier

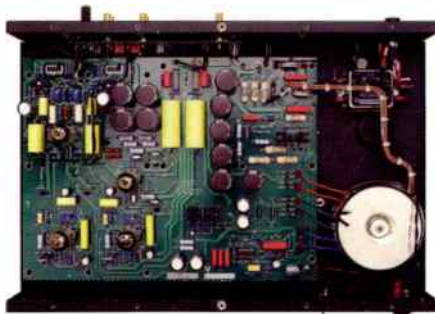
**A new entry point to true High-End analog sound...**



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*



- 60 watts into 8 ohms
- Remote control volume and mute
- Buffered pre-out





# welcome

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## verdicts

●●●●●	<b>OUTSTANDING</b>
●●●●	<b>EXCELLENT</b>
●●●●	<b>GOOD</b>
●●●	<b>MEDIOCRE</b>
●●	<b>POOR</b>
£	<b>VALUE</b>



Quad is a venerable British name that's been associated, tongue-in-cheek, with the "pipe and slippers" brigade. That was some time ago, by an illustrious editor I worked for who used a Naim six-pack and a pair of Linn Isobariks with which to bludgeon himself to death. Well, in truth he survived and used me to represent alternative art forms like valve amps, electrostatics and Quad amplifiers, such as Quad 33/303s and 405s.

The new Elite QMP monoblocks in this issue continue to use Quad's own 'Current Dumping' patented circuit topology, first used in the 405. If in the past this appealed to the "pipe and slippers" brigade, today the world has moved on. The Elite QMP monoblocks we review on p10 have an almost unique strength in being able to cope with modern electrostatics, providing a great sound in the process.

Do please see our High End Show report from Munich on p52, for the world's most extraordinary amplifier. It stands 8ft high, runs in Class A and produces a mere 60,000 Watts. Switch off and it folds down to just 6ft tall, so you won't notice it. Somebody did point out that on loud passages this amplifier would draw 240 Amps and blow the 60 Amp main fuse of any home, so you'd need to live in a factory to use it. Don't ask about which loudspeakers might be compatible.

What more can I say about the Astell&Kern AK120 in this issue, reviewed on p14? Well, I can say that one reader has already complained that by not mentioning other high resolution players we must be biased! I'm sure we will review other players in due course. iRiver, the company that designed it realised that only Hi-Fi World could measure its advanced performance – and this was important to them. At launch our review was read across Korea and Japan. We are very happy to be able to bring it to you in a World exclusive.

The world moves on and Hi-Fi World moves on with it. This issue carries some great reviews and features that I hope you enjoy.

**Noel Keywood, editor**

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

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

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

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

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



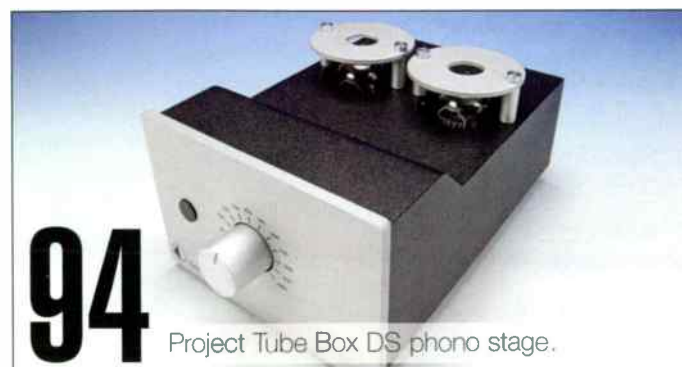
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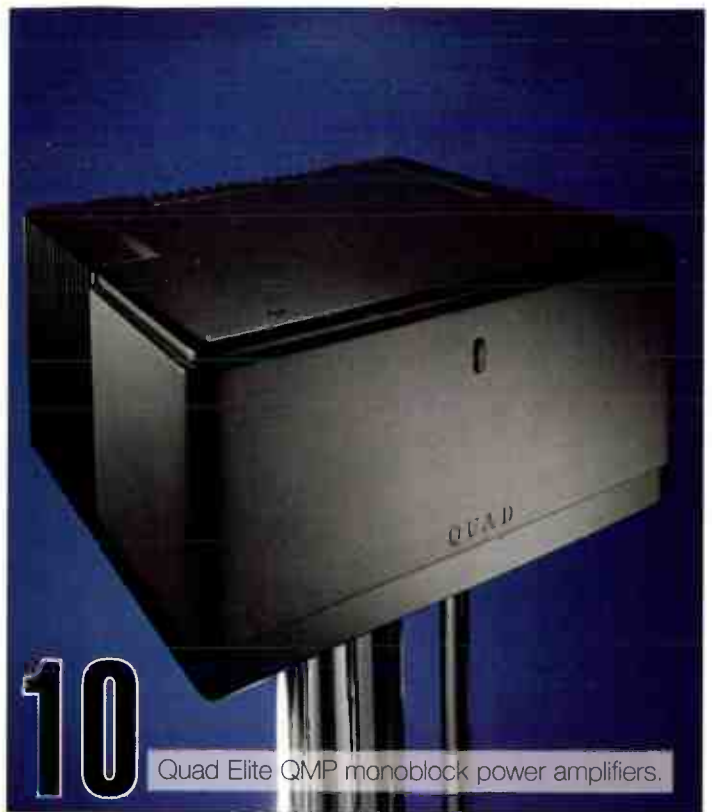
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email:news@hi-fiworld.co.uk

# news

## TEAC TRIO

TEAC has unveiled three new Reference series additions. The NP-H750 is the latest addition to TEAC's Reference 700 series line up. Featuring AirPlay (for iOS devices) and Wi-Fi, the NP-H750 combines a 40W analogue amplifier designed using selected Elna Silmic audiophile capacitors. As well as full wireless/wired compatibility with iOS devices, owners can stream music from DLNA-certified devices (i.e. PC/NAS) as well as connect directly to Windows PCs/Macs via USB (asynchronous). Capable of playing any content of up to 24-bit/192kHz, the BurrBrown PCM1795 DAC sits next to a built-in vTuner Internet radio facility offering 20,000 stations.

The CD-H750, includes mid-mounted CD drive supported by a BurrBrown PCM1791A. Connect an iPod/iPhone to the CD-H750's front USB socket and the DAC will take a digital

feed from your iOS device and replay it with, says the company, a higher quality than is possible via the device's onboard headphone output. Finally, put a CD in the tray and you can record the music on it directly to a USB stick as an MP3. Choose from 64/96/128/192 kbps bit rates.

Finally, the CR-H260iDAB includes a 25W Class-D amplifier, a CD player, a dedicated SD/SDHC card reader that allows MP3/WMA playback while the USB port is iPod/iPhone/iPad-friendly (and charges your devices into the bargain). There's also a DAB/FM/AM tuner and Bluetooth streaming.

All available in black or silver, prices include: NP-H750, £600; CD-H750, £300 and CR-H260iDAB, £400. For more information call 08142 4208 141 or click on [www.teac-audio.eu](http://www.teac-audio.eu).



## QUAD L-ITE PLUS

The Quad L-ite Plus consists of four satellite speakers for the front and rear plus a matching centre speaker and a compact active subwoofer. Driver technology developed from Quad's latest Classic 'speaker range includes a long-throw mid/bass driver (one in the satellites; two in the centre speaker) with 100mm cones made from Quad's proprietary bi-directional Kevlar weave.

An all-new active subwoofer complements the L-ite Plus satellites and centre speaker. It packs in two mechanically opposed bass drivers with 150mm Duo Tri-Lam cones, a composite cone structure plus an integrated 200W amplifier. Available in three colour options: high-gloss black, high-gloss white and high-gloss ruby red, prices are: Quad L-ite Plus Satellite, £249.95 per pair; Quad L-ite Plus Centre, £199.95; Quad L-ite Subwoofer, £599.95; Quad L-ite Plus 5.1 speaker system, £1199.95.

Click on [www.quad-hifi.co.uk](http://www.quad-hifi.co.uk) for more information.



## ARCAM rBLINK

The Arcam rBlink Bluetooth audio converter uses the aptX transmission system to allow any Bluetooth-equipped music device to send music straight to a hi-fi system. The rBlink uses a PCM 5102 DAC to convert music to a line level output ready for connection to audio systems and a new Bluetooth chip set from Cambridge-based CSR, the Blue Core 7 which, says the company, reduces noise and distortion. Spanning 75 x 100 x 26mm, weighing in at 350g, and including phono and coaxial connections, the rBlink is priced at £160.

Click on [www.arcam.co.uk](http://www.arcam.co.uk) for more information.



## AURUM BASE TITAN

Shown at the recent Munich High End Show, Aurum's Titan VIII is a centre speaker for a surround-sound set up. It features a Titan ribbon tweeter, an Altima 170 chassis and two 260mm Altima subwoofers. The Aurum Base Titan can also be used vertically to create a 'sound front' using three Titans as the front-left, centre and front-right speakers, positioned at the same height. Price is £4200. Tel: 01785 748 446 or click on [www.quadralgb-ie.co.uk](http://www.quadralgb-ie.co.uk) for more information.



## CANOR TP306VR+

The Canor TP306VR+ is an all-valve phonostage featuring valve rectification and CMT (Canor Milling Technology): areas of the circuit board are precisely removed to give the circuit similar electrical characteristics to one direct wired with air dielectric cables. To tackle microphonic distortion, the company has also fitted compliant rubber mountings.

The mains transformer features grounded double copper foil internal shielding together with a screened housing to protect

against electromagnetic noise. A vacuum impregnated core, potted in an anti-vibration compound, combats mechanical noise. Available in black and silver and supplied with a remote control, the unit is priced at £2750.

For more information call 01276 501 392 or click on [www.soundfoundations.co.uk](http://www.soundfoundations.co.uk)

## SERENE SPEAKERS

New from Serene Audio are speakers that comprise conventional passive and powered versions of three new shapes. The Paisley, Pebble and Talisman are single drive units, rear ported and filtered. They vary from 16.5cm tall (Pebble) to 27cm tall (Paisley). The enclosures are constructed out of engineered bamboo and leather in combinations of natural or caramel bamboo and black or white leather.

The powered versions feature a 20W amplifier that incorporates an internal signal processor and sensed subwoofer port. If a subwoofer is plugged in, the signal processor automatically cuts-in a 120Hz high pass filter and sends the lower frequencies to the subwoofer port making connection and setup of an external subwoofer simple.

Prices vary from £299 for the passive version of the Pebble and Talisman to £419 for the powered version of the Paisley. Call 0118 982 0402 or click on [www.hificinema.co.uk/brands/serene](http://www.hificinema.co.uk/brands/serene) for more information.



## DAMSON PORTABLE SPEAKER

Portable Bluetooth-capable speakers are, it seems, a bit of a trend. Damson's Oyster appears within a distinctive chassis (measuring 230 x 100 x 166mm) which houses two 51mm, front facing 10W midrange drivers, two sideways firing, 38mm tweeters and a rear passive radiator subwoofer. Supporting the Apt-X driver and including a twelve-hour battery life, the Damon Oyster fetches £180.

Click on [www.advancedmp3players.co.uk](http://www.advancedmp3players.co.uk) for more information.

## OYAIDE PAIR

Two new accessories from the Japanese outfit.

Firstly, the BR-12 is a turntable mat plus stroboscope-measuring device

that sits on top of the

mat. The BR-12 takes many of its basic design facets from the successful MJ-12 aluminium turntable sheet but this new variant is made from a butyl rubber sheet, with its anti-slip abilities, infused with the anti-vibration characteristics of tungsten. A PP-coated paper stroboscope is also included to address any speed issues. Price is £90.

Also look out for the MWA-RC. Arriving in a pack of six, each one fits over any unused RCA socket. They act as a dust cap but they also reportedly absorb EMF to improve sound quality. Price is £15 for a set of six. Click on [www.blackrhodium.co.uk](http://www.blackrhodium.co.uk) or call 01332 342233 for more information.

## EARPHONE FIRST

XTZ's first earphone, the cannot obtain a perfect cushions. Each changes the The units have magnets fitted the earpiece from your neck to stop one or both

Also look out for the iOS. With it you can listen to of your EarPhone-12, correcting the frequency and the impulse response in software. Click on [www.xtz.se](http://www.xtz.se) for more information.



EarPhone-12, uses the outfit's MH-800 DSP system (the company is insistent that you frequency response in an earphone without DSP) plus three different rubber ear sonic character so the larger the cushions, the more bass you will hear. to the rear of the earpiece. If you have to interrupt your listening, you remove ears and connect the two magnetically together and wear them around your units flailing around.

XTZ player, powered by Dirac for the EarPhone-12, a DSP player app for all your music in your iTunes library with the added benefit of DSP correction





## SVS SPEAKER RANGE

SVSound has released a new range of speakers utilising custom-designed drive units and crossovers. The Ultra Tower is a flagship 3.5-way tower loudspeaker with a 25mm aluminium dome tweeter (utilising a Finite Element Analysis-optimised diffuser), dual 165mm glass-fibre midrange drivers, 89mm flared rear-firing port and dual horizontally-opposed 203mm woofers. Standing 114cm tall and with an upswept trapezoidal shape in piano gloss black and real black oak veneer finishes, each cabinet employs two separate sealed midrange enclosures; midrange/tweeter baffles are 25mm thick and the woofer baffles are 38mm thick.

The woofers are horizontally opposed in a 'ForceFactor' configuration, which, says the company, results in mechanical force cancellation for reduced distortion.

The Ultra Bookshelf, developed in parallel with the tower, is a two-way reference monitor system in a trapezoidal cabinet, finished in a choice of piano gloss black and real black oak veneer. The system offers the same tweeter and a single glass-fibre woofer and SoundMatch crossover, together with a 43mm flared reflex port.

Price for the tower are £2,200 with the bookshelf speakers at £1,099. Call 01423 358846 or [info@karma-av.co.uk](mailto:info@karma-av.co.uk) for more information.



## LITTLE & LARGE

The new BTP03, in Hercules' WAE, Wireless Audio Experience range, includes a high-capacity rechargeable battery, can stream nearly fifteen hours of music from your mobile Bluetooth device, pumps out 12W and allows you to connect multiple BTP03 speakers to one another for joint playback. It includes a hands-free calling function, connection to a hi-fi system using a mini-jack and Bluetooth receiver to stream music. Bluetooth A2DP multipoint technology also lets you connect two phones at the same time.

Hercules has also developed the WAE Remote – an App that's compatible with both iOS and Android. Price for the BTP03 is £110.

The smaller BTP03 Mini features two active drivers and dual bass reflex ports. You can also connect multiple BTP03 Mini speakers to one another for joint playback plus hands-free calling, remote App and a hi-fi connection. Price is £70.

Click on [wireless-audio.hercules.com/wae.php](http://wireless-audio.hercules.com/wae.php) for more information.



## THINK THINKSOUND

The US headphone brand, Thinksound, has announced the UK release of the ms01 in-ear monitor featuring 8mm high-definition drivers. For a secure fit, the ms01's come packaged with a choice of four sets of flexible silicon ear fittings. The ms01 features chocolate-coloured hand-crafted wooden housings made from renewable resources and gunmetal-finished aluminium baffles. Passive noise cancellation is included. Light in weight (9.5g), the Active Lifestyle Ear Hooks mean they won't slip off, even during the most strenuous workout. Also included is a Kevlar-reinforced, tangle-resistant, four-foot long cable. Price is £115.

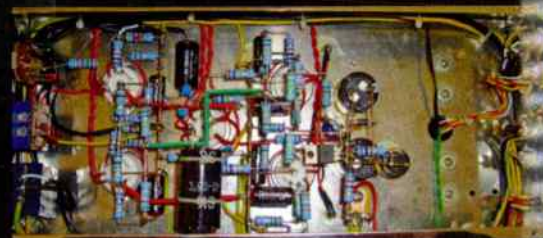
Click on [www.thinksound.com](http://www.thinksound.com) or follow on Twitter via [@thinksound](https://twitter.com/thinksound) for more information.

## LUXMAN PRICE CORRECTION

The price of the Luxman DA-100 DAC reviewed in last month's issue should have read £930. Further details on the product are available from Select Audio Tel: 01900 601954

## MING DA REVIEW CORRECTION

In our review of the Ming Da phono stage, p91 of our May 2013 issue, we accidentally used an underside shot of an Icon Audio MB30 amplifier (see this issue), Icon Audio have asked us to point out. Whoops! Sorry chaps. Below is the correct picture.





## ATLAS NEW ELEMENT USB

Atlas Cables has announced new USB cables called Element. To reduce jitter between components, each is made up of parallel twisted-pair silver-plated high-purity OFC copper conductors encased in a high quality foamed Polyethylene dielectric. Atlas has paid particular attention to ensure that every conductor is identical in length, to reduce the time difference between each pair to reduce the 'skew effect', which is typically to blame for jitter.

Prices are: 0.5 metre, £35.00, 1.0 metre, £37.50, 1.5 metre, £42.50, 2.0 metre, £47.50, 3.0m, £57.50 and 5.0m, £77.50  
Call 01563 572666 or click on [www.atlascables.com](http://www.atlascables.com) for more information



## LITTLE BLACK NUMBER

Avid have succumbed to demand by issuing an all-black version of its Acutus turntable. The release is now possible due to the complexity in perfecting the standard of finish required. The Acutus SP Black and Acutus Reference SP Black are available now for £12,000 and £17,000 respectively. Contact AVID HIFI via [conrad@avidhifi.co.uk](mailto:conrad@avidhifi.co.uk) or 01480 869900.

## SNIPPETS

Hartvig, producer of the audiophile, TT Signature turntable, has announced the release of the new baby brother turntable, called simply the Hartvig TT in addition to the Hartvig Master Reference Platform – a platform for audio devices which aims to eliminate vibrations from the surroundings. More details and prices to follow but check out the website on [hartvigaudio.com](http://hartvigaudio.com).

Also take a look at Hi-End Racks that are offering a range of high-end supports that range from around £950 for a single shelf to around £3,800 for a five-shelf system. The system features advanced spike geometry; spike resonance damping, structural resonance isolation and solid brass insert tips. Check out [www.hiendracks.com](http://www.hiendracks.com).



## SPHINX HYBRID AMPLIFIER

From Rogue Audio, the Sphinx is based on a vacuum tube input stage while the output stage is Class D delivering 100W. The Sphinx contains a discrete headphone amplifier and a phono-stage compatible with high output MM and MC cartridges. Active and fixed outputs allow for the addition of a subwoofer or other outboard devices. The machined aluminium faceplate is available in

either black or silver. A remote is supplied. Price is £1,499.

Call 020 8948 4153 or click [www.audiofreaks.co.uk](http://www.audiofreaks.co.uk) for more information.

## iRIVER GOES WIRELESS

A new, dinky, portable wireless speaker from iRiver, the IBA-50, features two, 175mm speakers backed by 2W of power. Measuring only 175 x 75 x 70mm, the IBA-50 also features Bluetooth compatibility and battery power that lasts for eight hours. Devices can be paired via Bluetooth or connected via the supplied Aux sockets. Price is £69.

Click on [www.advancedmp3players.co.uk](http://www.advancedmp3players.co.uk)





# Mono mania

**Quad has expanded its top-of-the-range Elite series of solid-state components with a pair of powerful monoblock amplifiers. Jon Myles takes a listen.**

**M**ention Quad to most audiophiles and they'll probably conjure up images of big electrostatic speakers and ground-breaking valve amplifiers. They'll also probably think quintessentially British and an overall safe, satisfying sound.

Few would argue that during its 70-odd years of innovation the company has produced some of the most iconic products in the hi-fi canon.

Despite that reputation Quad is not one of those companies that sees the need to revamp its line-up every other year whether it's actually

bringing anything new to the party or not. Instead it tends to look to evolution rather than revolution as the key to its business – introducing new products only when they genuinely believe they offer a sonic improvement from what's gone before.

So when it comes out with a



whole new product range it has to warrant serious attention – as is the case with the Elite series of components.

First introduced in 2010 as replacements for the well-regarded 99 series the Elite range has since grown with the popular 909 stereo power amp being replaced by the Elite QSP just last year.

Now Quad has topped the range with the Elite QMP monoblocks costing just short of £1,200 each and rated at 260 Watts into an 8 Ohm load.

Like the rest of the Elite components they are subtly understated, available in black only with the Quad legend laser-etched on the solid front panel which also houses the rocker-style on/standby switch.

Round the back the QMPs can be connected with the usual phono or XLR balanced inputs but Quad's preferred hook-up (especially when used with other Elite components) is its own Ampbus/QuadLink series cable. This utilizes a 15-pin D socket on the back of each unit which is linked to the next component in the chain via a supplied cable carrying balanced audio and control signals.

In an all-Elite system this gives the advantage of everything being controllable from a single remote – but some will undoubtedly prefer to try their own cables in the more conventional method.

## CURRENT DUMPING

Key to the QMPs' design is Quad's patented current dumping technology developed by the company's legendary founder Peter Walker.

In brief, this is essentially a combination of two amplifiers – one low and one high-powered – in each channel aimed at harnessing the best of both approaches.

In the QMP's current dumping circuit a very high quality class A low-power amp provides the details of the signal, while a high-power current dumping section provides the grip to keep the speakers under control. The two amplifier circuits are combined with a precision network to perfectly impose the finesse of the class A output onto the power of the current dumper.

Quad says this technology eliminates the problems of crossover distortion, quiescent current adjustment, thermal tracking and transistor matching. Consequently there are no internal adjustments or

alignments and the choice of power transistor types is less restrictive. The topology first saw the light of day back in the 1970s and has been constantly improved and refined by Quad over the years.

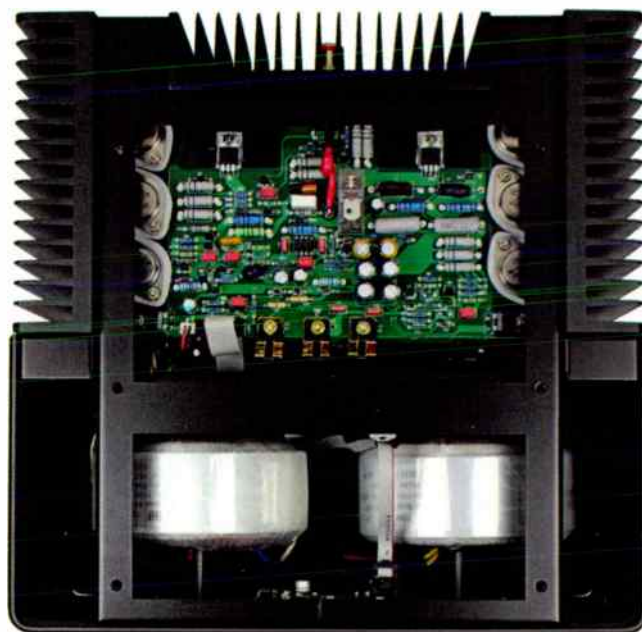
## SOUND QUALITY

Quad supplied its own Elite pre-amplifier for this review and hooked-up via the aforementioned Ampbus balanced connection there's an immediate synergy with the QMPs.

the varying tempos handled with reassuring aplomb.

That Class A front-end manifests itself in a welcome ability to portray nuances and shadings within individual passages while the clarity on offer brings out subtle musical clues often missed by other big power amplifiers.

PJ Harvey's 'Let England Shake' is a case in point. There's a lot going on in this collection but lesser amplifiers can sometimes tend to reduce it to a wash of sound – whereas the Quads



*A substantial power supply incorporating twin toroidal transformers helps provide the 260 Watts of output.*

"from top to bottom of the frequency range there's a pleasing clarity and openness to the sound which translates into excellent detail retrieval."

With 260 Watts per channel on offer the Quads have the power to grip almost any speaker with relative ease – but they do it in a confident, almost understated way instead of attempting to impress with sheer brute force.

From top to bottom of the frequency range there's a pleasing clarity and openness to the sound which translates into excellent detail retrieval.

The Radio String Quartet Vienna's superb new album 'Posting Joe Celebrating Weather Report' came over as richly faceted with

clearly delineated the various strands allowing instruments to breath and communicate the interplay at work.

And when needed the QMPs are not shy at driving forward. Throw on Primal Scream's latest 'More Light' and they drive the music forward inexorably hooking on to the incessant rhythm of the opening '2013' and never missing a beat. They manage to go low with ease without ever sounding bloated or overblown.

In fact, there's a very unfussy quality to the bass that seems to be factor of the overall clean nature of the Quads. Play anything with

# icon Audio



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*designed by David Shaw*

Early production photos. Showing PS3 upgraded version with JJ and Treasure tubes, and Jensen Copper foil in paper and oil caps. Iron Audio MC transformers

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This year marks the first major update we have made in order to make some improvements to the power supply and circuit whilst updating the looks to match our other products.

The brilliantly conceived 1950's RIAA equalisation for LP reproduction calls for a simple low noise valve stage which attenuates treble according to frequency. This may be done easily with three valves preserving the minute musical details recorded in the groove giving a "warmer" satisfying sound without emphasising surface noise and scratches that older vinyl is prone to have. Whilst technically speaking modern solid state designs work well, their more complex design "loses" something in comparison and can sound cold, clinical and uninteresting, lacking the passion and emotion in the music whether it be Vivaldi or the Verve.

As has been often been stated: whilst the Compact Disc is stuck with its 1977 software. With vinyl new stylus shapes new tone arms keep pushing the boundary on what can be recovered from an LP groove. At Icon Audio we too are striving to this end. As the definition of equipment improves we have refined our designs to maintain the focus and presentation to be without any "mechanical" or contrived quality.

**The PS2 improved.** Comes with an all important substantial power supply, a carefully tuned circuit all hand wired, with selected valves for optimum performance with moving magnet or high output moving coil designs. "RECOMMENDED" Hi Fi Choice 2013.01

**The PS1 MK II.** Our original design updated with improved separate power supply including a very special "choke" and now with valve regulation. This may also be fitted with high quality British made moving coil transformers, or our "premium" type suited to the finest moving coil pick up cartridges.

MK I version: "5 Globes £" Hi Fi World 2010.08

**The PS3 Mk II.** This design is unique in having a "state of the art" power supply. A valve rectifier, two very special "chokes" for ultra smooth power, a unique pure valve referenced and regulated circuit to give current of the very highest purity. Our very low noise high definition pre amplifier then uses the superb 6SN7 output valve. Optional British made moving coil transformers, or our newly developed "premium" type suited to the finest moving coil pick up cartridges.

MK I version: "OUTSTANDING PRODUCT" Hi Fi News 2010.07

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. All of 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. High quality components are used throughout including an "ALPS" volume control, silver plated PTFE audio cable SJB capacitors audiophile resistors. A choke regulated power supply adds richness to the sound quality that silicon devices alone are unable to do. Bespoke upgrades available including silver/copper capacitors, valves and design. All original designs by David Shaw made exclusively in our factory.

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**Input options include phono, XLR and Quad's own proprietary Ampbus control and balanced signal connection.**

a pronounced low-end and they'll reproduce it in a clearly-focussed and well-pitched fashion without making it so strong it overwhelms everything else going on or threatens to slow the tempo of the music when it shouldn't.

That's a quality that stays true no matter what loudspeakers you choose to pair them with. Driving a pair of standmount Wharfedale Diamond 122s they managed to highlight their attributes without revealing too much of the naturally curtailed frequency extremes.

Moving up to a pair of remarkable (and rather more expensive) KEF LS50s, they Quad's showed just how good the sound from this mini-monitor can be. Pair them with something at or even well above their own price range and the Quads will continue to give. John Rutter and The Turtle Creek Chorale's 'Requiem' through a pair of Spendor SR100 MkIIs was vast in its scale and scope with the assemblage of voices and deep acoustic space combining for a truly magical experience.

As power amplifiers at this price the Quads are clearly doing something very right indeed. In the final analysis they may not have quite the glacial, hear-through quality of, say, a Chord SMP1200 MkII – but then again nor do they cost as much as that £8,000 behemoth and some will undoubtedly prefer the Quad QMPs' warmer quality.

**CONCLUSION**

The QMPs are a very accomplished addition to Quad's relatively new Elite range.

They are supremely well balanced managing to sound detailed, subtle and polished while retaining a good

sense of rhythm and timing.

They are as adept at driving an up-tempo, bass-heavy rock track along as they are at unravelling light and shade in more nuanced recordings while the meaty reserves of power mean there's no shortage of grunt on hand for big orchestral crescendoes. That even-tempered manner also makes them relatively speaker agnostic – as happy with small mini-monitors as they are with bigger multi-cone arrays.

They may sound just a shade less dynamic than some competitors at first hearing – but that's likely to translate into much more enjoyable, less fatiguing long-term listening.

Pair them with Quad's own

**NOEL SAYS -**

I pressed the QMPs into service in our office system, driving Quadral Wotan VIII loudspeakers, with their revealing ribbon tweeter. My immediate and lasting impression was of a big bodied, easy going sound that was smooth up top and very easy on the ear. In fact, they reminded me of my dearly beloved (but now departed) Quad 303s: powerful, svelte and safe. Only the QMPs have more grunt, good stage depth and an all-embracing quality that will soothe the ears of classical fans and appeal to Rockers who haven't gone deaf from standing next to a 'Quo bass bin back in '78 and need piercing treble.

They have been tested extensively with Quad Electrostatic loudspeakers and can handle the capacitive load; Quad told me they have a wide stability margin and can push high frequency current. They also have plenty of power.

Elite pre-amplifier and you have the basis of an extremely good system which combines ease of control with a rich, satisfying, thoroughly musical performance. Definitely worth hearing if you value power and control in one smart package.

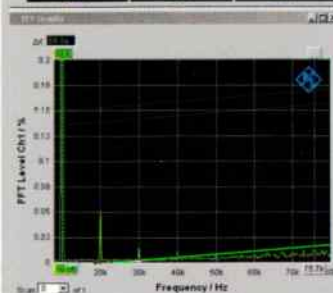
**MEASURED PERFORMANCE**

The Quad Elite QMP Mono power amplifier produces 264 Watts into 8 Ohms and 324 Watts into 4 Ohms so it has plenty enough power for Quad's own electrostatic loudspeakers, and even very insensitive Kingsound rivals, like the Prince II.

Distortion levels were low under all conditions and at 10kHz, 1 Watt, the QMP produced mainly second and third harmonics our analysis shows,

**DISTORTION**

THD total	Level (dB)	Frequency
0.0733 %	1.9161 V	10.000 kHz
OFF	OFF	OFF



measuring a low 0.07% in total. There was little sign of crossover distortion in the distortion residual produced by another analyser, and the residual did not change in harmonic content with level – always a good sign.

Frequency response reached an upper limit of 46kHz (-1dB) so the QMP matches the bandwidth of high resolution digital. It reaches down to below 2Hz so there is no effective low limit. Damping factor at 40Hz was a very high 80.

Both the unbalanced phono input and balanced XLR input had an input sensitivity value of 1V, needed to achieve full output.

The Quad QMP Mono measured well in all areas. It should sound smooth and powerful, and it can handle all loads. NK

<b>Power</b>	<b>264watts</b>
<b>Frequency response</b>	<b>2Hz-46kHz</b>
<b>Noise</b>	<b>-104dB</b>
<b>Distortion</b>	<b>0.07%</b>
<b>Sensitivity</b>	<b>1V</b>

**QUAD ELITE QMP MONOBLOCK AMPLIFIER £1,195 EACH**



**VERDICT**

A pair of monoblocks with power, precision and control. The latest implementation of Quad's current dumping topology is very accomplished indeed.

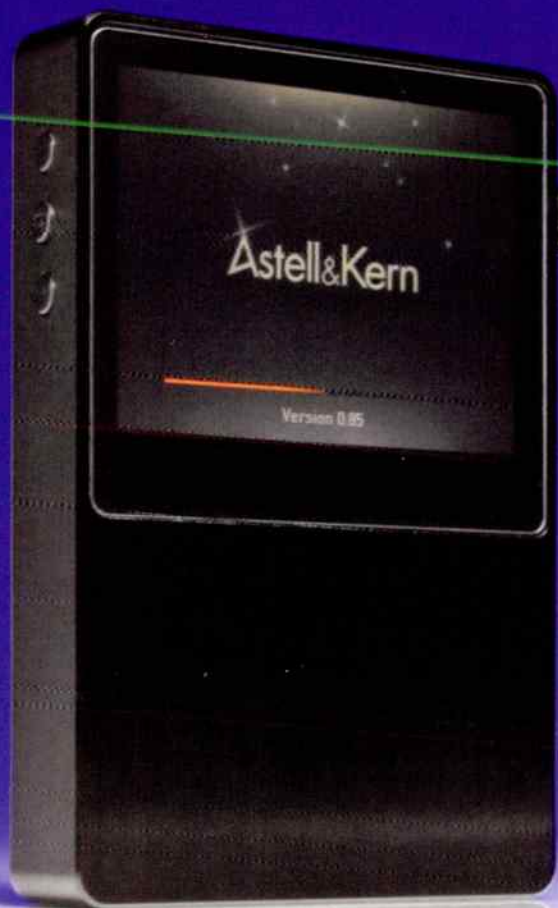
**FOR**

- exceptionally clean, clear and articulate sound
- well-focussed, tuneful bass
- ease of use with other Elite series components

**AGAINST**

- some may crave slightly more dynamism
- little else at the price

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# Line Ahead

Up-rated line amplifiers put the new Astell&Kern AK120 portable music player ahead of the field. Noel Keywood has the numbers.

**B**ack in our March 2013 issue I was stunned by the quality of the Astell&Kern AK100 portable music player. It plays the highest quality digital formats available and has a headphone output with sound quality that blows others away. Now, iRiver (Korea), makers of this player, have released a 'better' model, the new AK120 reviewed here. I was a bit puzzled by this, since there wasn't so much you could do to the AK100 to improve it.

Having measured the new AK120 thoroughly, I see what iRiver have on their mind. The company is technology driven; no one puts top Wolfson DACs into a portable player. They are serious audiophile items. If you want to inhabit this top-end territory, you have to pay attention to the numbers. The only valuable F1 car is the one at front and it's lead can be slender. I said in our original review the AK100 "approaches the limits of what's possible", so whilst being way better than any other portable it still wasn't technologically in front of the best stand-alone hi-fi DACs. Well, the AK120 has been devised to run at the front – and

that's why at £1140 it is double the price of the AK100.

In the AK120 iRiver have come up with a digital player able to deliver the very best from high resolution digital music. This is a serious audiophile device that can be used both as a portable and a top quality digital player good enough to feed a top quality hi-fi system: think of it as a high resolution CD player and you start to get where iRiver are coming from.

As audiophile CD players go, the AK120 is not expensive, yet it plays digital files right up to 24/192 quality, where CD is limited to 16/44.1 – the best possible in the early 1980s. So where the AK100 is a great quality portable, the new AK120 is a top digital player that is also portable – and it sounds way better than CD. But then, since it arrived 30 years later perhaps we shouldn't be surprised.

To lift quality further, new output stages have been used, to better complement the twin mono Wolfson DACs. As a result the AK120 is slightly larger than the '100, measuring 89mm high, 60mm wide and 15mm deep. Height has grown by 10mm, the 100 being 79mm high.

Note that the width value is that of the case only, it does not include the volume knob that adds another 5mm. That still makes the AK120 easily pocketable and at 126gms it feels weighty but isn't actually heavy.

On board is a 2000 mAh Lithium Polymer 3.7V re-chargeable battery to keep the player boogying for up to 16 hours, iRiver claim, and I recorded 14.5 hours on repeat play.

Music can be stored on 32GBs of internal memory, or on two 32GB MicroSD cards that plug into a slot in the base of the player, totalling a massive 96GBs of memory in all. That's roughly 145 CDs, but as 24/96 hi-res files are four times larger, that figure drops to 36 CDs, unless they are FLAC (losslessly compressed), in which case it jumps up to 72 CDs, or 720 tracks storage capacity in 24/96 FLAC. Whatever, there's enough memory to store a lot of music in high resolution form and it's a doddle to pre-load MicroSD cards by plugging them into a computer's USB port, using an adaptor. The cards are so small – fingernail size – that a matchbox full would store tens of thousands of tracks; a 32GB card costs around £15 at present.

The AK120 will play WAV, FLAC,



WMA, MP3, AAC, ALAC, AIFF, OGG, ASF and APE files. I played AIFF and AAC from Apple iTunes, plus WAV and FLAC up to 24/192 resolution, without problem, including through the optical connectors; there are no limitations here (some optical outputs work to 96k only). iRiver say DSD files – found on SACD discs – can be played too. However, I tried DSD64 and 128 with the DFF extension, and a DSF file, and none would play; we were then told this was a future upgrade.

I found the AK100 a little awkward to use but acclimatised to it. So I was pre-conditioned for the AK120. It has a small, colour touch screen of good resolution and I now realise I have hardly ever used the operating buttons. The player can be operated by touching the screen, but when it's in your pocket you'll be needing the buttons. It cannot operate from a remote control in a headphone lead.

The small black case looks featureless, but it disguises many inputs and outputs, and a lot of associated functionality. One of the small 3.5mm jack sockets on its top face accepts headphones, just like any other portable but – like Apple – iRiver fit a dual-role connector: it also acts as a digital output, using an optical S/PDIF cable fitted with an adaptor. This can feed an external DAC or digital amplifier.

**The touch screen has Play/Pause, track skip Forward and Back, Home and Return, as well as a battery indicator, now graduated, and Bit Depth/Sample Rate in orange. This Otis Redding track is a 24/192 transfer of a 1967 analogue recording.**



Similarly, the analogue signal from the headphone output can also feed a hi-fi amplifier, because it uses line drivers, rather than the usual noisy headphone amplifier of other portables. To do this either a 3.5mm-to-phonos plug adaptor cable is needed, or a 3.5mm plug-to-phonos socket adaptor, budget versions of which can be found in Maplins, in the UK.

The AK120 delivers no less than 1.6V from its headphone output, close to the 2V figure of a CD player, and way higher than the 0.3V of most portables. It is here also that the AK120 reveals its advantage over the AK100, measurement showing a massive 115dB dynamic range, against 110dB for the AK100. This is very good from 24bit digital and rarely bettered. That's 15dB better than CD, by the way, and 22dB better than other portables – and you can hear this, more of which later.

A second 'headphone socket' is in fact a digital optical input, allowing the AK120 to be used as a high



**Top view shows the combined headphone/optical digital output at right, optical digital input and on/off.**

quality, battery powered DAC.

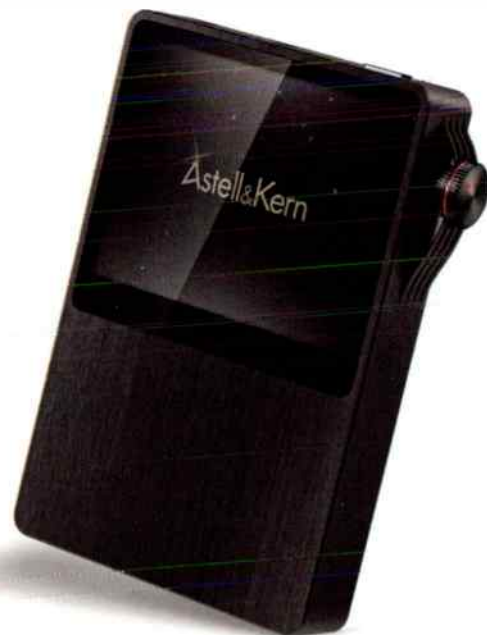
On the bottom face sits a Micro USB B input that is used for charging and for data transfer from a computer, both Mac and PC being compatible without special software.

And finally it also has a Bluetooth short range radio link on board. If

your system has a Bluetooth receiver, this is a convenient wireless connection, but at present aptX streams at CD quality, compressed 5:1 to reduce data rate, so quality isn't maintained.

## SOUND QUALITY

With both Philips Fidelio X1s and



**A final production sample player with shielded volume control.**

my small Jays V-Jays travelling 'phones, the AK120 went appreciably louder than any other player, like the AK100 before it, but the Philips 'phones were insensitive and I found myself up to 65 (75Max) on the volume control, which surprised me.

Most players would struggle to drive the Philips loud so I was grateful for the grunt of this player.

Like the AK100 the AK120 sounded silky smooth and silences were chocolate dark. As before I

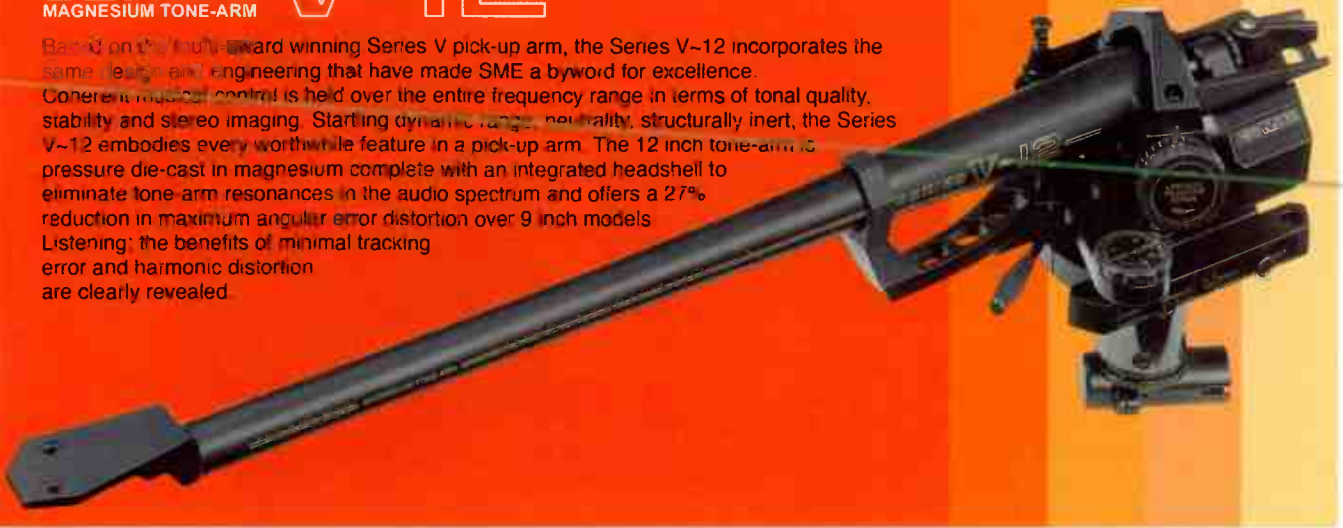
found myself cranking volume up with clean tracks like Diana Krall's 'Narrow Daylight' (24/96). Piano sounded gorgeously large centre stage and a plucked acoustic bass provided a firm under-pinning to this track. Ms Krall had a close, breathy presence, on both 'phones and Martin Logan Electromotion loudspeakers.

The player images with slick precision, due to its low jitter.

Put all this together with the lovely cleanliness of 24bit and the sonic result is fabulous precision, without that clinical sterility of so much digital. This makes everything so much more enjoyable and accessible. The soaring Hammond organ at the start of Tom Petty's 'Refugee' (24/96) swirled through my lounge and the drum kit delivered a firm thump through the Electromotions: this is Rock wrought large and the AK120 delivered it with an easily enjoyed gusto. Detail was unforced but abundant, and dynamics obvious; I fancy this player has slightly better bass strength and definition through

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its upgraded output amplifiers, against the AK100. My attention was repeatedly drawn to percussion, like a solo drum exercising one bass bin on Roberta Flack's "Killing Me Softly" (24/192). Yes, this is an analogue recording from 1973; I also played Otis Redding's 'Dock of the Bay' (24/192) from 1967 and both transcriptions were captivating, delicious insight into the original analogue master making both songs come across as raw and moving.

Classical music arguably fares better with a player like this. With the Minnesota Orchestra's rendition of Rimsky-Korsakov's 'Dance of the Tumblers' the orchestra had a scale and might that was convincing, the canvas large and spacious. Horns had a deep fruity quality, strings were lush and smooth as silk – no screech from this player (assuming a good original 24bit recording of course). Switching from 24bit originals to 16bit CD rips on this player made obvious the screech of CD.

**CONCLUSION**

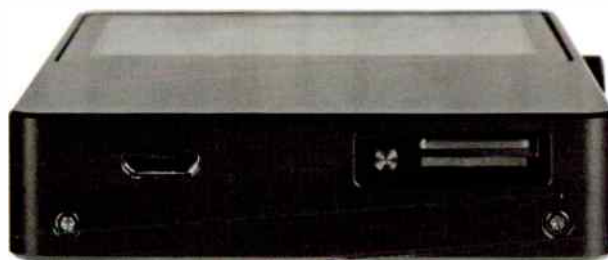
Like the AK100, the new tuned-up AK120 is a player that shows what we are moving to: it's a glimpse of the future. Superb high resolution digital sound quality brings even old analogue recordings to life

**RAFAEL TODES SAYS -**

The AK 120 makes some clearly audible and impressive improvements over the less expensive AK100. Listening to the HD tracks recording of Mozart's 3rd Violin Concerto, the orchestra is more three dimensional, the overall sound is more effortless, the slight hint of glassiness in the treble is banished, the bass is tighter.

I am aware of a quieter rendition with more music and less noise or hash. Tonally the higher frequencies have more solidity to them.

Turning to the about-to-be-released 24/192 of the Allegri String Quartet's (in which I play) Beethoven Opus 18s, the player really shows what good high-res can sound like. Crystalline sound, clean and clear with good dynamic punch. The player is tonally neutral and I have found it to be an incredibly useful resource, having so much high-res material, instantly accessible, and played to such a high level. It's truly a game-changer!



**A sliding door in the base reveals two MicroSD card slots. At left is a MicroUSB B socket.**

– fabulous. Its stronger output amplifiers strengthen bass grunt when using the analogue headphone output to feed a stereo amplifier, making this a serious digital player.

not just a fabulous sounding portable. Hopefully DSD will work well when it arrives as it is attracting interest, but even without it the AK120 is a must-have.

"detail was unforced but abundant, and dynamics obvious"

**MEASURED PERFORMANCE**

Like the AK100 tested in our March13 issue, the headphone output of this player delivers very high output of 1.6V, close to the 2V from a CD player and much higher (+14dB) than the usual 0.3V of a typical portable player.

The DAC and output amplifier were even quieter than the AK100, noise measuring -115dB with a notched out -60dB tone (24bit), to avoid output muting. This raised EIAJ Dynamic Range to 115dB with 24bit, making the AK120 comparable to the best stand-alone DACs. The headphone output is in effect a high quality analogue line output and can be used as one.

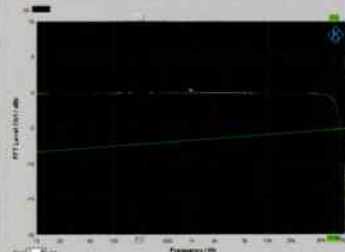
Frequency response was flat from 4Hz to 73kHz (-1dB) using a 192kHz sample rate signal, as the analysis from our Rohde & Schwarz UPV analyser shows, so here again the headphone output performs as well as a quality DAC, maintaining the full analogue bandwidth of 192k sample rate digital.

Distortion at -60dB was low with 16bit, measuring 0.18% and very low with 24bit at 0.04%, as our distortion analysis shows. This result and low noise both contributed to the player's high EIAJ Dynamic Range figures.

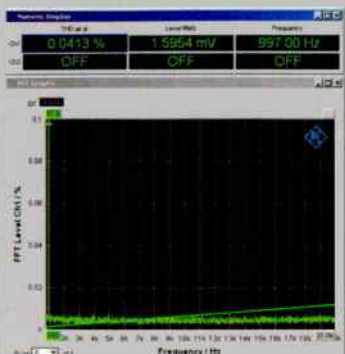
Jitter on the digital output was very low in all areas, uncorrelated jitter hovering at 6pS across the audio band, with little high rate jitter above 20kHz. Signal related jitter (1kHz, -60dB test tone) measured a very low 10pS and low rate clock wander was also low at 45pS. These are excellent figures.

The AK120 produced exceptional results for a portable player, improving even upon the excellent AK100. It has massive dynamic range, low distortion and negligible jitter and is way ahead of other portables, comparing with the best stand-alone DACs. **NK**

**FREQUENCY RESPONSE**



**DISTORTION**



**Frequency response (-1dB)**  
192k sample rate 4Hz-73kHz

**Distortion (16 / 24bit)**  
0dB 0.0008/0.0008  
-60dB 0.18 / 0.04

**Separation (1kHz)** 109dB  
**Noise (IEC A)** -115dB  
**Dynamic range (16/24bit)** 102dB/115dB  
**Output** 1.6V

Our pictures show an early review sample, lacking shielded volume control. An Astell&Kern press shot shows this detail.

**ASTELL&KERN AK120 £1140**



**VERDICT**  
A top portable music player with fantastic sound quality. Little comes close.

**FOR**  
- plays top 24/192 digital  
- can drive a hi-fi system  
- small

**AGAINST**  
- no charger  
- poor charge display  
- no DSD (yet)

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# Small single

KEF's LS50 loudspeaker may look compact, with its single Uni-Q driver – but its sound is large. Jon Myles believes it sets a standard for others to follow.

**S**ometimes you feel hi-fi manufacturers may be setting themselves up for a fall with the hyperbole surrounding a new product. After all, how many small speakers have you heard trumpeted as producing a sound 'out of all proportion to their dimensions'? Or bringing the professional studio monitor concept into the home environment? And then, to cap it all, being a spiritual successor to the legendary BBC LS3/5a?

KEF does all that with its LS50 standmount. But – at the risk of turning conventional reviewing etiquette on its head by delivering the conclusion before the description

– this is one loudspeaker that delivers on those claims.

To be scrupulously accurate, the KEF's similarity to the fabled LS3/5a design doesn't extend far in terms of technical detail. Nor in looks either. The similarity comes in the high standards it sets and the engineering excellence involved in its design. For a start, the LS50 sports the latest iteration of KEF's trademark Uni-Q driver – a 25mm aluminium dome tweeter located at the centre of a 63cm magnesium/aluminium-coned mid/bass unit.

This unit is derived from the company's flagship Blade loudspeaker and the surrounding cabinet housing also incorporates lessons learned

from the work involved in producing that statement product.

A curved front panel constructed from polycarbonate resin combined with glass fibre and calcium carbonate lends a distinctive look as well as aiding sound dispersion, while the remainder of the cabinet is made from heavily-branded MDF reinforced with strong damping to minimise internal resonances.

The attention to detail involved here extends to the rear reflex ports: KEF's engineers used CFD (computational fluid dynamics) modelling to design a rear elliptical vent, with flexible walls to help reduce midrange distortion.

Finished in a classy gloss black





veneer, each speaker weighs in at a reassuringly hefty 15.8lbs and responds to a rap on the sides with a dull thud in testament to the cabinet's inherent damping.

Of course, none of this is going to matter if the final package doesn't sound good once you fire it up, but with the LS50s when you do it's quickly apparent that all that technical innovation translates into something that sounds a lot more than the sum of its parts.

**SOUND QUALITY**

The first thing that struck me was the sheer weight and authority of the LS50s. They are capable of producing music with a scale that belies their diminutive proportions. Driven by a Naim SuperNait amplifier, and positioned to face straight down my room, they reproduced Valery Gergiev and the Kirov Orchestra's rendition of 'The Rite Of Spring' with all the weight, drama and impact it deserves.

Bass was deep, agile and powerful but never over-egged. Unlike some other mini-monitors the LS50s won't give you the impression they're trying to over-reach themselves in an effort to try to sound bigger than they are. In contrast with many 'speakers this size, KEF's engineers have resisted the temptation to dial in an artificial bass lift – so placing them relatively close to a rear wall is preferable to maximise that low-end response.

Stereo imaging is a particular strength – aided by the latest iteration of KEF's point-source Uni-Q driver (although whether you like its distinctive rose gold colour will be matter of individual taste!). Donald Fagen's reedy voice from Steely Dan's 'Aja' was clean and lifelike with the image anchored perfectly between the speakers.

They're not phased by fast and dense material – clearly letting you hear the quality of musicianship and detailed interplay in Acoustic Ladyland's 'Last Chance Disco'.

I felt that despite the Uni-Q's aluminium dome tweeter the LS50s lack the zing of some other models at higher frequencies. There's no lack of detail but at times a little bit more bite to instruments such as cymbals would not have gone astray and for this they must be turned to point at listeners.

And - although bass performance

is remarkable for their size – there's no getting away from the fact that any speaker of these dimensions is going to struggle with the real low stuff. Fed Jah Wobble and Evan Parker's testing 'Passage To Hades' at reasonable volume and there was a sense the bass lines were struggling to keep up with Parker's horn work when it should have been underpinning the piece.

But use them within their comfort zone and they can sound remarkably coherent.



Daft Punk's 'Random Access Memories' romped along with individual elements in the detailed mixes easy to follow. The LS50s have the happy knack of drawing you into the music by revealing the character in the playing and recording of an album. They manage to focus on the emotional content of music, which in turn means you just settle back and enjoy the ride.

**CONCLUSION**

There's much to admire with the new KEF LS50s. The latest iteration of the company's Uni-Q driver is undoubtedly the best yet at providing excellent stereo imaging with bags of detail.

They may be small but the LS50s throw out a huge image. It may be a cliché, but close your eyes and you can easily believe you are listening to a much bigger set of speakers.

Inevitably, ultimate bass performance is curtailed and some will prefer a bit more bite to the top end. Position them properly and the little KEFs are a cracking listen with an innate musicality that has you coming back for more time and again.

**MEASURED PERFORMANCE**

Our frequency response shows behaviour 15 degrees off-axis, where treble extended evenly to 20kHz. On-axis there was a little more treble, but the LS50 was very consistent in treble level across a wide lateral angle. The LS50 works best slightly off-axis and is best pointed down the room, not directly at listeners.

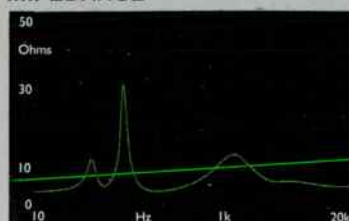
Output was even across the audio band and there is no bass lift to give added bass weight. Our analysis

**FREQUENCY RESPONSE**



Green - driver output  
Red - port output

**IMPEDANCE**



shows low bass rolls down steadily, proportioned for near-wall use. Port output at 80Hz was just +3dB up on the bass unit, +6dB being common, so this is not a bass heavy loudspeaker. The port has been tuned to reach down to 40Hz and no further so subsonics are unlikely, but at the same time ports tuned like this provide subjectively spry bass; the LS50 is well proportioned in its bottom-end behaviour. The asymmetric impedance curve around port resonance shows the bass unit and port are not ideally matched, adding reactance to the load.

The LS50's impedance measured 5.5 Ohms and the bass unit drops to 3.6 Ohms DCR so as a load this 'speaker is demanding and needs a sturdy amplifier like a Naim. With 86dB sensitivity it needs around 60 Watts or more to go loud.

A decay spectrum over 200ms shows a generally clean result, but there is an overhang at 70Hz that may well compromise bass timing a little.

The LS50 measures well, if with a few small blemishes. It is evenly balanced and smooth in output, over a wide solid angle due to its Uni-Q unit. It needs a sturdy amplifier able to deliver current. **NK**

**KEF LS50 STANDMOUNT LOUDSPEAKER £800**



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## LETTER OF THE MONTH PRIZE



**KEF Q100 LOUDSPEAKERS**

Visit our website at [www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk) or send your emails to [letters@hi-fiworld.co.uk](mailto:letters@hi-fiworld.co.uk). Letter of the month wins a pair of KEF Q100 loudspeakers.

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

For more advice see Letters from earlier issues at [www.hi-fiworld.co.uk/letters](http://www.hi-fiworld.co.uk/letters)

**A pair of KEF Q100 loudspeakers are on their way to NOEL COTTLE, Letter of the Month winner in our JUNE 2013 issue.**

## Letter of the Month

### CLASS OF ITS OWN

Your articles about, and reviews of Single Ended (SE) amplifiers, in particular transistor ones, has sparked me into writing this rather late letter.

In the late nineties I decided to splash out on a new, mainly CD based system. I used Sounds of Music, then in Tunbridge Wells, and the endlessly patient John Jeffries brought various equipment for me to try. The CD player was easy. To my ears a Pink Triangle Numeral wiped the floor with anything at or near the price of about £1100 because of its evenness, detail and lack of that robotic quality that many CD players seemed to have at the time; it seemed to preserve the structure of music in a way that other players didn't. I should perhaps mention that the comparisons were made through my already ancient early Proac Tablettes; not much to shout about now but, as I discovered, perfectly able to discriminate between different sources and amplification.

On to amplifiers. The first I tried was a pre/power combination from an Italian firm and I almost, but not quite, said yes to them after about a week's trial. They were certainly better than anything I had owned before. However, curiosity about what spending more might achieve got the better of me and the next stage was a Canadian push-pull integrated valve amplifier from Sonic Frontiers. On balance this was better; perhaps it was less controlled



**The Tellurium Q Iridium Single-Ended amplifier, reviewed in our June 2012 issue, that re-awakened interest in Single-Ended transistor amplifiers. Lots of heat and low power, but fabulous sound.**

but it had as much detail and it was more open and fluid; altogether a more beguiling and musical listen.

But curiosity won out again and John brought, you guessed it, a Single Ended Class A transistor power amp, a Passlabs Aleph 3, together with a suitable modest preamp. I think I listened to it for about a minute before I said that this was the amp I had to have.

Why? Well, here what you wrote in your inside article in the July issue rang a bell; for me it was the sense of solidity coupled with a richness of timbre that seemed to give instruments their true colour and character. To my mind the sound was simply more real.

The next difficulty was how to find

the right matching preamp, given that I was now committed to spending more on the power amp than the total cost of the original Italian pairing.

The preamp John had brought was decent enough but it seemed to slow music down. Others from Lumley (John's own make) and AVI were no better, one of them producing an unacceptably bright sound in the treble, perhaps reflecting your observations about glassy hardness, brightness and lancing treble energy. Eventually I tried another more upmarket preamp from the makers of the preamp John had brought with the Aleph (Talk Electronics); this was much more like it and I was nearly satisfied but asked what else I could try.

John then produced a Balanced



Audio Technology VK3i valve preamp which, he said, was the preamp he liked to recommend for the Aleph. Instant Karma - the harshness had gone and everything sounded right. The only trouble was the damage to my pocket - it cost about as much as the Aleph.

That is the combination I bought. I still have it and over the years it has given me much pleasure, though I had no idea that Single Ended Class A transistor amps were, in your words, "as rare as hen's teeth". The Aleph 3 was the smallest power amp made in the Aleph series and is supposed to put out 30 Watts per channel into 8 ohms and 60 into 4 Ohms. I have never seen it suggested that Pass Class A amps don't meet their claimed power output; there is a power graph for my particular amp in the brochure that came with it showing that it meets the output claimed and though I can't know, I see no reason to disbelieve it.

As you say, SE transistor amps run hot and use a fair amount of electricity; the Aleph 3 uses 250 Watts per hour at all times whether it is idling or in use. More powerful Alephs were available and Pass used to make monobloc Class A behemoths putting out 200 watts I think; I would have thought that would get rid of the need for any heating at all in the room they were in.

I don't know how the output stage of the Aleph is coupled to the loudspeaker; the brochure is coy about it, seemingly for commercial confidentiality reasons, saying - "The output stage of the Aleph 3 is a unique blend of traditional design and innovation addressing the unique requirements of loudspeakers. Previous methods of loading the output stage have used networks consisting of resistors, coils, transformers, and active current sources, all of which offer an optimal load line based on a resistive load. The Aleph 3 has a current source topology which optimizes performance for a wide range of impedance and reactance in the load, improving all aspects of performance into real loudspeakers. Pass Labs has a US patent pending on this output stage topology." I would be exaggerating if I said I was much the wiser.

The speakers I now have are AVI Pro Nine monitors which are on filled Partington Discovery stands. I recognise that AVI have never been flavour of the month with Hi-Fi World and they no longer make passive speakers, but I have been very pleased with mine. They are neutral, open, detailed and importantly, because of the fairly



**Sugden's A21SE amplifier is a modest and domestically acceptable Single-Ended transistor amplifier with a superbly clear, solid sound that typifies the breed.**

low output of the Aleph, efficient for stand mount speakers (88 dB plus for one Watt). I don't by any means agree with all the views that Ashley James forcefully expresses (cables all sound the same, mains cords make no difference, burning in cables achieves nothing) but the speakers are fine and don't need vast amounts of power as Ashley suggests they do.

So I have ended up with a system that is unbalanced in the sense that the amplifiers cost more than double the price of the CD player and speakers together; but I think what matters is that it should sound right to me, and it does.

I will end by saying that recommendations in Hi-Fi World, mostly in 'Soundbites', have been responsible for prompting a number of tweaks and upgrades to ancillaries that have considerably improved the performance of the system and enhanced my listening pleasure. They include using the Densen D-Magic (some say this is snake oil

but it isn't), mains cabling from the Missing Link, Ultimate Silver Dream interconnects from Artisan Silver and Blue Horizon Spike Shoes. Every one of these has brought about significant improvement at a reasonable cost, so please accept my heartfelt thanks.

My final suggestion is that if you haven't heard an Aleph and get the chance to do so, I think you should! With best wishes,

**Richard Baker**

Hi Richard. I found your experiences fascinating. Single-Ended Class A transistor amps always hit me hard when I hear them - which is rare. They are so conspicuously better than push-pulls. So much effort has gone into push-pulls over the years and we all have grown so accustomed to them; I sometimes wonder whether I am imagining the improvements I hear. Reading your letter and your experiences suggests men-in-white-coats are not needed



**The Pass Labs XS300 Class A power amplifier, successor to the Aleph 3. Is it Single-Ended? Since Pass labs do not specifically identify it as such, then likely not, but it still runs hot, consuming 1000W from the mains. It delivers bigger power, 300Watts, than an SE. Go to <https://passlabs.com>.**

quite yet!

The qualities of a good transistor SE also shade solid-state behemoths that still lurk on floors at hi-fi shows, such as the High End Show we have just returned from. Making a transistor amplifier ever larger and more powerful doesn't give it the elusive qualities of an SE I find, and measurement doesn't suggest a reason for this. So the wonders of an SE are a mystery; I am glad you hear them too and enjoy them.

I guess the same comments apply to tune-up items. Many are difficult to explain, but work and make a difference. Your recommendation to hear an Aleph is noted and will get consideration now we have paid the electricity bill for the last SE, although it is out of production.

And as a last final comment, that bit about the topology of the Aleph output stage is interesting and refers to the use of a active constant current source, an idea worked out some time ago (1970s) and incorporated into the very neat Sugden A2ISE I have used for some time and greatly admired. It runs hot but not very hot, is compact and well worth auditioning also, I suggest to interested readers. **NK**

### LEFT BEHIND

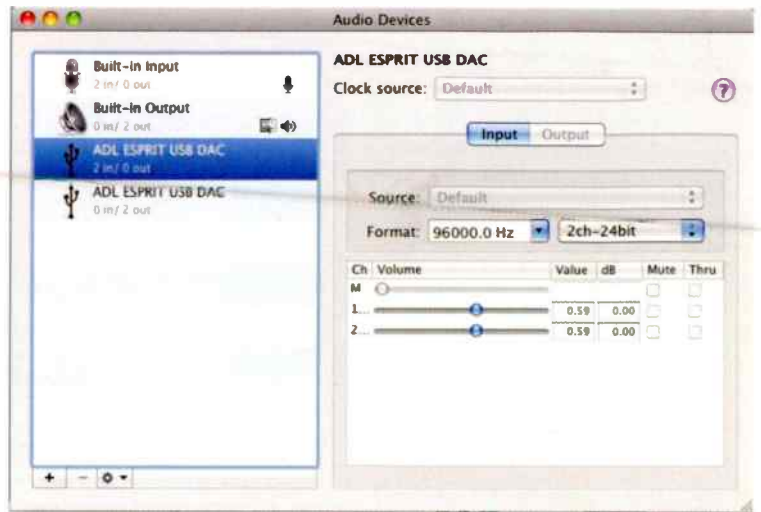
*I'm seeing more and more comments relating to digital audio and feel that I am being left behind. Can I ask some simple questions to clarify my thoughts?*

- 1) Can I just plug a DAC between my PC and amplifier to play internet radio and files?
- 2) Do I need to download hi-res files before I can play them?
- 3) What sort of quality will I get from internet radio compared to DAB and to FM, and what about CD through the computer?
- 4) In very simple terms, is a DAC just a converter, and a streamer is a DAC with a built in hard drive/computer?
- 5) How do I know what resolution the PC is operating at?

*I appreciate that this may make me appear simple minded, but after more than forty years of two channel hi-fi and lots of fun and enjoyment along the way, I don't want to miss out on access to more music.*

**Geoff Egginton**

Hi Geoff. Digital processing is truly a horrible subject and virtually impenetrable too, because what goes on inside chips, inside products, is difficult to fathom. Believe it or not, many manufacturers I speak to do



**The 'hidden' Audio/Midi control panel of a Mac, found in the Utilities folder, carries input and output resolution and sample rate settings, all data being converted to the values set. This must be set for hi-res, in this case 24/96 for a Furutech Esprit preamp.**

not know what their products do or do not do, in deep detail, so don't worry about not knowing. Most people don't know, but they're not letting on!

To take your questions in order:  
1) You can plug a DAC between your computer and amplifier. For this you need a DAC with a USB input, and most now have them. If you have a DAC without USB, only S/PDIF, then you can still use it if your computer has an S/PDIF output (Macs have one hidden in their headphone socket). Or you can use a USB-to-S/PDIF convertor. Don't forget to tell the computer to feed the DAC, instead of its own internal DAC and speakers, or you will get silence. Go to the Sound control panel (and Audio/Midi under Utilities on a Mac).  
2) Yes, you will need to download hi-res files before playing them. It is possible to stream high res. but uncommon because of the high data rate.

3) Internet radio is much like DAB in that it streams compressed audio, usually MP3 at 128kbps – a very low rate that gives poor quality. However, some internet radio, like Radio 3, streams at 356kbps and sounds good, so there is variation. Neither internet radio nor DAB sound as good as VHF/FM, unless the latter is hissy because the aerial is inadequate. CD via the computer, played from its CD drive, remains normal CD quality, ignoring jitter and noise the computer may add. CD played from a rip stored in iTunes, for example, may be compressed, according to the computer's settings.

4) A DAC is a Digital-to-Analogue

Convertor, so it is just a convertor, even though you could say it 'streams' music in real time. A 'streamer' is a box that plays digital music 'streamed' from a computer connected through an ethernet cable (network), or wirelessly. This usually means it is sited far from the computer, in another room. Today's streamers can do much more however, including streaming music from the internet as internet radio, or playing music from a memory stick.

5) Knowing what resolution your computer is providing is challenging, because many programs blithely alter sample rate or compress on the fly, so it depends upon the software you use. However, basically a Mac works up to 24/192 but you must keep an eye on your Audio/Midi control panel or it will sample rate convert, which is something you don't want. Don't store music in iTunes either, but as discrete files. PCs work up to 24/192 as well but they need ASIO drivers installed (big subject!).

Because digital can be up-converted (which does not improve quality) as well as down-converted (which lowers quality) this is all a nightmare. Best to avoid processing by downloading high res files to a computer, that in effect stores them, but do not use the computer to play them. Instead, copy them to a memory stick and play them on a streamer by plugging the stick into a USB port. Or you can copy them to a player like the Astell&Kern AK100/120 and play them through the hi-fi using its analogue output.

These methods are simple and avoid the horrors of the computer



# Letters On-Line!

You can now read our Letters on-line, from the last issue back to March 2010. That's a treasure trove of information and advice to our readers, as well as a fascinating catalogue of reader's systems and views. There's mountains of buying information, all just a click away on your computer or i-Pad. Have fun!

You can reply to Letters using the e-mail link at the top of the page -

## World Mail June 2011 Issue

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Letters are published first in the magazine, then here in our web archive. We cannot guarantee to answer all mail, but we do manage most!

Or comment in the Comment section at the bottom of each page.

Your experts are -

DP David Price, editor; NK Noel Keywood, publisher; PR Paul Rigby, reviewer; TB Tony Bolton, reviewer; RT Rafael Todes, reviewer (Alessi String Quartet); AS Adam Smith, reviewer; DC Dave Cawley, Sound Hi-Fi, World Design, etc.

...or the reply pane at the bottom of the page.  
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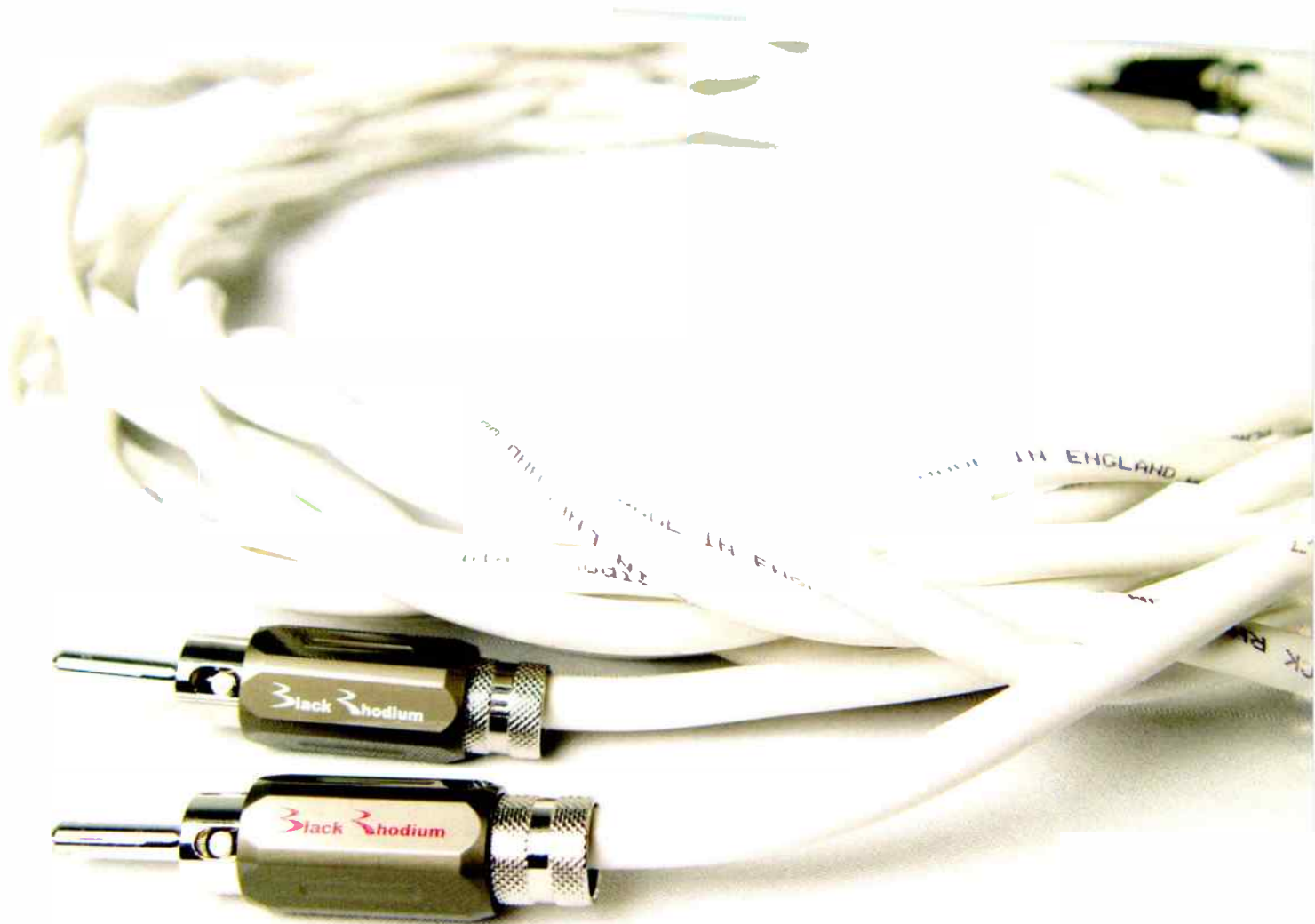
Comment:

Word verification:  VqLc

The screenshot shows the HI-FI WORLD website interface. At the top, the logo 'HI-FI WORLD' is prominent. Below it, there's a 'Magazine issue data' section with a list of issues from 1998 to 2011. A 'Display' dropdown menu is set to 'All'. On the right, there's a search bar and a 'COMPETITION PRIZE' banner for the August 2011 issue. Below that, there are banners for 'SEVENOAKS' and 'audio T'. At the bottom, there's a 'Contact' section and a 'SEE THE WHITE RETROBORG BS243 HERE FLAT' advertisement.

Just go to [www.hi-fiworld.co.uk](http://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'.

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*"Offering a clear midrange with tight and efficient bass, the Samba is a refined speaker cable"*

HI-FI World, February 2013



and ethernet, minimising the possibility of word truncation, sample rate conversion, compression, jitter, noise and RF interference. A second best alternative is to use a NAS drive, but even this has drawbacks and introduces other problems.

With digital just remember to KISS: to Keep It Simple Stupid! **NK**

### DAMN ALIENS

Saw your response to a letter regarding cabling. In it you re-iterated that you have yet to find a solid-state amp that you like for driving electrostatic speakers. Let's say that you were just given a brand new set of Quad ESL 2912s for your birthday and there were no valve amps available due to a recent alien invasion from Mars. They took away all the valves on earth for their use. Would you let the speakers sit in the corner collecting dust or would you hook them up to some transistor amp? If so, which one and why the choice? Are solid state amps not a better choice, if only in terms of better bass impact than valve amps?

Regards,

**Joe Wdowiak,**  
Canada

I would run out and buy a Creek Destiny 2 as a starting point. The reason? Because it has less of the hard sterility and 'shut your eyes unbelievability' most solid-state amps suffer. The Destiny 2 sounds big, full bodied, with powerful bass, yet sounds creamy smooth up top.

Is it the world's best amplifier and best choice? No. I don't think it would even suit the Quads which are now soft up top and need a livelier sounding amplifier. So we are back to the old matching problem. Sorry Joe! From the Destiny as a starting point I may well settle upon a brighter balance in due course.

I am never quite convinced transistor amps do better bass. They do tighter bass, that's for sure, although Audio Research amps may have you doubting that. What transys don't do is bass dynamics; they sound constrained, irrespective of their paper power spec. The Ariand Pro-845SE we reviewed recently had superb bass dynamics, and the Icon Audio MB845 MkII also has thunderous power. Being in Canada I guess you may well have an Audio Research dealer near you. They may even have a pair of 750 Monoblocks to listen to, because no alien craft could lift them. See what you think.

**NK**

### LOAD CHANGES

My question is regarding MC Cartridge loading: what audible difference will I hear if I adjust the loading on my cartridge, a Benz Micro ACE L? I don't want to alter it on the phono stage if it will damage the cartridge or the phono stage but I was wondering how it would affect the sound?

The ACE sounds very good to me but I can't help but feel it has more to give, barring spending money on a new phono stage, say an Icon Audio valve type. I would like to know if there is any tuning ability by altering the Load Impedance?

Thank you

**Andrew Burtchaell**

Hi Andrew. The short answer is that load variation little affects MC cartridges. The reason is that they have very low output impedance and almost nothing affects them, neither capacitance nor resistance changes. In practice you may well detect some small change when varying the load, but it is not great. I have found a low load of 10 Ohms or so does help clean/tighten things up a little, but it also can deaden the sound a bit, especially treble. Technically, it reduces high frequency ringing in the generator.

A low load is currently not a common option in MC phono stages but some manufacturers are offering it. Note that nearly all MC cartridges have a specified load of 100 Ohms; it is an industry standard.

The Ace is a very good MC. It needs a good arm, like all MCs, and good wiring too. You don't tell us about this, or your phono stage. Unfortunately, many modern phono

preamps use high gain / low noise audio ICs and they do not really do MCs justice I feel. A discrete stage like the Timestep T-01 MC or a valve stage is the way to go, or a step-up transformer from Music First Audio. **NK**

### ANOTHER STREAM

I have just read the letter of the month on streaming from Dave Mayer and I have to agree with him that this whole new business of acquiring hi-res music by means other than buying a CD, SACD or film on DVD or Blu-ray is a total nightmare and – if as we read in the hi-fi press – that our hobby of hi-fi is declining, the frightening complexity of new technology is perhaps to blame.

Back in the 1970s nearly everyone had a hi-fi of some sort but out of my fairly large group of friends and acquaintances, only two have anything remotely resembling a reasonable music playing system now. All their kit has been



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**When aliens strike and steal the planet's valves for their space craft, Noel will use a Creek Destiny to drive Quad electrostatics. For a while at least!**

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**"Are solid state amps not a better choice, if only in terms of better bass impact than valve amps?" asks Joe Wdowiak. Listen to an Audio Research 750 monoblock power amplifier at your nearest Canadian dealer and tell us what you think Joe.**

consigned to the attic, surfacing a couple of times a year for a party – or they get in a DJ, or have disposed of their hi-fi all together.

Why? It is all too complex except for the hi-fi nutter. Once you just bought a hi-fi, took it home and off you went. Now you have to employ a Shrink to cope with your nervous breakdown just in case you spent a fortune on the wrong cable; I mean one set of interconnects can cost as much or more than the Bose thingy a friend has in his study.

Every time I read of hi-res downloading/streaming my poor old brain reels. There's this goes into that, via this, then into that and then into something else, one trendy name or buzzword after another.

I thought N.K.'s answer to Dave's request was getting somewhere until I looked up LaCie Whizkey to find that it is unavailable, so what should we buy now? And I am not sure about USB 3.0 or 2.0 or how many GBs I should go for. Mr. Dinosaur doesn't understand.

Then I looked up the Cambridge

StreamMagic 6. Switched mode power supply and digital volume control, isn't that a no-no? The reviews have been reasonable.

I love watching films etc, through my Sky+HD box so I thought Oppo-BDP 103/5 or Electrocompaniet EMP3 and Blu-ray discs. Can I feed my Sky box through the DAC to upgrade the sound? I am sure these machines will upgrade the picture of normal DVDs. I believe both have digital volume controls so would I be better off bypassing that bit if possible and use my Primare Pre 30 pre amp instead?

Also, rumour has it that being

universal players, CD/SACD is compromised so would something like a Marantz SA-11S3 which has been getting nice things said about it be good to bypass that bit?

Lastly, to get the highest res music and films possible, would I still use a memory stick to download the files from my computer and could they, via downloading/streaming, be replayed via the Oppo/Electro? Mr. Keyword, I have asked a lot, I hope you don't mind.

**Hartley Pascoe.**

Hartley, don't worry about the Whizkey – buy any old key! It will work and get you going. I found the Whizkey worked well with music, possibly because it has no LED and no current draw, because it uses high speed memory and/or because it has an aluminium case that provides RF screening, likely all three properties acting together. But where I live, in a densely packed part of London, wi-fi transmitters outnumber flies and this may have some bearing on my experiences (the office is even worse).

If your Sky box has an S/PDIF digital audio output as most do, then you can connect it to an external DAC.

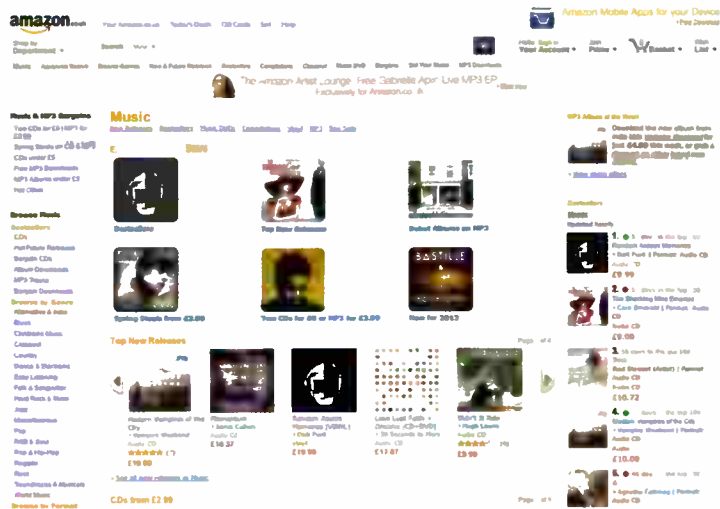
Get a 16GB memory stick, as it is fast, reasonably priced at around £18 but has enough capacity for 80 hi-res tracks (at 200MB per track).

Digital volume controls reduce resolution and are best avoided. You can try using the S/PDIF output into an external DAC, setting digital volume to maximum to avoid bit depth truncation, and adjust volume elsewhere.

The 'rumour' concerns DSD to PCM conversion that happens on-board with Philips players, for example. What happens within the dedicated signal processing chips used in AV receivers is anyone's guess and I am told many use internal DSD-to-PCM conversion before routing the signal into a standard DAC, so as to avoid the need for a discrete DSD DAC. It seems a likely



**Marantz SA-11S3 CD, SACD player and USB memory key player.**



**"I still know lots of people that buy CDs because they prefer a physical copy and better sound quality - Amazon are king, they have almost every release available" says Alan Cobb.**

cost-saving design strategy, so I tend to believe the rumour. But as DSD gains traction in the marketplace, we can expect to see the emergence of dedicated DSD convertors I believe. DSD has a long way to go and its early beginnings on SACD were very promising. A Marantz SA-11S3 is a good way to go.

Many products can now stream files from a computer over a home network: check out their specs. I have them passing through my lounge on an almost daily basis but I choose not to do this. I find streaming an inconvenient process, but I know other reviewers/normal people who are proud of their 3000 CDs on a NAS drive, PC or whatever and how operating a brace of remote controls, an iPad, or an iPhone, turns them on. It turns me off, and I do it a different way, storing music on the computer and playing it from memory stick, or now from an Astell&Kern AK120 portable player that has become part of my anatomy!

Both Rafael Todes and I find the AK100/120 a must-have device, because you carry your entire music collection in your pocket and can play it through the hi-fi or headphones, via digital, analogue or wireless (Bluetooth) connection. NAS drive? Nah – it all goes onto a few MicroSD cards, so you can now get your (musical) life into a matchbox. Who needs whirring black boxes under the stairs – they're so yesterday! **NK**

### IS NOEL RIGHT?

*I felt I had to put finger to iPad after reading the welcome page by Noel Keywood. Normally I tend to agree with*

*most of what Noel writes but I don't about what he has to say about CD's supposed demise. I have read in other publications that physical media still equates to about three quarters of all sales, in which case CD is hardly dead, is it?*

*From my perspective I can honestly say I still buy loads of CDs every month – and that includes new releases as well as back catalogue titles. HMV probably don't sell too many copies anymore due to the fact they are so expensive compared to the likes of Amazon.*

*Also HMV just don't stock most of the titles that I'm looking for, so there again Amazon are king, they have almost every release available either from themselves or from sellers.*

*I still know lots of people that buy CDs because they prefer a physical copy and better sound quality. There are very few high res downloads available yet, especially available to us in Blighty! There is lots of life left in CD yet. Don't try killing it off before there is even a viable replacement thank you very much!*

**Alan Cobb.**

I understand your feelings Alan. You are of course right to say that CD sales are still high but the medium is in fast decline whilst paid-for downloads are increasing. OK, Amazon has almost every CD title going, but have you ever looked at iTunes?

Isn't trundling physical CDs around the world, from factory to Amazon warehouse to your door all a bit archaic? I need not mention the un-green part of it – all that fuel, effort etc. And how long does it take you to look up your intended

purchase on Amazon, pay for it and await its arrival? The entire process takes just minutes through iTunes.

I mention all this to illustrate the point that to justify itself a physical medium has to have some unique advantage, a USP, and the CD has lost this to the download. Not surprising it is in decline. I am not trying to kill it off, but I have to say the CD just never did convince me. From its launch I have criticised its sound quality, being in the fortunate position of being able to measure its problems and defend my position against the zealots who declared it perfect. The days of 16bit religion are over.

At a 'Meet the Editors' gathering at the Whittlebury Show last year many confessed to dropping CD in preference to LP and downloads – and that's exactly where I find myself. I never threw my LPs away, but I am starting to eye my CDs with hostility! Like others I've noticed that ripping them fractionally improves sound quality too, due to re-clocking, so they are due to be ripped in due course. **NK**

### HI-RES HEADACHE

*I've been poking around the internet – as you do – chasing up high resolution downloads, and the means of playing them on my netbook (Win 7 / 1GB RAM).*

*As this is a basic £200 netbook, there is no digital output – nor a digital input on my Marantz PM4001 amp – so I am resigned to using the audio output socket to feed a spare line-in input. Fine. Not a problem with that. I don't have a problem with getting hold of a media player that can play 24/96 files either. As a computer technician I probably can even set it all up – eventually!*

*No, my main problem is the lack of choice of actual high resolution downloads. With experienced commentators and reviewers (like yourself) stating that the CD is dead and the only non-vinyl alternative is hi-res downloads; where and what can I actually buy? The range of music is mainly classical or jazz (2L, which I have ordered a BD/SACD sampler from, thanks again to your magazine) – which would keep someone with exceptional hearing, like Platinum Ears Rafael Todes, happy! – but isn't exactly mainstream these days.*

*The range of music that the average 40+ or 50+ enthusiast (someone with the disposable income to buy good hi-fi – not my cheap system), that is, the rock/pop/dance from the 60s to the 90s, may be on disc still but is not*



released in hi-res digital formats too widely, as far as I can see. OK, so Kate Bush has released her *50 Words For Snow* album at 24/96 – and well done for that – but she is in a minority.

I realise this is a transition period – from physical media to digital download – but the lack of U2, Genesis, Human League and even Kate Bush earlier albums mean we have to stick with crappy MP3 downloads at low quality or (horror, the horror!) the physical disc, which some commentators suggest should be almost abandoned as it's irrelevant to the New World Order.

I like SACD, and wish it had replaced CD as the hi-res carrier of choice. I also like surround sound, which can really open up a piece, be it the 1812 or *Shine On You Crazy Diamond* – and feel the lack of 'classic' (read well-known and popular) music on modern media available (so far), plus the fragmenting of the market as to how it is purchased by the consumer – be it on the discs in the Pink Floyd Immersion sets, or FLAC, or lossless – this or that MasterHD thingy on Blu-ray – means that hi-fi may well become even more esoteric and (dare I say it) even more irrelevant to the Average Consumer, who just wants to hear familiar music, not to comment on what format and resolution the (often very obscure) demo tracks were recorded at.

I suggest that vinyl or CD or even 320kbps MP3 are way good enough for this, especially as background music or on the go.

I'd love a quadraphonic set-up with four Martin Logan speakers and the valve amps to drive them (who wouldn't?), but what source? Blu-ray? A high-end DAC? How do I get that stuff over to the (say) Icon amps? Digital feeds? OK, what format and what kind of cables?

Now it's all getting too complicated for me; I'd just go for a reasonable 5.1 amp and universal player (Marantz again) – with Monitor Audio speakers (a favourite brand of mine going back all the way to the 70s) – and once set up I'd be happy, and I could play my PS3 through it as well!

Don't get me wrong. Progress yes, but there has to be a better way than this. The weeding out of formats – HD-DVD vs Blu-ray (same quality, just branding), or Ekaset vs MiniDisc vs DCC vs DAT (in the end, no real winners there) – by the consumer-driven market takes far too long, and ends up alienating the confused consumer who just says 'I can't be bothered' and goes back to their CDs or MP3s or records. And don't get me started on the quality

"My main problem is the lack of choice of actual high resolution downloads" says John Malcolm. HD Tracks has a rapidly expanding catalogue of high resolution transfers, as well as new recordings.

(or otherwise) of re-masters...!

Yours sincerely

John Malcolm

Hi John. There are plenty of hi-res downloads available, if not the catalogue available either on CD or iTunes. Go to [www.findhdmusic.com](http://www.findhdmusic.com) and [www.hdtracks.com](http://www.hdtracks.com). Bear in mind you do not have to throw all your CDs away in a format change, as people did when moving from LP to CD. Just rip your CDs to digital files and add hi-res files to the collection. That way you can morph from CD to hi-res. Once hooked on hi-res you will find there's no going back. And DSD downloads look set to have a

good future too, so your love of DSD will be sated.

It's a pity Blu-ray ended up purely as a movie medium, promoted heavily by Sony Pictures as a copy-protected vehicle for their output; audio was a secondary consideration. Blu-ray has an 'audio disc' specification but it is little used. I suspect licensing fees are responsible for this, pricing the medium beyond the reach of music producers.

Surround-sound was the new tomorrow just a few years ago. How things have changed! Whilst Blu-ray video racks slowly expand and prices descend, it has hardly supplanted DVD in the public mind, and few

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Paul Rigby, HiFi World 2012



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appreciate it is also a high quality music carrier. Hardly surprising because the music catalogue on Blu-ray is scrappy and the technology daunting in its complexity.

It need not have been like this, but the Consumer Electronics industry plays it so, majoring on gimmicky and complicated facilities that are difficult to use and confusing to buyers. Add in the fact that surround-sound is difficult to record for a broad slate of reasons, and unconvincing when only applause or crowd noise comes from the rear loudspeakers, and you end up with dubious benefit from a hideously complicated technology that fills a lounge with loudspeakers and cables.

In light of this I understand why people choose a worked-out music enjoyment solution of the sort Apple offer. You download quickly from iTunes, within a system that relieves you of money in the most un-intrusive way I have ever come across; iTunes is commercially slick. But from there on the system starts to weaken. You listen to compressed music from a tiny portable player through poor quality earpieces.

It's quite obvious people want better, by the rapid increase in the number of full sized over-the-head headphones being worn, especially by young listeners. But Apple have not exploited this. Long ago they should have made Mastering Quality 24/96 files available on iTunes, players able to play them and even matching Apple 'high resolution headphones'. They haven't done any of this and the boat is leaving without them.

Surround-sound downloads exist, but at 24/96 resolution, file size is enormous – and there is no video, so music concerts are out. Having got used to seeing music concerts, including classic rock concerts on Blu-ray, often with great video (you know, those 1960s bouffant hair styles and 70s platform boots) I'm not sure I want to lose the video element.

You may like to take a close look at Yamaha's BD-A1020 Blu-ray player I reviewed last month. It almost does it all, but you are locked into the AV receiver route and Icon valve amps are out, unless you buy an AV preamplifier from Onkyo that can feed valve power amps (I have done this and it works!). **NK**

### AUSTRALIAN TITANIUM

I have made up a new arm tube for my Hadcock from titanium tube with



**If you want to play Blu-ray and downloads then Yamaha's BD-A1020 Blu-ray player is a good choice.**

carbon fibre lining. It is to go on a Technics SP25 with new plinth that will take two arms up to 14". I have yet to cut the tube but could try 14" and see what is lost to rigidity. In the past I have had Decca cartridges in the Hadcock but since the 80s have used the Supex family (for their solid sound) in a Rega RB300 on my Thorens TD121 (solid plus). I found my TD121 in a charity shop for \$A 30 and as soon as I fitted the Rega I sold my Linn with no regrets. And now to the question. Can you recommend a low output moving coil for the Hadcock? I don't think I can go back to a London Decca because it never seemed happy on the vertical grooves and I or very dynamic cuts. Price range \$500-1000 \$Aus.

Thanks and cheers from Oz,

**Martin Shanahan**

**Wollongong**

**N.S.W.**

Hi Martin. The MC cartridge for you is an Audio Technica AT OC9 MLIII, because it has a fast, ballsy sound, it tracks very well and is available in Australia, likely at a good price. See our website for a review.

I owned a Decca London once and liked its sound but ditched it quickly when I realised it was damaging my stereo LPs. **NK**

### SONY AND DSD

I was very interested to read in the April 2013 issue of Hi-Fi World the interview by Jon Myles with Eric Kingdon, on DSD recording. References to this subject are getting more frequent in the hi-fi press, the advent of digital equipment and the possibility to download hi res. and DSD recordings are certainly arousing my interest.

The computer I use is a Sony Vaio



**To replace a Decca London in Wollongong, Australia, buy a Audio Technica AT OC9 MLIII.**

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Media Centre desk top, about six years old. Incorporated is Sony's recording suite 'SonicStage Mastering Studio', which has the option of recording in DSD mode. I have tried many times to achieve this but so far without a positive result. The recording is made onto a DVD disc, and although my Cambridge Universal player recognises the disc as being DSD, I get no sound on playback; I have had exactly the same result using the programme offered by Korg for recording DSD; I have made a successful DVD-Audio recording when by-passing the DSD option and they are very good.

So, although the option is presented to me, it has, up to now, been unusable. I just wonder whether I have missed something, because on the face of it, it would appear to be a straight forward process. Not being able to utilise what I feel is an important piece of technology has been a very frustrating experience, I would dearly love to be able to take full advantage of all that my equipment is capable of.

Engage anybody outside of the hi-fi world on the subject and you will be met with blank stares, but I am certain that you will know what I am talking about and, what is more, perhaps you can give me an answer to my problem. Living in Hope. Thanks.

Sincerely

**Mike Turner**  
**Woodford**  
**Essex.**

Er, sorry Michael, I cannot – and I know of no one who has tried recording DSD onto DVD. However, if the Cambridge has got so far as to recognise that the disc has DSD on it, it seems to be able to read it, although this may be only the TOC. I wonder whether it is the 'right sort of DSD', namely 2.8 and not double rate 5.6. I can only suggest you look



**I'll get a couple of Toyota GT86s instead of a top end hi-fi, says Steven Sharp.**

for on-line forum experiences or, if any reader can help, please e-mail us at: [letters@hi-fiworld.co.uk](mailto:letters@hi-fiworld.co.uk). **NK**

### ORDINARY PRICES?

I am an ordinary man! I live in an ordinary town in an ordinary street, I have an ordinary house, wife (sorry darling, extraordinary!) kids and job, for which I am paid a reasonable salary. I love my music (all sorts) and my hi-fi, and I believe that vinyl is still king.

I have a very modest system, but believe the reproduction is pretty good. And as I have said I live in an ordinary four bedroom detached, and I have (for reference purposes) Project Perspective turntable with Dynavector DV20x cartridge and Graham Slee Gold Era V phono stage. Arcam CD72, Arcam A 65+ (used as pre amp only) two Arcam P85 bi-amped to Wharfedale Evo 40 'speakers, Cambridge Audio NP 30 Streamer, Grado 125 cans, fairly good cabling (Atlas etc.) and a mains filter.

Here's my issue, I love poring over the pages of hi-fi mags, with Hi-Fi World being a very welcome regular. I am always looking for that next tweak or

improvement and I sit and drool over the esoteric systems on display like a besotted pimply teenager with a poster of Megan Fox. The craftsmanship, the sound – and the price!

Honestly, is somebody having a laff? Does this amp come with free car, house, Cameron Diaz? It would appear that by most hi-fi mags these days, in order to make any meaningful significant and discernible improvement, I will have to sell the car, the house and the children (not such a bad point). Are we suffering from the same condition that seems to effect modern art? That is, if we are told something is art by the 'experts' (e.g. pile of bricks, messy bedroom) then it is art!

I would ask: is any cable worth £6500? Would I hear £100 times the improvement over a £65 cable? Does this £1k turntable sound twelve times worse than this £12k one, or will it just sound different, and I've convinced myself it's an improvement as the cost because the experts define it as such?

At the lower end an investment of even a couple of hundred quid can reap obvious sonic benefits, but my issue stems around the kind of system I have (very modest), and where having listened to possible upgrades and improvements, I cannot honestly say that I have never had that trouser troubling "wow, that'll be sure worth the £5k I'll have to spend, what a difference!" experience.

For those that read the hi-fi press by the soft comforting glow from the valves in their latest Conrad Johnson amp, as their Acutus spins gracefully and majestically in the background like a small planet, linked to a Pulsare II via Nordost cables, and believe that I am an uneducated, heretical buffoon that has spent "pin money" on a system, I say "cool, but no thanks!" Instead, I'll go on 15 years worth of holidays or buy a couple on new Toyota GT86s and



**I would ask: is any cable worth £6500? Would I hear £100 times the improvement over a £65 cable? says Steven Sharp.**

continue to love my music being very well reproduced!

Many thanks

**Steven Sharp**

You may be unhappy to learn that the high-end of the hi-fi market is doing very well, or so we are told. I saw a traffic jam of Range Rovers the other day, giving the impression they were common transport, so people have the money it seems, it's just that not all of us have the money. But the amortised cost of a high-end system over a ten year period would still be less than running Megan Fox methinks!

Comfort yourself that what you have is great value and gives a disproportionately high standard of sound quality relative to outlay, to put it the other way around. Buy carefully and wisely and you can end up with



**Maestro loudspeakers by NotePerfect of Australia. "The midrange/upper bass drivers and the tweeters are housed in a separate, sealed enclosure inside the main loudspeaker", Jean says.**

a great system that doesn't cost the earth, even whilst all those around us – or so it seems – swish past in mighty vehicles.

Look out for old model clearances, especially on eBay, keep away from high power unless you play really, really loud, and use at least decent cables (as you do). In your case, Steven, I suggest a better cartridge and the use of high res digital files through your NP30. **NK**

### BI-AMPING A WOOFER

I would like some advice from you and your team in order to help me understand and manage the different ways of connecting my amp(s) and loudspeakers, especially as I'd like to use a valve amp. I have had the opportunities to listen to different PP (KT88, KT90, KT120) in my set up but I never heard this magic sound that gives you goose bumps, that is why I'd like to think of SE valve amps.

The loudspeakers are the Maestros by NotePerfect (<http://www.noteperfect.com.au/maestro.htm>). The midrange/upper bass drivers and the tweeters are housed in a separate, sealed enclosure inside the main loudspeaker. The crossover for these drivers is a 6dB/octave, phase coherent, hard wired design, with nothing but an inductor in the midrange – no capacitors, no resistors. Because this internal enclosure is small, the midrange/upper bass driver rolls off the bass acoustically, so there are no capacitors or resistors to distort the midrange. The woofer is self-powered by its own subwoofer amp, a classic class AB 200W solid-state amp, which accepts either high level signal (speaker cables from the main amp) or low level signal (interconnects from the preamp). The midrange/upper bass drivers and the tweeters as a whole have a 91dB sensitivity and present an average load of 6 Ohms. The crossover is set at around 110Hz.

They are currently wired to the main amp as is: - bi-wired from the main amp to the external crossover high and medium binding posts - wired using a jumper made of the same cable as the main speaker cable between the medium binding posts and the high level inputs of the woofer amp.

I chose this set up as to have the main amp imprinting its own signature, if it has one (?), to the whole bandwidth including the lows. Often valve amps are known to be less than adequate at low frequencies compared to transistors because of their low output power (especially SE ones) and because of the not-so-good performance of the output

transformers at low frequencies.

In my case I think I have two more options on top of my current set up (set up 1):

- Set up 2 would be to connect the preamp directly to the low level inputs of the woofer amps. This would avoid the valve amp to feed the woofers although it will still have to deal with the full bandwidth signal coming from the preamp. As the midrange/upper bass driver rolls off the bass acoustically would this set up avoid the possible weaknesses of a valve amp and allows it to work more comfortably not having to deal with woofers at below 110Hz?

- Set up 3, more complex and more expensive, would be to make use of an active crossover after the preamp at 110Hz. In this case the valve amp wouldn't have to deal with <110Hz frequencies at all and, as low frequencies pump out a lot of energy, it should have more oomph for dealing with the midrange/upper bass drivers and tweeters.

I'm currently dealing with two amps: an Altmann BYOB 10W integrated amplifier powered from a 12V battery (<http://www.mother-of-tone.com/byob.htm>) which I use for critical listening and a Burson Audio 90W PP160 power amplifier (<http://www.frontendaudio.com/Burson-Audio-PP-160-p19999-11292.htm>) which I use for mainstream and party listening.

The PP160's got high level inputs which allows it to be fed by a 2W to 25W valve amp and then be able to amplify its signal to feed average sensitivity speakers. I understand that by doing so the Burson amp will also amplify the noise inherent to the valve designs. Therefore in order to use the Burson amp as a booster for low-power valve amp will require those ones to be particularly quiet. If I had to use a valve amp in order to get this magic sound which tube amps are famous for what would you recommend for my current system?

**Jean from South Australia**

Hi Jean. Since your "midrange/upper bass drivers and the tweeters as a whole have a 91dB sensitivity and present an average load of 6 Ohms" and since you are able to use a 10 Watt amplifier, I believe you will get enough volume from a power limited Single-Ended amplifier, like an Almarro 318B for example, or the Ariand Pro-845.

Your current arrangement of using the power amp to drive both midrange/treble, and the powered bass unit is the one usually





**The Ariand Pro-845 Single-Ended valve amplifier would suit Jean from South Australia. Produced in China, it is likely available in Oz too.**

recommended. Although the power amplifier voltage-amplifies the bass signal in this arrangement, bass current is not drawn from it, due to rising impedance of the high pass filter used to feed the midrange/ treble section, and the fact that the woofer power amp draws no current either. The sound of the valve amp is preserved using this connection layout.

Connecting the preamp direct to the low level inputs of the woofer will change bass quality and seasoned subwoofer experts say this is not good, but I would still try it, providing your valve amplifier has a gain control for level matching.

You do not need arrangement 3) I believe, since although the valve amp 'sees' low frequencies with the other arrangements, it does not drive bass current and that is what matters. I hope this helps. **NK**

#### POWERED UP

You kindly published my letter and photograph of my battery power supply in the March 2012 edition of *Hi-Fi World*. Here is something by way of an up date.

When I wrote last, the battery power supply I built powered a Perpetual Technologies P-1A resolution enhancer with a Benchmark DAC 1 running off the mains via an isolation transformer

and PS Audio Power Plant. So very well supplied – or so I thought.

I recently purchased a Cambridge Audio DAC Magic Plus which runs from a 12 volt DC supply – perfect for a battery. I initially tried the Cambridge from the supplied wall wart which was roughly comparable with the Benchmark etc. but it sounded greyer, less dimensional and flatter.

I switched to the battery power supply with all the digital conversion process after the CD deck, powered by a battery. The change was astonishing. More detail, colour, dimension and depth with a powerful bass.

The conclusion I have drawn from this is that the problem with digital replay is the quality of the power supply alone. The conversion process is so delicate that any interference will corrupt the end result.

At the time I was listening to a local musician in the north east called Flossie Malaviale who has a stunning voice and is perfect for evaluating sound quality. She comes from Nimes but is settled in the north east. Her last two CDs "X" and "Dark Horses" are gems, locally recorded with local musicians. Find them on her web site. We have all been missing something. She is also very funny.

As a last point, the battery powered Cambridge means I can now listen to music off CD in Dolby Pro Logic via the Teufel Audio surround sound decoder (I mentioned last time), also battery powered. This adds spatial effect around the room and opens out the sound even more. Curiously it improves the quality of the bass as well.

**Peter Graves**



**The 12V lead acid battery power supply, with mains charger, built by Peter Graves. It "opens out the sound" he says, "adds more detail and depth and firmer bass".**

# Ming Da amplifiers are the perfect match for Triangle speakers



un particulier



Visite chez



Boss of Triangle and some audiophiles visiting our exclusive shop in France

Our flagship MC300845-AB is the exclusive test amplifier for Triangle's range of speakers

RENAUD DE VERGNETTE is the founder of the renowned HIFI speaker brand-TRIANGLE. This French entrepreneur is a connoisseur and lover of music. Since 1980, he has developed and produced high class HIFI speakers which are used by audiophiles in the whole world.

RENAUD DE VERGNETTE loves valve amplifiers, in particular the Chinese brand MING DA. He uses a pair of mono block power amplifiers MC300845-AB to drive his TRIANGLE speakers MAGELLAN (91DB/1W/1M). The MC300845-AB power amplifiers use 845 valves as output, 300B as push/driving. The power is rated at 100W AB CLASS. Beside, he uses a pair of MING DA 845-AB to drive the bass. The MC845-AB uses a pair of 845 tubes and 6SN7 tubes and the output reaches 100W in AB class. This is an airtight setup, giving no opening to attack and it is a perfect match. This huge high class sound system creates a warm feeling in the listener. The sound from the speakers is so beautiful and the volume is so wide, yet, it is soft like in water. The midrange and treble is like climbing mountains.

The deep and taut bass makes you feel so comfortable. Though we sit in front of speakers near 10 meters, we can still sense every detail of the soft and clean and natural music.

This high class audio system is like a Gran Turismo that drives on the French highway-gorgeous, modern, comfortable, and peaceful and with super speed.

Renaud De Vergnette told the journalist that what he pursues is not volume but the NATURAL AND TRUE music.

-----Adapted from an interview in French haute fidelite magazine



MC2A3-PRE PREAMPLIFIER



Valves: Exclusive 845 x2, 6SN7x2  
 Full music 300B x2  
 Power: 100W per channel  
 Net weight: 35KG per channel  
 Net size: L38 x D48 x H 25 (CM)

Out new upgraded MC300845-AB mono block power amplifiers.



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*Avantic Beam Echo integrated amp £495.*



*Leak Varislope III preamp, Trough-Line II tuner and power amplifier.*



*Stereo Nagra & mono Nagra tape recorders £1300 approx.*



*Radford STA15 power amplifier £1495.*

# The National Vintage Communications Fair

**T**he National Vintage Communications Fair was held Sunday 12th May at the Warwickshire Exhibition Centre, not far from the M40 motorway. There was a large amount of vintage hi-fi at the fair, organiser Richard Hetherington told us, often at attractive prices, as his pictures here show.



*SME 3009 arm (foreground).*



*Technics Direct Drive turntable.*



*Revox Rack mounted Varispeed £350.*



*Studer A series & Ampex 456 1/4 inch tape on 10.5 inch spools. This tape formulation was widely used in recording studios for the final stereo master. It's likely that many of the analogue records your readers listen to were mastered on tape like this.*

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The Q Series from KEF represents a quantum leap in terms of listening pleasure.

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So whether it's music or movies, Mahler or Massive Attack, what you experience is the captivatingly sweet, accurate and natural live sound of the original performance

'...in many respects it is exceptional at the price in terms of the power and physicality it offers.'

Q700 - Hi-Fi Choice Magazine - March 2012



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Pair of Quad II power amplifiers.



Quad 405 power amp and pre amp, £200.



Thorens TD 125 Mk II turntable and SME arm.



Early Leak TL/12 power amplifier.



Valve power amps Tempo & Yaqin £650 & £750.



Various valve amps including Linear, Leak Quad. Somewhere in there is a Rogers Cadet with a £350 price tag!



Open reel recorders from Revox, Akai, Sony. from £50 upwards.



Leak Sandwich speakers £50.

Photographs and text - Richard Hetherington.

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# Single issue

**Icon Audio's new MB30SE monoblock offer the magic of single-ended triode sound without many of the drawbacks. Jon Myles is seduced.**

**S**ingle-ended Class A triode amplifiers seem to divide hi-fi enthusiasts more than any other piece of equipment.

To some, they simply make the most satisfying, effortlessly natural music out there. To others they are hopelessly archaic museum pieces whose loose bass and low power ratings render them just too compromised for effective everyday use.

As ever, though, the case is not nearly as black-and-white. Proving

this is the new Icon Audio MB30SE monoblock power amplifiers.

Retailing at a (relatively) wallet-friendly £1,799.95, designer and Icon Audio founder David Shaw claims the MB30s afford all the advantages of 100% Class A single-ended triode output, without the drawbacks of flabby bass, hum and low power that other designs suffer.

Hence the choice of the new Super Tung Sol KT120 as the main output valve. This gives considerably more power than expensive triodes like the 300B; the MB30s can deliver

16 Watts in triode mode and a heady 27 Watts ultralinear. The KT120 is not expensive, so replacement costs when they finally do give up the ghost are reasonable – around £30 each.

The output transformer is Icon Audio's own Low Distortion Tertiary design with taps for 4 Ohm and 8 Ohm speakers.

Input sensitivity can be set on a toggle switch on the rear of the unit – giving the choice of low feedback (low sensitivity) or none at all (high sensitivity).

Custom-wound choke regulation is employed in the power supply and valve regulation comes courtesy of GZ35/SAR4 tubes. The audio preamp and driver stages use 6SN7/CV181 valves.

To complete the package the units are point-to-point hand-wired throughout with PTFE insulated silver-plated pure copper cable and all input and output terminals are gold-plated.

In common with the company's other products the MB30s are manufactured in Icon Audio's own factory in China before being shipped to its Leicester base for final assembly, adjustment and testing.

Decidedly utilitarian in design, the monoblocks are never-the-less sturdily built and purposeful-looking once installed.

Set-up is also simplicity itself via the handy bias meter on the front of

the characteristics of the breed – just that they manage to dial out many of the pitfalls at the same time.

For one thing, they give an absolutely luscious rendition of tonal colour, best in Triode mode, yet never once stray into the sort of syrupy soft-focus that can rob the music of leading-edge detail. Yes, there's a warmth there but not the sort that concentrates the ear on the midband at the expense of everything else.

And then there's the bass – so often the downfall of SET amplifiers. OK, you are not going to mistake the MB30SEs for a 100 Watt solid state design – but you might well be surprised at just how much drive, control and depth they exhibit when hooked up to moderately efficient

"that famous Class A liquidity served to emphasise the swing and intricate piano work of Blue Rondo A La Turk"

the unit. Simply turn the small screw situated on the chassis behind the KT120 tube and once the needle hits the grey area you are good to go.

In use the meter can also be switched to provide a handy indication of output power – useful if you want to know whether you're in danger of running out of grunt.

**SOUND QUALITY**

I've heard many SET amplifiers over the years – some good, some not so good. These Icon Audios are firmly in the former category. In fact, play them to someone blindfolded and they might struggle to identify them as single-ended triodes at all. Not that they don't exhibit any of

loudspeakers, with sensitivity at Low as recommended by Icon Audio. Using High weakens bass slightly. Driving a pair of Spendor SPI00Rs (new Mk2 version) the Icon Audios managed to keep the lower registers both taut and tuneful. Although the Spendors are big speakers capable of producing prodigious levels of bass, the MB30s kept them under exemplary control.

Paul Simonon's trademark bass from the start of The Clash's 'London Calling' wasn't just a background thump – but the distinctive ascending/descending thrum that underpins the song's dynamic. And when Joe Strummer's voice comes in there is something so natural and unmistakably right about the sound that whatever your previous opinions of lowish-powered valve amplifiers you'll instantly forget them.

A slice of King Tubby's 'Dub Fever' collection underlined the MB30s' bass attributes. Admittedly, they don't plumb the depths of more powerful designs (whether valve or transistor) but they do have a wonderfully rich, tonally accurate lower register to them. And, let's be honest, anyone seeking a diet of thumping dance tunes at foundation-shaking levels isn't going to be



considering a pair of 16 Watt SET monoblocks in the first place.

Interestingly, moving between the 4 and 8 Ohm taps with the big Spendors revealed a definite preference for the latter. The sound a shade softer and less focused with the 4 Ohm output.

Moving to more traditional valve amplifier fare and the Icon Audios continued to shine. In fact, I could have sworn they were built especially to play Dave Brubeck's 'Time Out' so fresh did this classic sound. That famous Class A liquidity served to emphasise the swing and intricate piano work of 'Blue Rondo A La Turk' – giving a new insight in the dynamic shadings and interplay of the group. Not surprisingly, these traits surfaced time and again on acoustic jazz and well-recorded vocals where the MB30SEs really shone. The moment Jacques Brel catches his breath on 'Ne Me Quitte Pas' is enough to set anyone's spine tingling when heard with the resonance the Icon Audios manage to convey.

It's not all perfect. Where the MB30s can fall down at times is in their reproduction of big orchestral climaxes. Not that they do anything wrong – but you don't get the same sense of size and scale that more powerful equipment can convey. Try as they might, with Vasily Patrenko's rendition of Shostakovich's 11th Symphony the Icon Audios couldn't quite manage to deliver the power and majesty of the first opening crescendo.

The MB30s won't give you the rhythmic drive and propulsion of, say, a similarly-priced Naim amplifier but they do have a thoroughly liquid, deeply lifelike sound that conveys





music with a sense of flow and realistic timbre, without hint of electronic grain.

Switching between Ultra-Linear and Triode mode, I developed a definite preference for the latter lower-powered alternative. There wasn't a great deal in it – but Triode operation exhibited a smoother, more mellifluous sound while Ultra-Linear seemed to add an extra edge to the music. There may be times when that edge and greater power are actually a benefit so it's nice to have the choice.

As for the sensitivity setting, Icon Audio recommend low as the default

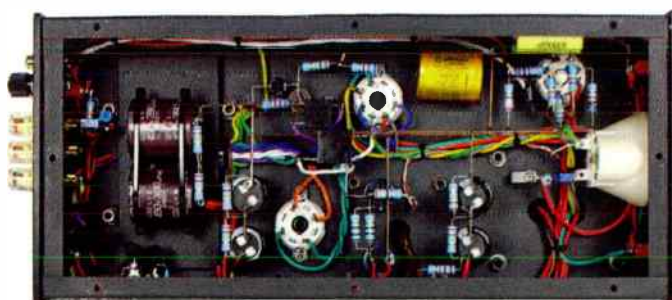


and I found this gave a better, fuller bass with the Spondors, especially in Triode mode. Switching to the high setting seemed to give a drop-off in low frequency definition and a slight blurring of the sound. This will be loudspeaker-dependent and, to a certain extent, depend on individual taste. But, again, the options are there to explore.

### CONCLUSION

The Icon Audio MB30SEs offer the joys of single-ended Class A triode valve amplification without the well-known pitfalls. The new Super Tung Sol KT120 delivers realistic power mixed with a beguiling sound. You are still going to need a pair of relatively efficient loudspeakers to get the best out of the MB30s but once you do then you are greeted with a sound that is both wonderfully organic as well as richly detailed.

There's no doubt they offer remarkable value for money. Even if you've never considered a valve amplifier before, I'd recommend a listen. They might just change your mind.

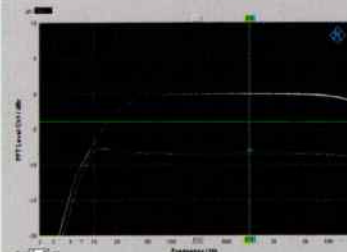


### MEASURED PERFORMANCE

In Ultra-Linear mode the Icon Audio MB30 produced 20 Watts; in Triode mode it produced 12 Watts. Why use Triode mode? Because it is favoured for good sound quality and, in keeping with this, the MB30 produced almost exclusively innocuous second harmonic distortion in Triode mode. Switching to Ultra Linear increased third harmonic and higher orders, which will sharpen the sound just slightly. To confuse matters, total distortion stayed roughly the same between the two modes, only its harmonic structure changed, as well as its lack of change with level, meaning Triode mode has smoother transfer characteristic. Sonic differences will not be great, but Triode mode was well implemented in the MB30 and is likely to sound best, staying within the available power envelope.

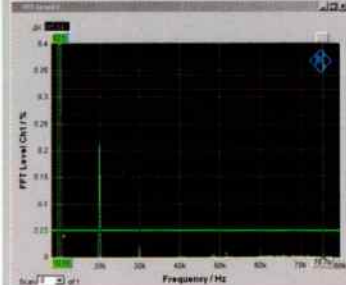
Complicating matters is a 'Sensitivity' switch on the rear panel. This switches feedback, not an attenuator, so it affects results in each mode, distortion being a little lower in L (Low) sensitivity mode, meaning high feedback. In L sensitivity measured 0.8V for full output, a normal enough result

#### FREQUENCY RESPONSE



#### IMPEDANCE

Mode	Gain	Level (dB)	Frequency
ON	0.2183 %	2.0719 V	10.000 kHz
OFF	OFF	OFF	OFF



and sufficient to allow the amp to need no preamp with silver disc players (2V output). Switching sensitivity to H (High), decreases feedback, increases gain to give 0.3V sensitivity, high enough to work with low gain phono stages.

However, changing feedback also changes frequency response and output impedance, meaning damping factor. The MB30 gave widest frequency response and highest loudspeaker damping in the L setting where feedback is highest, but interestingly low frequency time constants are such as to produce slight bass peaking of +1dB at 12Hz, our response analysis shows with a subsonic roll off below that frequency, lessening core saturation by reducing lows. Switching feedback out (H) reveals the open loop response, bass rolling off below 50Hz, so this setting will give lighter bass. Putting less bass into a loudspeaker may usefully counterbalance the drop in bass damping H also produces, damping factor measuring 1.8 (4.4 Ohms Z) against 4.6 (1.7 Ohms Z) with feedback on (L).

As a side note to all this, switching feedback out also lessens modulation of the distortion pattern and this may be why it is commonly preferred to feedback on. However, Icon Audio recommend L by default as it gives the sort of controlled sound most people are used to; it also best controls loudspeakers, which are designed for high DF transistor amps. Zero feedback can give boomy bass, depending upon the loudspeaker's acoustic damping.

In all then, the MB30 offers a good 20 Watts of power in Ultra Linear mode, and likely strong bass with Low sensitivity selected (default modes). It can be switched to Triode and low feedback for a more purist approach if desired. It measured well and should deliver fine sound quality. NK

Power	20watts
Frequency response	7Hz-22kHz
Noise	-113dB
Distortion	0.2%
Sensitivity	800mV
Damping factor	0.8

**ICON AUDIO  
MB30SE  
£1,799.95 PER  
PAIR**



#### VERDICT

A gorgeous, liquid valve sound with sufficient power to drive real-world loudspeakers.

#### FOR

- smooth Class A sound
- triode or ultralinear operation
- economical valve replacement cost

#### AGAINST

- need relatively efficient loudspeakers
- not the last word in bass extension

Icon Audio  
+44 (0)116 2440593  
www.iconaudio.com

**ORIGIN LIVE**

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

**HADCOCK GH-242 EXPORT**

2010 £770  
Consummately musical, lyrical sounding tonearm, but needs the right turntable. Excellent value.

**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 SME V'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 SME V 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 soundstaging. Build quality up to SME standards, which is really saying something!

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

**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-9SE** 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 £189  
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 DV10XS2003** £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-up-and-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; particularly 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 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** 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.

**ARCAM rDAC 2010 £300**

Cracking budget DAC sporting a fulsome and musical sound with gorgeous build and styling.

**MUSICAL FIDELITY MI DAC 2010 £400**

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

**STELLO DA100 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 CDS1 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 K2 CD 2010 £900**

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

**BENCHMARK DAC-1S 2009 £930**

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

**MUSICAL FIDELITY M3 CD 2011 £995**

Excellent mid-price machine with slick slot loading and an open and inviting sound.

**ELECTROCOMPANET PD-1 2011 £1,250**

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.

**NAIM DAC 2010 £1,995**

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

**MERIDIAN GO8.2 2011 £2,400**

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.

**ELECTROCOMPANET EMC-1UP 2009 £3,450**

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

**ACCUSTIC ARTS CDP1MK2 2007 £3,985**

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.

**ELECTROCOMPANET 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.

**NAIM CDX2-XPS2 2003 £4,950**

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!

**NAIM CDS3 2003 £7,050**

The most polished Naim CD to date; tremendously 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 1 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****NAIM HDX 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 2004 £370**

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.

**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 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 5i** 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 solid-state 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 hybrid transistor amplifier, 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 grin-inducing 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 IA4** 2007 £3,650  
Goodly amount of Class A power, icy clarity and a breathtakingly fast, musical sound make this one of the very best super-integrateds.

**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 gente music but is no headbanger!

**SIM AUDIO MOON 6001** 2010 £5,750  
Sturdy build, useful facilities and a wonderfully relaxed, seamless and even-handed sound will win this many friends.

**MUSICAL FIDELITY AMS351** 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 £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-1** 2010 £2,650  
Excellent solid-state preamp with a meticulously detailed and propulsive sound, but a deep velvety tonality.

**MELODY PURE BLACK 101D** 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.



**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 £520**

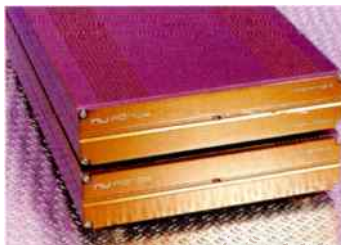
Decently smooth yet usefully muscular, this power amp punches way beyond its price point in sonic and value terms.

**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 rhythmic 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-40** **2005 £3,230**

Modern tube monoblock power amplifiers with plenty of power, liquid and open mid-band and spacious, airy treble. Explicit, engaging 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.

**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, evenness 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 AE1 CLASSIC****2006 £845**

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

**SPENDOR S3/5E** **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.

**ELAC BS243** **2010 £1,000**

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

**SPENDOR S8E** 2008 £1,895  
 Generously large, silky smooth delivery, this dynamic sounding floorstander is an excellent all rounder.



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

**PMC OB11** 2008 £2,950  
 Cleverly updated floorstanders give scale and solidity in slim and well finished package.

**EMMINENT TECHNOLOGY LFT8B** 2010 £2,300  
 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.1** 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 DC10T** 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 £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 audition.



**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 II** 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** 2006 £10,500  
 In many respects, the ultimate studio monitor; dazzling clarity and speed with commanding scale and dynamics.



**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 I701** 2010 £349

The first iPod dock to extract the music digitally, letting you hook your little Apple directly 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 DR150** 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.



**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 ear-speakers are like no other headphone, or loudspeaker for that matter...

**INTERCONNECTS****TELLURIUM Q****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****XS****2007 £20**

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

**WIREWORLD****OASIS 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****£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, inasmuch 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 £800**

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-M170 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 its 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 UNITIQUE 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.

**LINN CLASSIK****MOVIE****2007 £2,250**

Superbly built all-in-one that offers excellent sound across all formats and is surprisingly 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-7S1 disc player, SC-7S2 preamp and MA-9S2 monoblocks delivers jaw-dropping performance.

# HIGH END SHOW 2013

MAY 9TH-12TH, MUNICH, GERMANY, 2013



The High End Show always features musicians playing amongst the crowds, to remind visitors what live music sounds like. This year the peculiarly named but toweringly attractive Lady Taxi (see them on YouTube) played in the entrance hall to entertain the crowds.

Audio Power Labs' 833TNT valve power amplifier was one of the most striking exhibits of the show. Using massive 833C power valves running in push-pull, as well as liquid convection cooling, these beauties deliver 200 Watts, their manufacturers state. Standing 18in/46cm high and weighing 160lbs/73kgs they managed to eclipse even the mighty Kron Kronzilla. See ([www.audiopowerlabs.com](http://www.audiopowerlabs.com))



Once again the massive halls of Munich's MOC Event Centre resonated to the sounds of hundreds of high-end hi-fi exhibitors from around the world doing their best to wow the crowds. As always we were there to see the staggering array of high-end products on display: this is one of the world's largest and most prestigious audio shows. Here are some highlights...

*Final figures: 363 exhibitors from 35 countries; 16,159 visitors - and Hi-Fi World!*



Tannoy ([www.tannoy.com](http://www.tannoy.com)) have upgraded their entire Prestige Range to Gold Reference status, including the Canterbury GR shown here (right) with its single 15in Dual-Concentric drive unit, and the top-of-range Westminster Royal GR horn. Also on show was the new DC10A Alnico, using a single 12in Dual-Concentric driver in a larger volume cabinet than the twin-driver DC10T. This could be very interesting, because cabinet volume is all.



Quadral have upgraded the excellent Vulkan VIII in their Aurum range to VIII R status by giving it two bass drivers, instead of one angled sideways. Also on show was the smaller Orkan – also new, Quadral's premium Aurum range ([www.aurumspeakers.com](http://www.aurumspeakers.com)) use quality ribbon treble units slickly blended in with composite cone drivers to give a smooth, fast but accurate sound.



This amplifier was the 'must see' item of the show. It's spec sheet claims 60,000 Watts per channel in stereo. When operating the Opera Only opens up to stand 8ft (250 cms) high, no less. Switch off and it retracts to just 6ft high, so the wife won't notice. If you want one, go to [www.onlycreative.it](http://www.onlycreative.it).



Clearaudio ([www.clearaudio.de](http://www.clearaudio.de)) were displaying a self-powered parallel tracking tonearm. It's been done before, by Marantz for example. The spirit level is a dead give-away, because for this idea to work the turntable must be absolutely level. The tonearm is driven by a cartridge that slides on a frictionless carriage. It's a sensitive system that demands care, but it sounds good.



Audionote of Japan by Kondo ([www.audionote.co.jp](http://www.audionote.co.jp)), were exhibiting in a rare move outside Japan. Kondo was the founder of Japanese Audionote valve amplifiers, and designer of these famed and highly specialised designs in which every component was specially built for its purpose. This system was driven by their Kagura amplifiers using 211 triodes running in push-pull.



KR Audio ([www.kraudio.com](http://www.kraudio.com)) were showing their impressive Kronzilla SDi35 amplifier, dominated by their own T1610 valve, a monster that shades most competitors; 845s and 211s look undernourished against them. It's a Single-Ended stereo power amplifier producing 35 Watts per channel, weight a mere 50kgs.



**Buffalo** ([www.buffalo-technology.com](http://www.buffalo-technology.com)) make computer networking products, so their presence was a surprise. On display was the LinkStation LS400 NAS drive, the first to play DSD files over a home network complying to the Digital Living Network Alliance (DLNA) specs. DSD code was first used on SACD and is enjoying something of a comeback as a high quality alternative to PCM digital code. Buffalo's drive can store it and play it, a rare ability at present.



**Kingsound of Hong Kong** ([www.kingsaudio.com.hk](http://www.kingsaudio.com.hk)) were demoing their new top-of-range King III full range electrostatic loudspeaker to a packed house. It stands 192cm high and weighs 25kgs. Vertical high frequency panels are accompanied by stacked modular bass panels. The Kingsound electrostatics we have reviewed were superb, so we expect a lot.



**Silbatone of Korea** ([www.silbatoneacoustics.com](http://www.silbatoneacoustics.com)) were back with their fabulous Western Electric Mirrophonic cinema horns, again playing heavy Rock like Deep Purple's Smoke on the Water. The audience loved it; no other exhibitor was able to match the sound or the atmosphere. Although the horns sounded a tad boxy, they projected drums from bass guitar with outstanding clarity and delivered them at vast scale. Wonderful!

We were given a fascinating lecture by a National Physics Laboratory ([www.npl.co.uk](http://www.npl.co.uk)) representative about their ability to look at sound pressure waves in a room. Modulated laser beams are used to see how loudspeakers lobe at different frequencies, and sound wave absorbers behave. The equipment needed to do this is expensive and complex, but they are offering in-house measurement to companies interested in seeing how their products perform.





How about this for a wacky idea – an LP that plays ‘backwards’. Er, yes, we had to think twice about this too. It plays Ravel’s Bolero from the inside of the LP outward, the reason being it starts soft and ends loud, and sound quality of the loud bits is best preserved where linear groove speed is fastest, at the outside of an LP. This LP is strictly for those with steady hands, and auto-changers are out. Go to ([www.tacet.de](http://www.tacet.de))



The new Mosaic series from mains specialists Isotek will be available from the end of 2013. There are three components: the Mosaic Titan, Genesis and Centuri. They are half-rack width and provide voltage stabilisation (Mosaic Centuri), sine-wave regeneration (Mosaic Genesis) and high current outputs from the MosaicTitan. They can be used independently or combined, depending upon your system’s needs. ([www.isoteksystems.com](http://www.isoteksystems.com))



These unusual looking loudspeakers are made by Finnish company Amphion and are individually painted by the Danish artist Kristian Von Hornsleath. The speakers are 100W units. These unique transducers retail at 3,000 a pair. ([www.amphion.fi](http://www.amphion.fi))



The SMARTractor Alignment protractor from German based manufacturer Acoustical Systems. It boasts five alignment curves, including Loefgren and Baerwald in both DIN and IEC configurations and the new UNI-DIN curve. The magnifier has a glass lens and there are three shims provided to ensure a tight fit on the turntable spindle. European retail price is 3449 including shipping. ([www.acoustical-systems.com](http://www.acoustical-systems.com))

The LEEDH E loudspeaker has seven ABD (Acoustical Beauty Drivers) transducers. Four handle the bass frequencies and are aligned at 90 degrees to the listening axis and back-to-back, operating in a push/push configuration. The cones are made of carbon/epoxy composites. Power handling is claimed to be 300W, with an efficiency of 82dB. They cost 12,000. ([www.leedh-acoustic.com](http://www.leedh-acoustic.com))



STEREOPHONIC  
**STEPPENWOLF**

**BORN TO BE WILD**



**STEPPENWOLF**

Steppenwolf  
Music On Vinyl

**T**his album represents the band's debut. Spin it and you will find a pretty tight outfit.

There was a good reason for that which the likes of The Beatles had also found to their benefit early in the decade. They rehearsed like crazy and the more that they played together, the better they got. Hence, this strong LP in which the outfit never put a foot wrong. The music is loud, proud and powerful and was the brashest thing that MCA had issued at the time of its 1968 release. OK, John Kay's song writing was not quite up to par at this point, he still had some work to do, but the group were fortunate to tap into the output of ex-band member Mars Bonfire who penned the classic single, 'Born To Be Wild' which not only hailed the forthcoming heavy metal genre (Vanilla Fudge and Led Zeppelin were freely using the term too) but

did a fine job of backing the free-wheeling antics of Dennis Hopper in the film, 'Easy Rider'.

Chess Records were also featured via two of their songs: 'Berry Rides Again', written by Kay but based upon the work of Chuck Berry and the Willie Dixon cover 'Hoochie Coochie Man'. Even Hoyt Axton's anti-drug ditty, 'The Pusher', was included and then turned into a six-minute powerhouse of a track.

This reissue retains Music On Vinyl's ([www.musiconvinyl.com](http://www.musiconvinyl.com)) high standards in terms of re-mastering, but also in terms of its pressing, which is quiet, allowing the music to speak for itself. As such, the pressing provides enough silence to allow the subtle aspects of this record to come through. The master is unmistakable sixties fare with a warm glow but with a raw arrangement that is stripped to provide that motor-biking energy.



**RIOT**

Thunder Steel/The Privilege Of Power  
SPV

**W**hat an album! A heavy metal classic! But 'Thunder..' was also a commercial

flop that confused many and was ignored by others during its release in 1988.

The band was formed by Mark Reale in New York during 1976: vocalist Guy Speranza; guitarist L.A. Kouvaris; bassist Jimmy Lommi, and drummer Peter Bitelli were soon recruited but the project was to last until 1982 when Reale announced, after the release of the 1982 album, 'Made In America', and the culmination of a number of band changes, that the group was to disband.

Riot was reformed in 1986 with the vocalist Tony Moore fronting the group, along with bassist Don Van Stavern and drummer Bobby Jarzombek. The new line-up's comeback effort, 'Thundersteel', appeared in 1988.

'Thundersteel' was a

tremendous effort. Distinct elements of Judas Priest could be found within, while the thrash movement that was very popular at the time was also to be found within the powerful percussion and guitar stylings.

Hair metal was another ingredient, especially within the band's branding but it was, no doubt, the conglomeration of all of these styles that finally 'did' for the album. Hearing the album today, it sounds wonderfully eclectic, passionate and histrionic in a techno-metal sort of way, making it overstated but loveably so.

Offered within the same gatefold sleeve is the 1990 release, 'Privilege Of Power', which is a brilliant exercise in paranoia that, again, brings in elements of Judas Priest but also, this time, influences from Iron Maiden.

This SPV ([www.spv.de](http://www.spv.de)) master is solid while the gatefold sleeve is colourful and immediate.



**R**ollins is one of the best tenor sax players ever to grace the instrument. His work on bebop and hard bop is notable.

Every great musician has a unique style and Rollins can be recognised purely by his music. Still playing in his eighties, Rollins has a flowing, easy and accessible style but is always innovative in terms of harmonics. He has not only influenced a wide array of jazz players but his work has also encouraged a general view that jazz can be enjoyed by all.

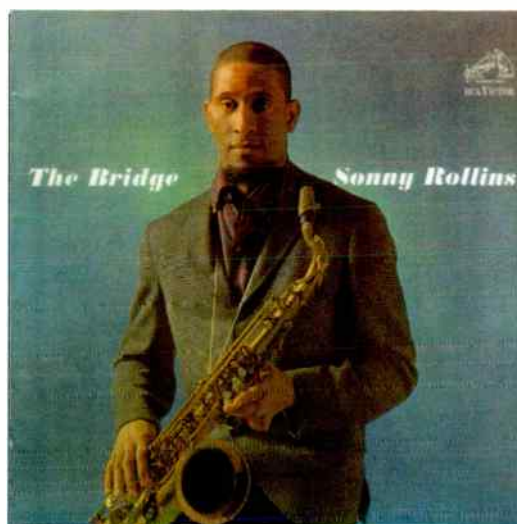
Back in his early career, Rollins quickly accrued a gamut of jazz experience with top players but, in 1956, he made arguably his most significant move by joining a new band that featured Max Roach and Clifford Brown.

Later still, Rollins would form his own band, distinguished because it didn't feature a piano. The outfit featured the bassist

Wilbur Ware or Donald Bailey and drummer Elvin Jones or Pete La Roca in 1957. Come 1959, Rollins decided to turn his back on society, fleeing to Japan and India and studying Yoga and Zen.

Rollins was not to stay away from the music he loved for too long, however. In fact, he would return in 1962 when he created 'The Bridge' with guitarist Jim Hall for the RCA Victor/Bluebird label. This was another quartet without a piano that also included bassist Bob Cranshaw and drummer Ben Riley.

Within the album, Rollins plays four standards, including the romantic 'Without a Song' and 'God Bless the Child'. One of the highlights of the LP is how Rollins and Hall work together, pushing each other to new creative heights, making this album a classic. The mastering for this Waxtime ([www.discovery-records.com](http://www.discovery-records.com)) LP is solid, proving a welcome addition for any audiophile with a jazz bent.



**SONNY ROLLINS**

**The Bridge  
Waxtime**

**D**emon were associated with the New Wave of British Heavy Metal bands in the eighties, representing a hard rock resurgence in the UK. A prominent live group, the band were quite shocking during their on-stage performances although the sound of the outfit never quite matched the extreme nature of the name. More a mainstream hard rock outfit, the band were formed by Dave Hill and Mal Spooner with the later addition of Clive Cook and Paul Riley. Demon produced a successful, one-off single, called 'Liar', which resulted in signing with the Carrere label, acting as label mates with Saxon. After the band's debut, which had the media comparing them to the likes of Judas Priest and Rainbow, Demon released this, their second and arguably their best album.

'Night...' begins with enough sound effects, via 'Intro' and 'An

Observation', to warn of the arrival of a fully-fledged rock opera but the LP never resorts to that (although there is a thread of the tragically, uncontrolled séance somewhere in there). What you have here are a bunch of top quality songs (yes, Demon used to write them) such as 'Don't Break the Circle', 'The Spell' and 'Beyond the Gates'. The band, which now seemed more akin to UFO than Rainbow, enabled them to dabble with classy ballads such as 'Strange Institution'. This is an album of hard-hitting heavy rock but wins and stands out from the crowd because of its consistent song-writing and instrumental prowess.

Also look out for two additional Demon LPs from Back On Black ([www.backonblack.com](http://www.backonblack.com)). 'Night Of The Demon' was the band's debut released, issued in 1981 and includes a mix of gothic hard metal and melodic hard rock. 'The Plague', issued in 1983, saw the band explore more prog rock flavours.



**DEMON**

**Night Of The Demon  
Back On Black**

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# The last broadcast

A tuner that breaks the rules? That'll be the Sansui, then. Martin Pipe tunes in.



**A**lthough it looks pretty conventional, Sansui's DR201V is one of the most unusual hi-fi tuners we've come across. This is because it employs what is known as Software Defined Radio to derive both DAB and VHF/FM. OK, this isn't new, Radioscape make such a module and Arcam use it. But Sansui use a GyroSignal module from Taiwan ([www.gyrosignal.com](http://www.gyrosignal.com)) and we got into a lengthy and unresolved debate with them about what it was doing.

The DR201V is equipped with a digital audio output (both coaxial and optical) for both DAB and VHF/FM. It supports DAB+ – a variant of the

standard, which substitutes AAC lossy compression for the original MPEG 1, Layer 2. With DAB, it's all about cramming in as many stations as possible into the available bandwidth in a bid to satisfy the listener's demands for choice. If in time the broadcast authorities migrate to the new standard, then it's good to know that the DR201V will be ready and waiting. For now, though, DAB+ remains the province of overseas broadcasters.

The DR201V is as basic (read 'friendly') as it's possible to be, although you do get a remote handset. A button toggles between VHF/FM and DAB, while a knob with a nice feel covers analogue tuning

or works your way around the DAB multiplexes. These are found with a 'scan' function, which in FM mode locates the next station up the band. Twenty easily-programmable presets (ten for each mode) provide quick access to 'favourite' stations. Although you can switch from stereo to mono for weak FM stations, no control over IF bandwidth (as featured on the Sansui 'heavyweight' tuners of yesteryear) is also provided.

An 'info' button calls up RDS-delivered information from FM broadcasts, or the similar data carried by DAB stations, and displays it on the front panel's bright and readable fluorescent panel. Extra information exclusive to DAB broadcasts



**The DR201V is well-connected in audio terms, and even features a serial port for complex remote control systems. One aerial input serves both DAB and FM, though.**

includes signal strength, audio bitrate, multiplex identity and frequency. Around the back are analogue stereo phonos, the aforementioned digital outputs, a RS232 port for remote-control and a conventional IEC mains connector.

The same aerial input, an F-connector, is used for both VHF/FM and DAB. You'll need a combined VHF/DAB aerial, or a 'diplexer' that will allow you to simultaneously-connect both of your existing outdoor aerials. The supplied wire aerial will only suffice if you live near the relevant transmitters.

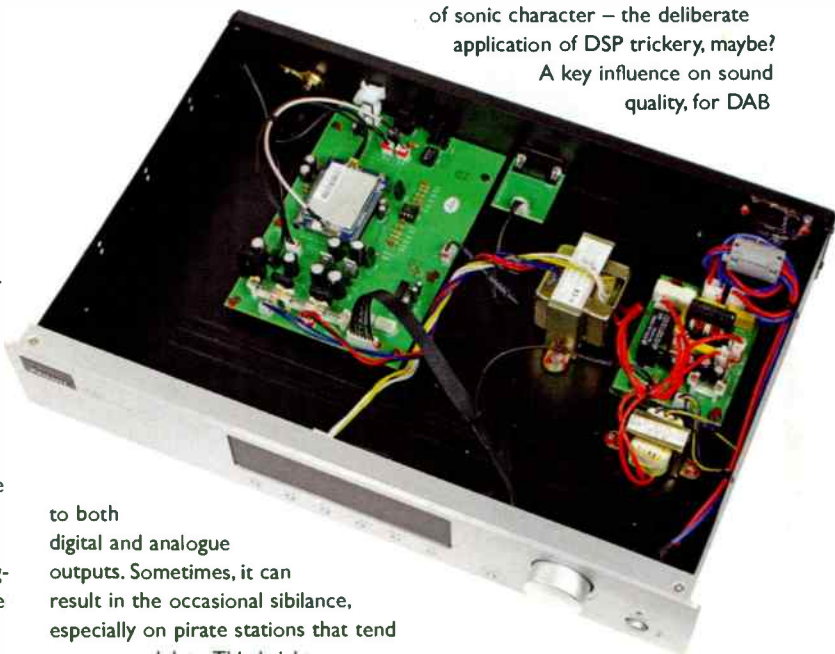
The DR201V is well-made, with two separate power supplies inside. But there's surprisingly little in the box. Nearly all of the work is done by the little 'software-defined radio' module known as the Gyro-1128; indeed, the tuner was obviously built around it. The only Sansui circuitry provides the user interface and correct power-supply voltages. Even the audio outputs are entirely down to what's going on inside the Gyro-1128, which is very different to the traditional analogue front-end/IF (intermediate-frequency)/demodulator/decoder arrangement around which most FM tuners are based. But then again, this module also provides the DAB capability.

After much chasing, GyroSignal provided basic internal details of the module it makes. Its secrets lie in a tiny handful of complex integrated circuits only visible after a screening-can is gently prised off. After a single RF conversion stage, the resulting IF is digitised. DAB and FM radio are thereafter processed entirely in the digital domain. The only device we could recognise is a modest AKM 24/96 delta-sigma DAC, which converts the digitally-decoded FM or DAB PCM stream into analogue audio. The Gyro-1128 is beautifully-made, but if a fault develops with your tuner then chances are it's going to be the culprit – hopefully, it won't be expensive to replace.

**SOUND QUALITY**

Which takes us to sound quality. Firstly, measurement had suggested a warm sound, due to rolled down treble; we requested a second sample to check this. A conventional analogue Hitachi FT-5500 MkII in-house 'control' was used to ensure validity of the result. The module's audio response is flat, but only at low modulation levels – which don't occur in the real-world of compressed VHF/FM broadcasting.

Yet my listening tests contradicted these findings. Compared to my reference Sony ST-S730ES, the DR201V's FM character is if anything slightly bright with music heard from local commercial stations and Radio One alike – a comment that applies



to both digital and analogue outputs. Sometimes, it can result in the occasional sibilance, especially on pirate stations that tend to overmodulate. This brightness was confirmed by setting up an ex-BBC FM stereo generator, fed with a range of music from an Arcam CD player. The percussive elements of Ben Finn's It's True certainly sounded sharper and more incisive than they did on the Sony.

With a pair of B&W DM7s driven by Naim Nait 3 amplification, bass – evident on upfront dance tracks like Disclosure's Tenderly - was tightly controlled. Moving to

a different form of music, 'Frankly, Mr Shankly' from The Smiths', from The Queen Is Dead, proved to be as enjoyable as ever, Morrissey's amusing vocal dovetailing neatly with Johnny Marr's equally-trademark guitar work. Rhythmic material, such as Steve Reich's Electric Counterpoint (from the 75th Birthday 2011 Prom concert, sourced from a 320kbps live stream) remained toe tappingly musical.

There are caveats, though. First of all, silence or exceedingly-quiet passages revealed that the DR201V was noticeably noisier in stereo mode than the Sony, even with a strong signal from an external aerial. In addition, the soundstage is rather compressed. A direct comparison demonstrates that the older Sony yields a superior stereo image, in which complex orchestration (a BBC Philharmonic/Nobuyuki Tsujii 'Afternoon on 3' performance of Rachmaninov's Piano Concerto No 2) is more believably-positioned. Switching to the DAB simulcast reveals that such behaviour is peculiar to the DR201V's FM side.

The two different modes are surprisingly complementary in terms of sonic character – the deliberate application of DSP trickery, maybe? A key influence on sound quality, for DAB

**Inside the Sansui uses two linear power supplies, and the Gyro-1128 module dominates the main circuit board.**

and FM alike, is the nature of the original transmissions. DAB may be carried via depressingly-low bitrates, but the DR201V keeps the worst of artifacting at bay. Radio Four yielded





**A close-up view of the Gyro module, which provides all tuner functions. In FM mode, it works very differently to conventional tuners.**

natural speech with a commendable lack of chestiness, while various live sessions on 6Music retained their intimacy. As noted, stereo FM was noisier than I liked. But the DR201V could, in both DAB and FM modes, capture signals reasonably well.

**CONCLUSION**

Although I hate to contradict the lab measurement, I found the FM section to sound rather bright. Although it can be fairly musical with some broadcasts, the DR201V falls short in some key technical areas. The DAB section, however, is a consistent performer.

**NOEL SAYS –**

Boy, did we have fun with this one – and poor GyroSignal, who were very friendly and helpful, but talked purely about allowable RF bandwidth and not audio quality; it all got very technical.

In listening tests I performed against our Hitachi FT-5500 MkII and a Marantz SR-8002 receiver the Sansui did not sound obviously dull or warm, but reasonably well balanced. There was a slight spitch that added some sharpness at times, but only occasionally, and I think this is what Martin heard. Tonally, it sounded accurate, and not warm or dull.

Much of what is transmitted on VHF/FM radio isn't of intrinsically high quality, but with a very high quality version of David Bowie's 'Let's Dance' from Radio 2 it was obvious that the DR201V had restrained dynamics in the upper mid-band against the Marantz, as if some dynamic effect was at work. It wasn't

great however, flattening dynamic perspectives a bit.

Technically, what GyroSignal have done is restrict passband to 200kHz in software to achieve high selectivity, but this curtails VHF/FM

sidebands, attenuating the strong high audio frequencies that produce wide deviation (defined by a Bessel function). Frequency response is flat at low deviations, but not at high ones. It impacts a steady measurement signal (sine wave, pink noise and white noise), but less so varying music it appears.

I listened to the DR201V at length to try to correlate an unusual set of measurements with the subjective result, finding that tonally it sounded balanced, much as the low deviation result suggests. As Martin heard, an extended flat response like this sounds a tad bright against what we are used to from analogue VHF/FM tuners, most of which reach little higher than 10kHz due to their pilot tone notch filter at 19kHz.

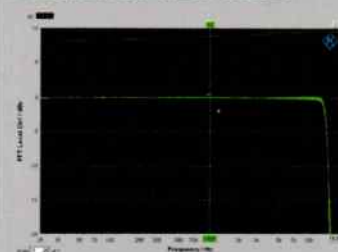


**MEASURED PERFORMANCE**

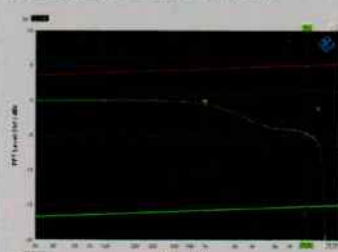
Frequency response of the VHF/FM section of the DR201V was very flat at low modulation levels, below 14kHz deviation (top trace), but treble rolled down above this level, up to full deviation of 75kHz, our lower trace shows. An analogue Hitachi FT-5500 MkII tuner measured flat under identical test conditions, from 10kHz deviation all the way up to 75kHz deviation, even in Narrow RF and IF mode where selectivity is very high.

GyroSignal's response was curious: they claim full FM deviation exceeds

**FREQUENCY RESPONSE**



**FREQUENCY RESPONSE**



the bandwidth allotted to VHF/FM stations and is technically not allowable. Hitachi's FT-5500 MkII however, which is very selective, returned flat frequency response under all test conditions, suggesting otherwise. This debate was not resolved.

Noise measured -58dB in the Mono channel, affecting centre images, but the Difference channel (L-R) affecting Left and Right images was noisier, measuring -46dB due to spiky components, making the aggregate noise floor a mediocre -52dB. Channel separation was a good 37dB.

A bit like noise, distortion measured well on the main Mono channel, just 0.06%, but was high-ish on the Difference channel at 0.4%. Not a bad result overall all the same.

This is an interesting Software Defined Radio VHF/FM tuner; Radioscape also make them (used by Arcam). Mostly, it measures well, considering price, and in use sounded balanced in spite of its measured characteristics. NK

Frequency response	20Hz-15kHz
Stereo separation	37dB
Distortion (50% mod.)	0.06%
Hiss (CCIR)	-59dB
Signal for minimum hiss	300µV
Sensitivity	
mono	µV
stereo	67µV
signal strength meter:	none

**SANSUI DR201V £225**



**VERDICT**

Easy to use, this modestly-priced DR201V is worth considering for the DAB section alone.

**FOR**

- very easy to use and well-made
- decent DAB performance
- digital output available in both FM and DAB modes

**AGAINST**

- stereo FM spoilt by noise and limited separation
- single aerial input might cause problems
- reliance on a module could mean expensive repairs

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# Digits direct

**NAD's new C390DD Direct Digital amplifier is all-digital, direct to the loudspeaker. Noel Keywood takes a close look at an interesting idea.**

**"H**eavens", I thought, looking at the NAD 390DD's rear panel. "it has no analogue inputs. How can you connect anything?"

Old ideas linger on. Most music sources have a digital output these days, including the AK I20 portable player in my pocket that has a digital output in its headphone socket, Mac Mini style. The only items that cannot feed the C390DD digital amplifier are an analogue tuner (although DAB tuners have a digital output) and a phono stage. NAD has an answer

for this: they offer a phono module with on-board ADC, and they have a matching tuner too. Another module has HDMI inputs and outputs with video pass-through; they all add to the price of course.

Lack of an analogue input probably won't worry potential buyers, because most audio products these days have either an S/PDIF digital output, or a USB digital output, and the NAD can work with both. I played the Astell&Kern AK I20 through it via optical S/PDIF, and my Mac Book Pro via USB, both playing maximum resolution 24/192 digital files; NAD's blue fluorescent

display panel flagged up sample rate correctly.

But when I went to plug in headphones I found that with no analogue anywhere, this option was out. And there are few work arounds for those with analogue components, because stand alone ADCs are rare. That's why AV receivers come with an ADC – so they can have analogue inputs, unlike the NAD.

Balancing this limitation are some unusual abilities. There is a room-boom eliminator, a simple low frequency filter set that can cut bass (or lift it) over six frequency bands: 40, 60, 80, 120, 160, 240Hz.



Those are a useful set of values for room tuning to smooth out bass, eliminating troughs and peaks. NAD wisely limit boost or cut to 2 or 4dB and no more, and they also provide 'wide' and 'narrow' modes, so there's flexibility in the system. Room tune and set up can all be adjusted on the remote control.

There are bass and treble controls, polarity inverse for those worried about absolute polarity, and 'soft clipping', a form of overload amelioration. Not that overload is likely to be a problem, because the amplifier delivered 144 Watts per channel under test (NAD optimistically claim 150 Watts per channel).

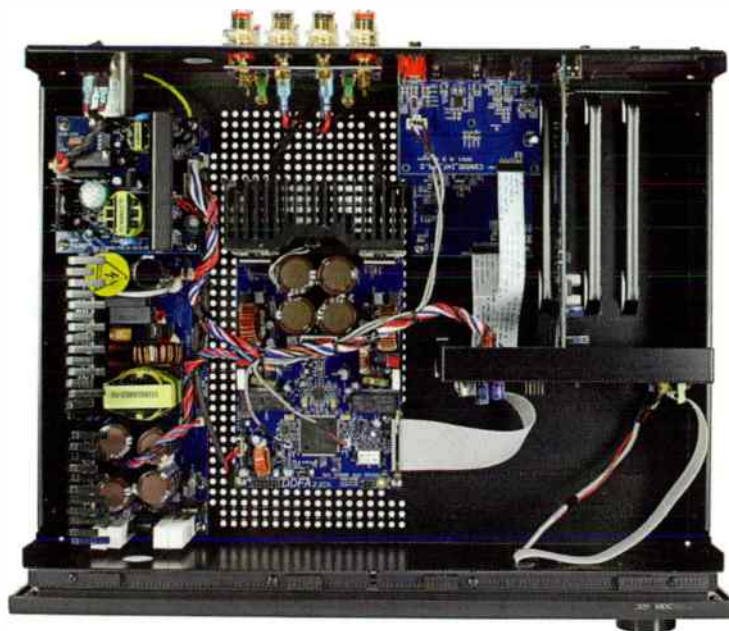
At the price, build quality, styling and finish were lacklustre.

**SOUND QUALITY**

Technologically advanced and well developed, I expected interesting sound quality from the '390DD. I have used Hypex Class D modules and liked them, and B&O's Icepower is acceptable (cough).

On the Martin Logan Electromotions I currently use at home, a brutally revealing electrostatic and a somewhat unkind one, the NAD sounded hard, dry and mechanical; I was quite taken aback; measurement suggested better. I reset the amplifier's loudspeaker load matching values, but there was no improvement.

A hard edge tinged sibilance from Diana Krall singing *Narrow Daylight* (24/96) and her voice was far from organic or natural sounding. As I worked through a wide library of high resolution files on an Astell&Kern AKI20 portable player the NAD failed to shake off this quality. It was also short of dynamic expression, sounding a little flat. Here



*Spot the mains transformer. There isn't one! NAD's C390DD amplifier is thoroughly modern, using an SMPS – Switched Mode Power Supply. They measure well but don't sound well.*

I suspected the insidious influence of a Switched Mode Power Supply (SMPS). Amplifiers with these things commonly sound flat, and it is no coincidence that expensive Japanese audiophile amplifiers these days make much of their "super C-core transformers" and such like (I prefer E cores!). Transformers are heavy and expensive items the SMPS replaces. The Japanese have become aware that an SMPS may be cheap and light but most don't sound very good (they measure well).

In our office listening room, using Quadral Wotan VIII loudspeakers, with their revealing ribbon tweeters, I had cause to re-consider. Playing an Eagles CD rip of *Busy Being Fabulous* from the *Long Road Out of Eden* CD, from the Astell&Kern AKI20 there was an obvious and peculiar thin hiss

to sibilance at the end of "busy" and "fabulous" and wherever else 's' arose.

Changing the loudspeaker matching settings, using the remote control, ameliorated this effect (2 Ohm was hissiest) but did not eliminate it. However, although this 2007 album is well produced it isn't perfect and always has a tendency to a little sharpness and hardness, CD style. The NAD threw it at me!

When Misery, in glorious *24/96*, from Dave's *True Story*, followed I got a different picture: now treble was finely detailed, if still obvious, and insight enormous. The dry, brittle quality was there, but this served to give bass notes a hard edge and a strong sense of definition with fine pace and timing. Now I was guardedly impressed.

**A wide range of digital inputs are fitted, including USB, S/PDIF in optical, electrical and balanced AES/EBU form. Two sets of speaker terminals facilitate bi-wiring; they are not switched. There are no analogue inputs.**



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As a wide variety of tracks played, the NAD showed an insight that was almost worrying. With Rebecca Pidgeon singing Spanish Harlem (24/176.4) a small percussion instrument I had not heard before had a piercingly obvious presence. But 192kHz sample rate files would not play via the optical link, even though the NAD recognised them by flagging up 192k on its display (they play via its electrical connection, our analyser showed)).

I was 'sort-of' impressed by this. Such a presentation isn't my cup of tea, but it may appeal to others. I heard crisp yet deep detailing quite beyond the norm.

**CONCLUSION**

The C390DD's £2250 price tag makes it a premium product. But there is plenty of competition, both from quality analogue amplifiers like the Creek Destiny, Cyrus 8a or Naim SuperNait, as well as quality AV receivers from Onkyo, Yamaha and Marantz. Most of these have analogue power amplifier stages, mainly because Class D has a bad reputation for both reliability and sound quality and doesn't sell amplifiers. These competitors also have plenty of digital processing, a full array of digital inputs including

HDMI, plus analogue inputs, all of which the NAD lacks unless you pay more.

Against all these products the NAD has few persuasive benefits, but it has some. The potential for room tuning will help out where rooms boom and it can be used as a subtle form of bass control as well.

The amplifier has very tight sounding bass that's pacy and it has seemingly enormous insight with high resolution material, better than

competitors. It's dry, brittle quality never vanished, however, and it wasn't the last word in dynamics. Given a good digital source, up to 176.4kHz sample rate, it's insight and definition were very high and I can see the C390DD gathering admirers for these qualities alone. It's an 'interesting' product but needs refinement and, at the price, HDMI and an ADC, as well as 192k via optical, if it is to compete with AV receivers costing half as much.

"a small percussion instrument I had not heard before had a piercingly obvious presence"

**MEASURED PERFORMANCE**

The NAD C390DD is limited to avoid output overload; a full scale digital input (0dB/1FS), the maximum possible, will not produce output clipping no matter how high volume is set.

Power into both 4 Ohms and 8 Ohms was 144 Watts, so there's plenty of power available and, being Class D, the amplifier runs only warm (Class D is analogue, by the way, but always termed digital).

Although output power does not double into low loads, as it does with conventional transistor amplifiers, a high damping factor of 60 suggests good bass control.

The electrical S/PDIF input accepted a 192kHz sample rate signal

and frequency response, shown in our analysis, reached 29kHz before moving out of 1dB limits, due to a +2dB peak in output at 50kHz, with the amplifier feeding an 8 Ohm load. Frequency response was load dependent, as is common with Class D, due to an output filter network, and on this amplifier is optimised for 6 Ohms.

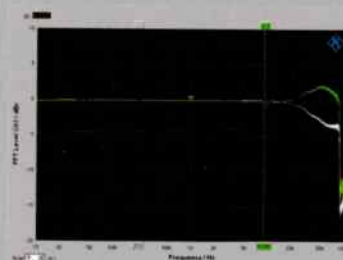
The optical input receiver worked to 96kHz sample rate and would not handle 192k, so is limited compared to many optical S/PDIFs these days.

Class D often produces strong high frequency distortion but distortion levels were low on the C390DD, measuring 0.04% at 10kHz, 1 Watt for example, and just 0.07% at high output (10V at 10kHz). Loudspeaker load, 4 Ohms or 8 Ohms, made little difference too, but our distortion analysis shows supersonic noise.

A digital signal 14dB below 0dB (peak level) was enough to drive the amplifier to full output at full volume, so the volume control is not set near maximum.

The C390DD is an interesting amplifier that works well in most areas and should sound clean. Tonally it will sound bright feeding 8 Ohm loudspeakers, but 'easier' with 4 Ohm loudspeakers, making it something of a wild card in subjective terms. **NK**

**FREQUENCY RESPONSE**



**DISTORTION**



Power	144watts
S/PDIF	
Frequency response	2Hz-29kHz
Separation	79dB
Noise	-110dB
Distortion	0.04%
Sensitivity	0.2FS
Damping factor	60



The remote control possesses loudspeaker load settings, and room bass equalisation that must be adjusted at the seating position.

**NAD C390DD £2250**



**VERDICT**

Hard 'digital' sound, and no analogue hamper this amplifier. Detailed and revealing all the same.

**FOR**

- many digital inputs
- bass room tuning
- tight bass

**AGAINST**

- no analogue
- expensive
- hard, bright sound

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Paul Rigby, *Hi Fi World*, March 2013



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### HUSH EQUIPMENT RACK THREE SHELF VERSION FROM £1,750

From CJ Audio, the Hush Equipment Rack incorporates a built-in damping system, employed to remove vibrations. I reviewed the Yewbarrow version that is available as a three or four shelf support with a 600mm shelf width, 450mm to 600mm shelf depth and 40mm thick.

Listening to the vinyl version of the Granddaddy track, 'He's Simple,

He's Dumb, He's the Pilot', I was impressed by the open soundstage that also improved in focus with no diffuse edges to blur the instruments. The attendant lower distortion

produced greater clarity while the lower noise floor helped the secondary percussion to sound crisp and focused.

Treble remained light and airy but it didn't finish there, these frequencies now had a rich, golden warmth that provided a depth to cymbal strikes, while vocals were calm, confident and lyrics were clearly enunciated in a self-assured fashion.

Lower frequencies had mass – bigger and bolder, with more heft during deep bass strikes. In fact, lower bass provided a secure footing for the entire track, giving a sense of uplift during crescendos.

Moving to CD and Helen Merrill's jazz take on 'Summertime'. Merrill's voice was slow, lazy, methodical but full of potentially emotive power. Her breathy approach gave distortive frequencies potential for disruption, yet the low distortion of the Hush meant that the silences of the sparse arrangement gave prominence to the black spaces between her words. This added gravitas, as well as a stronger sense of presence.

Possessing a high build quality, the Hush equipment rack successfully protects your equipment from distortive process, increasing sound quality and revealing new musical facets. **PR**

[Contact: [www.rjcaudio.co.uk](http://www.rjcaudio.co.uk)  
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# SOUNDBITES

### ATACAMA ERIS ECO 5.0 SPECIAL EDITION FROM £600

The Eris Eco is built from a high density carbonised bamboo resin composite material and handmade, fully welded, powder coated steel frame modules.

I reviewed the Special Edition that features an upgraded spike isolation system fitted to the legs of each module.

Soundtests began with my Avid Acutus turntable and the vinyl version of the Granddaddy track, 'He's Simple, He's Dumb, He's the Pilot'. The Eris promoted an open midrange presence, an airy and spacious soundstage plus a good deal of focus within the stereo image.

There was a slight lift on the upper extremities of the mid range but, despite this, the rack showed plenty of control along with a structural arrangement of the soundstage, reducing the diffuse nature of the sonic boundaries. Treble

was light and airy while bass was strong and weighty.

In an effort to increase the isolation, I sought out a set of Blue Horizon Spike Shoes (£25 for a set of four) and placed one under each of the three legs, sitting under the spikes. This calmed the slightly forward upper mids, giving a more soothing presentation and focusing the bass further.

Moving to my Densen B-475 CD player and playing Bing Crosby's 'Mandy', his vocal delivery was well supported at lower frequencies that showed control and focus, retaining Crosby's resonance.

Despite a slightly expansive presentation to the bass, there was no appreciable slur within this area. Upper mids, represented via piano, were lively and vigorous with an admirable lightness of touch that kept the song moving at a rhythmic pace.

A great value rack that, for the price, offers an excellent sonic



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performance including tight and efficient bass with a controlled midrange. **PR**

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# "the album talked about people on the moon called Glabbots and Sarooes."



Paul Rigby

Sometimes you become weary of cultural imports. Emblazoned upon various media platforms, you are constantly asked to appreciate someone else's culture and, because you're a reasonable person, you do. It doesn't feel like home, though. There's a certain frisson, a comfortable familiarity when you watch a film, hear music, read a book or watch a play written by your own countryman. I was reminded of this when I played a CD by Joe Meek, 'I Hear A New World'.

Joe Meek was, essentially, an eccentric. And we breed spectacular eccentrics in Britain. Way ahead of his time, Meek was a unique character with unique talents and had an incredible influence on the UK's music industry. As such, he is indirectly responsible for many classic albums.

Meek was a producer but, like America's Phil Spector, another major influence on music, Meek was totally idiosyncratic. In fact, he has sometimes been referred to as a 'mad genius'. Meek was a pioneer of studio tools and techniques in terms of multiple overdubbing, close mic-ing, sampling and more. In fact, in the studio, he had an 'anything goes' mentality. You're talking highly compressed music, pianos that were played at variable speeds, sound effects that were otherworldly, echo and reverb to the extreme, ghost-like orchestral noises and more. Amazingly, Meek never used state-of-the-art equipment for these endeavours, he couldn't afford them. In fact, he worked from over a shop, within a flat he rented there.

In some ways, Meek was early British rock'n'roll's version of the great British boffin. Beaverling away with his speakers and microphones in his tiny Holloway Road flat. Because of his cramped conditions

a typical recording would demand that the singer warble on the stairs, the guitarist would be strumming in the front room, percussion would consist of someone stamping in the bathroom and so on.

If you are not familiar with Meek, you may know his work such as the Tornados 'Telstar' (the first British rock & roll record to top the American charts) and the Honeycombs 'Have I the Right' but he produced scores of records, all of them with that Joe Meek edge. His work is highly prized and fetches top money on the collector's circuits.

'I Hear A New World' was strange. Meek pushed the technological boundaries for this release. A concept album, it examined the possibility of life on the moon (remember, this was almost ten years before the moon landings). He roped in an ex-skiffle outfit, West Five, from west London and renamed them the Blue Men to perform on this mainly instrumental "outer space music fantasy" using instruments such as the clavichord, a Hawaiian guitar, a jangly piano, and then-futuristic electronic noises and sound effects.

"Meek had an unusual approach to sound. He started the album when he was contracted to the independent UK label, Triumph Records, as a showcase for stereo where stereo didn't really exist in great numbers in the home at the time," said Kieron Tyler A&R/Producer for RPM International. "The entire concept took the form of two EPs and an album. What actually appeared, though, was one EP, Volume One of 'I Hear A New World', in stereo. There was only ninety-nine copies made of this record released because, once you print more than that, it attracted the tax office and the price of the record went up.

The second EP was going to

come along, picture sleeves where manufactured, about twenty-five have escaped in the world but no vinyl was created because the label, Triumph, went bust. Of the album, test pressings were made but no artwork was created. The album included tracks from both EPs, including the missing second. There are less than twenty-five of those album discs created too".

It was a big deal when, in 1991, RPM ([www.cherryred.co.uk/rpms shout.asp](http://www.cherryred.co.uk/rpms shout.asp)) released a CD with the complete album on it which also included a monologue from Meek, subtitled 'A Day In The Life', alongside a video interview (accessed via computer) from an episode of ITV's 'World In Action'.

"It is a deeply strange album," said Tyler "Meek's liner notes explained the context plus the music on the album and talked about people who lived on the moon called Glabbots and Sarooes. On the LP there were sonic descriptions of the sounds of the moon including the sounds of a waterfall. There were musique concrète things in there: sounds that could have been sounds of teeth running across a comb?"

Meek himself wrote the music, handled the band, produced and directed the album. He conceived the whole thing. You won't hear Meek's singing voice on the disc, though because, "Meek was tone deaf. He could 'La La La' but he sounded like a donkey when he sang," said Tyler.

The music was licensed from Joe Meek's niece, Sandra, who owned the acetates. There were no tapes available of the album.

Sounding like a warped version of Pink Floyd. A kind of 'Saucerful of Secrets' from the sticks, this album is a perfect slice of Meek's talent, skill, vision and slightly wacko genius that proved to be a watershed for future electronic music. ●

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# "dreams, that someone has made a reality"



Tony Bolton

**F**or most of us in the UK going to a hi-fi show usually involves a trip to Bristol in late February or to Whittlebury in the Autumn. However, there are other shows to visit in Europe, and the most prestigious of these is the High End Show, held every May in Munich, Germany. Not having attended this show before, I was more than happy to take up the offer of a lift there and back, since I prefer car and train to flying. So, one Tuesday evening I got into a large BMW estate and was whisked along the de-restricted autobahns through the night, arriving in the city after a 12 hour journey, with a day to spare before the show started on the Thursday.

After spending a day being a tourist, I had a good night's sleep in my hotel, before taking a taxi on Thursday morning to the show venue. This is in a complex of exhibition halls situated on the North side of the city. I had been warned that this show was big, and the sheer size of the 480 page show guide confirmed this. The show filled two large halls and three further floors. The first day, Thursday, is a trade only day, with the public then having three days in which to explore the most amazing variety of products on display.

Having browsed the show guide, I started exploring one of the halls and soon met up with British mains specialists Isotek, who were displaying their current range of equipment alongside the new Mosaic series which is to be introduced at the end of this year. Just around the corner from them was the Furutech stand, showing their range of mains connectors and their ADL series of headphones and amplifiers. I was particularly impressed with their new ADFL HI 18 headphones and the new XI 24/192 USB DAC and Headphone amplifier.

As a long-standing user of

Clearaudio turntables I was obviously interested in their stand. Their new parallel tracking arm, and their range of Deutsche Grammophon reissue records both caught my eye. These records are cut from the original master tapes, Clearaudio being the only company to have access to them, courtesy of an arrangement between company founder Peter Suchy and DG.

Canor had their Aladdin I and II valve testers on display, alongside the new CD11 DAC which I mentioned in my factory visit report in the June 2013 issue of Hi-Fi World.

Opposite this was an amplifier that everyone I met described as the Tardis. This was the monumental Opera Only, which opens up to stand approximately 8 feet tall (see our Show Report). With a power output claimed to be 60,000 Watts per channel, I am still trying to work out what domestic speakers could handle that much power. Designer, Andrea Pivetta, advised me that it cost €1,500,000 to complete.

Over the next few days I continued my exploration, coming across names and faces that I recognised, and others that were new to me. In the former category were Chario from Italy, displaying most of their range, and with a very handsome gloss black version of my Ursa Major loudspeakers on display.

I also found A. J. Van Den Hul demonstrating his new range of two pre-amps, one of which used balanced topology, and new monoblock power amps. All of this was connected using a new cable that he had developed that used "nano Carbon tubes" that were half the width of a human hair, and sounded very detailed and smooth.

In retrospect I would advise any visitor to see the Silbatone room (see our Show Report). This Korean company specialise in Western Electric valve amps and horn

loudspeakers, and were displaying a pair of 1934 Western Electric WE 26A Mirrophonic Model 2 horns that came from a cinema. They were about 8 feet tall and about 9 feet across and probably consumed a fraction of a Watt from the Company's own amplifiers. Even though they were in a big room and sounded pretty good, they could perhaps have done with a lot more space to really get the sound flowing.

Having a Thorens TD124 Mk.II that needs restoration, I was very interested in the Swissonor room. They had both the 124 and a TD160 on display, both making very nice sounds, and have inspired me to move the restoration of my example further up my 'to do' list. Their non-magnetic cast iron main platter makes the deck more usable with modern MC cartridges, and their own take on the Thorens TPI4 arm looked and sounded excellent.

After four days of exploration, I had in my imagination spent over half of a million Euros on just a basic system, but would need a far bigger house to accommodate it. Well, we can all dream, can't we.

That, for me, was what the High End show was about. Dreams, that someone has made a reality, albeit, an often expensive one. If you have never been to this show then I would advise going, even just once. It is an unforgettable experience and displays both the imagination of many designers, and the lengths that they will go to to achieve – and display – a dream. There are also 'real world' products aplenty to look at and listen to, but this is one space where exotica rules in both prototype and production forms. Some of it is excessive, some hideously expensive, and a few bits somewhat uninspired, but most fascinating.

I enjoyed it so much that I have already booked for next year. ●

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# "quality way beyond that possible from any CD player"



Noel Keywood

**T**here aren't many hi-fi products I feel a need to own, or even have to own. After iRiver of Korea picked up our review AK100 high resolution digital player by FedEx recently, I realised that this is a product I did need to have, not just for my own entertainment, but as a reviewing tool. A portable high-res player that fits the pocket, with analogue, digital and headphone outputs, plus Bluetooth for good measure, is a game changer.

While I procrastinated about getting one, reviewer Rafael Todes pounced, buying an AK100 after hearing our review sample. Like me, he saw it as a unique tool. Recordings of the Allegri String Quartet in which he plays, some made by master recording engineer Tony Faulkner, could be auditioned on the spot, no hi-fi system needed. Other musicians in the quartet could hear the recordings at their convenience, because no stationary hi-fi system is needed: copy music file into player and listen, it's as simple as that. Portability puts his music in his pocket, so he can play it to anyone, anywhere at any time.

So when we visited iRiver at the High End Show in Munich recently they were taken aback but impressed to hear and be able to copy a super high quality 24/192 digital recording of the Allegri on the spot: Rafael simply plugged and played. What he played was a superb live recording made with Neumann microphones, valve preamplifiers and a top quality Weiss Analogue-to-Digital convertor.

Learning its provenance and meeting the musician behind this recording mightily impressed the CEO of iRiver, Henry Park who, it turned out, was a classical music enthusiast with a good knowledge of the subject – far better than mine! – so he got updated at high speed by

Rafael and sat entranced as the music played. iRiver had not expected such a visit, but were obviously delighted and entertained. The AK100 made such a demo possible.

In my pocket at the time sat the early review prototype AK120 sent to us for review. Rafael insisted I bring it so he could compare it to the AK100. This slightly scratched and used sample, lacking the volume control shield, is the only one outside Korea and was stared at in fascination by the many UK audio journalists who attend the High End Show (a must-do).

The press gather at a modest hotel near the show, because the efficient German organisers run a regular bus service to the venue for them. Over breakfast I got to play a 1967 analogue recording of Otis Redding and Carla Thomas singing Tramp, recently transferred to 24/192 digital. I've got the LP from way back when, know the song, but had never sat in the studio, as I feel I am doing listening to this digital transfer.

Everyone was surprised by the quality of an analogue recording made 46 years ago. I'd like to say the LP sounds better, but cannot. Suddenly, digital is looking good to me! Good modern transfers, using the latest and best Analogue-to-Digital Convertors (ADCs) sound impressive and the AK120 makes them easily accessible.

A set of decent headphones is required and at present I use fold-up Jays V-Jays, because they are just pocketable, lightweight and sound good. Heavier, higher quality phones increase the burden, but at the Show Sennheiser had some newly introduced high quality in-ear 'phones costing \$600, no less. To be frank it wasn't the right environment to make an accurate judgement of them, but they may suit a high quality portable like the AK100 or 120.

But the overwhelming reason for needing an AK120 is that there are few other devices able to deliver high resolution digital from such a small and convenient package into a hi-fi system. Suddenly, I don't need to have a CD transport, DAC and a pile of reference CDs. I can pull this little box from my pocket, plug it into a system under review and get quality way beyond that possible from any CD player.

I can run my own musical compilation of reference recordings too, assembled specifically to assess products under review. So a typical Rock CD rip with drums, bass guitar, etc, like The Eagles 'Somebody', can be followed by a (similar) hi-res Rock track like Tom Petty's 'Refugee' (24/96), followed by the Minnesota Orchestra playing Korsakov's Dance of the Tumblers, followed by the Allegri String Quartet (24/192) where I know that what I am hearing is a top quality digital recording, validated by a musician there at the time (Rafael) as offering a true likeness to the original sound. MicroSD cards can be compiled to contain Rock, Classical or whatever I choose.

This is a powerful review tool. I got my first glimpse of its usefulness listening to the Quad 2812s recently and again when listening to the NAD C390DD digital amplifier in this issue. In both cases the breadth of program stored in the player made clear what each product was capable of.

So I now have an AK120 in production form in my pocket, loaded with high res recordings, CD rips, old analogue transfers, string instruments perfectly recorded – and heaven knows what else! DSD comes next.

The AK120 is easy to load and use, I don't have to suffer network religion, I don't need a NAS drive and I can enjoy analogue from 1967. Bliss. Who needs digital? ●



# WORLD CLASSICS

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

**We do not sell these products. It is for your information only.**

## DIGITAL

**CAMBRIDGE AUDIO CDI 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 CD73 1983 £700**  
A riot of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC -super musical



**MARANTZ SA-1 2000 £5,000**  
The greatest argument for SACD. This sublime Ken Ishiwata design is utterly musically convincing with both CD and SACD, beating most audiophile CD spinners hands down.



**MERIDIAN 207 1988 £995**  
Beautifully-built two-box with pre-amp stage. Very musical although not as refined as modern Bitstream gear. No digital output.

**MERIDIAN MCD 1984 £600**  
The first British 'audiophile' machine was a sweeter, more detailed Philips CD100. 14x4 never sounded so good, until the MCD Pro arrived a year later.



## 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.

**NAIM CDS 1990 £ N/A**  
Classic Philips 16x4 chipset with serious attention to power supplies equals grin-inducing 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-R1/DAS-R1 1987 £3,000**  
Sony's first two boxer was right first time. Tonally lean, but probably the most detailed and architectural sounding machine of the eighties.



**SONY CDP-701ES 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-PI200 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!

**YAMAHA CD-X1 1983 £340**  
Nicely built 16x2 machine with a very sharp and detailed sound; sometimes too much so. Excellent ergonomics, unlike almost every other rival of the time.

## COMPACT DISC TRANSPORTS

**TEAC VRDS-T1 1994 £600**  
Warm and expansive sound made this a mid price hit. Well built, with a slick mech.



**ESOTERIC P0 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 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.





**PINK TRIANGLE****DACAPO** 1993 £ N/A

Exquisite; the warmest and most lyrical 16bit digital audio we have ever heard. Clever plug-in digital filter modules really worked!

**QED DIGIT** 1991 £90

Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now past it.

**TURNTABLES****ARISTON RD11S** 1972 £94

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

**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 PL12D** 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 PL112D was off the pace compared to rivals

**PIONEER PLC-590** 1976 £600

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

**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 £15.65

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.

**LINN AXIS** 1987 £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 TT1000** 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 SP10** 1973 £400

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

**REGA PLANAR 3** 1978 £79

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.

**ROKSAN XERXES** 1984 £550

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****AT 1120** 1978 £75

Fine finish can't compensate for this ultra low mass arm's limited sonics - a good starter arm if you've only got a few quid to spend.

**ALPHASON HR100S** 1981 £150

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

**SME 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 absolute terms. Responds well to tweaking, and its cheaper RB250 brother better still.

**SME SERIES III** 1979 £113

Clever variable mass design complete with Titanium Nitride tube tried to be all things to all men, and failed. Charming nonetheless, with a warm and inoffensive sound.

**LINN ITTOK LVII** 1978 £253

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.



**NAIM ARO** 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 £625  
 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 CS1/P51** 1976 £130  
 Soft sounding early Sugden combo with a plethora of facilities and filters, complete with seventies-tastic DIN socketry. 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 A1** 1985 £350  
 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 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, TL10, TL12.1, TL12 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 £  
200W of sweet smooth transistor stomp in a grooved tube! Under-rated oddity.



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



**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 £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.



**CREEK CAS3140** 1985 £199  
Excellent detail, separation and dynamics - brilliantly musical at the price. T40 continued the theme...

**NAD 4040** 1979 £79  
Tremendously 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 real-world 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 FM4 1983 £240**  
 Supreme ergonomics and styling allied to a pleasingly lyrical sound with plenty of sweetness 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 T75 1977 £125**  
 Superb mid-price British audiophile design, complete with understated black fascia. Fine sound in the true Rogers mould – smooth and sweet with fine dimensionality.

**SANSUI TU-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.

**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 A77 1968 £145**  
 The first domestic open reel that the pros used at home. Superbly made, but sonically off the pace these days. B77 better, but couldn'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-JE55ES 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.S; surprisingly musical MD recorder.

**SONY TCD-8 DATMAN 1996 £599**  
 Super clean sound makes this an amazing portable, but fragile.

**LOUDSPEAKERS**

**ACOUSTIC RESEARCH ARI85 1978 £125**  
 Yank designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great speed from the paper drivers, although finesse was most definitely not their forte...

**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 AB1 subwoofers for an extra two octaves of bass!

**LOWTHER PM6A 1957 £18 EACH**  
 This seminal full-range driver is still manufactured. 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.





**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 imitate like few others.

**SPENDOR BCI 1976 £240**

Celestion HF1300 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 loudspeaker with genuinely musical abilities; fast, smooth, open, dry.

**KEF R105 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.

**IMF TLS80 1976 £550**

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 that, with 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.

**CELESTION SL6 1984 £350**

Smallest 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 'poof' 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**

(Cams) Quad's service department, able to repair almost all Quad products, from the very first. (Also Audiolab, Mission & Wharfedale).  
Tel: 0845 458001 | www.quad-hifi.co.uk

**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  
www.wembleyloudspeaker.com

**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@ntworld.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

# vinyl section

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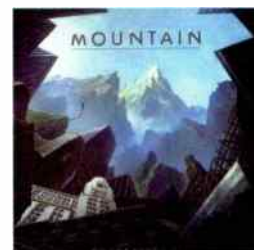
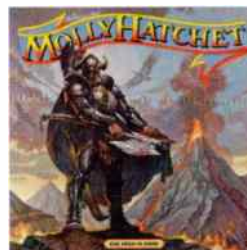
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[www.hi-fiworld.co.uk](http://www.hi-fiworld.co.uk)

**WILSON BENESCH FULL CIRCLE 86**  
Paul Rigby listens to a quality turntable, Act 0.5 arm and Carbon cartridge.

**PIE & VINYL 93**  
A new vinyl shop in Southsea that also sells pies! Noel Keywood reports.

**PROJECT TUBE DS PHONOSTAGE 94**  
Tony Bolton listens to Project's latest tube phono stage.



## news



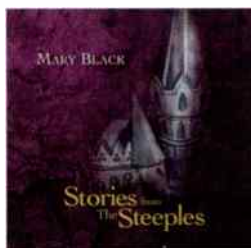
### PURE WOMAN

UK audiophile outfit, Pure Pleasure ([www.purepleasurerecords.com](http://www.purepleasurerecords.com)), has released a pair of LPs from respected female vocalists.

Jazz-vocalist, Cassandra Wilson's 2002 release, 'Belly Of The Sun' took a broad-based view on music, being obviously crossover in her mixture of Dylan, Jimmy

Webb and classic blues. A superb suite of interpretations.

Also look out for Mary Black's 'Stories From The Steeples', a 2011 release (her first for six years) mixing traditional and contemporary songs. A fine return for one of our best folk artists.

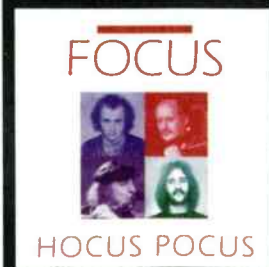


### NEW FROM MOV

From Music On Vinyl ([www.musiconvinyl.com](http://www.musiconvinyl.com)), country man, Steve Earle, made a big rock'n'roll album in 'Copperhead Road' that never dominated the singer who presents a strong selection of songs in this 1988 cut.

Focus' 'The Best Of...' is a great introduction to the band and features the US single version of the title track.

Also look out for JJ Cale's, 'Grasshopper' (1982), a slightly strange pop approach plus Steve Vai's 'Passion Warfare', the best solo guitarist album of the eighties where Vai was not afraid not to strut his guitar chops.



### BIG ROCK!

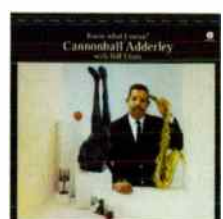
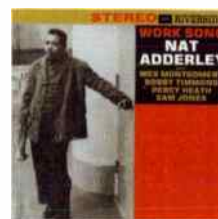
SPV has a wealth of mean and moody rock ditties to pummel you into the dust. German guitar hero, Axel Rudi Pell's live 'Circle Of The Oath' was recorded at Essigfabrik, Cologne, 18 October 2012. There's nothing new here but the guitar work is classy and catchy.

Europe's 'Prisoners in Paradise' (1991) includes the hit title track. The group temporarily quit after this album's release.

Dangerous Toy's self-titled piece (1989) plus 'Hellacious Acres' (1991) might sound like corporate rock but it's fun and lovably silly.

Also look out for: Molly Hatchet's 'Beat in the Odds' (1980) suffered due to a change in lead vocalist. Jimmy Faraar's entry didn't help the band's momentum. The band's 'The Deed Is Done' (1984) also failed to match earlier passion. Then there's Johnny Winter's 'Raisin Cain' (1980), finger lickin' blues guitar with a patchy songlist; Quiet Riot's 'QR' (1977) full of cheese and garage band fodder plus Mountain's 'Go For Your Life' (1985), the band's best release after the tragic death of Felix Pepparlardi.





## JAZZ FOR THE MASSES

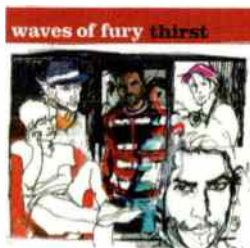
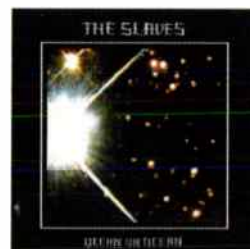
New for jazz fans, this month is Kenny Wheeler, Norma Winstone and the Local Vocal Project's 'Mirrors' (Gearbox; [www.editionrecords.com](http://www.editionrecords.com)). Music set to classic poems, the album is romantic yet is never afraid to enter upon sonic experimentation.

Art Blakey's 'Moanin'" (Waxtime; [www.discovery-records.com](http://www.discovery-records.com); 1958) is a stone-cold classic from this bop drummer, his best and one that every jazz fan should own.

Presenting the cornet of Nat Adderley's 'Work Song' (Waxtime; 1960), this is another classic with Adderley in peak form and joined by the likes of Wes Montgomery and Bobby Timmons with a guitar/cello accompaniment.

'Know What I Mean?' by Cannonball Adderley with Bill Evans (Waxtime; 1961) features a bonus track, 'Toy'. Adderley offers a well-developed yet delicate post bop presentation.

Also from Waxtime is 'Waltz For Debby' from the Bill Evans Trio (1961), a frankly brilliant sequence of music from the Village Vanguard sessions in which Evans reveals his romantic side.



## ...AND FINALLY [THE BIG EDITION]

Karl Bartos? He was a member of Kraftwerk before the band's dilatory release schedule retreated into mummification. Bartos' consequential solo career has now resulted in 'Off The Record' (Bureau; [www.bureau-b.com](http://www.bureau-b.com)) which uses archival tapes from 1975 to 1993 as its foundation, then incorporates new ideas within. An enjoyable, retrospective reimagined.

Next is Salsa Bestial from Orquesta El Macabeo (Vampi Soul; [www.vampisoul.com](http://www.vampisoul.com)) the first international release from the heavy salsa, Puerto Rican band that combines elements of the outfit's first two albums plus unique tracks. A rich album that features some surprising influences.

Nick Cave & the Bad Seeds new release, 'Push The Sky Away' (Bad Seeds Ltd; [nickcave.com](http://nickcave.com)), more a cinematic arrangement, than a classic Bad Seeds production.

The Slaves' 'Ocean On Ocean' (Helen Scarsdale Agency; [www.helenscarsdale.com](http://www.helenscarsdale.com)) features an ambient shoegaze of a double album originally released on Debacle in 2010 on a CD-R. A fragile musical arrangement that constantly threatens to collapse under sounds heavy with portent.

The almost pastoral, naive folk of multi-instrumentalist, Icelandic singer, Ólöf Arnalds' 'Sudden Elevation' (One Little Indian; [www.indian.co.uk](http://www.indian.co.uk)), touring member of Múm) is another delicate piece. Her first album sung in English.

Waves Of Fury's 'Thirst' (Alive Naturalsound; [www.alivenergy.com](http://www.alivenergy.com)) offers evil R&B. A sinister combination of Motown and garage punk.

Appearing on Editions Mego ([www.editionsmego.com](http://www.editionsmego.com)) is multi-instrumentalist, Billy Roisz's 'Walking The Monkey', her solo debut. A dense, electro-acoustic experimental conglomeration that is both claustrophobic and intimate.

Featuring the Metropole Orchestra, the Beauty Room's 'Il' ([www.discovery-records.com](http://www.discovery-records.com)) is Kirk Degeorgio and vocalist, Jinadu's soul-like, adult pop album – pleasant and inoffensive.

Julia Holter's 'Ekstasis' (Domino; [www.dominorecordco.com](http://www.dominorecordco.com)) offers ethereal vocal ambience combine with Enya-like arrangements.

Finally, Bardo Pond's 'Ticket Crystals' (Fire; [www.firerecords.com](http://www.firerecords.com), 2006) is one mellow, space rocky, hazy, reverb-laden, drug-addled, cuddle.

# Symphony Of Curves

Although famous for its elaborate speaker designs, Wilson Benesch is rooted in vinyl. Paul Rigby reviews the Full Circle turntable.



**T**he original Wilson Benesch turntable design, released in 1990, was popular but had problems. The sprung chassis was difficult to set up correctly while the expensive motor was increasingly seen as a weak point.

For the Full Circle reviewed here, the latter was an easy fix. Wilson Benesch adopted the 250rpm Premotec AC-synchronous motor,

essentially the same, Dutch-sourced, unit that you see in a number of successful turntables on the market.

As for the isolation? "We now rely on two basic systems commonly seen in sprung turntables. One is based upon soft, compliant rubber and the other uses a carbon fibre cantilever", said Craig Milnes, designer of the Full Circle.

Examining the Full Circle, it is divided into two parts, like a large

Victoria Sponge cake. The base is attached to the motor while the upper part holds the LP. The two need to be linked but also isolated.

The low frequency coming from the motor is tackled by rubber feet that sit in between the 'sandwich' but, said Milnes, there is a secondary system of carbon cantilevers that are "...disposed between three aluminium pillars which are on the top of the upper sandwich. Emerging from those



are small diameter, uni-directional, carbon fibre rods of high torsion and stiffness. They support the sub chassis and eliminate a lot of the high frequency energy".

The Full Circle uses a phosphor bronze bearing for the platter. "Phosphor bronze gives you an accurate diameter throughout its length and doesn't change over time as a result of external corrosive elements", said Milnes.

On top of the acrylic platter, the company decided to lay a piece of felt. "It gives better control and less artefacts", said Milnes. "Felt has a nice dampening character over a wide bandwidth. We recommend to users that, when they are not using the turntable, to place an old piece of vinyl on top of the felt and platter to keep it clean".

The included 0.5 tonearm, arrives as standard. It is based upon a vertical D2 steel shaft that includes 1.5% of carbon content running through its entirety to improve stiffness (the highest percentage of carbon that you can have in steel before it becomes brittle). "On the top of this structure we placed three, highly polished, 1mm ball bearings which is where the bearing itself is created", said Milnes.

For tonearms, bearings are a big issue. There are two principle types on offer: the unipivot and ballrace. The latter comprises a ring of steel with ball bearings held in a cage, called a race. The balls move inside



**The Full Circle motor is a 250rpm Premotec AC-synchronous unit.**

the race. "They are noisy and are best used in high velocity systems. Placed within a tonearm they suffer from stiction" said Milnes. "Imagine a car that is stood on a flat surface. Getting a car moving is difficult. Once it's moving, it's fine and it takes less effort to keep it moving. The first phase involves overcoming inertia.

That's the problem with a ball race, getting it moving in the first place. It's never really fluid in its movement".

This is the benefit of the unipivot,

**The uni-pivot arm uses a Kinematic arm bearing to avoid stiction. The tapered one-piece arm tube is wound from carbon fibre.**



which is never in a stiction phase. The unipivot's problem, though, is that, over time, it will change. If the mass of the tonearm system is resting on a sharp point, and that's what happens with a unipivot, then that point might be perfect on the day of manufacture but, in a short space of time, it will wear down to a radius.

Also, the surface that it is

not optimised. The carbon fibres in our arm don't flow in a straight line, they flow in a double helix shape, overlapping each other. This enables you to create one homogenous structure, running the carbon into a headshell so the arm and headshell are one piece".

This unique design initially required outside, specialist, help.

"Its compact nature will please many users that are restricted by space"

resting on will no longer be a perfectly flat surface, it will form a little indent.

"That's why we created the concept of three ball bearings with a fourth ball

that sits inside to locate it," said Milnes. "So, on top of the D2 steel stem, the three balls are held captive to create three contact points. The fourth ball sits within those three, meaning that the friction levels are incredibly low but the centre of the bearing will remain exactly the same and will never change. We call that a Kinematic bearing".

According to Milnes, the key to the success of the arm is the carbon fibre tube, a tough item to engineer correctly. "Most people get a piece of carbon tube, off the shelf, and stick a head shell on it. But that doesn't make use of the carbon fibre and the dampening characterises are

So Milnes approached a company called Advanced Composites that is involved both in the aerospace and Formula 1 industries.

"How serious are they? Well, we were told that we couldn't even meet with the company...because we couldn't afford it. They charge many thousands to even sit down and talk around the table. We did go to a brief meeting in which one of the directors was quite disparaging and wanted the meeting finished quickly but, fortunately for us, there was someone else, one of his engineers, who talked to us after the meeting and said that he would be happy to work with us in his spare time. This guy had twenty years of carbon composite experience and had worked on the Rolls Royce RB211 carbon fibre fan blades. He created the tool that allowed us to design the tonearm tube".

Wilson Benesch boasts that the 0.5 is the stiffest tonearm in the world, as well as the most highly damped (see our tests for more information) and it's all attributable

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to that construction from a single tool "that has been designed to allow the carbon to be placed exactly where it needs to be, according to function. The 0.5 is the most basic form of this process".

For the cartridge, the Ply, the company used a Benz Glider generator with their own carbon fibre body. Our pictures show what appears to be the Carbon cartridge but Wilson Benesch assured us it was a Ply. The review sample of the turntable was supplied with an elegant, made-to-measure pedestal, upon which the Full Circle sat.

## SOUND QUALITY

Spinning prog outfit, Caravan's quirky 'Golf Girl', my first impression of the Full Circle was that lead singer, Richard Sinclair's well-articulated lyrics were admirably enunciated. There was a sense of space between the instruments and his delivery enhanced this.

Mid range performance was exemplified by the trombone (with its mysterious player – some say it's Kinks-related Paul Beecham – does anyone out there really know?), which was efficient and lean through my One Thing Quad ESL-57 electro-



**The 0.5 arm utilises double helix wrapped carbon fibres for optimum rigidity.**

static speakers. What it lacked in the rich, extended dynamics of a more expensive turntable, it more than made up for in terms of focus with a single-minded approach to the soundstage that was clean and uncluttered.

Some might find the midrange a tad relaxed in nature but, to be honest, this attribute will benefit extended listening and prevent fatigue. Listening to the trombone and vocal, the Full Circle was obviously good at controlling unruly frequencies and did have any sort of bright tendencies. That's not to say that detail was lacking or that the performance was in any way conser-



**The rear counterweight along the axis to set tracking force and around it to adjust lateral balance.**

vative, far from it. Acoustic guitar work was effective with an attack, during play that flowed with the emphasis laid upon each and every strum.

Wind instruments did present a slight concern, however, and were, despite my midrange theories, verging on the strident. The Full Circle appeared to be contradicting itself. My eye began to wander to the pedestal stand – more later. Lower frequencies, slightly enhanced in weight by the Icon monoblocks, did provide a big and bold bass presentation. I was very impressed that a turntable in this price bracket could offer such a bass performance and delighted to hear that there wasn't an ounce of bleed from the lower to the upper frequencies, each part of the sonic rainbow knew its place.

I then took action regarding those troublesome wind instruments and transferred the Full Circle from its own pedestal to a Hush Platform (£490) that, in turn, sat upon a Hush Yewbarrow rack (three-shelf from £1,750).

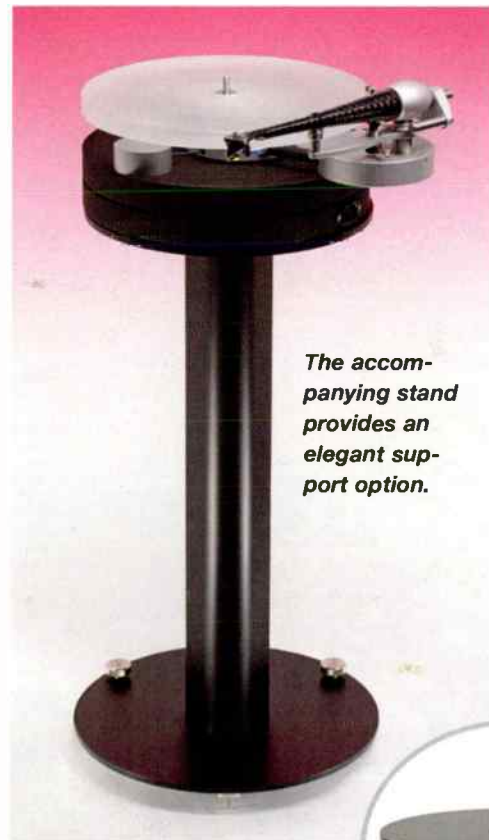
Playing the Caravan track, the flute solo was at the forefront of the mix, yes, but less challenged my ears. This improvement wasn't the only one, however. Guitar attack was aggressive and precise while the subtle flute playing behind the trombone solo was more noticeable and provided a greater 3D effect, again a nice surprise for a turntable in this price bracket.

Even if you cannot afford an expensive Hush Platform and Rack then I would personally recommend a wall shelf (such as the Decent Audio model, £179), especially for sprung floors, to maximise the Full Circle's performance.

I wondered how far I could push the Full Circle package so added an Oyaide STB-MS 'vinyl stabiliser' (£225). The Full Circle certainly benefitted from its use.

The soundstage was better focused and bass agility improved. Treble was seemingly given emphasis, because of the darker tone of the presentation, a result of lowered distortions.

Removing the felt mat and listening to the ceramic platter alone, the upper mids had a cooler presentation. Bass had a snappy character while upper mids were slightly more clinical, giving the midrange a strident air.



**The accompanying stand provides an elegant support option.**

So I added an Oyaide BR-12 butyl rubber/tungsten mat (£90) and it smoothed midrange frequencies, giving the organ a mature, richer flavour while the guitar had an enhanced, lush metallic sound. The trombone possessed more textural detail while the vocal was now almost angelic in its presentation.

More startling was the fact that, for the first time, Richard Sinclair's



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MINT/BOXED £2195  
EX.DEM £850  
SERVICED/VALVED £2995  
EX.DEM £375  
SALE!! £1150  
VGC £295  
EXCLT £380

## VINYL

WILSON BENESCH CIRCLE (25 HOURS USE)ACT 2 TONEARM  
PINK TRIANGLE LPT/RB-250/CART EXPORT SPEC WITH PSU  
UNN LP-12 CIRCUS/TRAMPOLIN/WALHALLA (JUST SERVICED)  
VOYD VALDI 2 MOTOR AND HUGE SPLIT PHASE PSU  
DEON DP-1200 LTD./SHURE CARTRIDGE DIRECT DRIVE CLASSIC  
ORIGIN LIVE SILVER TONEARM  
VPL JMW MEMORIAL TONEARM  
MICHELL ISO PHONO STAGE & HERA HUGE POWER SUPPLY  
TOM EVANS MICRO GROOVE  
MISSION 774 TONE ARM UPGRADED LEAD  
EMINENT TECH MODEL 2 AIR BEARING LINEAR TONEARM  
ANTIQUE SOUNDLABS MINI PHONO (2 BOX WITH NOS MULLARD VALVES)

MINT/BOXED £1795  
VGC £395  
SALE!! £895  
BOXED £795  
VGC £595  
DUE £395  
BRAND NEW £595  
EXCLT £395  
EXCLT £375  
VGC £395  
VGC/BOXED £995  
EX.DEM £349

## SOLID STATE

ADVANTAGE I200 INTEGRATED AMP (£1800?)  
MUSICAL FIDELITY MA-50 MONO'S  
MARANTZ MA-700 MONO'S VERY RARE FEW HOURS DEM USE  
BELCANTO EVO 200.2 POWER AMP  
DENON PMA-QS10H 30 KLD INTEGRATED ONE OWNER  
MARANTZ PM11 S2 INTEGRATED (£3300)  
DENSEN B200 PRE AMP & B350 REF MONO'S 1 OWNER  
BEL CANTO PRE-3 & S300 AMPLIFIERS  
NU FORCE 8.5V2 MONOBLOCKS  
KRELL 402 STEREO POWER AMP LITTLE USE  
LYNGDORF SDAI 2175 INTEGRATED  
MERIDIAN 502 PRE AMP MM.PHONO & MSR  
MERIDIAN 557 POWER AMP  
MERIDIAN 501 PRE AMP  
TOM EVANS 2 BOX PRE & LINEAR A POWER AMPS  
TALK ELECTRONICS TORNADO 4 MONOBLOCKS  
TALK ELECTRONICS TORNADO 5 MONOBLOCKS  
PATHOS INPOWER CLASS A HYBRID MONOBLOCKS (SUPERB £9K?)  
McCORMACK DNA-125 AMP (£2250)  
KRELL KAV 300R RARE TUNER AMP (£3950 ONE OWNER FROM NEW)  
ROKSAN 1.5a POWER AMPS (VERY RARE)2 OFF  
JOHN SHEARNE PHASE 2 INTEGRATED & PHASE 2 POWER AMPS  
JOHN SHEARNE 2.5 INTEGRATED AMP  
JOHN SHEARNE 3.5 POWER AMP  
DENON AVC A11 SR AV AMP (CHAMPAYNE GOLD)  
ULTRA RARE NAKAMICHI 620 POWER AMP  
H-CAT P-12A PRE AMP (£2500?)  
JVC AX-21010 K2 REFERENCE DIGITAL INTEGRATED AMP  
SONY TAF-542-E INTEGRATED AMP  
KING REX PRE AMP FEW WEEKS USE

EXCLT/BOXED £895  
EXCLT/BOXED £595  
EXCLT/BOXE £1095  
EXCLT £1095  
MINT/BOXED £995  
EXCLT £1895  
MINT/BOXED £3850  
MINT/BOXED £1750  
MINT/BOXED £1295  
MINT/BOXED £7450  
EX.DEM/BOXED £1295  
MINT/BOXED £749  
MINT/BOXED £995  
MINT/BOXED £395  
SALE!! £5450  
SALE!! £795  
SALE £995  
EXCLT £4250  
SALE!! £1195  
SALE!! £1295  
EACH £695  
EXCLT £875  
EXCLT £450  
EXCLT £450  
SALE!! £895  
EXCLT/BOXED £575  
DEM £1250  
ULTRA RARE £295  
MINT/BOXED £175  
MINT/BOXED £275

## DIGITAL

INCA TECH KATANA RCA/XLR OUT  
LAVRY DA-10 DAC  
LYNGDORF CD-1 CD PLAYER  
BOW ZZ EIGHT CD PLAYER (SERVICED)  
ACCU PHASE DP-90 TRANSPORT (SERVICED)  
AUDIO NOTE CD2.1 MKII VALVE CD PLAYER (£2900)  
EASTERN ELECTRIC MINIMAX VALVE CD  
PERPETUAL TECHNOLOGIES P1A UPSAMPLER/DSP (LAST ONE)  
PERPETUAL TECH. P3A MODWRIGT SIG2 24/96 DAC (LAST ONE)  
THETA CARMEN CD/DVD TRANSPORT  
THETA DSP PRO GEN III RCA/AES/8 GLASS IN RCA/BALANCED OUT  
MERIDIAN 500 TRANSPORT  
SONY XA-1200ES MULTI CHANNEL SACD PLAYER  
CHORD 1500E 192KHZ/DIGITAL PRE AMP 3 SEPARATE DACS AD/AKM/PULSE  
REMOTE VOLUME SUPERBLY FLEXIBLE (£8800 NEW ONE OWNER)  
STELLID CDA-320 24 BIT/44/96/192 CD PLAYER WITH DIGITAL INPUTS  
THETA DATA UNIVERSAL CD/DL PLAYER (ONE OWNER) RARE  
VACCUUM STATE JLT1 SACD/CD PLAYER (LAST 1 £1300)  
VACCUUM STATE LOGIC JLT1 SACD/CD PLAYER

VGC £475  
MINT/BOXED £550  
EXCLT £795  
MINT/BOXED £2750  
DUE IN £2750  
MINT/BOXED £1350  
MINT/BOXED £499  
EX.DISPLAY £695  
EX.DISPLAY £695  
EXCLT/BOXED £895  
EXCLT/BOXED £895  
MINT/BOXED £450  
EXCLT £395  
SALE!! £2450  
EXCLT/BOXED £795  
EXCLT/BOXED £495  
NEW/BOXED £795  
DEM/BOXED £649

MICROMEGA STAGE 2  
MERIDIAN 203 DAC  
PIONEER CLD 925 LASER DISC PLAYER (ONE OWNER FROM NEW)  
CAMBRIDGE AUDIO 7400 CD PLAYER  
CAMBRIDGE AUDIO AZUR DACMAGIC

SALE!! £249  
SALE!! £175  
MINT/BOXED £249  
EXCLT/BOXED £275  
EXCLT/BOXED £149

## LOUDSPEAKERS

MIRAGE M6 S1 HUGE BI-POLAR FLOORSTADERS (£8.5K?)  
MARTIN LOGAN CLARITY  
B&W 802 MATRIX SERIES-3 IN WALNUT 1 OWNER  
B&W 801 MATRIX SERIES-2 IN WALNUT 1 OWNER  
MARTEN MILES CHERRY (8k+ ONE OWNER FROM)  
AURUM CANTUS VIOILA (LAST PAIR)  
ART.2 WAY PRECISION MONITORS PIANO BLACK (£8K+)  
SPENDOR LS35A MATCHED PAIR IN SUPERB CONDITION  
PROAC STUDIO 150 FLOORSTANDERS IN PREMIUM YEW FINISH  
AURUM CANTUS MUSIC GODDESS (£2500) BRAND NEW BOXED  
AURUM CANTUS LEISURE 3 SE BRAND NEW BOXED (LAST PAIR £1350)  
AURUM CANTUS BLACK ORCHID BRAND NEW BOXED (LAST PAIR £1300)  
AMPHION NEON 1 (1 OWNER)  
PODRUM 1s FEW WEEKS USE ONLY (£6000? NEW)  
FAB AUDIO FAB 1 DEM/REVIEW USE ONLY 96DB ULTRA FAST!  
ENSEMBLE FIGURA (SOLID ALUMINIUM £5800?) ONE OWNER  
HARPER QUARTETT FABULOUS FLOORSTANDERS (£4000)  
BOLZANO WILLETTTI BV3003 & BV SUBWOOFER FANTASTIC!  
HALES TRANSCENDENCE 5 HUGE FLOORSTANDERS 2 OWNERS  
THEEL CS 1.5 (ONE OWNER FROM NEW)  
CURA CA-30 FLOORSTANDERS (£3000 ONE OWNER FROM NEW)  
T&A TMR-100 SIZEABLE GERMAN TRANSMISSION LINES  
MORDANT SHORT AVANT 904  
CASTLE HARLECH NICE FLOORSTANDERS IN BLACK ASH  
RUARK TAKJISMA II WITH EXTERNAL X-OVERS  
DYNAUDIO BM-5 PASSIVE MONITORS (FOR SPARES/REPAIRS)  
SEQUENCE SOMATA-300 FLAT PANEL WALL/FLOOR SPEAKERS  
SEQUENCE SOMATA-200 WALL HUNG CENTER SPEAKER

VGC £1995  
VGC £1295  
EXCLT £1795  
EXCLT £1995  
SALE!! £2995  
DIS.BOXED £1695  
BOXED £2750  
EXCLT £995  
EXCLT £895  
SALE!! £1495  
NEW/BOXED £895  
NEW/BOXED £895  
EXCLT £995  
SALE!! £1995  
SALE!! £4295  
SALE!! £2995  
SALE!! £1695  
SALE!! £2995  
EXCLT/BOXED £1895  
MINT BOXED £995  
EXCLT £995  
SALE!! £495  
MINT/BOXED £149  
VGC £249  
EXCLT £349  
£149  
NEW/BOXED £295  
BOXED £125

## TUNERS/TAPE/STANDS/MAINS

TOWNSEND LOUDSPEAKER ISOLATION PLATFORMS (LARGE SIZE)  
KRELL KAV 300R RARE TUNER AMP (£3950 ONE OWNER FROM NEW)  
DENON TU-QS10 REMOTE HEAVYWEIGHT GOLD TUNER VERY RARE  
STAX PROFESSIONAL HEADPHONE AMP AND HEADPHONES  
AVI REF7 BAND TUNER (ONE OWNER)  
KRELL KAV 300R RARE TUNER AMP (£3950 ONE OWNER FROM NEW)  
DENON TU-QS10 REMOTE HEAVYWEIGHT GOLD TUNER VERY RARE  
MICROMEGA MINUM TUNER  
TECHNICS ST-GT650 RDS TUNER  
TECHNICS ST-GT550 RDS TUNER  
STAX PROFESSIONAL HEADPHONE AMP AND HEADPHONES  
AVI REF7 BAND TUNER (ONE OWNER)  
BLACK RHODIUM SUPERMAINS 25 BRAIDED POWER CORD  
BLACK RHODIUM SUPERMAINS 25 BRAIDED POWER CORD/RHODIUM EASY PLUG  
BLACK RHODIUM 8 WAY MAINS BLOCK

RARE RING  
EXCLT/BOXED £1495  
MINT £495  
EXCLT £495  
SALE!! £275  
EXCLT/BOXED £1495  
MINT £495  
EXCLT £149  
VGC £99  
VGC £75  
EXCLT £495  
SALE!! £275  
BRAND NEW £85  
BRAND NEW £125  
VGC £149

## INTERCONNECT CABLE

AUDIENCE Au24 REFERENCE INTERCONNECTS  
XLD REFERENCE 1 METRE BALANCED PAIR  
ACOUSTIC ZEN MATRIX REFERENCE II 1 METRE RCA  
ACOUSTIC ZEN MATRIX REFERENCE II 1 METRE RCA  
DPA BLACK SLINK 2.3 METRE PAIR RCA  
DPA BLACK SLINK 0.8 METRE PAIR RCA  
HARMONIC HARMONIC-STRINGS HS-101 1 METRE XLR  
CHORD CO.SIGNATURE 1 METRE BNC  
VAN DEN HUL MCD102 HYBRID 1 METRE XLR TO RCA  
DPA SLINK 1 METRE XLR  
AUDIOQUEST/AUDIOTRUTH EMERALD 1 METRE PAIR

EXCLT £399  
EXCLT £175  
VGC £349  
VGC £349  
EXCLT £295  
EXCLT £175  
DEM/BOXED £375  
SALE!! £299  
SALE!! £85  
EXCLT £125  
SALE!! £155

## LOUDSPEAKER CABLE

TRUE COLOURS IND.KING COBRA 5 METRE PAIR  
TARA LABS RSC 5 METRE SHOTGUNNED BI-WIRE PAIR  
BLACK RHODIUM POLAR NINJA DCT 2.9 METRE PAIR  
XLD 5.2 SIGNATURE-1 4FT PAIR  
SONORAM PLATEAU 4 METRE VERY HEAVY HI END PAIR  
COGAN HALL INTERMEZZO 5FT PAIR  
KIMBER APR 2.5 METRE TERMINATED PAIR  
RAPPORT (USHER) 5 METRE PAIR FACTORY TERMINATED  
XLD REF.2.5 METRE PAIR  
BLACK RHODIUM S-300 BI WIRE 5 METRE BI WIRE PAIR(£400)  
BLACK RHODIUM S-300 BI WIRE 4 METRE PAIR (£240)

MINT/BOXED £375  
EXCLT £395  
SALE!! £650  
DEM £495  
EXCLT £475  
EXCLT £275  
SALE!! £99  
SALE!! £249  
EXCLT £375  
NEW £250  
NEW £175

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The Wilson Benesch Ply cartridge, now in gold finish body.

later vocal performance was now revealed to be double tracked. Bass, meanwhile, was focused and dark.

Moving to classical and Sir Arthur Sullivan's 'Pineapple Poll', conducted by Charles Mackerras, the initial string section at the start of the Opening Dance was neither too growling or laid back in attack. Brass never barked or shouted but nor did it fade into the background. The emphasis on the entire orchestral presentation was enough to deliver the correct amount of motion without any thought of grandstanding.

Spinning jazz and Mark Murphy's 'Mark Time!', backed by John Dankworth's band, Murphy's delivery was lively, animated and sparkling. The Full Circle allowed him the freedom to perform without restrictions and Murphy was not backward in utilising his own abundant energy to the full. It would have been easy for the mids to blur and bloom in this situation but the Full Circle was disciplined. For example, jazzing up the Beatles' 'She Loves You' provided a fulsome bass, vibrant percussion with a bubbly sax performance from Tubby Hayes.

I then moved from electrostatic to box speakers: namely the Kudos Super 10. Returning to the Caravan track, this was ideal opportunity to hear the enhanced bass tones produced via the Kudos alongside the open upper mids. The Kudos, in comparison to the Quads, where rather livelier in the upper frequencies but the Full Circle was able to keep control of sonics in this area while the bass was hearty,

powerful and quite explosive at times.

## CONCLUSION

The Full Circle turntable is an attractive design. Its compact nature will please many users that are

restricted by space. Providing a fairly straightforward set-up routine, the deck provided deep and solid bass and a spacious upper midrange with, if sited correctly, not a hint of brightness. To that extent, the tweaks and improvements employed within the review also showed that any new user of a Full Circle will benefit, not only from an excellent sound available straight from the box but also from numerous small but effective sonic upgrades which will not break the bank.

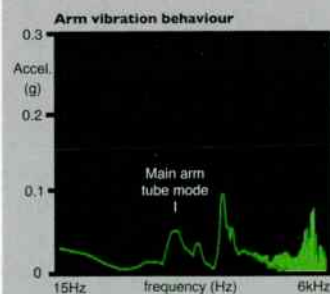
## REFERENCE SYSTEM

T+A G10 Turntable  
SME Series 9 arm  
Icon PS3 Phono amplifier  
Benz Glider cartridge  
Icon MB845 Mk.1 monoblocks  
Aesthetix Calypso Pre  
Quad ESL-57 One Thing modified speakers  
Tellurium Black & Blue speakers cables  
Tellurium Black power cables  
Oyaide clamp  
Oyaide BJ-12 mat  
Track Audio Precision 600 speaker stands  
Hush platforms  
Hush Yewbarrow rack  
Nordost Quantum Qube QB6 power block

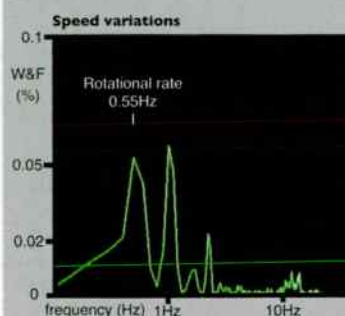
## MEASURED PERFORMANCE

The ACT 0.5 arm's first bending mode is at a high 325Hz (upper trace), so it is relatively stiff. The peak is low and wide, so damping is good. There is a sharp peak at 1kHz but this is narrow and does not embrace a lot of energy. The headshell is also well damped, shown by

### ARM VIBRATION



### SPEED VARIATION



the low level of modal products at right on the trace.

Speed was accurate, the turntable running a small 0.5% fast. Speed variations were well suppressed, with total Wow and Flutter measuring 0.12%, a low, if unexceptional value; Direct Drives manage 0.06% and the best servo motor belt drives 0.08%.

The Ply MC cartridge has a smooth frequency response that rolls down slowly at high frequencies our analysis shows, so it will have a warm but smooth sound.

At the maximum 2gms down force, tracking was satisfactory, all test tracks at 300Hz negotiated, except the highest. In the midband 16cms/sec was a mediocre maximum, top Ortofon's managing 20cms/sec or more. Vertical tracking angle was close to correct at 24 degrees and channel separation good at 26dB.

The Full Circle measured well all round. The arm is superb, the turntable good, the cartridge smooth in balance, but could track better. **NK**

Speed	+0.5%
W&F (total)	0.1%
Wow	0.15%
Flutter	0.04%

**WILSON BENESCH  
FULL CIRCLE  
TURNTABLE  
£2,795  
FULL CIRCLE  
STAND £490**



### VERDICT

With powerful bass and airy upper frequencies, the Full Circle is a strong contender in this price bracket.

### FOR

- design
- big bass
- expansive midrange
- focus

### AGAINST

- midband tracking

Wilson Benesch  
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Web: wilson-benesch.com

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# Pie & Vinyl

**Audio Technica vote Pie & Vinyl Britain's best shop for satisfying your hunger for LPs and – well – food. The two being of equal importance, no?**

**A**udio Technica sent us an intriguing news item recently, nominating an independent record shop in sunny Southsea, a coastal town close to Portsmouth on Britain's south coast, as the country's top independent record retailer. Clearly, their name told us they sold LPs – as well as pies! Strange, but worth investigating.

What relationship do pies have with LPs? Pie-and-Vinyl is also a cafe selling some scrumptious sounding fare like Moo (steak and ale) and Kate and Sydney (steak and kidney and ale) pies. Take a look at their



imaginative menu at [www.pieandvinyl.co.uk](http://www.pieandvinyl.co.uk).

The shop also organises music events that showcase less well known musicians and bands and it opened at 8a.m. on Record Store day to accommodate an expected queue looking to buy rare records. Vinyl releases can number just a few hundred, distributed around 300 stores in the UK, so getting hold of an album or single can be difficult and they have a rarity value.

Why is everyone in the picture under 30? What is the appeal of an old format to a new generation, we asked owner Steve Courtnell? "For us it's a new format, one we had not come across until recently. We did not grow up listening to vinyl. It is a much better experience than CD or downloads, better sound quality, more engaging and more satisfying to own".

Vinyl sales increased 78% in the first quarter of 2013 over the same period in 2012, say the Official Chart Company ([www.officialcharts.com](http://www.officialcharts.com)), although at 389,000 for 2012 numbers are still small against the format's peak of 86 million in 1978 (and CD's peak of 163 million in 2004). There is a strong trend upward, Music Week ([www.musicweek.com](http://www.musicweek.com)) reporting that an ICM Research survey showed purchases highest amongst 18-24 year olds, who liked it for its "raw sound". Others liked the cover art and many could not even play LP, but played the CD instead, putting the LP in a frame! Some LP releases come with CD and download as part of the package to accommodate such buyers.

For more on vinyl go to [www.thevinylfactory.com](http://www.thevinylfactory.com), where you will find fashion stores, exhibitions, and even Central London venue hire.

**Steve Courtnell (R) and Rob Litchfield (L)**



**Steve Roger Courtnell (R) and Robert Litchfield (L) and staff.**

# Viennese Whirl



**Tony Bolton digs into his record collection to test out the latest version of Pro-Ject's Tube Box DS phonostage.**

**T**he Box series of electronics from Vienna based company, Pro-Ject have been recently revamped and divided into distinct categories, separated by price and performance. The Tube Box DS is the top phonostage in the DS series and sits just below the range topping Phono Box RS (retailing at £599).

As with all the Box series, the

alloy casework is compact, in this case, measuring 200 x 72 x 200mm and weighing in at 2kg. The fascia is available in the usual black or silver finishes, and contains the power button (with a suitably muted blue LED) and a knob to adjust impedance from moving coil cartridges. This is unusual in being infinitely variable from 10 to 1000 Ohms and allowed me to really fine tune the setting for the Clearaudio Concept MC; I found that I preferred the sound with the dial reading a little past the 100 Ohms book setting.

All other circuit adjustments are accessed by small jumper plugs at the rear of the case. They are quite well explained in the instructions and can be configured for gain, capacitance and subsonic filter.

The internals

are a hybrid cascade circuit of J-FETs and valves, with one ECC 83 per channel. Previous generations of the Tube Box used a capacitor multiplier to generate anode voltage. The new models use a DC to DC convertor which is claimed to tighten the bass sound. The usual Pro-Ject split passive equalisation circuit uses a Texas Instruments OPA2134A chip, and there are MKP capacitors in the signal path.

MC gain is though the valves with the ECC 83s wired in what is called "common grid mode" to provide enough gain for MC cartridges without the need for expensive transformers.

After my usual 48 hours of running in I started my customary wander through my record collection, initially playing certain old favourites to get a handle on the sound. Kenny Ball's eponymously named second LP really caught my ear with a truly sizzling rendition of the jazz standard 'High Society'. This is a live recording

*The dual mono circuit board with the ECC 83 (12AX7) double triode valves removed.*





made in the London Colosseum, and despite the drop in sound quality compared to the studio recordings which surround it, the sheer energy of the performances usually make for an electrifying listen. Dave Jones wrings some most amazing sounds out of the clarinet, while playing the Alphonse Picou solo, and then duets it with Kenny on the trumpet.

The Tube Box DS did the

production values scale was Scott Walker's recording of 'Montague Terrace (In Blue)'. Written and performed by Scott, the Jaques Brell-esque intensity of both the lyrics, their delivery and the lush accompanying orchestration, made for a very immersive listening experience. I came out of the other side feeling that my emotions had been given quite a hefty tug, but that it had been a positive thing to have gone through.

Equally stirring, but less obviously emotional, were the sonic excesses of Raja Ram (sometime associate of Shpongle) in his guise of 1200 Micrograms. This is tuneful but fairly hard, driving 140+ bpm trance, and it came out of the speakers with all of the speed and punch of a Bugatti Veyron at full tilt, surrounded by a rich tapestry of sonic colour.

The Pro-Ject Tube Box DS seems to be one of those products that gently persuades the listener that its way is the right way. I could perhaps

criticise it for having a warmish tonal balance and slightly softened extreme high frequencies, but that would miss the point if its innate musicality and convincing presentation of music. I found it hugely enjoyable to listen to regardless of the genre, age or condition of what I played through it. At £425 it is something of a bargain, and if you are looking for a phono stage at this price point, then look no further. Absolutely recommended.



**The back contains jumper plugs and sockets which vary the gain and capacitance, and can activate the subsonic filter.**



**The ECC83 valves wear valve coolers that also eliminate the glass tube's tendency to be microphonic.**

recording proud with a firm grip on the rhythm and a big, slightly lush presentation of the music. The bass was fast, seeming to have a quite well defined shape that meant that it stopped and started where it should, without blurring the timing. The midrange was open and inviting and the treble seemed to go quite high and then gradually fade away. The tonal balance was more warm than neutral, but this was not, to my ears at least, in anyway a bad thing. It made instruments seem more three dimensional than, for instance, the iPhono phono stage that I reviewed last month.

Later on I played Kathleen Ferrier's 1946 recording of Gluck's 'What Is Life' from 'Orpheo'. This old Decca recording can sound very thin and uninspired through some phono stages. The Tube Box let me be aware of the technical deficiencies but left me focussing my attention on the music and the beauty of both tune and voice. This is a mono LP, in very good but not immaculate condition, but I didn't, for once, find the absence of a stereo/mono switch too much of a problem. If it had been fitted then it would have added a little extra finesse to an already sophisticated sound.

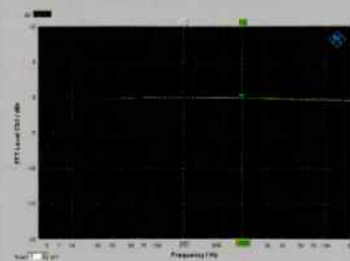
At the other end of the

## MEASURED PERFORMANCE

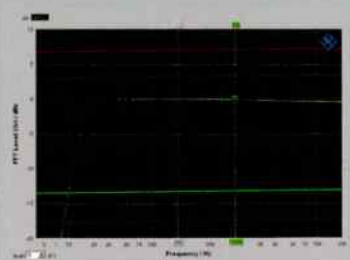
With subsonic filter out or in, output rolled down below 20Hz with this stage, so some attenuation or warps exists with both settings. The filter gives much higher attenuation at 5Hz and is preferable of the two, because it does not affect low bass, as so many do.

Frequency response measured flat

### FREQUENCY RESPONSE



### SUBSONIC FILTER



from 20Hz to 20kHz our analysis shows, so RIAA equalisation was accurate, although treble (75µS) does shelve down a tad so the Tube Box is balanced for a warm sound.

Output swing was a high 11V and gain values measured close to that stated at x120 (42dB), x380 (52dB) and x1125 (62dB), so input overload levels were all high: 91mV, 29mV and 9mV respectively.

Noise was on the high side at 0.27µV equivalent input noise at all gains and input impedances, 10dB more hiss than usual. This is because valves are noisy and whilst quiet enough for MM cartridges, are too hissy for low output MCs; valve phono stages typically use input transformers to avoid this, but they are costly. High output MCs must be used for hiss to be below nuisance level. Otherwise the Tube Box DS measured well in all areas. NK

Frequency response	20Hz-20kHz
Separation	78dB
Noise	0.27µV
Distortion	0.05%
Gain	x120 (42dB), x380, x1195 (62dB)
Overload	11V out

### MUSIC USED;

Kathleen Ferrier. 'The World of...' Decca Records. PA 172. 1971.

Kenny Ball and His Jazzmen 'Kenny Ball and His Jazzmen'. Pye Jazz. NJL 28. 1961.

Scott Walker 'The Best Of Scott. Volume 1'. Philips Records. SBL 7910. 1969.

1200 Micrograms. 'Heroes Of The Imagination'. TIP World Records. TIPWLP30. 2003.

### SYSTEM USED:

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# Revoxed Radio

There was more to Revox than recording. Martin Pipe reassesses the company's A76 analogue FM tuner

Switzerland, 1969. When you've made one of the world's best tape decks, you follow it up with one of the world's best tuners. If it could work in Switzerland, it could work anywhere! The A76 featured here is a Mark II.



## All in the family.

In the space of a few short years, the critically acclaimed Revox A77 has established itself as the tape recorder of choice for the knowledgeable enthusiast.

Now, from the same dedicated design team that created the Revox A77 come two new meticulously engineered components, an FM tuner and a stereo amplifier that extend performance to the limits of current technology.

Take the Revox A76 FM stereo monitor tuner. With its incredibly sensitive front end, unique dual action IF strip, specially developed discriminator circuit and two regulated power supplies, the A76 represents an entirely new approach to FM signal processing.

In fact, the Revox A76 sets new performance standards in a half dozen different categories.

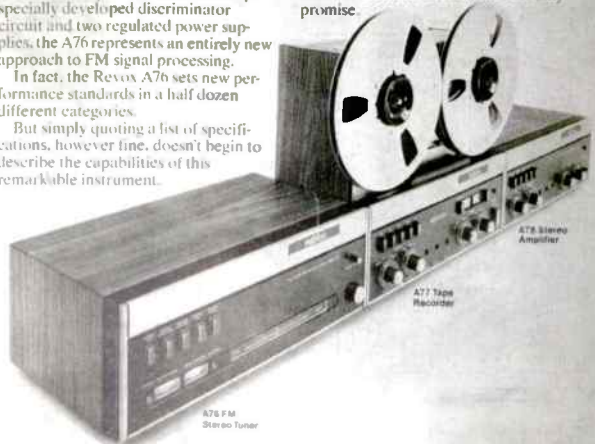
But simply quoting a list of specifications, however fine, doesn't begin to describe the capabilities of this remarkable instrument.

For what distinguishes the Revox A76 from all the rest is its uncanny ability to capture the weakest signals with a clarity and a freedom from noise that is truly startling.

As for the Revox A78 stereo amplifier, it does everything a superb amplifier should do. And it does it just a little better.

Together or separately these remarkable components are a fitting addition to the Revox family and provide further proof of what we've said all along...

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The A76 was intended for use in a complete Revox system that also included the A77 tape deck and A78 amplifier

During the 1960s and 1970s, Willi Studer's Revox company was known for expensive but superbly-engineered tape recorders. The Swiss company later turned its skills to developing a high-quality tuner, the A76.

In the US, where Zenith-GE mono-compatible 'multiplex' stereo was originally-developed, stereo FM/VHF broadcasting was firmly established by the late 1960s. At this time, the BBC's only radio service regularly broadcasting in stereo was the old 'Third Programme' – better known today as Radio 3; it had, however, been broadcasting in FM since the late 1950s.

At this time FM stereo broadcasting was rare in Europe too. There were some great stations, especially in south-western Germany, but their reception was difficult in adjacent Switzerland, because of its mountainous geography. To combat this, the new A76 Revox tuner was made sensitive. It was designed to pick up distant weak as well as local strong stations, without instability, distortion or selectivity

compromises.

The A76 would also be kitted 'as standard' for stereo; back then, most FM tuners had to be 'retrofitted' with an optional decoder. No provision was to be made for AM (medium wave/long wave) broadcasting.

The 'all-silicon' A76 was built around the sound-quality potential of FM transmissions – the sort of thing you might want to tape with your newly-acquired A77, the machine the A76 – and for that matter the A78, a 40 watt-per-channel transistorised stereo amplifier intended to complete the system – were styled to match.

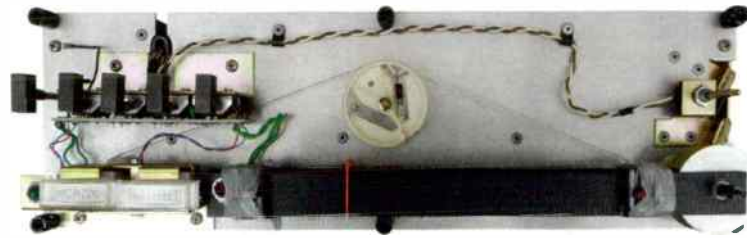
In appearance terms, the A76 is very much of its era. A smallish but positive tuning knob moves a pointer on a long tuning scale (on which is neatly marked the full Band II spectrum, ranging from 87.5MHz to 108MHz). Ranged alongside these are 'centre zero' tuning and signal-strength meters. Also in this strip are lamps that indicate stereo transmissions and, in a nod to the tuner's origins, the presence of 'multipath distortion'.

So what's that then? A radio receiving system tends to intercept



not only the directly-radiated (i.e. wanted) signal from a transmitter, but also one or more that have been reflected off tall metal-framed buildings, gasometers or – in countries like Switzerland – mountains. Because these signals arrive at an aerial via an indirect route, they're received later. In the case of analogue TV, the undesirable result is a 'ghost image'. With FM radio, though, you get a very nasty form of distortion – and a flickering red lamp on the A76. The sort of radio-happy customer who would have plumped for an A76 tended also to have a large directional aerial fitted to the roof, usually mounted on a rotator. With such outdoor equipment it was thus possible to align the aerial for minimal audible distortion and multipath-lamp activity. Some later Japanese high-end tuners actually meter multipath, but the A76's simpler system works well.

Above the meters and indicators is a row of buttons that control various functions. The stereo decoder can be turned off for signals too weak to deliver anything other than very noisy stereo (mono is preferable under such circumstances!). Muting can be turned on to eliminate interstation hiss, an adjacent 'trigger level' button enabling its threshold to be adjusted via a control just above the tuning knob so that weak stations need not be overlooked. The purpose of the fifth button can be used to distinguish between the three versions. With the Mk.1 (1969 – 1970) it engages or disengages the aforementioned multipath indicator. On the Mk.2 (1971 - 1974) and Mk.3 (1974 - 1977) versions, this button engages a useful 'stereo filter' function that de-hisses broadcasts at the expense of stereo separation (and thus the soundstage, which is audibly 'compressed'). In all significant



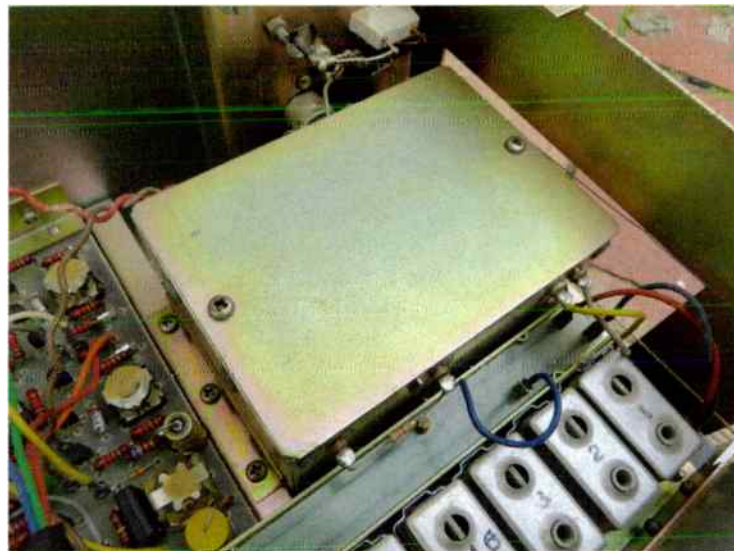
**The front-panel indicator and backlighting bulbs fail over time. Thankfully, replacing them with LEDs is relatively-straightforward.**

respects, the only differences between the Mk.2 and Mk.3 version are cosmetic, in keeping with the revisions of the A77 that were sold during the respective periods.

Internally, the A76 is beautifully-constructed and laid out in such a way that servicing is eased – in keeping with Revox tradition. Under

then again, the A76 was a high-end product (£250 or thereabouts in 1975) that Revox's contemporary advertising claimed set "new performance standards in a half-dozen different categories" – which, back then, it undoubtedly did.

There were no cheap mass-market chips in the FM demodulator



**Under this screening can lurk the A76's VHF front-end circuitry. It employs dual-gate MOSFETs, which were fairly cutting-edge technology at the time.**

a metal can is the tuner's 4-gang 'front end', which employs then-new dual-gate MOSFET devices. This can be fed from an aerial via either a Belling-Lee type socket or a 300-ohm balanced connection. The fixed-bandwidth IF (intermediate frequency) section the front-end drives doesn't rely on inexpensive ceramic filters, as is the case nowadays. Instead, it's based around a number of discrete tuned elements and a series of integrated-circuit amplifiers. This 'IF strip' had to be carefully aligned in the factory; in contrast, calibrating tuners based around ceramic-filter IF stages is much quicker and easier. The final testing allocated to an A76 was said to total two hours – unthinkable in these days of mass-production. But

stage either; the one in the A76, built from discrete components, was of the uncommon 'delay line' type.

Finally, we have a switching-type stereo decoder, with 15kHz low-pass filters to remove any unwanted 19kHz or 38kHz multiplex 'residue' that could interfere with recording. Revox obviously had faith in these filters, for non-Dolby versions of the A77 aren't – unlike some rival recording equipment – themselves equipped with a switchable 'multiplex filter'.

How does this 40 year-old tuner hold up against more modern designs? The first thing you notice, freedom from 'drift' apart, is how sensitive it is – that original Revox brief was fulfilled admirably. Even with a simple wire dipole, it's amazing



**Conventional phonos and a DIN socket yield the audio output, complete with level-matching 'pots'. The phono sockets tend to rust, and alternative arrangements are recommended.**



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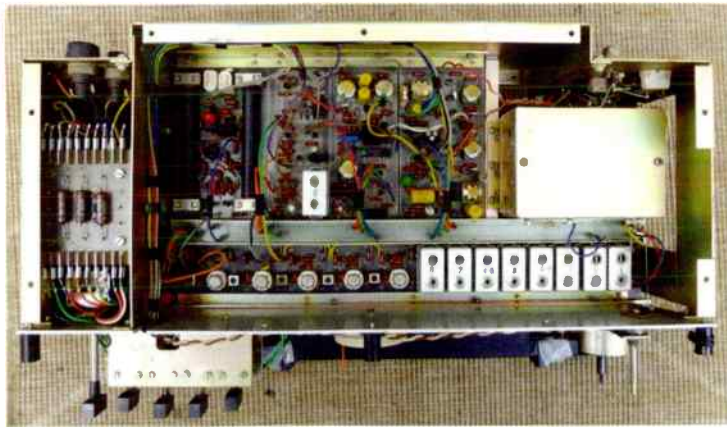
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**By late-1960s standards, the A76 was a sophisticated tuner that employed some maverick techniques. In performance terms, it holds its own even now!**

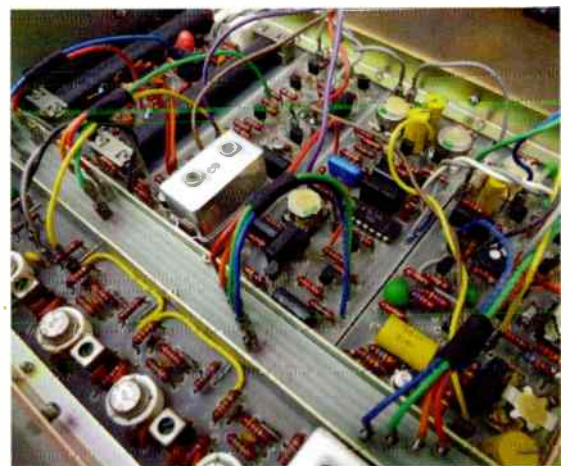
how many broadcasts it can pull in. In this regard, it beats many newer tuners – such as my synthesised Sony 730ES, or the ones built into the AV receivers I've reviewed recently.

Naturally, the A76 will deliver its best with an external roof aerial – especially from Radio 3's more exacting audio, where stereo 'mush' is more intrusive. The sound quality from this station can be superb; listening with the A76 gives you a low-end that's vibrant without being overblown, while the all-important 'presence' band (vocals, etc.) isn't

silenced it on the tuner, with no significant 'breakthrough' from the unaffected channel to the disconnected one.

With the exception of Radio 3, most FM broadcasts are heavily-compressed and the audio quality suffers as a result. However, the A76 manages to squeeze out a more than acceptable sound from most of them. FM's days are sadly numbered. The BBC want to force us to use DAB. Half of the VHF band (Band II) might, however, be retained for community broadcasting and so tuners like the

can be replaced with LEDs provided current-limiting resistors are connected in series. The phono audio output sockets are of rather poor quality, but a decent-quality trailing lead of suitable length terminated in the relevant connectors could be fitted in its place. If your tuner didn't come with a 'Revox special' mains cable, don't fret. It's easy to replace the associated chassis socket with a conventional IEC type. Manuals, should you need them, are freely-available on the Internet (try [www.hifiengine.com](http://www.hifiengine.com)). Don't, however, attempt any alignment of the electronics (especially the RF and IF sections) unless you know what you're doing and have access to the relevant test equipment.



**Here we see the A76's demodulator and stereo decoder circuitry. The unusual demodulator's delay lines can be seen top-left. That early Motorola logic chip is used as a frequency divider (it supplies the 38kHz and 19kHz signals needed by the discretely-built stereo decoder)**



**The job of this complex IF strip, which necessitated an involved alignment process during production, can be done with a few cheap components in modern tuners**

affected by chestiness or other colourations.

The A76 doesn't maybe give you the top-end 'sweetness' of up-to-date hardware, possibly because of the output filtering. Its soundstage is however excellent, suggesting that the separation of the decoder is up to scratch. I verified this with an ex-BBC 'closed loop' transmitter, fed via balanced connections from an ex-BBC Preco F500 broadcast tape console playing pre-broadcast tape material. Disconnecting one audio channel from the tape machine

A76 could still have some useful life ahead of them.

My example came from a car boot sale and, although rather tatty, only cost a tenner. You can often find A76s at Audiojumbles and on eBay for less than £100, and at that price it's well worth having a punt. There are two 1000uF capacitors in the power supply, and these should be replaced if the originals are still fitted – they have a tendency expire spectacularly!

The scale, meter and stereo/multipath bulbs die over time, but



**Revox used a non-standard 2-pin power socket on much of its equipment. As this shows, it's easy to fit a standard IEC type in its place. Note also the 'export-friendly' voltage selector and accessible fuses**



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SME 10 with tonearm with V	£3295
SME series 3 tonearms various	from £175
SME series 4 with damping trough	£1095
Sony PS6750 turntable	£POA
Sony 1800A vintage turntable	£245
Synrix LE1 tonearm recently wired with cardas cable fitted and checked by Audio Ongami	£275
Synrix PU2 tonearm	£295
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CD PLAYERS, DACs	
Arcam CD33 cd player top of the range boxed	£545
Arcam CD73 24bit cd player black finish	£225
Audio Alchemy V1.0 DAC	£145
B&O 9000 cd player with floorstands and speakers	£2295
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Harmon Kardon CD30 twin CD recorder HDCD top of the range	£345
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Mendian 506 20 bit CD player	£395
Mendian 208 and CD player with built in pre	£295
Mendian 200 transport	£245
Mendian 518 digital audio processor	£345
Musical Fidelity A3CD 24bit CD player boxed	£295
Musical Fidelity FCD valve CD player	£495
Nakamichi CD player 2	£175
Nakamichi MB10 5 disc music bank cd player	£175
Naim CDS3 with Teddy Pardo PSU	£2795
Naim CDS with PSU	£295
Pink Triangle litaural HDCD superb player £3000 new serviced	£595
Philips CD610 16bit cd player	£95
Pioneer PDR509 legato link	£145
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Rotel RA965 BX classic old school cd player boxed mint condition	£195
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Sony XE880 SACD player	£195
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Audiolab 8000T tuner boxed	£425
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Nordost Red Dawn speaker cable 5mtr	£395
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PURE SOUND	ROKSAN	AUDIO TECHNICA	DENON
PRO-JECT	ZYX	INSPIRE	PRO-JECT
EAR YOSHINO	CARTRIDGE MAN		ROKSAN
HEADPHONES	AMPLIFIERS	CABLES	HIFI FURNITURE
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BEYER	SUGDEN	QED	ALPHASON
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GRADO	QUAD	IXOS	CUSTOM DESIGN
ERGO	TOM EVANS	SUPRA	ATACAMA
GOLDRING	NAD		
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HARBETH	CREEK	LEHMANN	CREEK
OPERA	EAR/YOSHINO	PRO-JECT	NAD
QUAD	QUAD	GRAHAM SLEE	DENON
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WHAT HI-FI AWARDS 2012

### PIONEER • N-50 • MUSIC STREAMER

Award-winning audiophile Network player supporting AirPlay<sup>®</sup> and DLNA wireless technologies, allowing you to stream music wirelessly from your iTunes libraries or iOS devices. When connected to your home network, you can also enjoy a wide variety of online music services remotely.



£649  
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### ROTEL • RT-12 MUSIC STREAMER

The RT-12 is an FM and DAB+ preset radio tuner and much more besides. By incorporating network capabilities, the RT-12 can access thousands of internet radio broadcasts and play audio files stored on UPnP servers such as Windows computers.

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**ARCAM • FMJ CD17 / A19 • CD / AMPLIFIER**  
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**AUDIOLAB • 8200CD / 8200A • CD / AMPLIFIER**  
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 Designed to be the heart of a digital system and connected to a host of different types of digital sources. Includes asynchronous USB and a direct iPod input to optimise sound quality. All inputs can be controlled through an IR remote that will also control iPods, iPhones, PC and Mac computers.



**CYRUS • CD8 SE2 / 6A • CD PLAYER / AMPLIFIER**  
 With its impressive 40 Watts per channel and six analogue inputs, the 6a amplifier is a great partner for the award-winning CD8 SE2 CD player.



**MARANTZ • CD6004 / PM6004 • CD / AMPLIFIER**  
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**AUDIOLAB • M-DAC • PRE-AMP / DAC**  
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**NAD • C 546BEE / C 356BEE DAC • CD / AMP / DAC**  
 Enjoy music from your computer without musical compromise via the DAC or listen to music from CD with the MP3 / WMA compatible CD player.



**NAD • C 516BEE / C 316BEE • CD / AMPLIFIER**  
 Received an outstanding product award from Hi-Fi News magazine who described the C 316BEE as an "absolute barn-stormer of an amplifier". The C 516BEE is the perfect partner.



**AUDIOQUEST DRAGONFLY USB DAC / HEADPHONE AMP**  
 Turn any computer into a true high-fidelity music source with the DragonFly - A sleek, flash drive sized Digital-Audio Converter that connects to a USB jack on a Mac or Windows PC.



**MERIDIAN • EXPLORER USB DAC / HEADPHONE AMP**  
 Meridian's Explorer is a portable, compact and rugged USB DAC designed to deliver best-in-class audio performance. Featuring premium audiophile-grade components throughout, a 6-layer circuit board, an elegant all-metal enclosure, the Explorer delivers the Meridian audio experience from virtually any computer.



**ROKSAN • CASPIAN M2 • CD / AMPLIFIER**  
 The M2 amp boasts 85wpc and five line inputs while the matching CD features a 24-bit DAC plus dedicated power supplies for the outputs.



**ROTEL • RA-10 / RCD-12 • AMPLIFIER / CD**  
 Award-winning amplifier from Rotel. Delivers 40 Watts per channel and includes four line level inputs and a phono input. Ideal partner for the RCD-12 CD player.



**NAD • M51 • DAC**  
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Award-winning compact, floorstanding speakers featuring Tannoy's unique Dual Concentric™ drive unit along with trapezoidal cabinets. Exclusively finished in luxury Espresso colour real wood veneer

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**Q ACOUSTICS • CONCEPT 20**  
A truly remarkable new speaker which delivers a level of sonic performance previously only available to audiophiles able to invest in high-end models.

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PRICE EXCLUDES STANDS

**PMC • TWENTY-23**

An open, engaging and communicative loudspeaker that defies its size both the depth of bass and scale of presentation by taking any music or film material in its stride. The sound is vivid and dynamic and delivered with authoritative bass

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OR LESS

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**PMC DB1 GOLD**

Based on the famous DB1 model. The DB1 Gold uses Studio series HF and LF drive units for added robustness and reference monitor sound along with PMC's ATL bass loading technology

NEW

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**KEF • LS50**

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**WHARFEDALE DIAMOND 122**

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**RUARK AUDIO • MR1 • BLUETOOTH SPEAKER SYSTEM**

Standing just 17cm tall, the MR1 speakers feature 20W of Class A-B amplification, a 75mm mid/bass unit and 20mm tweeter in each enclosure. The handcrafted cabinets are finished in a choice of rich walnut veneer, soft white or soft black lacquer.

NEW

£299  
OR LESS

Bluetooth

WHAT HI-FI? BEST OF THE BEST AWARDS 2012

**SONOS • THE WIRELESS Hi-Fi SYSTEM**

The award-winning Sonos lets you play your favourite tunes all over the house and control them from the palm of your hand. You can even play different songs in different rooms.

NEW PLAYBAR NOW AVAILABLE

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The best of all worlds - amazing sound effortless wireless streaming with AirPlay™, a lightning connector for docking the latest generation of iPhones and iPods and a design that fits almost anywhere.



AirPlay

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With Lightning™ connector

NEW

£499  
OR LESS



AirPlay

Bluetooth

**NAD • VISO 1P • WIRELESS MUSIC SYSTEM**

Streaming system with both AirPlay™ and Bluetooth. Ideal for wirelessly playing music from your iPod, iPhone, iPad or any Bluetooth or AirPlay enabled smartphone, tablet or laptop.

**B&W • A5 & A7 WIRELESS MUSIC SYSTEMS**

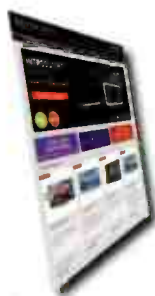
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# Cables section

**Y**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 and premium products across a single manufacturer's range. This month Atlas cables feature.

## **SPEAKER CABLES**

ATLAS ELEMENT 1.25/ATLAS MAVROS 107

## **INTERCONNECT CABLES**

ATLAS ELEMENT INTEGRA ASYMMETRICAL/ATLAS MAVROS RCA 108

## **DIGITAL CABLES**

ATLAS MAVROS 75 OHM/ELEMENT USB 2.0 A-B 109



## SPEAKER CABLES ATLAS ELEMENT 1.25



**T**he Atlas Element 1.25 contains 1.25 sq mm of stranded OFC copper contained in a high density polyethylene dielectric rather than the more usual and less efficient PVC.

### SOUND QUALITY

Comparing the Element to my

reference Tellurium Q Blue and spinning the vinyl version of Caravan's 'Golf Girl', you can hear two distinct philosophies from both cables. The Tellurium offered extended upper mids, only slightly uncontrolled in the extreme frequencies, a good bass response and free flowing dynamics while the Atlas provides more controlled, yet slightly less extended,

upper mids, more powerful bass and a slightly more mature sound. The Atlas, nevertheless, presented an incisive treble, smooth lower mids and extra clarity. Immensely cohesive, the Element cable always seemed to be 'on watch' for unruly and errant frequencies, like a sonic version of a sheepdog.

Moving to Tchaikovsky's 'Nutcracker' on CD and 'The Kingdom Of Sweets', the strings were smooth, although lacking in a touch of zip but the Element did keep a lid on potentially abrasive upper frequency areas.

### CONCLUSION

At this price point, the Atlas Element easily sits within the 'excellent' category. Then, because budget constraints limit the overall performance, you look for trade-offs. The Element controls wayward frequencies, ensures discipline and provides a rich, warm presentation.

**ATLAS ELEMENT  
1.25 SPEAKER  
CABLE  
£2.50 PER METRE  
& £30 FOR A SET  
OF RCA PLUGS**



### VERDICT

Top quality performer that builds a steady musical soundstage from the ground up.

### FOR

- sonic control
- focus
- smooth mids

### AGAINST

- extended frequencies

Atlas Cables  
+44 (0) 800 731 1140  
www.atlascables.com

## SPEAKER CABLES ATLAS MAVROS



**T**he Mavros features a micro-porous PTFE to increase signal fidelity. The speaker cable was tested with Rhodium plated locking 4mm plugs, though spades are available on request. Each speaker cable is provided with a serial number that is etched onto the plug.

### SOUND QUALITY

I ran the Nutcracker CD on my Densen B-475 and hooked up a set of Tellurium Blacks as a reference. Even on this restricted format, you could tell that the Mavros was something special. A super smooth midrange saw strings glide across the strong, well-constructed soundstage

offering total confidence that no control would be lost. Mixing a solid bass with deliciously incisive detail, which kept the ear busy and alert. Turning to the high resolution Caravan vinyl track, I was nothing short of astounded. Where to start? I could talk about the attack of the acoustic guitar strumming that almost bit at my ears or the tight, efficient, measured bass.

I could even opine about the superb vocal definition where vocals projected with a calm confidence. Then there was the wide soundstage and the

instrumental separation that allowed each instrumentalist to express themselves with a great sense of clarity

### CONCLUSION

One of the truly great cables currently on the market. This is the best set of speaker cables that I've ever heard. Truly genre defining.

**ATLAS MAVROS  
SPEAKER CABLE  
£1,700 FOR 3M**



### VERDICT

A quite astonishing speaker cable that provides an open, clear and dynamic performance.

### FOR

- tremendous focus
- tonal reality
- sonic definition

### AGAINST

- nothing

Atlas Cables  
+44 (0) 800 731 1140  
www.atlascables.com

# INTERCONNECT CABLES

## ATLAS ELEMENT INTEGRA ASYMMETRICAL

**ATLAS ELEMENT  
INTEGRA  
ASYMMETRICAL  
INTERCONNECT  
£45 FOR 1M**



**VERDICT**

Showing a rich presentation and a firmly grounded bass, the Element offers plenty of detail.

**FOR**

- detail
- balanced delivery
- dynamic

**AGAINST**

- nothing

Atlas Cables  
+44 (0) 800 731 1140  
www.atlascables.com



**E**mploying a braided copper and aluminium foil giving a 100% screen, it employs Oxygen Free Copper (OFC) for its conductors together with a low loss porous polyethylene dielectric (PEF). The Element is fitted with a new Integra non-magnetic RCA plug: a solder free, cold weld interface that employs two conju-

gate brackets to grip the cable without compressing it. Compressing a coaxial causes the cable to alter its impedance, thereby causing reflections.

**SOUND QUALITY**

Running the Element alongside my Black Rhodium Tempos, I played Ella Fitzgerald's vinyl version of 'Johnny One Note'. Offering an open and

dynamic suite of mids and providing speedy transients, Fitzgerald's vocal offered great character and emotion with a rich delivery. Adding 3D depth to the pleasingly arranged and constructed soundstage, the performance added a layered arrangement that was surprising for this price point.

Moving to CD and the 'Nutcracker', played via the Chord QuteHD DAC, the upper mids were calming and, via the strings, gently sweeping like the wind through tall grass. The upper mids were never somnambulant, though, plenty of fire was available via the brass section while the plucked strings were tantalising. Treble fairly sparkled which lent itself well to this magical piece of music.

**CONCLUSION**

Providing a balanced output, the Element offers remarkable value for money.

# INTERCONNECT CABLES

## ATLAS MAVROS RCA

**ATLAS  
MAVROS RCA  
INTERCONNECT  
£850 FOR 1M**



**VERDICT**

Unerringly neutral, there is no 'character' to get in the way of the music.

**FOR**

- bass grip
- smooth mids
- neutral presentation

**AGAINST**

- nothing

Atlas Cables  
+44 (0) 800 731 1140  
www.atlascables.com



**T**he Mavros uses a micro-porous PTFE dielectric together with OCC copper conductors. 'Ohno Continuous Casting' (OCC) has one grain in about 700 feet of conductor, so the audio signal travels through a continuous conductor instead of traversing grain boundaries. The copper itself is of the

highest purity; equivalent to 7N or 99.999997% pure. The RCA plugs are Atlas non-compressing, solder free Ohno Continuous Cast types.

**SOUND QUALITY**

Starting with the 'Nutcracker' through the Densen B-475 and Chord QuteHD DAC, the Atlas cables offered a welcome lucidity to

the overall presentation.

Strings flowed but they also informed. There was a great deal of emoting within the sweeping artefacts that offered insinuation and gesture. Bass was informative and almost provocative in nature, providing a potential for power.

Moving to Caravan on vinyl, there was a calm assuredness about the Mavros. They don't perform 'big'. These are not cables that try too hard to impress. They just allow the music to flow naturally. Bass was forthright and strong with a power that was solid and mass heavy while the vocal performance was clear and distinctive.

**CONCLUSION**

What is remarkable about these cables is how much detail is presented without having to ramp up the upper mids to bright levels. The confidence of the cables, in terms of presentation, is quite remarkable.



## DIGITAL CABLES ATLAS MAVROS 75 OHM



**U**sing a microporous PTFE dielectric together with silver-plated copper conductors. The new microporous insulation with a dielectric constant between 1.3 and 1.5 improves on ordinary PTFE and provides up to 85% greater velocity of propagation

than ordinary cables and 30% better than Teflon cables. The RCA plugs are the unique Atlas non-compressing, solder free Ohno Continuous Cast types.

### SOUND QUALITY

Playing Granddaddy's epic 'He's simple, he's dumb, he's the pilot', via the

Chord QuteHD DAC and Densen B-475 CD player, the Atlas provided a heightened clarity that was sincere and, frankly, uplifting in its approach to the music. Upper mids were magnificent in their presentation, being detailed and perceptive in their make-up. As the track progressed, the bass offered fine support, holding the entire track up for examination and giving the music both weight and a certain gravitas that plumbed emotive centres.

Similarly, when playing the Nutcracker, the music had somehow grown in stature, becoming more important and bolder in its approach. Upper mids were delightful in their dynamic reach while the lower mids found a playful rhythm that was almost nonchalant in its ability to dig deep into the mix.

### CONCLUSION

This cable infuses digital music with an essential emotion that gives body and depth to the presentation.

### ATLAS MAVROS 75 OHM DIGITAL £260 FOR 1M



#### VERDICT

A quite magnificent digital cable that opens up the soundstage to give your music a breath of fresh air.

#### FOR

- clarity
- perceptive mids
- dynamic reach

#### AGAINST

- nothing

Atlas Cables  
+44 (0) 800 731 1140  
[www.atlascables.com](http://www.atlascables.com)

## DIGITAL CABLES ELEMENT USB 2.0 A-B



**T**he Element USB is made up of parallel lay twisted-pair silver-plated high purity OFC copper conductors encased in a foamed Polyethylene dielectric. Every conductor retains an equal length to ensure no time differences between each.

### SOUND QUALITY

I played an EAC-ripped WAV of 'My Life' from Billy Joel, via an Arcam rDAC. The output showed plenty of control on bass and within the upper mids while the Atlas cable provided a high degree of focus with no obvious bleed or foggy frequency dispersal. Acoustic guitar detail was distinct while bass guitar tracked with ease.

Treble was an enjoyable experience, it almost shimmered. Joel's multi-tracked vocal, during the chorus, was complex with distinct layering. Reverb, meanwhile, was atmospheric and filled with air and space.

Moving to the higher res 24bit/96kHz of Gerald Finzi's 'Come Away Death' via Marianne Beate & Sergej Osadchuk, the vocal revealed plenty of emotion that plugged directly into the sentiment of the piece while the tempo was agreeably rhythmic. Midrange emphasis on the vocal was subtle, allowing the song to become portentous. The piano accompaniment provided a dynamic bass resonance along with a complimentary atmosphere.

### CONCLUSION

Providing a reassuringly attentive playback that retains a distinct authority over potentially errant digital frequencies, the Element USB offers great value for money.

### ATLAS ELEMENT USB 2.0 A-B DIGITAL £42 FOR 1M



#### VERDICT

Providing excellent performance for the price, the performance envelope offers plenty of potential for higher resolution files.

#### FOR

- distinctive mids
- airy soundstage
- rhythmic tempo

#### AGAINST

- nothing

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**BRACKNELL HI-FI** Sales Event, at Bracknell Leisure Centre, on Sunday 23rd of June 2013, please phone for details on 07846-002164.

**TANNOY CHEVIOTS** HPD 315A, immaculate mint condition, superb performance, £685 ono. Decca London International Unipivot arm, all packing, instructions, hardly used, £75. Tel: 0116 288 2338

**MISSION 751** standmount speakers, rosewood finish, £25, no offers. Buckinghamshire area. Buyer collects. Tel: 01908 645 353

**REGA P9**, black, white belts, 18 months old, unused last 8 months, Absolutely as new, boxed, all paperwork, no cartridge, £1825 ono. Possible P/Ex cheaper deck. Tel: 01323 728 118 or Email: [alanchamberlain@hotmail.com](mailto:alanchamberlain@hotmail.com) (Eastbourne)

**HFV MAGS Vols 5 to 23.** FOC, collect near Honiton - all or none. Have Naim, Linn items for sale. All boxed for move. Tel: 01404 891 380

**RAYSONIC SE-30** MkII valve integrated amp, single ended, 18 watt per channel, Three EL84 power valves per side. Under three years old. Excellent condition. £900. Tel: 01903 506 479

**REL STORM3** sub-bass loudspeaker. Boxed, £400. Russ Andrews Kimber 8TC REL sub-woofer cable, 5m, £125. Podium One flat panel loudspeakers. Need repairing. £1000. Tel: 0115 929 7706 (Nottingham)

**SPENDOR A6** floorstanding speakers. Oak finish, excellent condition. £1100 ono. Can demo. Buyer collects. Tel: 01708 475 319 (Essex)

**LATEVAN** Den Hul Frog Gold cartridge wanted. One requiring repair preferred. Tel: 01505 346 791 (Renfrewshire)

**EPOS M121** standmount speakers. NAD C545 BEE CD. Wharfedale 9.1 speakers. All items boxed. Buyer to collect please. Tel: Alan 01977 695 385

**PAIR CUSTOM** built speaker stands. 5kg each. Finish black hammered. Height 35.5cm, base 25x22cm, top 20x17cm. Excellent condition. £45 ono. Buyer collects, Blandford Dorset. Tel: 01258 454 084 or Email: [gandjboutelle@talktalk.net](mailto:gandjboutelle@talktalk.net)

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**TOM EVANS** MicroGroove Plus Phonostage Mint as new LFD PA2M Power amp Excellent condition Transparent Audio Powerlink Plus mains cable Can demonstrate, call for details - Offers (Bedfordshire) e: [stuardarshan67@googlemail.com](mailto:stuardarshan67@googlemail.com) T: 07870 912 963

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MARANTZ NA7004 Streamer. One month old. £190 ono. Tel: 0771 613 9026

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PROJECT PHONO Box SE2 blk MM/MC, original box and instructions VGC £135 ex p&p. 01684 290581 (Tewks).

LATEVAN Den Hul Frog Gold cartridge wanted. One requiring repair preferred. Tel: 01505 346 791 (Renfrewshire)

BRACKNELL HI-FI Sales event, at Bracknell Leisure Centre, on Sunday 23rd of June 2013. Please phone for details on 07846-002164.

# NEXT MONTH – AUGUST 2013 ISSUE

Teac's UD-501 Digital-to-Analogue Convertor is a hot machine. It can play normal high resolution digital to a level commercially unavailable – 384kHz – and SACD code (DSD) at its top 'high rate' spec of 5.6MHz. These are specs well beyond that being used today. The UD-501 is claiming rights to tomorrow's digital world and is alone in doing so.

It goes further: Teac's DAC is also tuneable – owners can dial in a range of filter and damping settings that finely alter sound quality. Is this the digital convertor you should buy? See our August 2013 issue.



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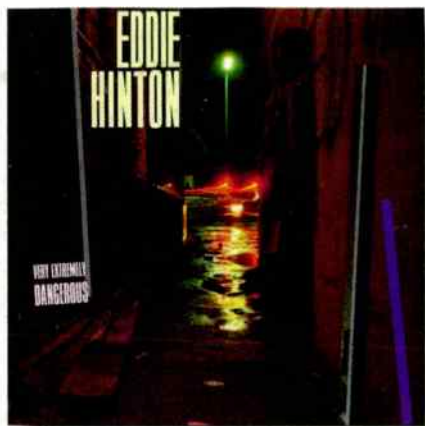
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SEPTEMBER 2013 ISSUE - 5TH JULY

OCTOBER 2013 ISSUE - 5TH AUGUST

# EDDIE HINTON

## VERY EXTREMELY DANGEROUS SHOUT



"Very Extremely Dangerous was cut after he had started to get a little crazy"

**W**hat do these soul legends have in common? Aretha Franklin, Wilson Pickett, Solomon Burke, Percy Sledge, the Staple Singers and Otis Redding? OK, how about if I add the reggae star Toots Hibbert of Toots & the Maytals? Elvis Presley?

Baffled? It's Eddie Hinton. Or, rather, the guitar of Eddie Hinton. Hinton was one of the all time great soul musicians. He played lead guitar for the famous Muscle Shoals Sound rhythm section (the first rhythm section to own its own studios, appearing on many legendary records). Hinton's talent didn't just stretch to guitar playing, however. This guy was also an excellent singer, a superb songwriter, arranger and producer too.

Jimmy Hall, musician and label mate, knew Hinton well. "His is a tragic story to me because when I first met him I thought that this guy was going to be the biggest thing ever. He was so talented. I thought that this guy was going to be it – you can't be any better than Eddie Hinton!

He wasn't one of the owners at Muscle Shoals, he was a staff guitar player in the rhythm section and he played on all of the early things that they did, but he got tired of it after a while. He was making great money, more money than he had ever made in his life, but he had written some songs that were hits and he wanted to do that more and he wanted to have a group."

Hinton was a hard worker, more so when he had visions of a solo career. Hence, Hinton would work all day on the contracted Muscle Shoals business but then would continue all evening on his own project, 'Very Extremely Dangerous'.

"He just got so into it", said Hall. "He was smoking pot and doing some drugs and just kind of got 'out there'. He finally said, 'I don't want to be a studio player any more'. The album he had been working on, he played that in his car out in our parking lot for Atlantic boss, Jerry Wexler and some people and they didn't like it. Eddie had worked on it so long and thought that it was going to be the next

'Sgt Pepper'. He just went nuts. He went off the deep end and actually changed personalities and became kind of a different person. It was very sad. It got like I could hardly be around him because he acted like a crazy guy. He eventually died in his mother's house, in the bath tub. I went to his funeral and didn't even recognise him in his casket".

Known as the best white soul singer that there has ever been, Hinton recorded this, his first solo album, in 1978. Listening to it, the album has that distinct sound of the classic Muscle Shoals group. You can almost hear the sixties vibes and imagine the great soul singers sitting, watching and grooving as Hinton does his thing. In fact, on this album, the Muscle Shoals Rhythm section backs Hinton.

As Hinton was the lead guitar in the group, the sound is far different from what you might expect from a visiting musician. Hinton knew these guys well, well enough to anticipate what each was about to do and more to the point, they all knew Hinton. The level of integration and musical flow that derives from this set is sublime. How else could the entire ensemble find a rock vibe without losing that essential soul groove that Hinton was attempting to retain?

Hinton's voice was a magnificent beast of a thing. There was a certain boundless exuberance in Hinton's delivery that reminds you of Wilson Pickett. Where Hinton shouts the blues, he never leaves the essential rhythmic, musical nature of the lyric.

"Very Extremely Dangerous was cut after he had started to get a little crazy," said Hall. "I played on that one. It could have been a big hit. He had a huge, cult following. All of the bands played it in their buses, for example. The label, Capricorn, went out of business so the album never went anywhere. That's one of the tragedies in his life. A lot of things almost happened for Eddie but didn't."

That this blue-eyed soul album appeared just as disco and funk were arriving on the scene meant that this masterwork of soul never received its due. You, however, can revisit it in all its glory. A true classic. **PR**



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The USHER Dancer Diamond Series features the world's first amorphous DLC (diamond-like carbon) diaphragm tweeter. This is a tweeter which is second to none in the current market. To find out more, visit [www.usheraudio.com](http://www.usheraudio.com) or your nearest USHER dealer...



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# PRIMALUNA.

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