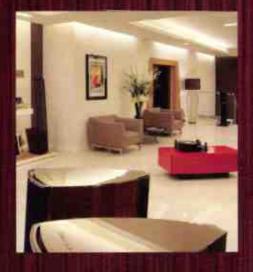




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welcome

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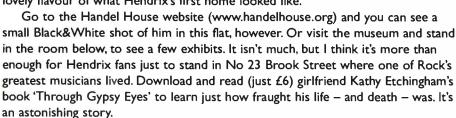
People turn away from gratuitous complexity when it overwhelms them - and why not. Technology should make our lives easier and facilitate our everyday existence, not hinder it.

So I hope the increasing complexity of modern DACs like the amazing Teac UD-501 we review this month (see p10) isn't a step too far for buyers. If it is then they would be missing a good

thing. But to date I've had a number of conversations with reviewers faced with this DAC and

all have been unsure about how best to use it: Teac need to write clearer instructions. It took our advanced Rohde & Schwarz UPV audio analyser to show us just what the UD-501 could do when set up properly - then it flew. This is a great DAC, if a technically challenging one.

Almost more intimidating as a subject was coverage of the small Hendrix exhibit in Central London, a mile or two from our offices. I know from my long association with Abbey Road that the music business is not to be taken lightly; it harbours big egos. We had to be particularly careful to get our facts right in this apparently innocuous appreciation of Hendrix history (see p93). Sadly, the picture we most hoped to reproduce - an artist's impression of his flat as it may appear when restored - was withdrawn from publication by Handel House (and removed from their website) on the grounds that it may affect their application for funding. What a pity. It was an evocative view, very 1960s in decor and it gave a lovely flavour of what Hendrix's first home looked like.



This issue has a broad selection of unusual features. The world of high fidelity will never be boring. I hope you enjoy it!

Noel Keywood, editor

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

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

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

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

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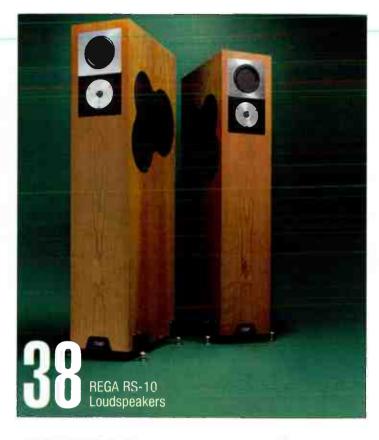
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email:news@hi-fiworld.co.uk

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THREE NAITS

In celebration of Naim's 40th
anniversary, three new and improved integrated
amplifiers are superseding the existing NAIT 5i, NAIT XS
and SUPERNAIT: all three feature larger mains transformers and
improved power supplies.

NAIT 5si: The power output has increased from 50W to 60W and components have
been upgraded in critical areas such as the power amp stage where small signal capacitors have been
changed to high quality film types. The PCB layout and wiring loom have been improved too.

NAIT XS 2: The power output has increased from 60W to 70W. The headphone output on the front panel is now

on a 6.35mm socket and is driven from a new Class-A headphone amplifier. Ceramic heat sink isolators are used and the power amp stage has been improved.

SUPERNAIT 2: Apart from a larger transformer and a similar headphone stage improvement, the digital inputs have been removed. As the SuperUniti already fulfills the role of integrated amplifier with digital inputs, it was felt that it would be more beneficial to performance to concentrate on an analogue only integrated amplifier. Removing the digital section also allows the power supplies to be further optimised for the analogue stages. All inputs are now hand wired and similar, on board improvements mirror those seen above.

Prices are: NAIT 5si - £925; NAIT XS 2 - £1595 and SUPERNAIT 2 - £2,750. Click on <u>www.naimaudio.com</u> or call 01722 426 600 for more information.

CODEX

The new CodeX music streamer features much of the technology implemented in Chord Electronics' flagship streamer, the DSX1000, including the same front end and control processor, DSD 128 playback over USB as well as PCM decoding at up to 384kHz and the proprietary remote motor-controlled analogue volume potentiometer. It can be controlled in one of three ways: using the fascia-mounted jog-wheel control combined with the full-colour TFT screen; via numerous third-party uPnP control apps plus Chord Electronics' own iPad/iPod Touch/iPhone app, or using the supplied remote control. The device's network connection uses a fixed-wired approach, due to the bandwidth limitations of Wi-Fi for 24bit/192kHz support. The CodeX's Ethernet connection offers DSD 64 and up to 192kHz PCM, and its USB input offers DSD 128 and PCM at up to 384kHz.

The CodeX's DAC section is based upon the FPGA-based QuteHD DAC. Improvements to the Pulse Array DAC have been further complemented by an enhanced power supply design and layout.

The CodeX is compatible with numerous file types including: MP3;WMA;WAV; AAC; ALAC and FLAC files, with 24bit/384kHz support where available. DSD support is available using the DSD over PCM standard.

The CodeX is available in silver and black as standard, with special finishes, including hand-polished nickel and colour anodizing, available to order.

Two dedicated equipment support systems for the Choral range are also available. The Choral Modular system is available in both shelf and floorstanding configurations, with the latter available up to five shelves tall. Prices start at £1,600 for the shelf variant. Price of the CodeX is £4.495.

Call 01622 721444 or click on www.chordelectronics.co.uk for more information.



EAR EAR!

Cardas' new EM5813 Model I Ear Speakers features copper plated brass bodies and custom designed drivers, machined from proprietary solid bar stock metals in California. All drivers are hand matched on each pair of Ear Speakers. The Ear Speaker cable is Clear Light Headphone Cable, which is a miniature version of the Clear cable and is also manufactured in California using proprietary Cardas copper. Price is £359.

Call 020 8948 4153 or click on www.audiofreaks.co.uk for more information.

NUFORCE TRIO

The AVP-18 is an all-digital HT preamp/processor for AV users seeking 24bit/192kHz audio and HD video. It comes complete with four HDMI inputs, two optical and two coaxial S/PDIF inputs.

For the headphone enthusiast, the unit also includes a headphone output that provides both standard 2-channel and Dolby

surround listening.

The HDMl output and all four HDMl inputs are fully HDMl 1.4 compliant with

3=D, CEC and SRC support. The AVP-18 also accepts

an ARC input from your TV. Internals include a Cirrus CS3318 volume

control chlp, ELNA coupling and filtering capacitors and Burr Brown OP2134 opamps. The NuForce AVP-18, is available for €1,095 (around £950).

The Mobile Music Pump is a portable headphone amplifier featuring a toggle switch providing three or five times gain and two headphone sockets. A micro USB is supplied for charging and battery life is up to eight hours long with a charge time of seventy minutes. The NuForce Mobile Music Pump is priced at €59 (around £52).

Finally, the DAC-80 is basically a DAC-100 without the headphone amp. The DAC-80 accepts up to four digital input sources operating in asynchronous mode, features a 32bit digital volume control, a RCA output stage and a remote. A 24bit/192kHz DAC stage is supported with no up-sampling. Price is €795 (about £695)

Click on www.nuforce.com or send a message to info@robytone.com for more information.



This new floorstander tops the Venere range for Sonus Faber. A 3.5-way, front-vented design, all drive units are proprietary Sonus Faber designs including a 29mm tweeter with precoated silk dome and no ferrofluid, 150mm midrange driver and two 180mm bass drivers. Both the bass and midrange cones are made from Curv material. All drivers sport a 'free compression' basket while the midrange driver uses a coaxial anti-compressor. Featuring a double-curved cabinet and a base made from high-rigidity tempered glass with adjustable aluminium feet, the speaker is available in three cabinet finishes: lacquered black, lacquered white and walnut wood veneer.

Prices for the Venere 3.0 in lacquered black or white: £2,898 per pair. The Venere 3.0 in walnut wood veneer fetches £3,198 per pair.

Click on www.absolutesounds.com or call 020 89713909 for more information.



NATIONAL AUDIO SHOW

Hi-Fi World is prime media sponsor for the forthcoming National Audio Show at Whittlebury, UK, September 21st/22nd. We will be there and look forward to seeing you.

Whittlebury Hall is a large spa hotel set in acres of parkland, centrally located in the UK. Visitors can comfortably and conveniently stay in the show hotel.

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For more info go to www.chestergroup.org ... and hotel guests to www.whittleburyhall.co.uk.
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Parking is not a problem.

CHORD ENTRY-LEVELS

The Chord Company has launched newly upgraded versions of its entry-level interconnect cables. Improvements include advanced shielding and a new plug, which takes design cues from the flagship Sarum range. The VEE 3 (Vibration Eliminating Enclosure) plug uses a new textured-finish, easy-grip ABS casing which also benefits from a new internal design, featuring direct gold or silver-plated signal contacts. The signal insulation block is PTFE. VEE 3's signal-return surround contact provides high-pressure contact with RCA sockets and the cable clamp which, when combined with each cable's design, minimises the changes to cable impedance. Looking at each cable in more detail...

Crimson VEE 3: Chord's most affordable interconnect, features heavy-gauge and

multi-strand oxygen-free-copper conductors. Its twisted-pair configuration is insulated with a low-density polyethylene and cotton-thread cable spacers run alongside conductors providing mechanical damping. Both the conductors and spacers are wrapped with a layer conductors are wrapped with a layer conductors.

Cobra VEE 3: the new revised-strand-count, multi-strand silver-plated oxygen-free-copper conductors run in a twisted-pair configuration. Cotton-thread cable spacers run alongside the conductors. The conductors and spacers are also wrapped with a layer of natural fibre to further reduce mechanical noise.

Chameleon VEE 3: the cable uses twenty-six silver-plated multi-strand oxygen-free-copper conductors and has a single signal and twin return semi-floating configuration.

Price are: Crimson VEE 3 - 0.5m pair £49, Im £55, 3m £89, per extra metre £12; Cobra VEE 3 - 0.5m pair £84, Im £95, per extra metre £22m and Chameleon VEE3 - 0.5m pair £120, Im £135 and per extra metre £34.

Call 01980 625700 or click on www.chord.co.uk for more information.



REVEL PERFORMA3

The new range of nine, Revel Performa3 loudspeakers deploy proprietary drivers throughout. The 25mm aluminium-dome tweeters deliver a response beyond 20kHz using an exclusive Acoustic Lens Waveguide shaped for horizontal and vertical dispersion both on and off axis.

The midrange and low-frequency drivers employ aluminium cones that have integral ribs to add strength and rigidity. The drivers incorporate additional refinements including castaluminium frames and vented, high-power motor structures. Other materials include air-core inductors and polypropylene capacitors in the crossover network and heavy-duty gold-plated binding posts.

Depending on the model, a tweeter level control allows the speakers' high-frequency balance to be fine-tuned and a boundary control enables the speakers to be tailored to individual room acoustics and placement positions. The larger models feature individual subenclosures for the midrange drivers.

Prices include: F208 3-way floorstanding tower, £4,750; F206 3-way floorstanding tower £3,300; M106 2-way bookshelf monitor £1,900; M105 2-way bookshelf monitor £1,400; C208 3-way centre channel £1,900; C205 2-way centre channel £950 each; S206 2-way surround speaker £850; B112 powered subwoofer £2,800 each; B110 powered subwoofer £1,900 each. Call 01423 358846 or click on www. kgrmg-gy,co,yk for more information.

STUDIO SIX

A Class-A single-ended triode (SET) circuit design with zero-feedback, this new headphone amplifier utilises multi-stage, high-voltage filtering and a proprietary output stage that accommodates a wide range of headphone impedance and four headphone output sockets, ideal for shared listening sessions.

The power supply is a 'virtual dual monoblock' design featuring valve rectification, filtering for the left and right input stages including two glow discharge regulator valves and additional separate multi-stage filtering for each channel output

0 0 0 0

valve.

Price is \$4,900 although you can upgrade to Teflon/Foil capacitors for a further \$200. Click on www.aloaudio.com or call 001 971 279 4357 for more information.

TOWNSHEND CELLS

Offered as part of a range of isolation accessories, the Townshend Seismic Load Cell consists of an alloy steel compression spring covered by a flexible synthetic rubber jacket with two end plates. Screw threads at each end enable height adjustment and provide attachment points. A movement-sensitive, airresistance damper rapidly dissipates low frequency oscillation caused by handling the suspended equipment.

As Seismic Load Cells are very 'soft' they allow free movement in all three dimensions; vertical, left to right, back and forth in order to tackle vibration from 2.5Hz upwards and from every direction.

The Cell has been used within a new series of Speaker Isolation Platforms (from £999) featuring four Cells situated between two rigid steel plates and come in three sizes.

The Seismic Isolation Pod can be placed under any piece of equipment (from £100 each) while the Seismic Isolation Platform features four Cells underneath a single steel plate. Available in three sizes it retails from £500.

A multi-level stand is made from smoked glass, rigid steel and eight Cells with prices starting from £1,500.

Finally, Seismic Isolation Corners fit under the corners of your current hi-fi furniture to enhance their isolation properties. Prices start from £800 for a set of four.

Click on www.townshend.com or call 0208 979 2155 for more information.



POWERBAR

The new PowerBar from Russ Andrews Accessories is housed in a black, extruded aluminium case and comes with four, six or eight sockets that provide a tight grip on the mains plugs, indicated by a positive 'click' when they are inserted. Each socket is individually wired back to the IEC connection on the end of the PowerBar, eliminating the busbars commonly used in extensions of this size and price. Thanks to the 10A IEC input, the user has a choice of mains cables to connect the PowerBar to the wall socket.

Slimline and wall mountable via the integrated brackets, the PowerBar range starts at £89 for the four-socket option, rising to £149 for the eight-socket variant with built in SuperClamp.

Click on www.russandrews.com or call 01539 797300 for more information.

NEW ONKYO DOCK

A compact CD receiver with charging connections for new and legacy iPhone/iPod models, as well as audio playback from compatible smartphones/tablets via USB and a DAB/DAB+tuner with 40 memory presets, the CS-255DAB is supplied with two-way speakers. The cabinets feature a 10cm cone driver and 2cm balanced-dome tweeter. Price is £250. Call 08712 001996 or click on www.onkyo.co.uk for more information.



GATHERING MOMENTUM

In an attempt to recapture some of the burgeoning sales of 'hipster headphones' from Dr. Dre and men of his ilk, the rather more established Sennheiser brings us the Momentum On-ear headphones. This style-conscious 160-gram addition is available in a choice of colours - blue, pink, green and cream. A supraaural design with a claimed 16Hz-22kHz frequency response, the Momentum On-ear employs a robust stainless-steel headband and has pads made of Alcantara – a material chosen by Sennheiser for its combination of comfort and durability. The cable attaches to a latching socket on the left earcup, for ease of replacement. Two cables are supplied, one of which has an integrated microphone and 'smart remote' for Apple products. A substantial carrying case is also included in the £169.99 retail price. The Momentum is currently available from John Lewis or via Sennheiser's online store; for details, point your browser to www.sennheiser.com

GENEVA XS DAB+

This portable, Bluetooth-enabled sound system, within a waterproof clamshell case, consists of a recharagable system of speakers, amplifiers, FM/DAB/DAB+ radio and alarm clock.

The Geneva Model XS DAB+ arrives in red, white or black faux leather that flips open to reveal a lacquered cabinet. Measuring just 157 × 102 × 115mm, it features an external 3.5mm Aux jack and a clear LED

display of volume/mode/frequency and Geneva's touch-sensitive

'Touchlight' controls.

Price is £219. Click on

uk.genevalab.ch for UK stockists.



INSPIRE BLACK MAGIC CORRECTION

Inspire have asked us to point out that with regard to our Inspire Black Magic turntable review, August 2013 issue.

The platter on the Black Magic is $10\ \text{mm}$ acrylic and on the Si is $20\ \text{mm}$ acrylic – neither are glass.

The sub platter is machined from a 2 inch solid billet of acetyl – it is not a Rega supplied part. +44 (0) | 246 472222, www.inspirehifi.co.uk





MONSTER DNA

The black and white Monster DNA White Tuxedo headphones have been created in conjunction with Viacom. Priced at £170, the units feature the company's Pure Monster Sound algorithms supplied by engineer, Noel Lee. Also included is Monster Music Link, which features dual-port inputs that allows multiple users to connect their headphones at once and share their audio experience plus noise-isolating cushions and Control Talk which allows you manage phone calls while you listen to the headphones.

Contact: www.monsterproducts.com, www.facebook.com/MonsterProducts or twitter.com/monsterproducts

DSD Delight

Teac's new UD-501 digital-to-analogue convertor has lots of tricks up its sleeve, including DSD replay. It delights Noel Keywood.

his fascinating Digital-to-Analogue Convertor (DAC) pushes the limits of what is possible in playing high resolution digital music files. However, that isn't necessarily good news! It's one of the most complicated DACs currently available, and may not appeal to those intimidated by FIR filters, DF settings, Upsampling and other obscure digital processing schemes. But it can do things most other DACs can't, like play DSD files. Teac's UD-501 is quite a beast, a DAC like few others.

To position this £699 DAC in its marketplace, one that's getting increasingly crowded, let me tell you straight away that it's been designed to work both with a conventional hi-fi system, fed from a CD player or transport, digital portable player or whatever, or from a computer (or tablet) through a USB link.

And here's where it gets interesting, because the UD-501

plays DSD files from a computer at standard rate (2.8MHz) and double rate (5.6MHz), with no trouble at all. And yes, they sounded wonderful!

DSD? It's an alternative to digital as we know it (Pulse Code Modulation, abbreviated to PCM or LPCM). Sony first used DSD (Direct Stream Digital) to archive their music, because it was more faithful to the original than PCM, meaning it sounded better. Then they used it in the high resolution layer of SACD, where it gave a more organic and analogue-like sound than that of PCM, typically from CD.

Sony lost interest in SACD, the disc, but recently has had a change of heart. It is now putting SACD replay into its Blu-ray players and is helping companies like Blue Coast Records (California) promote the wonder of DSD digital by making music available in this format as downloadable files.

Currently, there are few ways to play such files and because this

technology is in its infancy as an independent file format, getting DSD files to play isn't easy or guaranteed I've found. So I was surprised when the UD-501 played normal and double rate DSD files from my MacBook Pro with no trouble at all — reminding me why I like \$ACD and showing just how wonderful DSD sounds. This is a strong distinguishing feature of Teac's UD-501; it offers fantastic sound quality from DSD, in addition to all else.

OK, DSD is a rare format and will remain a fringe interest, you might think I'm not so sure. At present this is how things stand, but in future there's no reason why it will not merge into the digital landscape as yet another file that can be 'opened', much like your tablet or phone can handle MP3, AAC and uncompressed PCM (WAV) at present. DSD can be added to the list.

Teac's UD-501 illustrates the



issues this raises, the biggest being the need for a media player: iTunes will not play DSD files! Teac supply a free, downloadable player for the UD-501, available on their website (see http://www.teac.com/product/ud-501/getting_started), as well as an ASIO driver for Windows (oh, what fun). It all gets a little geeky and threateningly complicated; being a Mac man, installing ASIO drivers into Window 7 (on Bootcamp) makes me want to take up knitting. But with Mac at least, playing DSD via USB was a doddle.

Is DSD worth the bother? I think so. There's a lot of argument about DSD, the distortion it theoretically generates and the noise shaping that limits dynamic range (at high frequencies). But our measurements show DSD gives 24bit resolution across the audio band (if less outside it). Both distortion and noise are as low (0.02% at -60dB) as the best 24bit PCM can manage. I suspect, however, it sounds better because it uses simpler conversion technology in the DAC.

DSD is currently in its early days as an independent file format and has potential, which is why Teac's UD-501 is so interesting. It is something of a trail blazer as DACs go and it certainly caught my interest.

But enough of DSD for a moment, let me get back to basics and how this product works and slots into a standard hi-fi system.

SIZE

The UD-501 is compact, just 290mm wide (12in), 240mm deep and 81mm high and it weighs 4kgs so can be put into place with ease. Teac – bless 'em – make a point of not using cheap switch-mode power supplies (SMPS) that generate interference, noise and invariably sound bad. Instead, they point out the UD-501 uses a normal 'linear' power supply based around two toroidal mains transformers, one for each independent stereo channel, this being a dual-mono convertor.

Power enters through a normal IEC-plug terminated mains cable; there is no external wall-wart, so specialised mains cables can be used, Teac point out. Throw a trad. lever switch and up lights a large, orange electro-illuminescent display that is easily read at a distance. Amongst many things, it shows sampling frequency so you can be sure that the 24/96 file you think you are playing is truly that, and not a 48k file down-sampled on the fly. At left

a turned-alloy knob selects input or, when a Menu button alongside is pressed, adjusts filter settings and what have you.

The Teac also has a 1/4in headphone output at left and a volume control for it at right. This does not adjust volume on the analogue output lines. Surprisingly there is no remote control, so you cannot flick through filter settings from your arm chair, and there is no HDMI input for streaming DSD or PCM from a Blu-ray player. Nor is there an AES/EBU S/PDIF input.

The rear panel has both balanced (XLR socket with switchable polarity) and unbalanced analogue outputs. The XLRs deliver 4V output — double that of CD — and are the best option for driving long lines across the lounge, but you need an amplifier with XLR inputs to take advantage of this.

There are two electrical S/PDIF

claim 24/96 only for optical in their specs. but our review sample saw 192 via optical with no problem; I suspect variability in the TOSLINK receivers may explain Teac's conservative claim here, as Toshiba don't guarantee TOSLINK to high data rates.

And finally there is a USB B style (printer lead) input for connection to a computer, or player with a USB output. This includes an iPad with a Lightning USB adaptor, but bear in mind tablets and phones at present do not support high resolution audio files.

As usual, I used a MacBook Pro as this does not need special drivers for DSD over USB (phew!), stuffing DSD into USB data frames in a recently agreed DoP transmission standard that Teac have been quick to implement. I was surprised that Apple's Lion OS (10.7.3) in conjunction with Teac's little software player handled this task without a



No cheap switch-mode power supply here! Instead, Teac fit two big toroidal mains transformers, one per channel. This helps provide a clean sound with solid bass.

digital inputs and two TOSLINK optical digital inputs. Teac claim up to 32bit resolution at 384kHz sample rate is supported by the internal BurrBrown PCM1795 convertors, but I've yet to see commercial music files with such resolution (and they'd be huge). Our measurements showed the Teac's TOSLINK receivers work at 192kHz, unlike many used on current products. This is an issue where players have only an optical digital output, usually in a headphone socket, able to transmit 192kHz data. like the Astell&Kern AK120 I used with the UD-501. The two worked perfectly together.

I should note however that Teac

murmur, quite frankly – and very relieved too.

FACILITIES

The challenging issue of playing DSD downloads from a computer through the UD-501 draws attention away from its many other features. I'd like to say that they're less complicated, but they are not! Digital filter options are difficult to understand; often they have little affect, such as those used by Cambridge Audio and others who use Wolfson DACs. With the UD-501 the filters had quite a large measured effect — and this could be heard.

When receiving normal digital

(PCM) three Digital Filters (DF) are available, the display and handbook defining them as Off (default), Sharp and Slow. Teac say little about these options, but our Rohde&Schwarz UPV digital analyser showed they have quite a large affect under some circumstances, but little under others! In fact, I thought they were thoroughly confusing — but that's digital for you.

With the filters set to Off the UD-501 rolls down treble early with CD and - interestingly - one person keen on DACs borrowed the UD-501 for a quick listen and promptly returned it, unimpressed, because of this. Playing CD, the UD-501 sounds obviously warm, even dull, with DF set to Off I found. The Sharp setting is, in everyday parlance, Normal, giving flat response to 21kHz and the sort of tonal balance expected from CD, whilst the Slow setting offers a compromise between the two. Changing filters was an awkward routine of Menu button pressing to step through menu options to DF,

stepped down volume level. I settled on FIR3 or 4 in the end; FIR I was harsh at times and FIR 2 none too subtle, but listening to DSD was a whole new ball game after PCM – it was a bit of a shock, even though I am used to DSD from SACD.

UpSampling converts all data up to 192kHz sample rate Teac say, to reduce jitter. However, our analyser showed this also lowered noise and improved dynamic range, so I ran the UD-501 with UpSampling On, to maximise dynamic range.

In addition to these settings, the display can be dimmed or turned off, the outputs selected and XLR polarity changed, USB power set. Auto power save can be chosen using a rear slide switch.

SOUND QUALITY

I used the UD-501 with an Astell&Kern AK120 player delivering everything from CD rips (i.e. 16/44.1) up to 24/192 digital recordings, as well as 24/192 transcriptions of old analogue recordings, fed through its more of a performance rather than a thin digital copy.

Driving the amplifier(s) direct from the AK120's headphone output, bypassing the Teac altogether, showed the Teac was a nose ahead in terms of dynamics and bass grunt, but there was little in it with Sharp selected. With Slow the Teac was softer than the AK120, although again it wasn't night and day. But that means the UD-501 handles CD very well, because the AK120 shades most else even playing CD.

Moving on from CD to high resolution digital had the Teac sounding smooth and generously full bodied in its handling of vocals. I found myself winding volume up with the Minnesota Orchestra playing Rimsky Korsakoff's Dance of the Tumblers (24/96). The Teac's smoothness and lack of digital edginess encouraged this, and its excellent mid-band dynamics gave brass a full bodied rasp, whilst single kettle drum strikes moved the air in my room nicely.

Balanced XLR analogue outputs offer best quality, especially with long cables.



then knob twiddling to set the filter.

As if all this wasn't confusing enough, these comments only apply to 44.1kHz and 48kHz sample rates; at higher sample rates the audio band up to 20kHz remains unaffected.

Worse, these filters also affect noise and dynamic range, making intelligent selection even more difficult. In a nutshell, with DF set to to Slow and UpSampling set to On, the UD-501 performed at its best (see Measured Performance). I used the UD-501 like this by default. I listened to the alternatives but was not convinced. With these default settings it is tad warm, but easy and relaxed.

Then there are the low-pass DSD filters to consider! These are labelled FIR (Finite Impulse Response) 1, 2, 3, 4, presumably for their filter coefficients. I noticed straight away that FIR2 was much louder than FIR1, whilst FIR 3 and 4

optical input. As explained earlier, DSD came from a MacBook Pro running Lion OS, running on its internal battery.

Kicking off with my Eagle rips from Long Journey out of Eden, representing standard Rock from 'standard CD' (meaning not so good!) the less than couth Eagles tracks were smoothed out nicely. Often jangly, a bit hard and a tad coarse too, Busy Being Fabulous was subtly but usefully smoothed and held in top-end check by the Slow filter. It didn't sink into somnambulence, as it did with Off selected I felt, but it was darker and less lacerative than Sharp. 'Somebody' drove along with its usual power and pace, Hammond organ swirling nicely in the background. Both tracks showed the Teac delivers lithe and muscular bass lines; it put some oomph into the bottom end of these Eagles tracks, making them sound better balanced tonally and

As high resolution digital improves – and I'm talking standard PCM here – it gets easier to listen to, with less of the jittery harshness of CD, plus more internal detail. The UD-501 realised these qualities nicely I felt, making orchestra sound big, bold and dynamic – even lush. My Martin Logan Electromotions purred along with all this, driven by a WAD 300B valve amplifier (and alternatively a Marantz SR-8002 receiver).

Another strength of a good DAC and jitter free source is excellent imaging and I enjoyed the way I could hear into various orchestral sections; brass was well delineated from strings, horns emerged strongly but freely and all were rock stable in position.

There's little wrong with quality digital it seems to me. Even CD sounds better after its been re-clocked in the ripping process, making Long Journey Out Of Eden

sound better from my portable AK 120 than from CD, and better still from the AK 120 through the UD-501 with UpSampling and the Slow filter in action. But what about DSD?

Running DSD from a download through a good external convertor is a relatively new experience for me and it was fascinating through the UD-501.1 have Divertimenti, from the Trondheim Soloists on Blu-ray and SACD and use it so often in reviewing I know it very well. From Blu-ray (24/192) it is a rather hard, bright recording, albeit one filled with detail from closely recorded strings. The SACD that comes with the Bluray offers a different perspective, sounding less hard, more tonally balanced but still a tad unconvincing; a mechanical quality still pervades the music. As SACD goes this one has never impressed me, but I just put it down to recording perspectives (i.e. where the mic was placed etc),

Playing the same recording as a DSD download gripped me in a way digital usually does not. Now the orchestra was enormous in scale and seemingly very close. Strings sounded quite harsh when bowed heavily. Images took on a big, bold demeanour in front of me, sounding rounded in physical stature, strongly dynamic in nature swinging soft to very loud in an instant. At times it was almost too much: a sudden rasp from the strings made me jump up and dive for a different FIR filter, but the FIRs ameliorated the effect rather than eliminating it.

That's probably right because I suspect what I was hearing was natural and how it really was for the microphone! In the end I had a marginal preference for FIR 4 and 2.8MHz files, simply because 5.6MHz (double rate) files were a little too challenging; I felt a need to move back from the players.

Technically, I was listening to DXD (don't ask!) streamed as a DSD file and the Mac declared 352kHz sample rate, no less - I half expected it to catch fire! The Teac also identified the file as 5.6MHz DSD, probably from metadata, but detected 352kHz PCM, it declared when the music was paused or stopped. With real DSD (2.8) in the form of Alex De Grassi playing Beatles on an acoustic guitar the sparkling cleanliness, glitter of treble and rock like stability of imaging were gorgeous. All this suggested there's plenty to come from digital recordings in future and I was

impressed that the UD-501 had no difficulty coping with it today.

CONCLUSION

Teac's UD-501 is a 'USB D/A Convertor' as they call it - and a great product too! In spite of all its

setting options, most of which are barely explained anywhere by Teac - website, manual or literature - and would baffle most audio engineers because terminology such as Sharp is difficult to interpret, the convertor works well in practice, giving great sound quality. It's unique strength is DSD handling over USB from a Windows or Mac computer - this is cutting edge stuff. Teac even provide a free DSD player to enable it to happen. Wow!

The UD-501 is a digital dream



if digital turns you on, because it is so fluent and adjustable. Or perhaps even if digital turns you off, because it smoothes over the imperfections of bad digital with its various filtering arrangements.

I suspect Teac know that digital can be nasty and needs taming, and this the UD-501 can and does do. In all, for its price, this is a lovely DAC to listen to, big, fulsome, easy and clear, in fact very non-digital. I enjoyed it with ordinary digital and was wowed by DSD, so it's fully recommended.

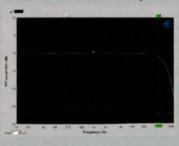
The Teac's DSD display shows DoP transmission protocol, Audio Filter FIR4 selected and a double rate file (5.6MHz) being played.

MEASURED PERFORMANCE

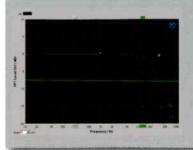
Frequency response of the UD-501 measured flat from 4Hz to 47kHz (-1dB) with a 192kHz sample rate signal, rolling off smoothly up to 90kHz our analysis shows

With 96kHz sample rate this contracted to 25kHz and with CD (44.1kHz sample rate) treble rolled down early with PCM DF set to Off, measuring -1dB down at just 13kHz. With CD and 48kHz sample rate digital the UD-501 will sound warm, but with 96kHz and 192kHz sample rate material it will sound balanced, so subjectively this DAC will change character between normal and high resolution material if PCM DF is set to off. Set to Sharp, response is ruler

FREQUENCY RESPONSE, 96k



FREQUENCY RESPONSE, CD



flat, and Slow offers a compromise that in practice will probably sound most 'normal'.

Distortion was very low at 0dB, measuring just 0.0001% with 24bit. At -60dB the result was a low 0.04% at 44.1kHz sample rate, but rose at 96 and 192kHz sample rate because of extra noise. Switching in Up-sampling and Slow DF reduced this noise and distortion

The rise in noise affected EIAJ Dynamic Range values, which varied from 110dB at 48kHz sample rate to a low 102dB with 192kHz sample rate, with Up-sampling and DF set to Off (as standard). With up-sampling on and DF at Slow the DAC managed a massive 119dB EIAJ Dynamic Range value, via XLR out. This is the best we have measured to date.

Output from the unbalanced phono sockets measured 2V, and from XLR 4V. Apart from this there was no difference between them.

The Teac was flexible and well engineered, giving excellent measured results. NK

Frequency response (-1dB)

Dynamic range

Output

	CD 4Hz - 47kHz
Distortion	CD (%)
0dB	0.0001
-60dB	0.04
Separation (1kHz)	135dB
Noise (IFC A)	-107dB

TEAC UD-501 DAC £699.00





OUTSTANDING - amongst the best

VALUE - keenly priced

VERDICT

A smooth sound with strong bass, plenty of adjustment to tailor the sonic picture, and DSD replay make this a great DAC for the price.

- sound quality
- user adjustment
- DSD replay

AGAINST

- no remote
- no HDMI
- awkward to adjust

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108dB

2/4V



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With immediate effect our MB30, ST60, MB90, MB150 will be available with this very affordable upgrade. The KT150 is also an upgrade for any of our existing KT120/KT88 designs*.

As a company run by lli Fi enthusiasts we regularly evaluate our amplifiers to ensure they are the best of their kind. Whilst we do not make changes for change sake, if we can make a significant improvement to the sound quality and reliability we will do so. The new MK III version of the Stereo 60 now comes with several improvements in sound and performance, and build quality. This is our biggest integrated amplifier. It is ideal for someone wanting a very dynamic fast sound. It has a big power supply, big output transformers, and uses the excellent new KT120/KT150, and comes with many features. An excellent alternative to a transistor amplifier, the ST60IIIm will deliver the finest detail of modern recordings in a more vivid way and present jazz and rock music without harshness.

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

Now with "Easy Bias" Meter We think of our amplifiers as musical instruments. Like a piano needs occasional tuning, big amplifiers need the bias checking. This way you can be sure of 100% performance all of the time. Simple with our "easy bias" meter. If the pointer is in the "black" it's correct! Also useful to check if your valves are worn or faulty. Long term performance is important to us and this useful aid will take the guesswork out of maintaining your amplifier. Attractive Valve cover Most valve amplifier covers look as though they were done as a cost saving after thought, and don't exactly enhance the look of the amplifier. They are rarely seen in advertisements. We think that something you will use every day should look attractive. That's why we use 18 pieces of laser cut Perspex assembled with a further 20 precision components. See picture on our website.

Our new series of "Low Distortion Tertiary" output transformers are the best we have ever made, enabling us to reduce global feedback by about 40%. All our amplifiers are designed and finished in Leicester. Warranty and service is done by the engineers that designed them so you can be sure of long term performance. We incorporate a "standby" switch in order to protect those precious cathodes from damage until they have warmed up. 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. Remote controlled volume included for fine tuning your listening. High quality components are used throughout including an "ALPS" volume control, silver plated PTFE audio cable SCR capacitors audiophile resistors. A choke regulated power supply adds a richness to the sound quality that silicon devices alone cannot do. Recording loop included. In short we have created an amplifier of excellent flexibility and quality which retains the qualities traditional of traditional design and performance. Bespoke upgrades available including silver/copper capacitors, valves and design. (*Excluding EL34)

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Sound in Motion

Martin Logan made its name with a range of hybrid electrostatic loudspeakers — but can it repeat that success with a more traditional design? Jon Myles finds out.

t's a Martin Logan — but not as we usually know them.
The American company has built its reputation on exceptionally fine-sounding hybrid electrostatic loudspeakers. But in a move to broaden the customer base there's now a new range of more traditional transducers on offer.

They vary in size and price from the range-topping Motion 40 floorstanders to the Motion 15 on test here.

Bookshelf, centre and surround-sound

alternatives are also available for those looking towards an AV package.

The common thread between all the models is the use of a Folded Motion tweeter – a Heil-type folded ribbon design which should, in theory, give a closer sonic match to Martin Logan's more expensive hybrid electrostatic models

This is mated to a 5.25-inch aluminium-coned woofer in a sturdily-huilt rear ported cabinet finished in a classy-looking real cherrywood veneer

(gloss black and white are also available). The top slopes slightly towards the back to help break up standing waves within the cabinet

A word of praise for the speaker posts – substantial thumbscrew designs which enable a super-tight fit when using speaker cables with spade lugs, but will also accommodate banana connectors.

SOUND QUALITY

There's no doubt these Martin Logans has been engineered for a distinctive



Audio products designed to combat phase distortion

"In my system, the TelluriumQ's simply turned out to be in a class of their own" Kai Ekholm, Inner-magazines.com 2012

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

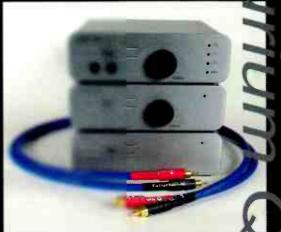
Steve Dickenson, Hi Fi Plus 2010

"The Iridium mines details other amplifiers only dream about"

Noel Keywood, Editor, HiFi World 2012

"A certain magic when it comes to absolute sound quality"

Jimmy Hughes, Hi Fi Choice 2012



"I've talked a lot about Tellurium Q of late. I've also sung its praises constantly. To be honest, I wish I had something to grump about, it would make a change but when a company gets a series of products "this right" it is difficult to say anything negative."

Paul Rigby, HiFi World 2012

Cable group test winner 2012

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"something that I've never heard from any cable at this price point."

HiFi World 2012





Hi Fi World
Cable of the Year 2010

Hi Fi Choice

Jan 2011





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sound – and initial impressions are all positive.

For what is in essence a minimonitor it has a beguiling top end. The Folded Motion tweeter sounds silky smooth and adds a great sense of air to vocals.

Kairos 4Tet's 'Home To You' was immensely well-projected. There's a tremendous sense of separation between Marc O'Reilly's vocals and the subtle violin backing which imbues the track with all the atmosphere it deserves. In fact, the Motion 15s absolutely shine with all vocals — with only the occasional dip into sibilance on the toughest of tracks.

Barb Jungr's 'The Men I Love' highlighted its abilities, the Stockport singer's jazz crooning soaring free from the speakers and hanging in the air in front of me. Subtle intonations of phrasing and changes in pace come to the fore to provide a sumptuous sound.

Try something with a little more weight and depth and the Martin Logan's don't disgrace themselves. There's little bass output below 60Hz but even then the balance is well-judged so the lack of serious deep bass doesn't seem to distract. New Order's 'Age Of Consent' romped along nicely with a good sense of timing. The inherent speed and detail of the folded ribbon tweeter also helps bring out little musical flourishes that can remain hidden on other loudspeakers.

Taking time with set-up and positioning is also crucial here. A good pair of stands is essential and moving the speakers closer to the wall helped augment the bass. Firing straight down the room also gave the best integration between the drivers. Obviously you are never going to get prodigious bass from this size of speaker — and pressed hard it can start to sound a little bloated and thumpy.

But the Martin Logan is trading on something different – the strengths of clarity and naturalness.

Listening to some classical music – to be precise the Scottish Chamber Orchestra's 'Beethoven Piano Concerto No 3' – and the atmosphere of the venue and recording acoustic came through vividly. There's masses of fine detail and a resolution and focus to the music that brings the performance to life wonderfully.

Interestingly, the Martin Logans came into my listening room hard on

the heels of the recently reviewed KEF LS50 mini-monitors. Both cost the same per pair – yet have a remarkably different character from each other.

While the KEFs produce a big, bold sound that belies their size the Martin Logans sound smoother and airier up top — electrostatic like. That's because Martin Logan customers asked for small box loudspeakers able to match their big hybrid electrostatics, within a surround-sound system. That's explains their use of a Folded Motion tweeter.

CONCLUSION

Martin Logan has produced a fine-sounding loudspeaker with the little Motion 15. Cosmetically, it easily justifies its £800 price-tag. Sonically, it's a brave attempt to bring some of the characteristics of the company's hybrid electrostatics down to a lower price bracket.

The star of the show is undoubtedly the Folded Motion tweeter which dictates the sound of the speaker. It is clean, fast and deliciously airy, giving vocals and acoustic instruments a wonderful

sense of freedom and lack of colouration.

That translates to superb projection of the music with images floating clear of the speakers and setting up an enveloping soundstage.

It's tempting to
say the Motion 15 is
best with simpler music
such as light pop, folk, jazz quartets
etc because the tweeter initially
pushes you in that direction it's so
enjoyable to listen to.

But that would be doing the whole package a disservice. It is just as refined and articulate on denser material – managing to hold its own in the rhythm department without losing any of its sophistication.

If you have ever hankered after a full-size Martin Logan hybrid electrostatic but had neither the space – or the funds – then this 'speaker could be just the ticket.



Cleverlydesigned speaker posts make using lugs a breeze

MEASURED PERFORMANCE

Frequency response measured broadly flat across the audio band, up to 10kHz. Upper midband output from 2kHz to 6kHz is strong, meaning the Motion 15 will project a lot of detail, sound fast and crisp. Above 10kHz high treble rises to a peak of +5dB at 16kHz and this will add a small hiss to treble, when extended high frequency content exists in a recording.

The dip in output around 600Hz is peculiar and may well push vocals back a little; many loudspeaker manufacturers

FREQUENCY RESPONSE

IMPEDANCE

forward so the Motion 15s may sound a little recessed or polite. Output rises back up a little at low

raise output in this region to push singers

Output rises back up a little at low frequencies but there is little low bass from the small forward firing bass unit. It shuts off hard at 100Hz and the rear port takes over. The port extends output down to 50Hz, so the small cabinet does not go low.

Sensitivity was very high for a small loudspeaker, measuring 89dB from one nominal Watt of input (2.8V), helped by a bass unit with a low 3.8 0hm d.c. resistance. Overall impedance measured 4.7 0hms and our impedance analysis shows the port is tuned to 70Hz, but its breadth of operation is quite wide so bass damping will be good.

A 200mS decay analysis shows the Motion 15 to be very clean and free of overhangs, except at 100Hz where the box is a little active. The treble unit looks very smooth and refined.

The little Motion 15 will be forward, fast and detailed. It keeps well away from warmth of any sort. The box does not reach low. Little power is needed for high volume levels - unusual for a small loudspeaker. The Motion 15 measures well, but will have a specific presentation. NK

MARTIN LOGAN MOTION 15 £800





OUTSTANDING - amongst the best

VERDICT

A taste of the Martin Logan sound in a more domestically-acceptable and wallet-friendly package. Definitely worth an audition if you are looking for something a little different from the standard minimonitor.

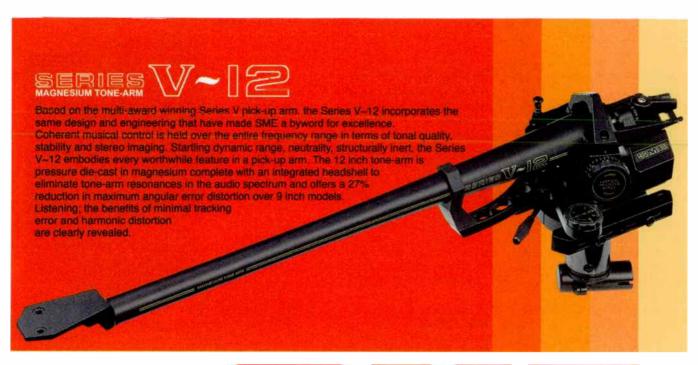
FOR

- fast, detailed sound
- superb vocal projection
- classy construction

AGAINST

- lack of low bass
- need careful set-up

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+44 (0)1332 342 233 samba@blackrhodium.co.uk www.blackrhodium.co.uk/samba/ Visit our website at www.hi-fiworld.co.uk or send your emails to 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; RT - Rafael Todes; JM - Jon Myles.



KEF 0100 LOUDSPEAKERS

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

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

Letter of the Month

IGNORE IT!

I write in response to Noel Keywood's advice to Geoff Egginton (Left Behind, July edition) not to use a computer for audio playback. I would urge Geoff to ignore this advice and dip a toe in computer audio and judge for himself.

A properly set-up computer is capable of fabulous sound quality and you can get started for very little financial outlay, unlike buying an expensive streamer, which is, as far as I am aware, basically a computer with hi-fi bits added and a silly little screen. After all, most homes now have a computer of some description already and if you DIY you won't be locked into a manufacturer.

Download the tutorial 'dCS Guide to Computer Audio' by the wonderful people at — naturally — dCS. What they don't know about computer audio isn't worth knowing. Once the PC is configured correctly I would recommend Geoff purchase the J River Media Centre v18 for playback of his music for about £33, this being a terrific player program with a super interface.

He could rip (copy) his CDs using the program dbpoweramp, about £25, and store these along with any hi-res downloads on any high speed USB storage device. You could go down the NAS route at a later stage if desired, although this is not on my radar.

I presently use a ITB external hard drive, backed up to another, connected to my laptop via a Chord SilverPlus



Acer Aspire laptop with Intel i5 processor, price around £400. Terry Catlin fitted a computer like this one with a Solid-State Drive to purpose it for music replay.

USB cable and another from laptop to my Preamp/DAC. So far, so cheap, so simple.

The biggest outlay will be for a separate DAC with an asynchronous USB input. A world class DAC can now be bought for a little over £400.

A little tip from the manufacturer AMR: download the free program 'Fidelizer' – this will close down all applications in Windows that are not relevant for music playback and runs in the background whilst you are using the computer for audio.

I now use a dedicated laptop for my music, an Acer with Intel i5 processor and have changed the internal hard drive for a lightning fast SSD drive. There is nothing on this laptop other than the J River and Fidelizer programs — no internet, no spyware, nothing. KIS(S).

I, like Geoff, have been into hifilmusic for more than forty years
and am no computer geek, just get a
younger person to help (thanks son).
Join Computeraudiophile.com for any
help and guidance. This is now my only
source component and used with high
quality hi-fi stuff – I wouldn't go back
and it can only get better. My high
specced Linn Sondek went to someone
in Beijing and my 'high end' Wadia CD
player hasn't been used for the best
part of a year. The house computer
gets plugged in for internet radio – I

can recommend Radio Paradise – and Spotify (free and great for listening to an album prior to purchasing). Go for it Geoff.

Terry Catlin

Ouch. Great letter Terry, practical and very helpful – if critical! I can't help but note a few things though.

Most obviously, you are using a dedicated computer, an Acer laptop, as a source. Add in the SSD drive and the price isn't so far off a dedicated hi-fi component, much above the Logitech Squeezebox – and you still lack a DAC.

There is no big cost benefit here and you are faced with wrestling the computer to do something it wasn't designed for. This means getting into computer religion, bypassed in your case by getting someone else to do the donkey work (that's what sons are for – perhaps!). You have used Fidelizer to tame the computer,

high data rate/high frequency digital circuits. I've done this to research ripping from a laptop and found it does improve the quality of rips.

If, alternatively, you transfer downloads from computer to a high-quality memory stick and then play them from a high-quality player, like a Naim NAC-N 172 XS pre-amp or Aune S1 media player (£550), of the sort you criticise as too expensive, this is a simpler, more elegant path that avoids the need for computer tweaking – and in fact the whole subject of 'computer audio'.

However, I do see that a battery-powered laptop with SSD and nice, bright display is easier to use in the home than a media player with a tiny screen on the other side of the lounge, so readers may like to try it, and may prefer it. But at the same time it doesn't have the functionality of the players I have mentioned, and probably not the sound quality.

out. But a purpose-tuned laptop has its attractions all the same, so thanks for the frank advice! **NK**

MIGHTY MONTIS

OK, I've decided it's Martin Logan electrostatics for me. My musical tastes are mostly in the Americana / Roots / singer-songwriter genre and the (previous range) electrostatics I've heard (SL3, Aerius) sound fantastic.

That's the easy bit! But which one? The Summit X is out of my range, but is there a significant difference to be heard by a passionate but Joe Average punter like me between models from the Theos, Ethos and Montis that warrants the price differences? (by the way, what about the previous range Spire? Any 2nd hand ones around? And what would be a reasonable price to pay?).

Can you also guide me with regard to amplification? I'd like help with a shortlist of, say, three valve and three solid state set-ups (pre/power and/or integrated) that are sympathetic to my musical tastes through the electrostatic sound. I'm leaning heavily towards a valve set-up, but, depending on what you think, would not discount solid state (or a mix of the two?).

I reckon on spending up to £5000 (less, if you think there are any worthwhile candidates, but a bit more if you really think it significant!).

Whilst visiting my daughter in London a few weeks ago, I called into a well respected hi-fi shop in Marylebone to do a bit of reconnaissance. The very pleasant sales rep was adamant that the Montis speakers were the ones and suggested either the Jadis I-35 Integrated or Krell S-550i. Any thoughts on these?

Finally, a CD player. I've no idea other than to say my budget would be somewhere between £2,000-£3,000. (again, perhaps a bit more if there is a significant candidate).

My room is 27 x 16 with a wooden floor but we may be downsizing in a couple of years. Can you say what you'd regard as a minimum room size to do justice to, say, the Montis?

Many thanks for whatever advice you can offer.

Alan Peatfield Diss, Norfolk

Hi Alan. Let me compare the models you quote first.

The Theos uses a 44in x 9.2in XStat panel atop a passive bass bin housing an 8in bass unit in a small cabinet with downward firing port. Crossover between box and panel is



bought an SSD drive to speed up digital delivery and, of course, have had to remove intrusive anti-virus software.

If you run the computer from a tethered mains supply, you'll be injecting unwanted toot from a cheap outboard Switch Mode power supply; all computers have 'em and audio avoids 'em, because they generate a lot of high frequency switching rubbish that degrades the sound by reducing dynamic range.

Charge the laptop's batteries then disconnect the mains supply and, all of a sudden, the laptop becomes a silent source, ignoring RF from its Yet another solution, that I think tops them all, is an Astell&Kern AK 100 high-resolution portable player. You can copy music to this, carry it around and play it anywhere, through a hi-fi or headphones. It's a fraction of the size of your laptop, lower price and has an on-board Wolfson DAC. The SSD you use is replaced by 32GB on-board memory and two 32GB micro-SD card plugins offering 96GB in all.

Digital music is part of a fast evolving consumer environment in which fiddling with home computers to make them do something they were not designed for is on the way



Martin Logan is for me, says Alan Peatfield. But which one? This is the Montis, £9800 and with an 11.2in wide XStat panel.

quoted at 425Hz. I heard the Theos and didn't like it, because the box audibly colours the sound and bass quality was thoroughly average. For such an expensive loudspeaker I felt the bass bin was an afterthought; it is relatively easy to produce a tidy sounding small box loudspeaker that delivers clean bass and lower midband. The Theos box didn't manage this, it wasn't a match for the high quality XStat panel sitting above and crossover between the two was obvious. Perhaps this is why Martin Logan put Theos in the ESL Series, rather than the premium Reserve ESL Series. So that eliminates the Theos!

The Ethos uses the same 44in \times 9.2in XStat panel, but atop a powered subwoofer that has adjustable output, crossing over lower down at 340Hz. I liked the Ethos and you can find our

review on the website. However, it squeezes a lot of bass from a small box and you can hear energy in the box coming back out through the bass cone as delayed sound that blurs bass timing and slows things down. I felt I could acclimatise to this and live with it (turning down bass helped) but Rafael said cellos were lagging the main orchestra and wasn't having any of it! The XStat panel is nothing other than superb though, a complete revelation and worth compromising for I also felt the Ethos had very strong upper treble even though it doesn't peak; a valve amp would help ameliorate this.

The Montis significantly uses a wider 44in x 11.3in XStat panel that moves more air and runs lower, down to 340Hz, so it covers more of the audio band. It also uses a 10in powered bass unit, but this

isn't necessarily a good thing, as it simply puts more energy into a small cabinet unable to contain it. Bass can be turned down though, and with Martin Logans this is usually necessary, as the company make much of reaching down to very low frequencies using a small cabinet, but this hardly ever works. The reason is as output is extended downward using active equalisation, and amplifier power increased to raise bass level, distortion rises substantially from around 3% to 15% and delayed output goes through the roof, our measurements show. Bass quality suffers, becoming heavy and ponderous. You cannot easily kick against the physics of a small box; try it and the box bites back!

The bigger Montis panel is to die for. But, bearing in mind my observations about small subwoofers, go for a demo before you decide. Take plenty of bass heavy music you know well and compare the two. Also, be prepared to adjust bass level if you are unhappy with the sound balance. The bigger panel of the Montis will sound smoother and fuller bodied, and the bass bin a tad less obvious. The Ethos, however, may well sound a little brighter and more incisive.

Perhaps unsurprisingly, the Summit X uses two bass units, lessening the load on each, and Martin Logan have devised a clever system to get the bass monopole to slowly become a dipole at higher frequencies to smooth the crossover transition to a 44in x 11.3in panel that they push down to a low 270Hz. By studying a higher model like this you can see what Martin Logan see as deficiencies in the lower models, namely Montis and Ethos, allowing you to go to a demo forewarned.

On room matching and placement, I have not found Martin Logans too sensitive. Rear output from the electrostatic panel can be lost down the room and into soft wall hangings, like a patterned rug. Bass level can be adjusted. They do need some space behind of course — one metre minimum with rugs on the wall — especially the bigger ones that run the dipole lower.

I say "rugs on the wall" but you can alternatively hang dedicated absorbers (acoustic foam) or diffusers (hard panels with irregular surfaces), and you can even try egg boxes! These diffuse and absorb and are worth a quick try when experimenting to see what sort

of improvement you can achieve. Yes, they are ugly, but can be cloth covered.

I mention all this as much to warn that big electrostatic dipoles are amazing loudspeakers but your room may need a little treatment to get the most from them. I don't recommend Martin Logans are used in a hard, reflective room. I don't recommend older Martin Logans; the panels were very directional.

As you will be spending quite a lot on partnering amps I suggest you try to see if home demos are possible before you buy the speakers.

By all means try Krell, but also Audio Research. Valve amps are a better subjective match I feel and they better handle the capacitive load of an electrostatic panel. But listen for yourself: differences between transistor and valve become very clear with electrostatics.

Other amps to try are the new Quad Elite QMP monoblocks that are powerful, super smooth but very sophisticated in their sound, and suitable for electrostatics. Also consider Icon Audio valve amplifiers, including a new stereo integrated due out soon that uses 845s. A Creek Destiny 2 is worth hearing too.

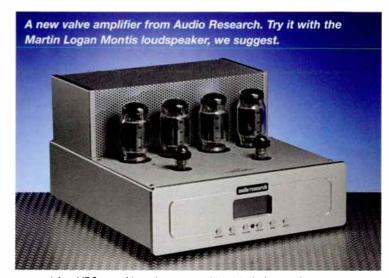
You don't need a lot of power, 40W - 100W will do, because big Martin Logans are sensitive, and bass is handled by an on-board Class D amplifier.

I can't decide which of the big Martin Logans you should choose but I hope all this helps you make the correct choice and also get the most from them in your home. They are a very special loudspeaker and probably what I would take to my grave with me, if I could fit them in!

1970s NOOB

I recently bought an amp/tuner and tape deck. They are made by Panasonic and are the SU 2700 amp, the ST 2700L tuner, and stereo cassette deck model 619. They are probably not what some of you guys are used to classing as hi-fi but I am on a limited budget and also have a fondness for retro technology and therefore was looking for something in brushed aluminium that had a 70s/early-80s look to it and would produce some good sound while giving me an experience of listening to music that I enjoyed during those times listening to stuff like Deep Purple, Rainbow and Van Halen at my cousin's house.

I used to have some gear of my



own, mainly a NEC turntable and some obscure branded amp/tuner/tapedeck that went by the name of Capl0, but I always longed for stuff like my cousin had, Sansui, Marantz, Rotel and Pioneer. Anyway, as I sit here I am wondering if you can give any advice as to a good book that will cover the basics, e.g. hooking up equalisers, separate phono stages plus all the associated lingo. There does not seem to be a dummies guide as such. I have ordered a bluffers guide as I have read them on other subjects and they seem very informing.

Also, are there any forums or websites which deal with retro affordable systems and components like the ones I have bought. There seem to be a lot selling in these prices and I would be interested to find out more about these systems and discuss them with like-minded enthusiasts.

Ideally, when my finances are more settled I would like to get my new purchases looked over by the local chap in Torquay who does this sort of stuff. They are supposed to be in great condition, the only thing being a non-working lamp in one meter on the amp. I think I have seen one on the net replaced with a blue LED and thought

this might look appealing.

So there you have it, any help you could give me and point me in the direction of books and sites/forums would be gratefully received.

I bought the June 2013 magazine today for the first time after looking at it in W.H. Smith and seeing the World Classics section. The Pioneer PL12D you have listed has taken my fancy if I could get one at a similar price.

I do not have speakers yet but will be looking around the second hand haunts and eBay while I await the arrival of my new toys. Best wishes and thanks...

Paul Blute

Hi Paul. Fingers crossed your system will work when it arrives. I suggest you buy decent interconnect cables, to hook up the tuner and cassette deck to the amp. Also, buy some good budget loudspeaker cables, rather than using what may come with the equipment. Old products had lousy connectors and cables, even if the circuits worked well.

Oh – and mechanical parts such as switches and volume controls were well below today's standards



Pioneer PL12D turntable – a 1970s classic that has taken the fancy of Paul Blute.

letters On-Line!

You can now read our Letters online, 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!

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too. There's not so much you can do about this, but a good repair man may be able to help you out with dodgy switches etc.

The cassette deck will need to have its head cleaned at least. You can buy a head cleaning kit or use isopropyl alcohol applied with ear buds. If there is obvious wow then new belts may need to be fitted and this could be expensive. If pre-recorded tapes sound dull, head azimuth will probably need adjustment — not difficult, but a job for someone who knows what they are doing. Use TDK D, AD or AR tapes to record.

Get a decent pair of loudspeakers, hook up and enjoy. You can of course buy a CD player that will hook up to the SU 2700 without difficulty and bring you into the modern age!

The Pioneer PL12D was a great turntable, nice and simple to use and it did the job. Today's equivalent is a Rega, the P3/24 (£575) being a nice unit if likely above your budget, except second hand.

Fit a budget Goldring 1006 (£150) or a 1012GX (£235) if you can afford it.

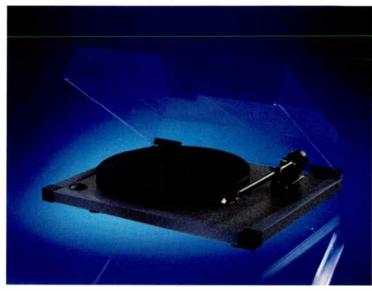
Don't forget the simple Goldring GRI turntable too; it's basic but has a good Rega arm and this does sound better than the old resonant tubular arms of 1970s turntables, including the PLI2D.

Scout around for those LP collections people throw away and you'll be in hi-fi heaven, at minimal cost. **NK**

TAPE TEASER

I have just purchased the June, 2013 edition of Hi-Fi World, and am flattered that you decided to publish my letter concerning he use of Magix Audio Cleaning Lab software in the context of converting vinyl and cassette recordings to digital format. I do hope that the content will be of some interest to your readership.

The purpose of this further letter is to seek your expert advice concerning a couple of upgrades, which I am considering making to my current hi-fi system, which consists of full Michell Gyrodec, SME IV arm, Dynavector DV-20X high output moving coil cartridge, Audion triode Silver Night phono stage, Crimson 610 pre-amp with a pair of Crimson 640D monoblocks, Meridian 588 24-bit CD player, and Sonus Faber Cremona Auditor speakers. I have linked the pre-amp tape line-in/line-out to a QED 3-way tape switching unit to



If you can't find a Pioneer PL12D then perhaps a Goldring GR1 will do. The Rega arm is better than the 12D's tube, but otherwise the GR1 was a tad basic, shall we say!

incorporate Revox B77 Mkll reel to reel, Sony MDS-JB940 mini-disc (also for archiving cassette tapes), and my Acer M3400 PC. Speaker cables are Chord Carnival, and interconnects are an assortment, including DNM ribbons.

I have been considering purchasing the new Crimson 710/640E pre-power combination for amplification, but even with the trade-in offered against my existing Crimson units, the net upgrade cost to me will be in excess of 5,000, and I am reluctant to go down that road without giving the matter deeper thought!

I would prefer to think in terms of an upgrade budget for amplification in the region of 3,500-4,000, and wonder what pre/power combination, or integrated solution you might recommend within these figures, not forgetting that any pre-amp stage will require tape line-in and out to accommodate my QED unit. I know that you are keen advocates of valve amplification, but I would prefer to stick with solid state options.

In addition, I am pondering upgrading the Meridian 588 possibly

instead of, or as well as, purchasing new amplifiers. Again, what is your opinion of the Meridian player, and if it is to be replaced, what would you suggest? Or would it be best for me to retain all my existing kit, and improve all interconnects and speaker cables? I'm confused! My tastes in music include easy listening and classical vocals, modern and traditional jazz, folk, blues, classical instrumental and orchestral generally, no rock!

I have always been interested to read the views of your team of experts on matters pertaining to upgrades, and I am hoping that they will be able to offer me some much needed advice as to how I might proceed.

John Boyd Nottingham

Your tape loop requirement makes preamp selection difficult. Tapes disappeared a long time ago and the whole idea of recording anything is history it seems, quashed by music industry interests. Few preamps now have tape loop outputs/inputs. A Leema Acoustics Pyxis is an



If you want to use tape decks, like John Boyd, then a Creek Destiny amplifier is a good choice.

exception and it also has much else that would suit your system. In conjunction with a Leema Hydra II, a combo we tested in the July 2011 issue, this pairing looks perfect, but possibly at the limits of your budget. Arcam have their C31, with two tape loops no less, and a much lower price tag.

Preamps can make or break a system in a subtly subversive way: put a poor preamp in front of a good power amp and the combo will die. Conversely, a good preamp is a godsend, and one of the best ever — no discussion or argument! — is the Music First Audio Classic transformer preamp. But although I think you need one of these at your level of sensitivity and appreciation it is difficult to accommodate into your complex system where a tape loop is required.

I suspect you will need a preamp with a gain of at least x5 (14dB) to cope with the Silver Knight phono stage. So although I recommend the Classic as an ultimate preamp, whether it will suit you is questionable.

The simplest and probably best solution is to buy a Creek Destiny 2 amplifier. This has a lovely bighearted, easy-going sound and is powerful, easily able to drive your Sonus Faber Cremona Auditor loudspeakers. It has switchable preamp gain to match in the phono stage and a buffered tape loop, no less. Since you use a valve phono stage you will like the sound of the Destiny 2 I believe and at £1800 it suits your budget as well.

It's becoming difficult to recommend CD players nowadays, with high-resolution digital upon us. This issue contains two interesting possibilities, the Prima Luna ProLogue Premium CD player that absolutely would suit you, with its SuperTubeClock, but the price might not! The Teac UD-501 DAC can do it all however — even play DSD digital. How can you not look closely at a DAC like this? It will handle CD of course; just hook up your Meridian 588 with a digital cable and use it as a transport.

I hope this provides you with some good ideas. **NK**

ROCK CLOCK

As I have improved my vinyl record player, its sound has increasingly left CD in the shade. There was nothing obviously wrong with the sound from my Rotel RCD-951 CD player: the

highs were crisp and high, the lows were deep and low and there was no audible distortion ... but somehow it was sterile to listen to. The flow and naturalness of the sound from vinyl was missing and after listening to one CD I usually got bored and put a record on instead. However, I was wary that shopping around for a new player to solve the problem might prove difficult and costly.

I then found websites from Trichord, Net Audio and others which offered to improve the sound from existing CD players by upgrading the internal clock to reduce jitter. After some thought and research, I bought a 'RockClock' from Net Audio and installed it in the RCD-951. The tricky bit was working out the connections and where to fit it in, as the Rotel has a slim, well-filled case (it ended up on top of the IC it connects to, in order to keep the connecting wires short). However, Net Audio's proprietor David Pritchard was helpful and once the details were worked out it did not take long to remove the old clock components and install the RockClock.Then I turned on the CD player, found that it still worked (phew!) and played some discs.

Somehow, installing the RockClock has quietly transformed the Rotel's sound. The obvious stuff (tonal balance, treble, bass, distortion) hasn't changed but somehow everything else in between just sounds clearer and more natural. Voices sound much more authentic, the sound of an orchestra swells to fill the room and when Nick Drake picks his guitar on the CD 'Pink Moon', his finger movements on the strings no longer sound like 'hi-fi' squeaks - they sound real. Everything simply sounds more natural than previously. Instead of becoming bored after one CD, I can happily listen for a whole evening - and it seems like 'listening to music' rather than 'listening to CDs'.

In my system the RockClock has closed the gap between vinyl and CD to the point where, although the former is still better, the latter is now an acceptable and useful alternative. The results of the upgrade appear to support Noel Keywood's view that jitter is the Achilles heel of CD reproduction. The RockClock has breathed new life into my old CD player and (in simple listening pleasure) lifted its performance to a whole new level - and all for a mere £95. It suggests that the upgrading of CD player clocks is an area well worth investigating Best wishes.

Alasdair Beal

The heavily screened Rock Clock 3. Fitting a new Rock Clock to a Rotel CD player made "everything simply sound more natural" says Alasdair Beal.



Great stuff Alasdair! I think most of us have found that lessening jitter audibly improves the sound in a subtle but aurally important way. Imaging sharpens and stabilises, there is less of a sense of fuzz in the sound and even bass can improve, when clock wander is eliminated. Ripping CDs commonly improves their sound when the digital stream is re-clocked, a process that often (if not always) reduces jitter. I've been experimenting with ripping CD to see how far such improvement goes and there's no doubt it does make the sound more amenable, as you have found.

Unfortunately, better clocking on replay, either in the CD player or after it, doesn't eliminate timing error from the recording process, so the improvements only go so far and depend upon the quality of the recording. This is true of all digital.

CD is also afflicted with quantisation noise that subtly coarsens the sound and limits deep detailing – 24bit recordings avoid this, sounding smoother, 'darker' and generally more svelte. So jitter isn't the only blight!

Fitting a CD player with a new clock is a bold move and perhaps not for everyone, but your experiences are illuminating. **NK**

DUTCH DILEMMA

You guys are driving me nuts. Not only you, but all hi-fi magazines. Love to read all of them through but prefer your letters section. I want to make a point and would like to ask you for some insight, but first I'll introduce myself I hi-fi. As a born Dutch living in



A small room in Portugal would go nicely with a small loudspeaker from the UK, the KEF LS50. It should make a Dutchman living in Spain happy, even if we remain confused!

Portugal and working in Spain I am in the fortunate position to have two sets of hi-fi pleasure. In Madrid I do have a Home Theatre set-up but stereo is most important. Rotel pre/processor, Primare DVD30, Rotel 6 channel amp bridged to 3 channel. The rest is Dutch: Van Medevoort PA333 power amps and Van Medevoort DD6.5 sealed box monitors with two mid/bass configuration (one internally) and Van den Hul cabling. Very happy with this but I think the Rotel pre and the apartment are the constraints.

In Portugal I've composed a minimal setup: ADAM A5 active loudspeakers, BMC-2 DAC and monitor control, Onkyo dock/digital transport and Rotel DVD995 for CD (DVD part broke). I am very happy with the detail but noise level (a ssshhhh when volume is up) and lack of scale bother me. It is a very small room of max 15m2 with all thin plaster walls except one thick outside wall out of rocks (yeah really; rocks in cement) with a window, wooden floor with directly a cellar below and a high ceiling close to 3m.

Why do I tell you all this? Well I would like insight on how to fully upgrade my set in Portugal. I can mix things from Madrid, buy something, save and buy the following but honestly I don't know what to do first or which direction to go. That's why you make me crazy because bad products are hardly manufactured anymore. 5 stars here and 4 stars there make it difficult to select a short list. That is my point. Can't we introduce a 6th star or downgrade the value of the stars.

Anyhow, I selected some favourites which can take me in any direction.

Main objective for me is to gain scale and dynamics (some energy boost)

with a low-end as taut as possible in my small room and add streaming. A sweeter delivery would also be nice. I need to upgrade in steps and total budget is not fixed. And good performance at low listening levels at night is a pre.

Products of my interest:
Loudspeakers: PMC twenty 21, 22,
23 (I wonder if the 23 goes too low),
Guru Q10, Guru Junior, ProAc 115, KEF
LS50, KEF R300, MAD1920, JBL Studio
530, Neat Petit.

Equipment: Roksan Caspian M2, Icon Audio LA4, Icon Audio passive pre amp, Naim N172XS, Cambridge AudioStream Magic 6, Van Medevoort MA260 int. amp with DAC, Hegel 100, Onkyo P3000R, MF M1CLiC, Pioneer N50. Naim Unitilite.

Do you have any suggestions? What would you do? Thanks a million in advance and keep the magazine printed! Please make sure Lisbon Airport has enough copies. Kind regards,

Derrick Swart

The 15m2 room needs either large stand mounters or small floor

standers designed for use against a wall. Although it is possible to get deep bass in a small room it is easiest done with a subwoofer that can be positioned and adjusted for level. Big floor standers usually over-excite a small room, producing boomy bass. KEF's Q500 small floor stander is likely to suit or their Q300 stand mounter. The LS50 you mention is also very popular and highly regarded, and would suit your room. Equally the MAD1920 would be a good choice, as it is carefully designed to sound good in small-ish rooms.

A small room needs little power and Naim's Unitilite would probably be ideal, if you want to move into the modern age, whilst retaining CD playback. **NK**

START STREAMING

I thought I would share with your readers my experience of setting up an entry level streaming system. Having had my Naim NAP180 serviced and changed to Avondale 845 boards in my NAC 72, I added a Teddy Pardo power supply to the NAC72 and another one to my Arcam rDAC. The change wrought on the NAC 72 was instantaneous! The legendary hiss vanished, leaving, as Teddy himself describes, an inky blackness. For speakers I use Dynaudio Focus 30s.

I bought an ex-office PC (£100) and rebuilt it with Linux Mint 14. For those unfamiliar with Linux, it's a genuine alternative to Microsoft 'bloatware' and runs, by my estimate, five times faster than Windows. And, if you're mean enough not to make a voluntary contribution to the Linux developers, it's free.

I then added a 3TB external drive (£90) to the Linux media PC. Please note you don't have to be a technical expert to setup Linux and the community that supports it is very helpful. The media PC doesn't require a screen, a keyboard or a mouse, after it's set up.

Once networked I ran a CAT5 cable to my media box (Philips HMP5000 £50) and shared the external hard drive,



Choose a Naim Unitilite if you want a modern doo-dah that does it all: play CD, amplify, get internet radio, play computer music, play a memory stick...

that holds my 600 films and 1,000 ripped CDs.

I added two Powerline adaptors (£30), one of which is sited in my daughter's bedroom, so that she too can access all the media content, via a Seagate media box (£50). Powerline adaptors use the house ring main as a network and don't require any configuration. With my existing wireless router, I can also access the content from any of the other two Linux machines that I have.

So, my total outlay for streaming to two locations was £320, assuming you already own a DAC. I am utterly delighted with not only the sound quality, but also the convenience that this set-up allows. Maybe it will inspire your other readers to have a go!

Regards.

Paul Margey

Yet another alternative in the great computer scheme of things. And a very good one too Paul, at least for inveterate computer geeks. Curious how all the free stuff, like Open Office and Linux, actually works better than anything you can buy. It's a topsy-turvy world out there! **NK**

NEW ICON

Here are a few impressions of the new lcon Audio LA5 pre-amplifier that we received about a month ago. We just bought it on spec, having not heard it, but were confident that it would come up with the goods. And of course we were right... David Shaw has done it again, and then some.

The 845s and LA4 were brilliant, the CDXI and PS3 were brilliant, but the LA5 is spellbinding. The music produced by the LA5 has got all the usual credentials of top end hi-fi and more, much more. Crescendos made us catch our breath in amazement; the romance assaulted our hearts. This is magical, a real dream machine.

This of course is after a long and tedious running in, and with Psvane CV181 valves fitted. It started out sounding something like an old LA4 with an Eton education and it gradually improved until what was coming out of the speakers started to sound extraordinary. We were beginning to feel the music a microsecond before our brains registered the sound. The sound had gone to new levels of emotional expression. We just sat in front of it and every now and again when one of us said did you hear that, invariably a bemused ...yeah... was the only reply. This machine plays emotion - the music is a commentary.



The new Icon Audio LA5 preamplifier "makes a scintillating harmony of sound, revealing all the emotions in the music and of the musicians with a transcendental precision which is breathtaking" say James and Cath and Gould.

The LA5 makes a scintillating harmony of sound, revealing all the emotions in the music and of the musicians with a transcendental precision which is breathtaking. From the moment we turned it on we were transfixed, whether it was playing rock, jazz, or classical, there were qualities we had never heard before with any system. Best wishes

James & Cath Gould

Hmmm... seems you like it! Those 845s are great valves sound quality wise and as you say David Shaw of Icon Audio does get the best from them — and all else it seems. Glad you like the LA5 preamplifier. Readers might be interested to know that Icon Audio are working on an integrated amplifier using 845s, a prototype being on display at the Manchester Show this year. **NK**

MORE ORDINARY

I too consider myself to be ordinary, if ordinary can be attributed to anyone who has spent 40 years listening to and buying hi-fi equipment in order to hear music. However I was intrigued by Stephen Sharp's letter. If he is a music lover rather than a hi-fi collector then listening contently through his system, as he says he does, should be the end of the story. Yet he seems to decry paying for equipment which would allow him to listen to his music with more realism.

Of course a £6,500 cable will not sound 100 times better (if indeed that could be measured) than a £65 cable. We all know that hi-fi prices follow the law of diminishing returns. But it will (or should, if chosen with care) sound immeasurably better providing the accompanying system is of similar quality. I truly believe that if you look

and buy with care and know what you want to achieve you do get what you pay for. I have never used an expert's opinion to buy equipment, only my ears.

Let me explain further. I was very fortunate a decade ago to be able to spend, what is to me, a lot of money on upgrading my system. After months of listening and auditioning I moved from a Linn Sondek/Rega/Sumiko front end, AVI preamp and ATC 50 speakers to the dizzy hi-fi heights of an SPJ La Luce record deck with Van den Hul Condor cartridge amplified and cabled entirely by LFD products into Rockport Merak/Sheritan speakers. In retail prices this was easily a 15-fold increase over my previous system. However, everything was purchased second hand which resulted in it being only a 5 fold increase. The point is I now have the best system for my ears I could find for the money. I believe it represents phenomenal value. I now listen to my music and am carried into another world whereas before I was always in my living room straining to hear the music through the hi-fi. I wonder exactly to what equipment Stephen has been listening if he has never heard the difference he seems to crave.

As for low cost improvements, I do those too. I recently wired in a dedicated consumer unit, spurs and unswitched power sockets for my hi-fi at a cost of less than £100 for materials. The result was an immediate satisfying improvement.

There is no end to this hi-fi game unless you choose there to be one.
Stephen has, and so have I. But knowing and accepting that further possibilities are there is, I find, quite exciting. In the meantime I'll enjoy the music.

Nigel Smith Bristol

Ming Da amplifiers are the perfect match for Triangle speakers







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

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

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 TRI-ANGLE 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.

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

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

The Mingda MC300-PRE preamp fully exploits all the merits of 300B. When MC300-PRE is coupled with MC300845-AB, the combination have no problem driving high sensitivity JBL speakers or even low sensitivity Dynaudio speakers. Violins sound clear and bright, with the ability to extract powerful emotions from vocals is stunning! The overall sound is delivered with amazing dynamics and aplomb. From the highest treble to the lowest bass, the reproduction is better than anything I have ever heard in Mingda's showroom!



Valves: Exclusive 845 x2, 6SN7x2 Full music 300B x2

Power: 100W per channel Net weight: 35KG per channel Net size: L38 x D50 x H 33/CM)

MC300845 AB flagship mono block power amplifiers.

Please read more information about 20th anniversary edition in our website. Made in China

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ere's your chance to win a superb Funk Firm 'Little Super Deck' turntable worth over £1000, reviewed in the May 2013 issue. Read the review excerpt below and answer the questions at right.

"This example is priced at £1164 including the new F5 arm. It offers a more traditionally styled machine than some of Funk's more modernist creations. The combination of an oiled walnut veneer over the MDF plinth, and the gloss black acrylic top plate, give it a retro appearance, rooted in the 1970s, but done in a 21st Century manner. Black or white versions are available for £1100, with other colours available to special order and costing the same as this

wood finished variant.

Lifting the glass platter reveals a sub platter which is driven by a belt that loops around three pulleys. This is the Vector drive system to be found on all Funk Firm turntables. The brass pulley is attached to the DC motor, while the two black ones are unpowered idlers, serving to position the belt so that the drive is evenly distributed around the platter. A switch at front left selects 33 or 45 rpm. The layout is unusual in having the lower speed to the right-hand

Both of these speed settings can be fine tuned by moving the deck to edge of a shelf and using a screwdriver to access the two trim pots found underneath. The left foot is thoughtfully placed behind this area so that the deck can remain secure on the shelf while this takes place. The three feet are adjustable for leveling the deck.

The platter is topped by a quite thick felt mat, although the Funk Firm's Achromat is available as an upgrade, costing £57.60 for the 3mm thick model. A bright blue example was supplied with this review model, and after a brief comparison I did all of my listening using the Achromat. The bearing assembly sits in a brass housing that contains a hardened steel ball resting against the burnished and hardened steel shaft of the inner platter".

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

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

(Please note cartridge not included with turntable)

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QUESTIONS

- [1] Was the veneer
- [a] teak [b] oak
- [c] plastic [d] oiled walnut
- [2] Was the platter
- [a] aluminium
- [b] glass
- wood [d] acrylic
- [3] How many pulleys are there
- [a] one
- [b] numerous
- [c] three [d] too many

[4] Speed is adjusted

- [b] hammer
- trim pots
- [d] chewing gum

September 2013 Competition Hi-Fi World Magazine Unit G4 Argo House The Park Business Centre Kilburn Park Rd. London NW6 5LF

entries will be accepted on a postcard only

JUNE 2013 NAIM NAC-N 172 XS PRE-AMPLIFIER WINNER J Watson of Cumbria

Mobile fidelity

Looking for the best sound per pound from a portable speaker? Jon Myles listens in to some of the latest offerings to guide you in the right direction.



ot so many years ago the notion of storing and listening to music via your computer or mobile phone would have seemed fanciful.

Now it's simply taken for granted.

And as the number of digitally-stored tracks has soared exponentially manufacturers have not been slow in bringing out add-on speakers to let you listen to your computer/phone-based collection.

The choice now encompasses a dazzling array of form and function with prices ranging from pocketmoney to the relatively expensive. The four devices on test here give some indication of the options available — with each having its own unique selling point.

They range from the appealingly small Qube through to the more conventional iRiver IBA50 with its traditional looks and promise of better sound quality.

Inbetween are the innovative X-mini and the Damson Twist.

All four share the aim of portability – allowing you to pop them in a pocket or, in the case of the iRiver a bag, for providing sounds in the garden, hotel room, picnic or wherever else you may be heading.

Bear in mind none of these devices could strictly be described as audiophile – but that doesn't mean they aren't fun. So, how do they rate?

MATRIXAUDIO QUBE £40

The Qube is a dinky aluminium cube with rounded edges and a 31mm driver on one face. A combined headphone jack/mini USB cable provides charging and sound duties. Fire it up and it sounds.....well, small. But crucially it's not altogether unpleasant considering the size. In fact Bruce Springsteen's 'Tenth Avenue Freeze-Out' romped along

quite pleasantly while Clarence Clemons's

saxophone on

'Night' is clear and defined.

A little experimentation also helps. Angle the Qube upwards and the sound gains more

dispersion to help if you are listening from a

few feet away.

Factor in its small form factor and nice design and the Qube has a lot going for it.

Inputs: 3.5mm jack. Micro USB Battery Life: Eight hours.

X-MINI UNO £40

It might not look up to much at first – but a fair bit of thought has gone into the design of the X-mini Uno. The top and bottom halves of the spherical unit twist apart so the whole thing opens like a mini-







accordion to double in size. A short captive lead at the base then plugs into the headphone socket of your phone/portable player or there's a separate USB lead which also doubles as a charger for the in-built battery.

It might look small — but the Uno's 40mm ceramic driver outputs a surprisingly big sound. Daft Punk's 'Instant Crush' was pleasingly rhythmic and tuneful with more definition than you've any right to expect for something so small. Turn the volume up a bit and you realize the accordion design acts like a bass port — close it and the bass disappears. Open it up and there's a little more body on offer. Overall, a good combination of function and convenience.

Inputs: 3.5mm jack. Micro USB Battery life: 20 hours

DAMSON TWIST £50

The Damson Twist's twin benefits are that it brings Bluetooth to the party (as well as a line in socket)

– and it uses something called Incisor

Diffusion Technology. Luckily,

that doesn't mean it plugs into your teeth to transmit sound – instead the unit energises whatever it sits on to produce

It does that through a vibrating rubbercovered plinth at the bottom of the cylindrical unit which means the sound quality very much depends on what it's sitting upon. To the Damson's credit,
Bluetooth pairing was quick and
easy with an iPhone and it easily
exceeded its 10 metre operating
range in practice. There's also quite a
bit of fun to be had from trying it on
different surfaces around the house.
As for sound quality....well, it really
does depend on what it's standing
on. Therefore out in the garden
on a concrete patio it is absolutely
rubbish. On a small kitchen table it
was passable and quite good fun.
An extremely clever design but
rather limited for long-term use.

Inputs: 3.5mm jack. Bluetooth Battery life: Nine hours

iRIVER IBA-50 £69

iRiver's IBA-50 portable speaker is the most traditional of the four models on offer here. It's an unassuming black box measuring 75mm deep and 1800mm long

housing a pair of 69mm drivers with a single blue LED on the front to indicate status. Volume and Bluetooth pairing are handled by a four-way rocker switch on the top of the unit while the back has the on/off switch, mini USB socket for charging and a line-in socket.

Gimmick-free it may be but the iRiver shows the rest of the products here a clean pair of heels when it comes to sound quality. There's no attempt to boost bass artificially or try to pretend it can be something it isn't. Instead the iRiver sounds as admirably clear and defined as anything this size can.

Via Bluettoth there's a nice tempo to The Smiths on 'The Queen Is Dead' while the bounce of Eleanor McEvoy's 'Non-Smoking Single

Female' comes over

with all the infectiousness it deserves.

Use
the line-in from
an iPhone and
sound quality
improves
by leaps
and bounds.
The Eleanor
McEvoy track
takes on much
more body and
substance and

the timing is several notches up from that available via Bluetooth.

It also has the definition to distinguish between bit rates. The better they are on your source, the more impressive it sounds. For what it does at the price the iRiver is a bit of a bargain.

Inputs: 3.5mm jack. Bluetooth Battery life: Eight hours

CONCLUSION:

Four portable speakers – and every one of them offers something different.

Top of the bunch in terms of sound quality is undoubtedly the iRiver. You'll struggle to find a better



package at the price. Use the line-in from a portable player and it really sings. It can handle Bluetooth as well – although sound quality takes a dip. The only downside is it's bigger than the rest.

So if you want something smaller then the X-mini will fit in a shirt pocket and when opened up to its full size produces a sound

that seems out of all proportion to its dimensions. Compared to the Qube there's a fair bit more bass – but the latter wins out in terms of outright definition.

And then there's the Damson Twist. Like the iRiver it can be paired with a mobile via Bluetooth - but the sound is totally dependent on whatever surface it happens to be standing on. Which means it works quite well sometimes - yet sounds like a bag of nails if you get it wrong.

NOEL SAYS -

MATRIXAUDIO QUBE

No deep bass, and only initial smack of drum kit audible to mark out tempo, but fast, clear and clean at high volume, vocals crisp and clear. A tad metallic on classical strings; not ideal here.

X-MINI UNO

Some small amount of bass power behind drum kit, fuller sound than QUBE and less metallic. Plenty of high treble; OK for classical. Runs loud and stays clean. Impressive – sounds big. Clever, pocketable - like it! My choice of the group.

DAMSON TWIST

It's heavy and solid, and on an office desk produced a sort of booming bass. Limited in volume though, and a tad muffled and indistinct in midband. Fun, interesting but not there.

iRIVER IBA-50

Big, warm sound with little high treble. Slightly turgid and heavy across mid-band. Some feeling of bass, more than others – just. Plenty of volume and clean at high levels. Muscular sound compared to others, but not pocketable.



U.S. Dream

Rafael Todes finds the amplifier of his dreams comes from the U.S. It is the VAC Phi 200.

he Valve Amplification
Company is well known to
the audiophile community
in the USA, but is more
of a rarity on this side of
the pond. Founded in 1990
by a father and son team of Kevin
and Channing Hayes, it is based in
Sarasota, Florida and employs around
20 people.

VAC initially made its name for winning the contract to re-issue the Marantz Classic series (Model 7, 7C, 8B and 9). It was with one of the latter that I became acquainted

with the brand, having heard the 8B, I was struck by the sweetness and openness of the sound, which retained faithfully the spirit of the original.

The Phi 200 amplifiers for review arrived later than intended: there is currently a twelve week wait for new stock. Each product that leaves the VAC factory is personally voiced and signed off by designer and CEO Kevin Hayes. It is an artisanal product with very high levels of quality control, not a mass market affair. Typically, between 500 and 1000

listening hours go into developing a new model. The Phi 200 is actually the entry level power amplifier in the range, with several models sitting above it in VAC's offering.

The Phi 200 can be operated as a stereo amplifier in its own right, or can, by the flick of a switch on the rear panel be converted into a monoblock, so the power output doubles from a claimed 100 Watts per channel to 200 Watts per channel, (see Measured Performance) with the addition of a second unit. This gives the user the opportunity



1-2 Ohm, 2-4 Ohm and 8 Ohm loudspeaker terminals, plus unbalanced and balanced inputs.

to upgrade seamlessly, without having to replace the existing unit.

Another pair of switches at the front alters between single-ended and balanced operation. For the bulk of the listening, I used single-ended operation and a pair as monoblocks.

Biasing is achieved by reference to discreet amber indicator lights, on the top panel. I found the bias to be remarkably stable after the first few hours. Each monoblock uses four KT88s and four 6SN7 GTs.VAC supply selected and tested Shuguang valves which are their valves of choice.

The transformer technology is traditional but well honed. The transformers themselves are massive, and are stick as opposed to bobbin wound. The amplifier has a damping factor of around 2 which is stable across the frequency spectrum, and uses only small amounts of negative feedback.

The unit borders on the utilitarian in looks. Weighing in at 40.9kg, it is lighter than some, and is a relatively easy one-man lift. The fascia comes in a choice of black or silver, and is 9.5mm thick aluminium, finished in lacquer. An illuminated blue VAC logo can be switched off on the rear panel, if so-desired. Its looks in no way belie the extraordinary quality of sound that emanates from it.

SOUND QUALITY

Listening on my Inspire Monarch turntable, SMEV arm, and Icon

Audio PS3 phono stage, to Dvorak's 7th Symphony, the Scherzo, the Concertgebouw Orchestra under the baton of the recently late Sir Colin Davis on Philips, this movement has an almost morse code-like rhythm to it and is a recording I know intimately.

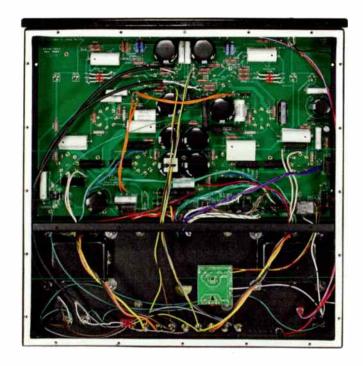
The music is fabulous, but I've always been left underwhelmed by what I thought was a mediocre recording. The VACs make it sound utterly different to what I've heard previously. They take a stiff brush to the grungy midrange, resolving a staggering quantity of new detail, and creating an orchestral holography the

likes of which for me is again new. The morse code is rapped out with consummate panache, creating the taut rhythmic structure that propels the movement to its breathtaking climax. It sounds almost unfamiliar due to the increased detail I'm noticing. The string section has tremendous depth and clout, the basses go down low, with not only a solid state-like grip, (unusual for valves), but also with etched texture which is revelatory.

The climaxes are effortless, the sound is vibrant, engaging and powerful

The famous Allegri Quartet (way before my time in the quartet!) recording of the Elgar Introduction and Allegro, Barbirolli on HMV, recorded in 1962, is supposed to be an all-time classic, and whilst the musicianship is stellar, the recording has always left me a bit confused. The VACs have the resolution to hear the tiniest detail amongst the quartet of soloists, and to place them accurately in the enveloping orchestra in a way I've not heard before. The simpler microphone techniques used then, together with a recording, not mastered to within one inch of its life, makes this a difficult play for all but the best. The VACs effortlessly sort out the confusion and chaos, and leave in their wake a compelling musical argument in this, one of the finest English string orchestra pieces.

Turning to some live radio, using my valve Magnum Dynalab MD90TSE tuner, with a live link up to the Met in New York, Wagner's epic Siegfried sounds like I have never heard one





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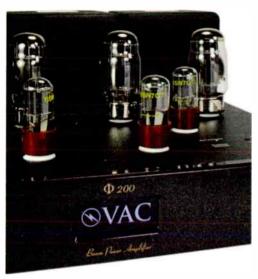
LS50

Stim America sary Mode

Empty your martie precisely the way it was first recorded. Unboard of an such a compact design LSSO delivers a deeply rich mole-disconsistational faculty are experienced that is out of all proportion to its size. Designed were KEF compiledge account more more ing. LSSO is the utilities may marting a fee the forms.

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of these broadcasts sound. Normally I just about get the energy and excitement of these world class performances, but the stage sound is slightly constricted, the orchestra typically sounds a touch boxy. With the addition of these VACs to my system, the midrange boxiness disappears, the stage dimensions are blown outwards, and there is a palpable feeling of really being three thousand miles across the pond, in the Met itself. The voices are commanding, nuanced, free of the distortion I have heard from lesser amplifiers, and the sheer weight and gravitas of this amazing work erupts. The orchestra layers with the singers in a way I have not heard before. Each instrument in these vast forces has a perfect place in space. both horizontally, laterally, as well as texturally. The VACs are quite simply extracting levels of detail of which I was hitherto unaware, particularly on an FM broadcast.

How does the sound compare with only one unit in stereo, and not two monoblocks?

Still mouthwateringly good, but a bit less of a generous soundstage, and less of a feeling of authority. Listening to a live BBC broadcast of the rarely performed Schumann 2nd Symphony, there is a more compacted feeling to the orchestra, as the amp uses a greater proportion of its resources to drive my B&W802Ds. As monoblocks are they twice as good? Maybe not, but worth it for the luxury they bring to the sound.

These mono blocks have an extraordinary ability to resolve detail like no amplifier I have heard before. Although they can make even the most badly-recorded LP sound good, they are highly critical

of poor sources, and really shine when fed with the best quality material available. They seem to exacerbate differences between the mediocre and the excellent, and even highlight the minutiae of cable differences. I find it very difficult to ascribe a particular sonic signature to them, as they seem to be as chameleon as any piece of audio I've ever encountered, taking on the character of

the source, and not impressing their own version of events. They don't have that gloopy valve sound that can sound attractive, but is not particularly real. They

have bass command that is up there with the best solid state

amplifiers I've experienced, along with the liquidity, transparency and beauty associated with the very best valve amplifiers. It leaves me many yards closer to the goal of live music making recreated, and they are a "must hear" for anyone searching for the ultimate in valve amplifiers. It however leaves me with great curiosity to know what the next model up sounds like!

REFERENCE

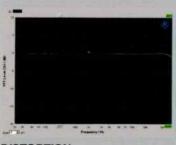
Inspire Monarch Turntable SME V arm Ortofon Cadenza Bronze cartridge Icon Audio PS3 Special edition Phono stage Weiss DAC202 Chord Indigo Plus cable Townshend Allegri Preamp B&W 802D 'speakers Magnum Dynalab MD90SET tuner Telurium Q spkr cables

MEASURED PERFORMANCE

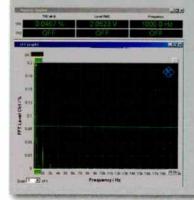
With an 8 0hm load connected to the 8 Ohm terminal, power before clip was high, measuring 66 Watts, but distortion was high also - above 3%, suggesting the reflected anode load was suboptimal, probably too low.

Connecting an 8 Ohm load to the 2-4 Ohm terminal gave 55 Watts at less than 1% distortion, and connecting a 4 Ohm load to the 1-2 Ohm terminal gave 50 Watts at less than 1%. Load matching is best using 1-2 Ohms for 4 Ohm loudspeakers (most out there) and 2-4 Ohms for the few that are 8 Ohm loads. Then, in effect the Phi 200 is a 50 Watt

FREQUENCY RESPONSE



DISTORTION



amplifier, for 1% THD, as expected from a pair of KT88s run at a sensible anode voltage for long life, using fixed bias. A pair of KT88s cannot produce 100 Watts as claimed; two pairs are needed e.g. the Quad II-eighty.

The amplifier gave low distortion at I Watt, around 0.07%, in 'single-ended' input mode using the unbalanced phono inputs, or in 'balanced' mode using the XLR input. The main difference here was sensitivity: unbalanced input needs 0.5V for full output, balanced IV for full output, so sensitivity is halved. Bass distortion was low and mainly second harmonic - unusual; it is usually third due to slew rate limiting by the transformer core. Damping factor was a reasonable 3.4, high enough to exert a little bass control.

The output transformers have very wide bandwidth, reaching 80kHz without resonant peaks due to winding reactances. Like most they also reach down to 2Hz, but this is not good as LP warps can cause premature core saturation.

The Phi 200 measures well as a push-pull 50 Watt KT88 based amplifier, only the output taps being mis-labelled, which is a little confusing. NK

Power	55watts
Frequency response	2Hz-80kHz
Separation	78dB
Noise	-100dB
Distortion	0.07%
Sensitivity	500mV

VAC PHI 200 PRICE £8750 **FOR SINGLE** STEREO UNIT OR £17500 FOR 2 **MONOBLOCKS**







VERDICT

Wonderful sound quality from a specialist amp.

FOR

- great sound
- inexpensive valves
- balanced inputs

AGAINST

- less power than claimed
- poor styling
- mediocre finish

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T+A's modern factory in Herford, at the heart of Germany.

T+A

Theory + Application. How sexy is that? Not very: this is a German engineering company! The engineering is sexy though, Noel Keywood discovers.



Founder and CEO Siegfried Amft explains product range, with Solitaire loudspeaker and HV products behind.

ot many hi-fi companies in this world manufacture valve amplifiers alongside transistor amplifiers — they are opposing religions. Even fewer add electrostatic loudspeakers

into the mix. It takes a wide range of engineering skills to do all this, and raises an equally wide range of difficulties.

But T+A, or Theory + Application as they are catchingly named, are German. Germany loves engineering and the outcome is a product range unlike most others. We saw it recently on a press trip to T+A, based in Herford, Germany, whose soft rolling hills and lush green fields differ little from the UK (but without litter!). Here are some of the highlights.

T+A ran through a story I know well, from my own days with World Audio Design valve amplifiers. They have a valve amplifier in their product range, the V10. Germany and indeed Europe is a strong market for valve amplifiers and founder and CEO Siegfried Amft was acquainted with them from his past, explaining the V10's existence.

But Lothar Wiemann, Director of Development, was quite frank with us: the VIO had problems with valve failure. Batches of valves from East European and Russian manufacturers were substandard and would fail after a short time - not something any manufacturer wants because the customer's perception is that the amplifier is at fault. We suffered this once at World Audio Design, one batch of KT88s in particular failing completely. Underrunning valves as we did lessens this problem, but it reduces power output and cannot avoid it altogether.

The VIO uses a rugged high power valve, the EL509, squeezing 80 Watts per channel from them. This works with good quality New Old Stock valves from Siemens and the like, Lothar told us, but lower quality valves failed.

Wanting a more reliable amplifier, but with the sound of the VIO, T+A developed their new PA 3000HV transistor amplifier, HV standing for high voltage, in this case 360 Volts for the output stage (+/-85V across the power transistors though).T+A



T+A's new PA 3000HV amplifier gives the sound of valves, but with transistor reliability, they say.

say that by doing this and using just a small, linear part of the transistor's operating curve they mimic a valve amplifier. The PA 3000HV has a massive toroidal power transformer and delivers a claimed 300 Watts per channel at up to 60 Amps. We saw the amplifier's massive construction and careful adjustment to optimise final performance.

Hi-fi companies tend to specialise in one field, usually the one they started in, but T+A reminded me of Quad in that they design in-house



The big Solitaire CWT 2000 loudspeaker is a vertical line array loudspeaker. It gives a smooth, cylindrical radiation pattern that fills a room with sound whilst lessening reflections from floor and ceiling.

At right on this left-cabinet of a 'handed pair' sits T+A's electrostatic tweeter. It uses a BASF mylar film with a conductive resistive coating sputtered on by Sennheiser, we were told. The cone drivers handle the midrange and the bass units can be seen on the side panels.

not only novel amplifiers but are also prepared to tackle the big issue of an electrostatic loudspeaker. And what T+A demonstrated to us in their top-of-range Solitaire CWT2000 hybrid electrostatic loudspeaker was impressive.

T+A's electrostatic drive unit works from 2kHz up to 40kHz in this 'speaker, and is mounted as a vertical line source driver. Stacked vertically beside it are six midrange units that work from 150Hz up to 2kHz, and either side are opposing bass units, tied together internally with metal connecting rods to resist flexure of the enclosure.

An interesting feature of this loudspeaker is its line-source design; It is not a point source, or pseudopoint source like most (think of a pulsating tennis ball). Line arrays have a smooth cylindrical radiation pattern that delivers acoustic power well: they are common as PA loudspeakers to get an even sound across an audience.

Line array hi-fi loudspeakers

are rare but have the benefit that they send less energy into ceiling and floor than other designs, and deliver more consistent sound power across a room. The big Solitaires managed this with ease in our demo, within a large meeting room at least 12 metres (36ft) deep. The electrostatic unit delivered beautifully pure treble whilst the cone midrange and bass units pushed out big power and delivered a firm punch. This allowed the

big Solitaire to deliver both Rock and Classical with power and refinement.

It was obvious too that T+A, like an increasing number of German companies, are now balancing their loudspeakers for accuracy, which gives an easy, natural presentation free from bass boom and searing treble. This may sound understated in a show room demo, but it is more truthful and provides enjoyable long term listening.T+A provide level adjustment all the same, to suit tastes and the listening environment. The CWT 2000 carries a €20,000 price tag, but there are smaller and more affordable CWT 1000 and CWT 500 models.

With 120 employees T+A are a big company by hi-fi standards, with strong sales into Germany and neighbouring European countries, as well as the Far East where German engineering is appreciated and a high price tag expected within a luxury goods market. The UK is a difficult market to break into for European companies, simply because it is saturated. But T+A have superb facilities in Herford, producing high quality products with advanced technologies that the UK will understand and appreciate.



T+A V10 amplifier works with quality Siemens valves, but suffered with poor quality modern copies.



Lothar
Wiemann
explains test
procedures for
the PA 3000HV
amplifier.



he small, round drive unit you can see at the top of Rega's recently introduced RS-10 loudspeaker caught my attention immediately. It's a BMR - or Balanced Mode Radiator, And that means - good! Ever innovative, Rega have built the RS-10 around this new type of drive unit and I heard its strengths immediately. Think superbly clear vocals, possessing an easy and natural smoothness. A BMR is a very interesting new technology, making the RS-10 an equally interesting new loudspeaker. The price tag is high for a Rega product - £7998.

There's more to the RS-10 than just its flat. round high technology BMR midrange unit. Rega have also decided to ditch the standard ported reflex cabinet in favour of transmission line bass loading. This demands a more complex and weighty cabinet, due to the internal baffles needed to create a long line, adding to cost. All the same, engineered properly, a transmission line will give even sounding bass that runs deep with laconic ease. Transmission lines sound less 'bouncy' in bass quality than reflexes, bass notes are firm and their power consistent as string bass instruments - guitar or plucked acoustic bass - traverse the musical scale. Potentially then, the RS-10 will have better quality bass than most rivals, since few manufacturers choose to go down this difficult and even contentious route: some designers conclude that reduced sensitivity and increased cost weigh heavily against this type of loading. We shall see!

Flat Race

Rega use a flat-panel BMR drive unit in their new RS-10 loudspeaker. That puts them ahead in the race to this new technology, thinks Noel Keywood.

And finally Rega tell us that they had to design and build their own high quality tweeter to match the properties of the BMR. Yet again then, Rega have stamped their imprint on this part of the RS-10; most manufacturers buy a tweeter from an outside supplier, rather than design and build it themselves.

That's a quick outline of the new RS-10 I'm reviewing here. It's Regainnovative from top to bottom, if not unique. Naim have a BMR equipped loudspeaker, the Ovator, and PMC use transmission line loading, in their new Fact 12 for example, a loudspeaker similar to the RS-10 in outline, but with a £12,000 price tag!

The bigger a transmission line the better; small ones don't even work properly. This explains the RS-10's one-metre height (1005mm) and depth of 440mm. Rega have kept the front baffle narrow (200mm) to lessen visual impact and improve imaging.

Narrow cabinets can be knocked over – not so good when a loudspeaker weighs 38kgs as this one does – so feet project either side of the base and they house adjustable spikes. The RS-10 looks a sizeable loudspeaker, although its height is common enough as floor standers go.

The cabinets are well veneered and have a deep gloss lacquer finish that's attractive. Real wood Cherry and Walnut veneers are available.

The connection panel has terminals that offer bi-wiring, fitted with quality wire links for a mono wiring option.

I'll not attempt an explanation of BMR here as it can dive into arcane complexities about the way panels vibrate. It's a technology that emerged from Britain's Defence Research Agency (DERA) in an attempt to find commercial use of a sound transmission system used in helicopters. Whilst panels have been driven by exciters before, this technology simulated the panel optimally, based on an understanding of its behaviour derived from computer modelling (Finite Element Analysis). The result was a panel that behaved so consistently it could be used as a high quality loudspeaker.

Mission loudspeakers developed this as NXT technology, the basic idea being to replace every moving coil loudspeaker in the world with a higher quality, vibrating panel NXT transducer. Nice work if you can get it!

It didn't work out, but NXT

drivers sounded fabulous all the same, clear, super smooth and totally cohesive. They eliminated multiple drive units, crossovers, differing materials and phase changes that, in summary, resulted in a super clear, smooth, even and just relaxedly natural sound, almost character free. An NXT panel was a panel that wasn't there, in sound quality terms.

But NXT panels had the usual low frequency limit of any panel and so a bass unit in a box was necessary,

The rear panel carries bi-wiring terminals with wire links, and three-position bass quality adjustment. as in the Cyrus Icon loudspeaker. And manufacturers had difficulties with materials, exciters and much else.

In the end it became apparent to engineers working with NXT that the technology could be used to produce a one-piece, fit-and-forget drive unit, bought in from an expert outside supplier as usual – and that is what has happened.

If you want to know more just go to UK based Cotswold Sound Systems (www.cotswoldsound-systems.com) who produce BMRs (they're ex-NXT people). The technology also migrated to Germany and then China, although NXT had a Far East presence and offices in Hong Kong well before BMR got going.

So that's where Rega's BMR drive unit comes from and what lies behind it. They're right in saying

> that this one drive unit is able to cover a wider frequency range than most - and do it well. It runs from 300Hz up to 6kHz, meaning four octaves of the audio band, leaving three to the bass unit and two to the tweeter. It's one octave more than a cone midrange range - and done better! That's why, when I saw the flat, round form of the BMR I suspected Rega's RS-10 would be a very interesting loudspeaker, likely with unique sound quality, knowing haw fastidious Rega are in their engineering. But with loudspeakers, matters are never simple. Currently, BMRs don't work smoothly above 6kHz, causing Rega to use an additional tweeter. Fine - but as we found out engineering our World Audio Design KLS3 Gold loudspeaker, with its HD3P Gold Dome Audax piezoelectric tweeter, crossing over at 6kHz means getting the tweeter less than 3cm from the midrange unit (half a wavelength) to avoid phase cancellation and this is impossible, especially

with a large face plate.
Subjectively the impact
isn't great but it does
compromise phase
matching and does have
subtle impact. Rega have

rather ignored this whole issue with

the RS-10 and it did affect things.

Ignoring cost, Rega use two high power bass units in this loudspeaker, a 200mm deep bass unit rear loaded by a transmission line, and a 100mm upper bass unit rear loaded by a closed box - very unusual. Using two bass units of different size and loading gives smoother bass, Rega claim. Doubtless, but one bass unit feeding one transmission line could probably have done the job and saved more than a few pennies. The RS-10 is not exactly a cost-inhibited design, shall I say!

But we all know that good bass is worth having, if elusive. Rega have quite obviously gone for broke here: the RS-10 has been designed stupid for good bass. Measurement showed the transmission line works well and this loudspeaker is, as hoped, a very easy load for an amplifier, far better in this respect than most rivals. It is basically a four ohm load so I used the four ohm taps of our Quad IIeighty valve amps.

The two bass units and the port at the end of the transmission line sit in a group on one side of each cabinet, concealed by a clover shaped grille. This means the RS-10s come in handed pairs and can be arranged with bass units facing inward or out, according to taste. I tried both and found that when firing outward shading by the cabinet reduced lower midrange presence, taking warmth and body from the sound. Firing inward gave a fuller sound and a smoother balance, if with less ethereal sound staging and also some coloration that wasn't so obvious when firing outward.

SOUND QUALITY

The Rega's were run in over a weekend with pink noise, then run for a few nights with a Monitor Audio De-Tox CD, so they received 72 hours of run-in before use. I used a variety of components with them as always, not one fixed system. Most usage was with an Astell&Kern AK I 20 high resolution digital player feeding a Furutech Esprit preamp through an optical S/PDIF link, the preamp driving a pair of Quad II-eighty valve power amplifiers, and alternatively Quad Elite QMP transistor monoblock amplifiers. The valve amps were set to 4 Ohms. A Cyrus CD8T CD transport supplied silver disc digital into the Esprit.

The few NXT loudspeakers I heard impressed me no end, with a lovely tonal purity and smooth

cohesive presentation. There were times when I wondered if NXT was even better than an electrostatic but that's another argument for another

What I was aware of immediately with the RS-10 was that vocals weren't tinged with any particular quality, or low level coloration. Here I'm thinking particularly of aluminium cones that have a patina of 'lightness' to their sound, and impose a subtle metallic sheen. The RS-10s had none

power, supporting Nigel Kennedy playing Vivaldi's Spring. This was a performance few loudspeakers could match, bigger Martin Logans excepted.

With the bass units facing outward there was a lack of lower midband richness, if an ethereal sound stage. I wasn't convinced and found I preferred the big Regas with their bass units facing inward, spaced 6ft apart. This added in some lower midrange energy - warmth and body

"The single drum strike at the start of Angelique Kıdıo's Aye sounded firm and powerful, lacking the big resonant thrum I hear from ported loudspeakers"



Rega's novel BMR midrange unit gives it a unique sound.

of this. Diana Krall (24/96) sounded clear and perfectly real, centre stage, singing Narrow Daylight into a close microphone. Not only was her voice uncoloured but it was smooth. The absence of local resonances and the minor colourations they produce, a quality of the BMR unit, was obvious as a matter-of-fact rightness to the delivery. No sheen, no quack, no imbalances, no enhancements or detractions, just a simple and pure mid-band delivery that had vocals hovering convincingly centre stage. I identified this aspect of NXT / BMR straight away and the RS-10 enjoys it as a great advantage. If you want clear, smooth, uncoloured and totally natural vocals, the RS-10s deliver.

Violins of The English Chamber Orchestra sounded dense, strongly textured and smooth. They sat on a wide sound stage and had visceral

to vocals - and gave a well balanced

However, with a direct path from the bass units and port to my ear I also became aware with this arrangement that there was some slight 'whoomph' coming from the box, an overhang to vocals occasionally audible. This was picked up under measurement by our decay analysis, so it is a quantifiable effect, if not a major one. Unfortunately, for £8k it isn't impressive.

Moving down the scale, bass lines played with firm authority and a dry, even quality free from the bounce given to notes by a typical ported reflex loudspeaker. There's no doubt that Rega have got their transmission line working well (not all of them do) and it was responsible for a firm, even quality to notes as they moved up and down the bass scale.

The single drum strike at the start of Angelique Kidjo's Aye sounded firm and powerful, lacking the big resonant thrum I hear from ported loudspeakers. Setting the bass adjustment to maximum, this thrum appeared, bass gaining bounce. Setting bass to minimum bass dried out to a harder thud that, on balance, I preferred. With bass at minium the RS-10 has tightly controlled bass that hits hard and runs deep, but a cabinet warmth accompanies the sound.

The Regas go low; the synths in Lady Gaga's 'Monster' moved the room with vigour and the extended subsonics shook the settee around me. There was less of the inflated



Putting bass units and port on the side panel gives the RS-10 a modern, crisp looking front face.

bounce of many loudspeakers, more of a considered grip and firm control.

The RS-10s were fascinatingly in control all the time and their near perfect bass damping was nothing other than impressive — and a step up on all else. But by being quite different from the norm these loudspeakers need careful judgement; they're not radically different from all else but they aren't the same either and need acclimatisation.

My only small reservation was that by energising the cabinets more heavily, 'Monster' made their boxy whoomph more apparent, especially with the big Quad Elite QMP Monoblock transistor power amplifiers. This apart however, the RS10s are a step ahead in their bass quality and do a very good job in all respects, sounding firm, tuneful and powerful.

Rega have put their new tweeter into nice subjective balance with the rest of the loudspeaker: it sounds fast, sweet and clean with high resolution digital I played from an Astell&Kern AK I 20 player.

Treble is apparent; this is not a soft sounding loudspeaker by any

means; cymbals in Narrow Daylight rang strongly but sweetly and snares had a hard presence in Misery (24/96) from Dave's True Story. But I was always aware that treble stood apart from all else; the tweeter has its own presence in its own space and lacks integration. Arguably, this is no big deal as the quality and balance Rega have struck were excellent and will have wide appeal, but it did contribute to the character of the RS-10, making it a loudspeaker that was a sum of identifiable parts, rather than a seamless whole. So the RS-10 isn't neutral, even though it is well considered and aurally attractive.

With the Trondheim Soloists playing Mozart's Violin Concerto in G Major the lead violin of Marianne Thorsen was richly detailed, but free from glare or screech. If anything, by normal standards it was warm, but

as I was playing a high quality 24/96 recording free from CD screech this was also down to better digital.

CONCLUSION

The RS-10s have a lovely, wide open mid-band that is free from the subtle afflictions suffered by most loudspeakers. Their high technology BMR midrange unit is very obviously a great player. Classical strings fared especially well and orchestras sounded large and smooth through the RS-10s

With great bass quality and sparkling treble the RS-10 has an attractive sound, but it also has some blemishes that hold it back.

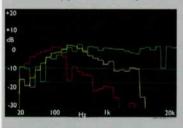
Different from most else, the RS-10 demands to be heard. Offering poise and clarity this loudspeaker defends its space amongst price rivals, but it doesn't rise above them.

MEASURED PERFORMANCE

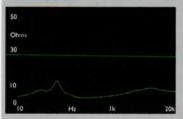
Because of the distance between tweeter and midrange BMR, and the high crossover frequency of 6kHz, phase integration between the tweeter and BMR was poor. This caused frequency response to vary substantially with microphone position/listening height. Our published response shows the best result possible, on-axis of the BMR unit, requiring an ear height of 1m, which is fairly typical. Away from this position response varied substantially, generally treble loss causing a warmer sound balance. Overall, however, the RS-10 does not have strong treble and will not be an overtly bright sounding loudspeaker, measurement shows.

FREQUENCY RESPONSE

Green - forward response Red - port output Yellow - upper bass output



IMPEDANCE



The side firing bass/midrange units (200mm and 100mm) fill in the lower midband and the larger one is loaded by a long transmission line within the sizeable cabinet, that in theory should absorb all back radiation. This appears to work well as bass output does not peak, but falls away smoothly toward low frequencies. The impedance curve is also flatter than is common, with just one well suppressed residue of resonance at 60Hz

The RS-10 is an almost perfect resistive load and free of resonant systems, as Rega claim. Impedance measured 5 Ohms overall and DCR was low at 3.1 Ohms, so the RS-10 draws current and needs a good amplifier. Sensitivity was good at 88dB from one nominal watt (2.8V) of input, amplifiers above about 40 Watts being needed for high volume.

A 200mS decay analysis showed little colouration above 1kHz but below 1kHz there is more delayed output than expected. This may make the RS-10 sound a little rich or coloured. There were no bass hot spots in a decay map, meaning no bass overhangs and there the RS-10 does again meets Rega's claims of a non-resonant system.

The bass level adjustment system had no measured effect at all – strange. It did have audible effect.

The RS-10 follows an unusual design approach that works well in most areas but needs improvement in some. BMR / treble unit integration needs improving in particular and there is colouration in the upper bass. **NK**

REGA RS-10 FLOORSTANDING LOUDSPEAKER £7.998



VERDICT

capable

Firm, tuneful bass, wide open, natural midband and sparkly treble, but some boxiness and incohesive. Nice, but imperfect.

FOR

- spacious midband
- tuneful bass
- sweet treble

AGAINST

- incohesive
- box 'whoomph'

Rega

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

TURNTABLES

REGA RPI 2010 €225

Pleasing sound, fine build and ease of setup and use make this a great first 'real' hi-fi turntable.

REGA P2 2008 £300

Excellent value for money engineering, easy set up and fine sound.

2008

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

MICHELL TECNODEC 2003

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

FUNK FIRM VECTOR II 2009 £860

Innovative engineering gives a nimble, pacey and musical sound that's one of the best at the price.



MICHELL GYRODEC SE 2005 £1,138

Design icon with superlative build and finish. Sound is beautifully smooth, effortless and exceptionally expansive. No longer peerless at the price, but still a brilliant platform.

MARANTZ TT-15S1 2005 £1,299

Cracking all in one deck/arm/cartridge combination, this must surely be the best sounding 'plug and play package at this price point.

ROKSAN RADIUS 5.2 2011 £1.450

Although getting expensive, the latest Radius is a highly grown up package with a flowing yet engaging nature; a fine package.



AVID DIVA II SP 2010 £2,000

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

INSPIRE ECLIPSE SEv2 12

€2,349 2010

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

NOTTINGHAM ANALOGUE HYPERSPACE 2010 £2,390

Deliciously spacious, lyrical and beguiling sounding turntable, but lacks ultimate grip.

MICHELL ORBE 1995 £2,500

The top Michell disc spinner remains a superbly capable all rounder with powerful, spacious sound that's delicate and beguiling.

DR FEICKERT WOODPECKER 2010 £3,445

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



LINN LP12SE

2010 €3.510

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

ACOUSTIC SIGNATURE

STORM 2011 €3.612

An excellent high end design with a smooth, solid, open and lyrical sound and razor sharp styling and build.

FLETCHER AUDIO OMEGA .5

Charming high end turntable that's a fitting testament to the late Tom Fletcher.

2010 €3,750 PALMER 3

Eccentric hand built high end turntable with a pleasingly smooth, sweet and lucid sound.



E.A.T. FORTE S EVO 12 2010 £4,750

Excellent premium price turntable with power, precision and passion aplenty, but relaxed and easy going by nature too. Geat value package with the Pro-ject Evo 12" arm option.

ACOUSTIC SOLID

ONE 2007 £4,050

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

SME MODEL 10A 1995 €4.556

Exquisitely engineered deck and SMEV tonearm combo that's an extremely accomplished performer with classical music.

AVID VOLVERE

SEQUEL

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

BRINKMANN BARDO

2010 €5.845

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



McINTOSH MT10 2008 £8,995

Big, expensive, controversially styled and glows more than some might consider necessary, but an astonishingly good performer.

EAT FORTE 2009 €12.500

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

TONEARMS

REGA RB251

2009 £136

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

MICHELL

2003 TECNOARM A

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

£442

ORIGIN LIVE

SILVER 3C 2010 £599

Excellent mid-price tonearm with a clean and open yet lyrical sound.



HADCOCK GH-242 EXPORT

KPORT 2010

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 SMEV's magic at just over half price. Exquisitely built and finished, and a design classic. Faces stiff competition these days, but lovely nevertheless.

SME 312S 2010 £1,750

Twelve inch magnesium alloy armtube plus SMEV bearings makes an impressive transcription tool with an insightful yet composed sound. Superlative build completes the package.



GRAHAM PHANTOM 2006 £3,160

Sonically stunning arm with magnificent bass dexterity and soudstaging. Build quality up to SME standards, which is really saying something!

TRI-PLANAR

PRECISION 2006 £3,600

Immaculate build, exquisite design and one of the most naturally musical and lucid sounds around.

SME SERIES V 1987 £2,389

Vice-like bass with incredible weight, ultra clear midband and treble astound, although some don't like its matter of factness!

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

OL ENTERPRISE 3C 2010 £4,500

Few if any pivoted arms come close to this arm's combination of liquid musicality and forensic grip.

CARTRIDGES AUDIO TECHNICA AT-95E 1984

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

€25

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 DVIOX52003 £295

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

ORTOFON 2M BLACK 2007 £350

Staggeringly good high-end MM that uses a stylus from the MC Jubilee and easily rivals similarly-priced MCs

DYNAVECTOR DV20X-H2003 £395

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



AUDIO TECHNICA AT-OC9MLIII 2010 £399

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

ORTOFON RONDO BRONZE 2005 £500

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

LYRA DORIAN 2007 £649

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



BENZ MICRO GLIDER L2 2008 £650

Crisp, clean and detailed MC; particualry 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

IA 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 DA 100 SIGNATURE

£750

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



CAMBRIDGE

AZUR 840C 2006 £800

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

NAIM CD5/ 2008 £895

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

ROKSAN KANDY

K2 CD 2010 £900

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

BENCHMARK DAC-IS 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.

ELECTROCOMPANIET

PD-I 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.

ELECTROCOMPANIET EMC-IUP 2009 £3,450

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



ACCUSTIC ARTS CDPIMK2

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.

ELECTROCOMPANIET EMP-I/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-

dCS DEBUSSY 2011 £7,500

Compact, stylish DAC bringing the gloriously smooth, svelte, spacious sound of dCS to a wider audience.

ACCUSTIC ARTS DRIVE I 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

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 5: 2007 £725

The italic 'i' version remains one of the most musically competent and dynamically engaging integrateds at the price.

AUDIOLAB 8000S 2006 £400

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

CAMBRIDGE 840A V2 2007 £750

Version 2 addresses version 1's weaknesses to turn in a mightily accomplished performance, offering power, finesse and detail.

SUGDEN MYSTRO 2010 £1,225

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

NAIM NAIT XS 2009 £1,250

With much of the sound of the Supernait at half the price, this is powerful, articulate and smooth beyond class expectations.

CREEK DESTINY 2 2010 £1,445

Beautifully voiced integrated amplifier with a distinctly seductive, tube like sound. A 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 hybid transistor amplifer, with a lively, musical nature.

NAIM SUPERNAIT 2007 £2.475

Integrated tour de force from Naim that combines impressive functionality and connectivity with super sound.

AUDIO RESEARCH VSI60 2009

£3,298

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

LEEMA TUCANA II 2010 £3,495

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



SUGDEN 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. OUAD II CLASSIC 2010 £4,500

Beautiful retro styled integrated amplifier with a subtle, supple sound - although needs matching to speakers that are easy loads.

QUAD II CLASSIC INTEGRATED 2010 £4,500

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

SIM AUDIO MOON 600i

2010 £5,750

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

MUSICAL FIDELITY

AMS35i 2010 £6,000

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

DARTZEEL CTH-8550

2010 €16,500

Charismatic and quirky high end solid-state integrated amplifier with superb sound and a charming visage.

HEADPHONE AMPLIFIERS

FIDELITY AUDIO HPA 100 2011 £350

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

MUSICAL FIDELITY
X-CAN V8 2008

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

PREAMPLIFIERS

headphones.

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 masserclass

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.



2007 €2,200 **NUFORCE P-9** 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-I 2010 £2.850

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

QUAD II-40 2005 £3,230

Modern tube monoblock power amplifiers with plenty of power, liquid and open midband 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

OUAD II-80

€5.500 2010

2005

£6,000

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'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

O 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.

2007

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

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.

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

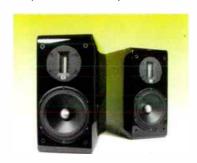
2008 £1,600

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

XTZ 99.25

2010 £640

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



ACOUSTIC ENERGY AEI CLASSIC £845 2006

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 midprice standmounters represent top value.

RRR FS100 2007 £1,055

Mind-boggling amount of loudspeaker for the money. Big and sturdily built with serious bass and awesome soundstage scale. A real bargain.

ONE THING AUDIO ESL57

2007 £1,450

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

GURU QM-10P 2007 £1,595

Quirky but adorable standmounters that are way off the pace in respect of detail and power, but well capable at playing a tune and pulling you in to the music.

USHER BE-718 2007 £1,600

Beryllium tweeters work superbly, allied to a fast and punchy bass driver. The result is subtle, smooth and emotive.

ISOPHON GALILEO 2007 £2,100

Big standmounters that really grip the music and offer quite startling dynamics and grip.

MY AUDIO DESIGN

MYCLAPTON SE 2010 £3,299

Powerful, dynamic, musical yet refined, this unconventional point-source design yields dramatic sonic benefits.

SPENDOR S8E 2008 £1,895

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



MONITOR AUDIO PLI00 2008 £2,300

The flagship 'Platinum' series standmounter has a lovely warm and delicate sound with superlative treble.

PMC OBII 2008 £2,950

Cleverly updated floorstanders give scale and solidity in slim and well finished package.

EMMINENT TECHNOLOGY

2010 €2,300 LFT8B Brilliant ribbon/moving coil hybrid with seam-

less, 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 1.1 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.

2007 £5,000 **R&O REOLAR 9**

Technically impressive and visually striking loudspeakers with sound quality that more than matches their looks.

TANNOY DEFINITION DCIOT 2010 €5,000

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

£795 ISOTEK AQUARIUS 2010

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

ECLIPSE

TD712z/2 2011 2011 £5,100

Flawed genius, and wilfully so. These loudspeakers don't do everything well, but what they can do is profound and enthralling; rhythms, dynamics and soundstaging.

ARS AURES MI 2006 £5,995 Sublime build and finish allied to an insightful, assured and even-handed musical perfor-

mance 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

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



GERMAN PHYSIKS LIMITED 11 2011 £7,800

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

USHER BE-10 2009 €10,500

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

REVOLVER CYGNIS GOLD 2010 £15,000

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

MARTIN LOGAN CLX LINEAR

2010 £15,990

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

B&W 801D

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 1701 2010 €349

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

TOWNSHEND MAXIMUM

2003 £800

£19

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

Our unqualified recommendation for those seeking a serious sounding pair of in-ear phones. Smooth, detailed and musical.

SENNHEISER PX-100 2002 €29

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

GOLDRING DRISO 2006 €70

Excellent build and fine sound makes these budget cans superlative value for money.

SENNHEISER HD-590 1998

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 earspeakers 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

2004 £260/0.6M

Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency. Tight and tuneful bass mixed with air and space results in a cracking cable for the money.



TCI CONSTRICTOR

13A-6 BLOCK 2003 £120

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

MISSING LINK CRYO REFERENCE 2008 £375

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

TUNERS

DENON TU-1500AE 2006 £120

Excellent entry level analogue tuner; slick sonics and fine feature count make it a bargain.

CAMBRIDGE AUDIO 640T

2005 £250

€550

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

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

ARCAM SOLO MINI 2008 £650

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

SHANLING MC-30 2007 £650

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

PEACHTREE AUDIO

£1,000

Excellent sounding iPod dock, impressive DAC and fine amplifier section make this an excellent one box style system.

ARCAM SOLO 2005 £1,249

Excellent all-in-one system, with a warm, smooth and balanced sound to match the features and style.

LINN CLASSIK MUSIC 2008 £1,250

Neat update of the original and best one-box stereo system; superbly musical sound beats equivalently priced separates.

NAIM UNITIQUTE 2010 £1,350

Great little half width one-box system with truly impressive sound allied to a wealth of source options.

MERIDIAN F80 2007 £1,500

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



AURA NOTE MUSIC CENTRE

2007 £1,500

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

NAIM UNITI 2009 £1,995

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

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.

If you want a serious upgrade....



Conqueror MK3C Tonearm by Origin Live

Tonearm of the Year Award HIFI WORLD

Most wanted component award STEREO TIMES (USA)

Best sound at the show award KLANGBILDER (Vienna)

Perfect 10 award "The most addictive product I've heard"

AUDIO 10 (USA)

"For me Origin Live in the analogue sector is the discovery of the year! ..."

IMAGE HI FI (Germany)

"The biggest improvement I've made in 25 years of listening to music and lots of exchanges of hi-fi stuff!!breathtaking, big new level! It's like coming to Nirvana".

OWNER COMMENT- FERDINAND ROEHRIG

.....have you considered the benefits of changing the tonearm in your system?

Changing an arm can be easy and <u>much</u> more influential on performance than changing a cartridge. Not to mention being more cost effective.

Origin Live arms are not just "good" or even "better"-they embody a refusal to be satisfied with anything but the best. For this reason they astonish users with breathtaking performance over market references.

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Introducing Tempo
the cable that reveals
the inner details in the music

TEMPO Incorporating the best technology

The interconnect that beautifully communicates the artistry of the musicians through your own speakers.

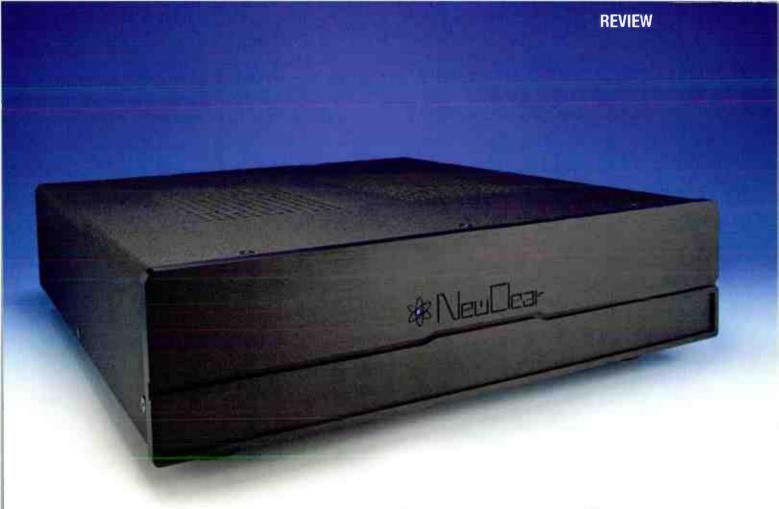
"The Tempo is a top flight interconnect that provides a wealth of upper mid detail..."

HI-FI WORLD

"You can hear the scale of the venue in the reverb characteristics and there's no shortage of air."

HI-FI+

Slack Shodium
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www.blackrhodium.co.uk



Power direct

Sold direct from the dealer, NewClear's formidable Class D NC1000L power amp is reviewed by Paul Rigby.

vailable on import-only, direct from the manufacturer and offering 500V into 8 Ohms, the cool-running NC1000L comes from US retailer, Audio Video Choices (AVC).

Arriving within a simple, heavy gauge steel chassis, chosen for its rigidity and mass (the amp weighs in at almost 12kg and spans 355x380x85mm) plus an aluminium faceplate, the metalwork costs have been minimised to focus more on the internals. On the rear, alongside the speaker connectors, are sets of RCA unbalanced and XLR balanced inputs for each channel plus a rocker power switch and mains connector.

"Inside, we use two B&O ICEpower 1000ASP modules: one for each channel, sharing only the power cord. The largest and one of the earliest modules made within the series, initially designed for Pro audio use, it's very powerful and tough",

confirmed NewClear boss, Sean Brady.

Some ICEpower implementers drop a module into a steel box and sell it 'as is'. NewClear wanted to properly implement the technology, "Typically, you will find a buffer stage in front of an ICE module to raise the input impedance, which is relatively low and not friendly for a range of valve pre-amps. The buffer offers a balanced circuit too. They do the job, technically, but they don't change the sound of the amp.

We use a transformer for that input buffer role. It eliminates ground loops and also strips distortion from the incoming signal.

Other changes include heavy gauge, internal silver-plated copper and Teflon cables. We also cryogenically treat our cables".

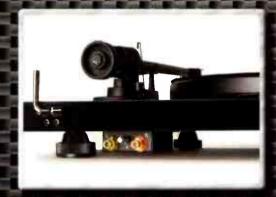
Our own tests (see box out) did throw up a selection of issues that I put to Brady. On the subject of those 'live' speaker terminals? "The connectors are the common shrouded type that meet European



The Carbon Age



Introducing the multi-award winning Debut Carbon from Pro-Ject Audio Systems. The Debut record player is an icon of the entry-level audiophile market, and this latest incarnation elevates the model to a new level of audio quality.



Debut Carbon

Brand new one-piece 8.6" Carbon Fibre tonearm - New motor isolation set-up - Upgraded 12" platter with higher mass - New mains supply method - Cable junction box - Ortofon 2m Red Pre-Fitted - Available in 7 high-gloss colours

Pro-Ject Audio Systems is distributed in the UK by

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standards so no-one can get shocked", said Brady. As for the voltage gain? "The pre amp requires a little bit more advancement in the volume control but only a couple of extra clicks. We don't recommend a passive pre amp, however". I required gain to be increased from my standard 'loud' setting of '64' to '72' on my Aesthetic Calypso valve pre.

SOUND QUALITY

I connected the NewClear with a Black Rhodium Cratos (£125) mains cable and played Julie Cruise's 'Falling' on vinyl via my Quad ESL-57, One Thing modified, electrostatics (the NewClear drove them without a problem). Bass background was admirably dark while lower frequencies were confident and detailed. The introductory, lower midrange whispering Cruise vocal was clear and easily distinguished. A touch of upper mid aggression did encroach upon the broad soundstage, however, that proved to be exacting during vocal and guitar crescendos.

Switching to the 45rpm version of Ernestine Anderson's 'Never Make Your Move Too Soon', the double bass proved heavy and powerful, dominating the mix. Piano was lively and vivacious although rather shouty within the high upper mids. That said, piano had swing and bounce: this was one pianist who was having serious fun. Treble was relatively clear although not extended.

Changing the mains cable to a more expensive Tellurium Q Black (£800), upper mids proved far more articulate and informative with a

further reduction in distortion. Piano exhibited upper mid control with enhanced instrumental separation while vocals were relaxed and calm.

exuding control. I recommend this cable for use with the NewClear. although this reduces the amp's value for money.

Turning to rock-based Anekdoten and, not surprisingly, this was where the NewClear shone. Sporting a quality Densen B-475 CD source, the NewClear threw itself into the music with gusto while the dynamically driven upper mids relaxed into the fast pace

Swopping the Quads for a pair of unpowered, bookshelf Spendor \$3/5R2s, the rock output proved to be just as enjoyable. The dominating lower frequencies provided a largely smooth output that exuded a vibrant energy.

CONCLUSION

The NewClear NC1000L is arguably the best incarnation of the ICEpower modular design yet, Its thoughtful implementation provides a perfect niche solution for those who enjoy high-energy music or bass-significant output.

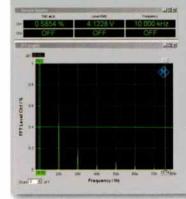
MEASURED PERFORMANCE

A Fluke multimeter showed each loudspeaker terminal was +63V above ground - classic and now outdated Class D. I say "outdated" because the last time I tested ICEpower1000 was on a Rotel 1092 around 2006, and it blew one of our spectrum analysers. Modern Class D (PWM) amplifiers (e.g. Hypex) rarely exhibit common mode offset, it causes too many problems. Power measured 578 Watts into 8 Ohms and 1156 Watts into 4 Ohms, awesome figures.

The NewClear should be fine with normal loudspeakers, where neither channel is either active or earthed. I would not let it near any (mains) powered loudspeaker / device.

Distortion levels - another problem with Class D - were sort-of low, just 0.006% at 1kHz for example, into 8 Ohms. But at 10kHz distortion hit 0.5% at 4 Watts output into 4 Ohms and.

DISTORTION



generally, distortion levels hovered around 0.3% at high frequencies, into low loads. The distortion spectrum varied wildly with level, unlike conventional amplifiers explaining why Class D - ICEpower especially - has a distinctive sound

Treble rolled down fast above 20kHz into a 4 Ohm load, a restricted bandwidth to ensure high frequency mush does not reach the loudspeakers. Damping factor was very high at 108.

Voltage gain was unusually low at x11. Most power amplifiers have a voltage gain of x30. Accompanying preamps will need high gain, at least x6 (15dB), plus plenty of output swing to drive this unit.

Modern Class D amplifiers rarely have 'live' loudspeaker terminals like the NewClear NC1000L. Around 60V is considered the safe limit when applied across the heart, through wet hands. The terminals are insulated, but still

Ignoring all this, if you need 1000 Watts from a compact amplifier that runs cool, the NewClear1000L can provide it.

Power (8 Ohms) 578watts Frequency response 5Hz-20kHz 91dR Separation -119dB Noise Distortion 0.3% Sensitivity 6V for full output **NEWCLEAR** NC1000L POWER **AMPLIFIER \$2.600** PLUS \$100 P&P







EXCELLENT - extremely capable

VALUE - keenly priced

Providing strength and power, this is one muscle-bound amp that offers heaps of musicality.

FOR

- musicality
- bass response
- value for money
- rock-centric

AGAINST

- low gain
- assertive upper mids
- careful pre-amp matching

NewClear 001 602 265 1628 www.newclearaudio.com



Hot clock

PrimaLuna has used a unique tube clock in its distinctive Prologue Premium CD player. Jon Myles thinks it's hot.

No losing this remote - it's big and heavy!



ake a quick glance at the ProLogue Premium and you might be forgiven for thinking you are looking at one of PrimaLuna's well-regarded valve amplifiers.

Weighing in at a hefty 15kgs, it sports six glowing tubes in front of the encased transformers at the back of the unit.

A closer look, though, will reveal that the solid steel faceplate contains a CD drawer, transport controls and rectangular LCD screen. The similarity to the Dutch company's amplifiers isn't entirely coincidental however. PrimaLuna says the power supply of the Premium CD player was derived from its award-winning ProLogue Three pre-amp and the casework shares a similar style to

other products in their extensive range.

The idea of adding tubes to CD players is nothing new – but few companies do it with such detail as PrimaLuna. Not for them the use of a single tube as a buffer stage to try to ameliorate some of CDs brittleness.

Instead the ProLogue Premium sports a pair of 12AU7 valves per side with a 5AR4 tube rectifier in a true dual-mono design.

And inside the digital circuitry makes use of PrimaLuna's proprietary SuperTubeClock. This is a tube-based clock that employs a mini-triode valve in place of the usual solid-state oscillator found in most CD players. There's not just one but two of them inside, and they are said to deliver significantly lower levels of jitter.

Digital duties are handled by a 24bit/192kHz upsampling circuit and DAC from Burr Brown. These are used by the rear-mounted USB input – which PrimaLuna says was no mere afterthought. Its engineers did exhaustive listening tests on various USB interfaces before settling on the hiFace from M2Tech in Italy. This device converts the jitter-filled USB from your computer to S/PDIF, said to dramatically improve digital signal quality even before it gets to the SuperTubeClocks.

Sitting alongside the USB input are the optical and co-axial outputs alongside the RCA phono connections.

The front panel track controls feel precise and the disc drawer loads smoothly with time from loading the

CD to play commencing of just a few seconds.

For those who like not to leave tubes open to the elements — or simply cannot because of small children/pets — there's a quick-release valve cover that allows just enough of the glow to shine through to remind everyone this isn't your run-of-themill box of electronics.

Completing the package is PrimaLuna's system remote control
– a black anodised aluminium slab which is one of the biggest and heaviest you are likely to come across. Suffice to say there's very little chance of losing it down the back of the sofa.

SOUND QUALITY

The ProLogue Premium is undoubtedly larger and heavier than most CD players. Its near eight-inch height and the use of tubes means it demands some room to breath – although the valves don't generate as much heat as a power amp.

Once adequately sited and connected to my Naim SuperNait it became clear the ProLogue is no identikit silver disc spinner. What it does do well is make recordings sound infectiously alive and musical. John Coltrane's 'One Down, One Up: Live At The Half Note' collection sounded full of atmosphere and shimmering transients through a pair of Quadral's excellent Platinum M50 floorstanders. The PrimaLuna managed to pull all the essential details off the disc - even down to the occasional background chatter and clinking of glasses.

Coltrane's saxophone was indeed a joy to listen to – his famous 20-minute solo suffused with controlled energy and emotion. Some lesser CD players can reduce this jazz tour-deforce to a jumble of unconnected notes but here it was a coherent whole with the integration between Coltrane and the Tyner/Garrison/ Jones axis seeming almost telepathic.

The PrimaLuna clearly has a way with rhythmic propulsion that translates into an upbeat listening experience.

Bruce Springsteen's 'Magic' came across as bouncy and full of emotion. The PrimaLuna seems to go out of its way to delve into the emotion of tracks, delivering a punchy sound which can also be subtle and composed when the music demands.

Soundstage was wide and high with instruments weaving around



PrimaLuna's
triode-based
SuperTubeClocks
oan be seen to the
left of the main digital circuit board.

each other with locked-in timing.

It might seem predictable to put the player's distinctive sound down to the use of valves: it undoubtedly possesses those tube-like qualities of a sweet midrange, glistening strings and saxophones together with a knack for female singers and a soundstage with masses of depth. more nuanced and precise. But to be fair, the PrimaLuna was such an enjoyable listen at other times that it's easy to overlook its occasional failings.

That quality carries through to the USB input and gives a clear indication of how much better higher-resolution music can sound.

"the PrimaLuna seems to go out of its way to delve into the emotion of tracks, delivering a punchy sound which can also be subtle"

Just listening to Eleanor McEvoy on 'Yola' I knew the sound hasn't gone through the usual collection of electronic parts.

But, perhaps just as predictably, it's not all perfect. Occasionally that infectious character seemed to be masking some of the detail – and overall there's no doubt other CD players at this price are rather more adept when it comes to the reproduction of big, deep bass.

Playing Bernard Haitink and the London Symphony Orchestra's recording of Beethoven's 5th and things didn't fall into place quite as well, with bass climaxes a little softer than is ideal.

There was nothing particularly wrong with the presentation – just a feeling it could have been a little

A case in point is Daft Punk's latest 'Random Access Memories' opus. Spin the CD and the Prologue soon gets the feet tapping – teasing out the beats and multi-layered embellishments to great effect.

Switch to the 24-bit, 88.2 kHz sample rate master copy of the recording, though, via a MacBook Pro into the USB input and things step up a notch. It seems this is the version from which all the others (CD, iTunes, vinyl etc.) were taken and it shows.

There's more space around instruments with a better weight to the bottom end. Even the Parisian duo's trademark Vocoder voices become more intelligible.

Exactly how much the M2Tech hiFace interface is adding to the



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party here is impossible to say - but PrimaLuna say it's significant and so we'll take their word for it. Sir Colin Davis and the LSO's rendition of Berlioz's 'Grande Messe de Mort' also sounded enthralling on 24/48kHz - with terrific texture and definition of both voices and instruments.

There's little doubt that high-res material sounds better through the PrimaLuna's USB input than standard Red Book CD - which, really, is as it should be.

Obviously few people are going to pay £3,750 for the USB input alone - but it's nice to have the option if you want to combine CD replay with higher resolution music in one package.

CONCLUSION

Sales of CD may be on the decline and the demise of the physical format has been predicted so many times most of us have given up counting. But there's no getting away from the fact that there are still millions of the silver discs in circulation across the UK and being sold, and they need something to play on.

How well does the PrimaLuna perform this task? In the final analysis it does some things very, very well indeed.

If you are looking for a supremely musical disc spinner which draws you into the music and consistently gets the toes tapping then this could just be just up your street.

Dual-mono construction utilises three valves per channel





The M2Tech-sourced hiFace USB input at rear - said to give lower iitter levels.

It imbues music with a deliciously liquid feel and while perhaps not always absolutely accurate it more than makes up for that with an enjoyable, big-hearted sound.

Live recordings come over well with plenty of scale and ambience and detail levels are never less than good.

What it doesn't have is the ultimate bass extension of some other players and in absolute terms it adds a hint of warmth to the sound - but that could be a plus point for those who still criticise CD for sounding overly harsh and artificial.

The USB DAC input is also a major plus - bringing the benefits

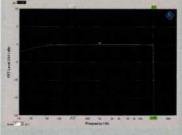
of high-resolution replay should you want it. Unlike some machines this isn't simply a bolt-on feature for added showroom appeal but an integral part of the design which performs admirably in practice. Factor in solid build and the upmarket remote and the Primal una makes quite a case for itself even at its relatively elevated price point of

In the final analysis, some people may crave a more analytical edge to their CD or a weightier bottom end. But you would sacrifice some of the PrimaLuna's effortless music-making. And at the end of the day isn't that what it's all about?

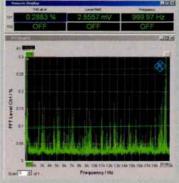
MEASURED PERFORMANCE

Frequency response of the Prima Luna Prologue Premium CD player was flat

FREQUENCY RESPONSE



DISTORTION



across the audio band, up to 21kHz our analysis shows. There was a slow low frequency roll down below 28Hz that will reduce sub-sonics.

Distortion was a little high at -60dB, measuring 0.28% against a common value of 0.2% or so. As a result EIAJ Dynamic Range was low, measuring 97dB where 100dB is common and 102dB possible. Noise contributed to this. Output was high at 2.5V. Signal related jitter was 160pS.

The Prima Luna Prologue Premium measured reasonably well, but it was below most competitors in the figures it produced, even if differences were small.

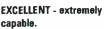
Frequency response (-1dB)

CD	28Hz -21kHz
Distortion CD (%)	
0dB	0.12
-60dB	0.29
Separation (1kHz)	116dB
Noise (IEC A)	-101dB
Dynamic range	97dB
Output	2.5V

PRIMALUNA PROLOGUE CD/ **USB DAC £3,750**







VERDICT

A delicious sounding player that brings an infectious joie-de-vivre to CD replay. High-quality USB input is an added bonus.

FOR

- fluid sound
- strong timing
- USB input
- quality remote

AGAINST

- slightly rolled-off bass
- others are more analytical

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VERDICT ••••

Hi-Fi World, Tony Bolton, March 2012, Overall: 5/5 HI-FICE magazine

Hi-Fi Choice, Ed Selley, January, 2012 Overall: 5/



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Pure Jongo

ure almost single-handedly kick-started the DAB market in the UK – with its Evoke-1 being the first sub-£100 receiver to hit the shops.

And whatever you think of the format's inherent advantages and disadvantages there's no doubt it has now established a firm and committed listening base for itself.

Pure has expanded and revised its radio range in the decade or so since the appearance of the original

Evoke – but now it is looking to break into a new market in the form of simple, wireless multi-room audio.

The system is dubbed Jongo and the first two products in the range are the wireless S3 speaker and the dinky A2 hi-fi adaptor. Pure also supplied one of its Evoke F4 radio sets — which can integrate into the Jongo system via Bluetooth or wi-fi.

SET-IIP

Any multi-room system such as this has to tread a fine line between

convenience, sound quality and price. Get one of the parameters wrong and you are going to alienate a lot of potential buyers.

To Pure's credit – the Jongo system is a relative breeze to get up and running. With the Evoke F4 radio connected and tuned in on a table in an upstairs bedroom it immediately picked up the S3 in the kitchen below and began streaming internet radio.

The £170 S3 itself is a well-designed and surprisingly good-



AVID SH 70007 INGENIUM

TONE Audio Magazine

2012

Publisher's Choice
Award

"This level of performance, convenience and style makes for an award winning product."

Jeff Dorgay, Tone Audio Magazine, January 2013



"Oozes quality in both construction and sound"

Paul Rigby, Hi Fi World, March 2013



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The Jongo A2 turns any hi-fi into a streaming music centre

sounding unit for what is essentially a portable speaker.

A sculpted cube standing just a tad taller than an Apple iPhone 5 it contains four 19mm tweeters – one on each fascia – and a 9cm upward-firing subwoofer plus a 20 Watt amplifier.

The sound can be tailored from stereo 360-degree – which uses all the drivers – to stereo forward-facing which shuts off the back tweeters for close-to-wall placement. There's also mono 360-degree for placement in the centre of a room and an outdoor boost function for out in the garden, park or wherever.

In practice the 360-degree stereo option sounded consistently best — with a pleasant weight and depth which is a step-up from most run-of-the-mill portables. A handy battery life of 10 hours means moving the speaker from room-to-room throughout the day proves no problem.

A small LCD panel on the rear of the S3 gives a visual depiction of which sound setting is being used as well as information on what method is being used to stream information along with wi-fi signal strength and remaining battery life.

Getting the £100 A2 connected is just as simple. It's a puck-sized unit packing wi-fi (802.11b/g) and Bluetooth A2DP connectivity to turn your audio system into a streaming device.

Inside is what Pure describes as a "high-performance 24-bit 192kHz

DAC" and output connections come in the form of RCA phono analogue as well as digital coaxial and optical.

Both the S3 and A2 support WMA, AAC, and MP3 codecs as well

as analogue audio but not FLAC which may or may not be a dealer breaker for some.

SOUND-OUALITY AND USE

With the \$3,A2 and Evoke F4 set-up you have the choice of playing music or radio over wi-fi using the Pure Connect App or via Bluetooth. Bear in mind though that multiroom only works over wi-fi — while Bluetooth streaming is restricted to one Jongo. It's definitely a more basic system than, say, a Sonos.

To get the full benefit of the system the free Pure Connect App (available for both iOS and Android) is also a must. It gives the advantage of multi-room functionality meaning there's no limit as to how many Jongo speakers you can set-up and when done they each appear in the App, allowing you to stream a track to all or just one of them. You can also control volume settings as a whole or independently.

Just as importantly it pulls together all the purchased music stored on the device you're using as well as allowing access to some 20,000 radio stations and 200,000-odd programmes and podcasts free of charge.

For an extra £4.99 a month you get access to Pure Music's library of some 15 million tracks and the homepage offers up music, radio and podcast recommendations based on your listening patterns. Bear in mind though that streaming on-line is restricted to 128kbps which fails to do justice to the capabilities of the Jongo units.

That's because Pure has managed to provide the Jongo

system with a nicelybalanced tonal range across the devices.

The S3 is capable of a bigger sound than its dimensions would at first suggest — with a pleasing weight which avoids straying into thin or weedy territory. The bass also errs on the right

side of clarity above boom, marking it out from many other small speakers aimed at the portable market.

Playing Nick Cave's 'Murder Ballads' and his edgy, rasping vocals came over well while even tracks with denser instrumentation never sounded too congested.

Sreaming some music from an iPad via the A2 connected to a Naim amplifier I could tell the DAC



Choose from a range of different sound settings indicated by the Jongo S3's rear LCD panel

is more than acceptable. Leading edges on PJ Harvey's 'Let England Shake' are well-defined and the music comes over with a decent amount of rhythmic propulsion and definition.

In absolute terms it lacks a degree of sophistication and the detail retrieval available from more expensive solutions – but at the price point that's only to be expected.

Interestingly, the Evoke F4 radio seems to have been subtly tweaked sound-wise to fit into the Jongo streaming family. Previous Pure radios tended to have a noticeably warm tone, but this new £180 unit is noticeably crisper and cleaner giving greater detail retrieval and a much more tightly focussed sound.

It's undoubtedly feature-packed, with DAB/FM, Bluetooth, wireless functionality as well as a recording facility via a USB socket on the back and an alarm and snooze handle. There's also an 3.5mm input and a socket for adding an extra speaker if needed.

CONCLUSION

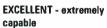
It's obvious Pure has put a lot of thought into its Jongo system. It's not the last word in fidelity – but majors on convenience, integration and flexibility. The S3 and A2 in particular offer strong value for money providing the starting point for a multi-room system at less than £300.

PURE EVOKE F4 £179.99

PURE JONGO S3 £169.99

PURE JONGO A2 £99.99





VERDICT

Pure's Jongo system provides a flexible, good-sounding basis for anyone looking to set-up a multi-room streaming system. It might not be the last word in sophistication but it's strong value at the price.

FOR

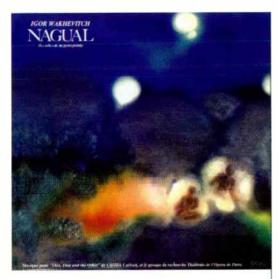
- easy set-up
- nicely-balanced sound
- flexible options
- bluetooth and wi-fi capable

AGAINST

- low bit-rate streaming from Pure Music app
- no FLAC support
- Evoke F4 might seem pricey

Pure www.pure.com





IGOR WAKHEVITCH

Nagual (les ailes de la perception) Fauni Gena oesn't ring a bell? Nurse With Wound fans may have seen his name on Steve Stapleton's infamous list on the front of his debut album, a list that seen as a recommendation of avant-garde music quality. Nagual is a native American (more South than North) folk religion that tells of humans powerful enough to become shape shifters, able to turn themselves into animal form.

This album is one of three new LP reissues from Wakhevitch ('Let's start' and 'Les Fous D'Or' being the others). Released in 1977, 'Nagual', was actually a score created for the American dancer, Carolyn Carlson and shows Wakhevitch's eclectic tastes. You experience a selection of musical directions such as electronica, choral work, organic instruments, tribal elements and so on. Nagual certainly continues this style. Wakhevitch can, however, base his works on themes from

the downright scary too, as in this case, the beautiful with attractive, Peter & the Wolf-like, piano and acoustic gultar promoting optimism, faith and hope, despite the more electro-acoustic, broody works that surround them.

Examples include 'Hunapuguch' which features a steady tribal percussive flow featuring a drone in the background that promotes a mischievous atmospheré, emphasising the ritualistic aspect that is a signature of the Wakhevitch arrangement.

'Cinderella' is a short interlude that takes the acoustic approach but with a music-box delivery adding a subtle electronic frisson to make a pleasantly creepy track. The album ends on its best track, the symphonic and cinematic 'Chirakan-Ixmucane' which is nearly entirely electronic, save for a few moody string parts, but the synths are very much the focus of this adventure. An intriguing and imaginative suite of music.





CHEAP TRICK

Next Position Please SPV

heap Trick? Think melodic power pop with enough crash, bang and wallop to scare the neighbours and power chords aplenty. Led by guitarist Rick Nielsen, the band's early albums, from around 1977, were filled with melodic, well-written songs that foresaw the later arena rock presentation of the eighties but the band proved an effective influence on many later heavy rock and alt. metal bands.

Speaking of the eighties, after the release of 1982's 'One On One' (also released by SPV, incidentally) which proved to be a rather stiff, claustrophobic release without any real clear direction, the band hired Todd Rundgren as a producer. This was an inspired choice because many bands had found it difficult to manoeuvre the shifting musical waters from the mid seventies to the early eighties. Many bands, in fact, had floundered and died a

death. Rundgren was one of the few artists who knew how to ride the waves. In fact, Rundgren had so much of an influence upon the new album, 'Next Position Please' that you could easily hear the Utopia sounds coming from within. Utopia, of course, being a Rundgren vehicle. There's even a Rundgren song that you can find on Side 2, namely 'Heaven's Falling'.

Despite the threat that this LP could have been a Rundgren album by proxy, the band draw strength from his discipline as Rundgren made sure that the quality control never slipped. Robin Zander's excellent 'I Can't Take It' begins the LP while you'll even find a cover of the Motors' 'Dancing the Night Away' on there. Rick Nielsen produced some of his best songs for five years. While the new wave elements are still present within the overall styling and presentation, the guts of the LP is still true Cheap Trick at their very best.

his set features Presley's live television concert from 1973 and is the height of the seventies live spectaculars (it was the most expensive special concert at the time costing \$2.5 million) where the sights were just as, if not more important than the sounds. This is a big package spanning four LPs. The first two LPs feature the concert itself (initially sold in quadraphonic format, the first of its type to top the Billboard charts and the largest selling quadraphonic pressing ever).

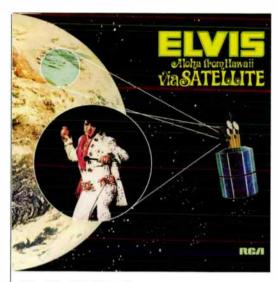
Covering twenty-four tracks you will hear a svelte swivel hips (Presley lost almost two stone before the show) sing a number of 'new' songs plus covers that include 'Something', 'Blue Suede Shoes' and 'Fever'.

This package also includes another two LPs that feature a sort of back-up show, previously known as 'The Alternate Aloha', recorded two days before the final broadcast,

just in case those pesky satellites ran out of steam and packed up. Instead of the twenty-four tracks on the final show, the back-up includes twenty-one tracks plus a 'closing riff'. This alternative show has been remixed.

When the show was over and the auditorium was empty. Presley then returned to the stage and recorded five songs for the American airing of the show. These included 'Early Morning Rain', penned by Gordon Lightfoot plus four songs from the film, 'Blue Hawaii', including the title track, and 'Hawaiian Wedding Song', 'No More' and 'Ku-U-I-Po'. These tracks have been included as bonus tracks at the end of side two of the second disc. You also get a twentypage booklet including an essay plus rare photos.

An excellent package, this multi-fold-out gatefold includes excellently mastered platters that are typical of the standard shown by MOV. Elvis fans will love it.



ELVIS PRESLEY

Aloha from Hawaii via Satellite Music On Vinyl

AUDIOPHILE VINYL

, wo sparkling double albums that take archival material that has seen little coverage from two classic soul record labels, King and Federal. Compiled by WFMU DJ Mr Fine Wine, the tracks include songs from the late fifties, such as The "5" Royales' 'The Slummer The Slum' from 1958 and Little Willie John's 'My Nerves' to early sixties, which are the majority of the content including the wonderfully named 'Gibble, Gobble' from Willie Wright & His Sparklers from 1961 plus the Drivers' Mr Astronaut from 1962.

In amongst the R&B soul there's also proto-rock'n'roll with effusive sax playing, plus jump beat blues outings. There are plenty of rarities on here too with a range of vocalists of the highest quality.

Let me give you just two examples.We've already mentioned the Little Willie John track. John was an influential performer of great technical ability and with a high timbre (track down his original take on 'Fever', elsewhere, for example) while Hank Ballard (who sings 'Broadway' here) was a singer of, let's say, down to earth attitudes. His songs had a hard driving style that pushed the limits of fifties' decorum. This is a real party album that will get you in the mood for dancing pretty pronto.

The companion piece to Volume 1 is, of course, Volume 2 that retains the same compiler and also the same archival sources. You also generally get the same musical mix. This time around, there are some star names in amongst the more obscure songs. So, for every Elliot Shavers & His Blazers ('Scratch That Itch') you will find an Otis Redding with 'Shout Bamalma' and for every Amos Milburn with 'Whiz-A-Shoo-Pepi-Dada' there's a Freddy King with "The Bossa Nova Watusi Twist'.

PR





VARIOUS

R&B Hipshakers Vol.1 Teach Me To Monkey Vampi Soul













Supernail 2 Integrated amplifier: 80wpc

The NEW Supernait 2 takes integrated amplifier performance to a whole new level. In the pursuit of ultimate purity, Naim has even removed the digital inputs/DAC, which was present in the old version. Less is always more!

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Alpha process is applied to all metal parts of the headphones and involves cryogenically freezing the components down to between -196 to -250C. After this they then go through a ring demagnetisation

Ear Candy

Tony Bolton shuts out the noise of the world and gets immersed in the sound of the new ADL H118 headphones.

urutech's ADL HII8 headphones are tapered to fit
around the ear and have an
adjustable headband. They
do not fold flat enough
to go in a pocket, but fold
in on themselves to fit into their
case. The ear pieces are padded and
finished in leatherette, the combination forming a fairly good noise seal
around the ear, and proving quite
comfortable over extended listening

The custom made diaphragms are actuated by 40mm high-flux neodymium magnets, and feature a ring between the voice coil and the diaphragms to keep ultra high frequencies in phase. The coils are made of copper coated special aluminium alloy wire.

sessions.

The 3m long cable features a rhodium plated stereo Alpha mini XLR socket to connect the lead to the left earpiece, and a gold plated 6.3mm plug that unscrews to become a

.5mm plug. The

listening to Dave Brubeck's LP 'Time Out', played on the Clearaudio Master Solution via the Agena phonostage and the headphones output of the Tucana II amplifier. I was impressed with the sense of space around the performers and the smoothness of the sound. This American second pressing is in excellent condition and I found that I had a feeling of near intimacy with the Ouartet that listening through loudspeakers just cannot provide, Eugene Wright's bass seemed to be a substantial instrument, with good weight to the plucked strings resonating against the wooden body, yet at the same time Joe Morello's usage of the high hats seemed nicely balanced on top of the piano and saxophone sounds, being neither too muted nor overblown.

process.

I started

I changed over to CD and put on Astral Projection's album 'Amen'. This is uptempo Goa Trance that has a substantial bass beat and the usual sonic mayhem of sounds swooping around the soundstage. I was pleased to find the bass retained a certain level of decorum, maintaining the beat, but not overpowering the mid and upper frequencies, although on a couple of tracks this was a close run thing.

The soundstage seemed quite wide, although not the biggest that I have heard through headphones; that honour going to a long defunct pair of AKG units that I owned several years ago.

After this I changed over to my Nakamichi Dragon and a Deutsche Grammophon release of the 'Eroica' on Chromium Dioxide tape. Over the years I have played this tape on this machine through every set of headphones that I have owned, and I can honestly say that this was the best that I have heard it through 'phones. I was particularly impressed with the ADL's ability to transmit the wide swings between quiet and loud that this music possesses. Small groupings of instruments were treated with the same degree of fidelity as the orchestra at full power, and at no time did I hear any signs of compression to the music.

ADL also market the iHP-35 upgrade cable for these and other makes of headphones. Priced at £75 for 1.3m or £100 for 3m. This lead seemed well worth the money, adding a sense of precision to the leading edges of sounds, and letting sustained notes decay away for longer, to a seemingly quieter conclusion than the standard cable allowed.

I found that the sonic balance of the ADL H118s, with the upgrade cable, seems just right to my ears. Heavy bass of modern electronica was unable to upset their equilibrium, and more conventional music was presented with care and diligence to the sonic balance. I was so impressed that I now own a pair, and can only recommend that you try a pair for yourselves.

ADL H118 HEADPHONES £225.00



OUTSTANDING - amongst the best

VERDICT

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FOR

- well balanced sound
- comfortable
- good separation of instruments

AGAINST

- nothing at the price

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Light insight

PMC loudspeakers help a press conference at the National Physics Laboratory (UK) to show a new laser scanning measurement technique that maps sound. Hi-Fi World was there to find out more.



The hi-fi press in a semi-anechoic chamber at the National Physics Laboratory. In the foreground is a PMC loudspeaker and in the background corner the scanning laser assembly on a tripod.

The walls, ceiling and floor of a fully anechoic chamber are lined with large wedges that absorb all sound, making them totally silent.

This is a semianechoic chamber with hard floor for people to stand on.

MC loudspeakers held a press conference on 3rd July 2013, at the National Physical Laboratory (NPL), Teddington, Middlesex to demonstrate both their new Fact 12 loudspeaker and some novel laser measurement techniques developed by NPL, in conjunction with PMC. The Fact 12 is an upmarket design with a £12,000 price tag, that packages 'pro' technologies into a cabinet small enough to fit a normal home. NPL scientists fired lasers into the air around it to ensure sound was radiating smoothly, free from anomalies.

The National Physical Laboratory isn't the first place that comes to mind for loudspeaker research: at heart it is responsible for maintaining the accuracy of Britain's measurement standards. But inside we were shown three very large acoustic measurement chambers, one that was totally reflective, one completely absorbent (anechoic)

and one half-anechoic due to the presence of a hard floor on which people can walk.

Chambers like this are complex, difficult to build, expensive and rare as a result. But they allow unhindered research. Within their semi-anechoic chamber NPL showed us a new laser based acousto-optic mapping

measurement technique able to 'see' sound radiating from a loudspeaker.

The laser scans the air in front of the loudspeaker to detect sound wave patterns.

Lasers have been fired directly at loudspeaker cones and boxes to measure vibrational behaviour since the 1970s but NPL's system scans the air, not the structure, measuring sound rather than vibration. It is faster than using microphones and able to picture unusual behaviours such as surface wave radiation, diffusion around corners, reflection from hard surfaces and interference between drive units. NPL scientists demo'd a variety of measurement scans that play as real



Sound pictured bouncing off two panels, of differing acoustic properties. NLP's laser scanning clearly shows at left a clean reflected wave, at right a diffuse one. time videos able to show what a loudspeaker is doing over a wide frequency range. Go to their site www.npl.co.uk for more.

The new £12,000 Fact 12 is a high-end design equipped with a dome midrange unit, commonly found in studio monitors, that gives clear stereo imaging on a prominent sound stage.

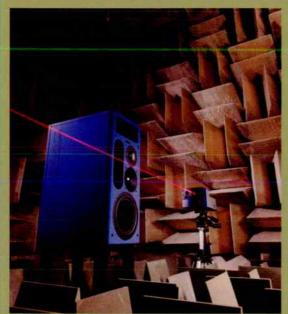
A tall slim cabinet houses

transmission line loading of the bass units for improved bass quality. Go to PMC's website at www.pmcspeakers.com to see more.

> PMC's new Fact 12 loudspeaker with twin bass units, large dome midrange drive unit above them and tweeter at top.



NATIONAL PHYSICS LABORATORY Rapid Acousto-Optic Scanning - an explanation.



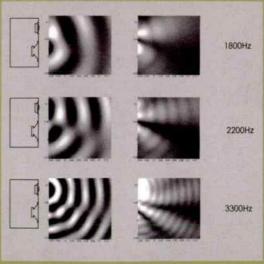
A laser scans the air in front of a PMC loudspeaker to map sound waves. This is carried out in a quiet semi-anechoic chamber, big foam wedges absorbing sound.

xisting acoustic measurement techniques, used in the test and measurement of acoustic products such as transducers and loudspeakers, make use of microphones to map the soundfield around the device being measured, its directivity and dispersion pattern. However, measurements have to be made at many points to create an accurate picture of how sound propagates around the device, and the microphone has to be moved many times. Moreover, the presence of the microphone can itself distort the dispersion pattern being measured.

NPL's new laser-based measurement technique, known as Rapid Acousto-Optic Scanning (RAOS) removes the need for a physical measuring device such as a microphone, and instead relies on the fact that sound waves affect the refractive index of the air they travel in. A laser passed through the air is affected to different degrees depending on the nature of the sound

passing through the air at the same time as the laser. By accurately measuring the delay of a laser beam passing the device under test as it generates audio, a complete picture of the dispersion pattern of the device can be built up with ease. Because RAOS uses light, and requires no physical measurement device, and because the measurements with the laser can be carried out extremely quickly from a single position, the acoustic field around the device under test can be sampled and mapped rapidly.

Although the principles behind RAOS have been understood for many years, turning the theory into practice so that it could be used reliably in a test and measurement context was another matter. RAOS can now provide the most detailed 3D picture of how sound radiates from a loudspeaker.



A laser scan of the air in front of a two-way box loudspeaker at three different frequencies, 1800Hz (top), 2200Hz and 3300Hz showing how phase cancellation between the drive units produces lobes of sound in front of the loudspeaker. The NPL system takes many pictures and assembles them into video showing how the speaker behaves as frequency rises in shifted real-time.



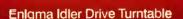






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"People start looking around, wondering what the hell's going on."



Paul Rigby

ands up who remembers Bernard Quatermass? No, he didn't work for Quad or test bass drivers for Wharfedale but the era is about right. Professor Quatermass was arguably Britain's first TV hero, the star of the first TV, Science Fiction series for adults. Appearing in three series during the fifties and another in 1979, the story pitted science, moral right-headedness and good ol' British pluck against pesky alien forces. Wonderfully written, all three TV series can be found on a DVD, from Amazon for just a tenner. Bargain.

And the point is? The TV series was immensely influential to many future creative stars. It proved to be of significance to future star author, Stephen King, for example, but also to John Peter Robinson, composer of a number of film scores including 'Wayne's World' and 'Highlander III'. TV series including 'Charmed', with Andrew Lloyd Webber on 'Jesus Christ Superstar' and an arranger for the likes of Eric Clapton and Al Jarreau. JP was also a rock star, playing keyboards for the band, Quatermass (and, later, Brand X), an all-too-brief project who released their one and only album in 1970: a study in both prog and classic rock and a cult favourite amongst fans of

The album itself has undergone a thorough reissue via the UK audiophile label, Esoteric, featuring a reissue of the self-titled album plus previously unissued tracks. In addition, JP is also starring in another reissued work from Esoteric, an album from the Sphincter Ensemble. Called 'Harrodian Event #1'. It features an underground musician supergroup, of sorts, and was the result of many hours of improv

prog/jazz work, created purely for pleasure, not with the initial intention to publish. Both albums, from the point of view of the listener, tell a tale of frustrated ambition and 'might have beens'. A tale that is all too familiar within the creative arts world but one that, nevertheless, makes you grateful for the work that's out there and available.

"I came from the Royal Academy of Music," said JP, talking to me from his hotel room, pausing while editing the liner note for the new reissue. "I initially gravitated towards more modern classical stuff such as Stockhausen, Ligeti and people like that, which is somewhat evident from the strings on the Quatermass track, 'Laughin' Tackle' which includes glissandi and clusters and stuff like that. I was also loving what Miles Davis and Soft Machine were doing at the time as well as Brian Auger and Jon Lord's work in Deep Purple."

For JP, Quatermass was a small part of an extensive career and, to some extent, he has been pulled away to revisit this moment from his past but, because of his work in film and TV and his facilities in Los Angeles, USA, he saw it as an opportunity to go one further than a straight reissue and investigate a 5.1 Surround Sound mix of the album.

This is not something that you normally see on this category of CD reissue and is rather above and beyond the call of duty. Nevertheless, it proved to be quite a task,

"Unfortunately, most of the original multi-tracks were lost. There were only a few safety copies and some 3- and 4-track tapes. 'One Blind Mice' and orchestral stuff were the only multi-tracks available. It took the best part of five months to digitally conduct the archaeology on this, to reconstruct drop-outs and

to put it into a decent mixable form. I collaborated with Michael Hoenig, who used to be in Tangerine Dream, a great collaborator of mine. He helped create some incredible magic on this."

To produce a satisfying Surround Sound mix from such raw material is remarkable but, with today's software, eminently do-able."Nothing has been added and, for a trio, you can't do much with just three instruments: drums, bass and keyboard. In terms of the surround mix itself, vocals were placed in the middle and delays were added to the left and right. Low toms and drums were placed into the sub area. The new mix really lifts the music off the front speakers with discrete placement within the rear speakers for those tapes that features four or six tracks".

Producing a 5.1 mix for a rock music album proved strangely liberating for JP in the same way that his normal work, creating similar mixes for films, can prove oddly restricting, "Well, everything has to be in the front for movies. You can't put too much going out of the back speakers, otherwise people start looking around, wondering what the hell's going on. We call that 'Exit Sign Syndrome'. For the 5.1 Surround Sound mix of the Quatermass album, there were no rules. You could do what you want."

During the process, hardware from Lexicon was utilised. "It's impressive. Using their algorithms, you can even create 5.1 from mono, using inverse delays, frequency-based steering and so on".

JP intends to place the new Quatermass 5.1 mix on high definition streaming sites available at 32bit/192kHz for "...the few of us who are audiophiles, who will find this really nice".



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TIMESTEP T-01MC PHONOSTAGE





VERDICT

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AGAINST

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I'm nailing my colours firmly to the "mains cables do make a positive difference" mast!



Tony Bolton

ast month I recounted how I had been requested by a friend to help him set up a hi-fi system. The main problem was the confines of a very tight budget but luckily, my local auction house came to the rescue, and a late 1970s Pioneer separates system was purchased for the princely sum of £25 along with some Eltax loudspeakers. All is well with the system and my friends, but my recounting of this story has caused an interesting reaction from another source.

Soon after the column was published I received an e-mail from an ex-colleague who informed me that he had a headache. This headache was apparently caused by him banging his head repeatedly against a wall in frustration at my spending a substantial part of my friend's budget on cabling, rather than looking for a better system in the first place.

He agreed that interconnects and 'speaker cable can make changes and improvements to the sound, but drew the line at mains cables, commenting that I would have been better off buying more upmarket equipment in the first place, and spending less on the cables (actually there was no fixed budget for either, luck just happened to produce a system that normally makes around £100 on eBay, for a quarter of that sum, so we took advantage of the spare cash and released the performance capabilities of the system with improved cabling).

At this point my correspondent and I start to differ, since I have found that all audio equipment, from my 1954 Ferguson radiogram through to the Leema Acoustics kit on the downstairs system, have all responded very positively to the installation of better quality, screened mains leads. His argument was that a few feet of "posh" cable running from a wall socket will make no difference after

the tens or hundreds of feet of cable that run from the distribution board.

I can see his point, but my ears tell me a different story. We had some correspondence on this matter and it has provoked me into writing this column and nailing my colours firmly to the "mains cables do make a positive difference" mast!

Over the years, including the time before I started writing in this industry, I have experimented with trying various mains cables and ganged sockets on my hi-fi equipment, some commercially made, and others that I have put together myself after buying the materials at our local Maplins. The results have generally been beneficial, usually resulting in a wider perceived bandwidth to the sound, blacker background silences, and a smoother treble response, often with increased definition to the sonic image of the performers that the system has portrayed in front of me.

I have also found that mains purifiers work very well in both my house and various friend's properties that I have tried these products in, further increasing the positive effects that I have just listed.

I should mention at this point that I live in a medium sized town in Devon, in a early 1930's house in a residential area with no industrial activity nearby. So any mains pollution is purely caused by our domestic equipment and that of our neighbours.

I know of one situation where a mains purifier did not improve matters, and that was at a friend's house, who lived in a particularly rural spot, and had the transformer that fed his, and the surrounding handful of houses, in his garden, his house being the first one on the circuit. It is the one occasion that I heard a reduction in sound quality from installing a mains purifier — the results being a little compressed compared to the direct mains. In every other

environment that I have tried, some form of properly designed hi-fi mains purification has been of benefit (please note that I said hi-fi mains purifiers; the filters used to protect computers and the like do not work effectively for a hi-fi, usually resulting in a very compressed, un-dynamic sound).

Among my various experiments, I have tried installing different brands of mains sockets. I have found that the cheap ones seem to produce a less expansive sound, often with a rather ratty sounding treble, when compared to the sound produced by using sockets from MK or Crabtree, with the result that I have used unswitched MK sockets for the hi-fi to plug into.

When we had a new kitchen installed a few years ago, a new distribution board was fitted, a Crabtree unit, and this has to be one of the most beneficial changes that I have yet made. Since then, the house has been gradually rewired, room by room, as finances have allowed. We are currently at the stage where there is a dedicated spur to the upstairs listening room (wired with commercially available twin and earth cable) and the upstairs system has sounded so much better with this than using the normal household ring main, that my next plan is to have a dedicated distribution board for the hi-fi installed, with rings feeding the sitting room, dining room and upstairs systems. Whether I continue to use normal house-wiring cables, or splash out on buying some of the products made by various cable companies will be down to experimentation and a great deal of listening. Rest assured, when these experiments finally take place, I will keep you up to date with the results.

In the meantime, I think I had better send my ex-colleague some aspirin. I think his headache may get worse after reading this!

ortofon

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Xpression



Xpression

The new MC Anna from Ortofon sits at the highest echelon of Moving Coil cartridges. This state-of-the-art product is representative of numerous design elements and ideals pioneered by one of the world-leaders in analogue technologies. As a result, the MC Anna is truly capable of the highest degree of performance possible, and will provide a sound which is literally unsurpassed. The MC Anna is named after and inspired by the world-renowned operatic soprano, Anna Netrebko.

The stylish Xpression cartridge from Ortofon bridges the gap between SPU-type designs and High-End models like the MC Windfeld and MC Anna, which are designed for headshell mounting. The result is a high-performance moving coil cartridge with the convenience of a standard headshell connector. By using some of the best technologies available to them, Ortofon have made the Xpression into not just a convenient and attractive design, but also one of the finest sounding cartridges available on the market.

Cadenza Series











The Cadenza series represents another example of Ortofon's constant push toward technological perfection.

By taking various design characteristics acquired through market leaders, such as the MC Jubilee and Kontrapunkt series, Ortofon have developed Cadenza to elevate any decent Hi-Fi system to a whole new level.

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Ortofon is distributed in the UK by Henley Designs Ltd. W: www.henleydesigns.co.uk | T: 01235 511 166 | E: sales@henleydesigns.co.uk

World Radio History

"It was Linda Keith that triggered all else: she saw his talent"



Noel Keywood

Ithough a lifelong Hendrix fan, I've known little about how he got to Britain in the first place, and what happened from then on. Researching all this to get facts straight for our look at Hendrix's London home revealed a story so extraordinary it's breathtaking. From one particular, seemingly serendipitous event, that of a beautiful 20 year old British model hearing him play in a New York club, everything accelerated forward from one world into another, like the Starship Enterprise engaging warp drive to move into a new universe.

What different worlds he moved between, each with its own sharp contrasts. America in the 1960s was a super power, Britain trying to lift itself from the ruinous effects of a debilitating war. Hendrix was a penniless black musician in a powerful nation that at that time practised racial segregation. He could play only in clubs that accepted blacks, those on the infamous Chitlin circuit. These were travelling players paid little for their nightly efforts to keep an audience entertained. They played to eat. That was his reality, one that was to change in a barely believable way.

Hendrix had a long background as a backing musician, much as Tina Turner was a singer "working in the back line" as she put it. They travelled and they worked hard, but couldn't expect much in a world that was structured to hold them back.

Then Linda Keith turned up. Beautiful and just twenty, she was an aspiring UK model and girlfriend of Keith Richard, of the Rolling Stones. It was Linda who heard Hendrix playing at The Cheetah club in New York, behind Curtis Knight. She recognised his talent and befriended him. The story goes she gave Hendrix a white Fender Stratocaster guitar,

said to be Keith Richard's, and this was one of the few possessions he had when arriving in Britain a little later. In doing this it was Linda Keith that triggered all else: she saw his talent, gave him a valuable guitar and – in the end – got him discovered.

Chas Chandler is credited with the discovery of Hendrix but in fact he heard Hendrix play on Keith's recommendation and decided to invest in his talents. Chandler saw his ability, was prepared to invest in it and provided Jimi with a home too, for his early days in London.

It's interesting that Chandler took the risk of flying him to Britain. Blues bands were popular and black blues musicians thought of as seminal, but there were no black U.S. artists performing solo in the U.K. Although in the U.S.A. Hendrix could expect little, equally the U.K. wasn't exactly an obvious prospect at that time either. It was a relatively small country of 47 million, compared to 200 million in the USA. It wasn't rich, nor powerful and it had no history of supporting black blues acts. It did like their music though; blues bands were big in Britain through the 1960s - and Chandler obviously thought this enough.

His was a big gamble. The Beatles, Rolling Stones and The Who were already famous, so there was a proven market. But bringing in a U.S. citizen who'd never left America and who likely knew nothing about where he was going strikes me as a long shot. The only other U.S. musician to make the U.K. his home was Geno Washington, a U.S. serviceman stationed in the U.K. who never got around to going home!

But at least Washington knew the U.K. before he played it; for Hendrix it was a complete unknown; he just took a gamble, figuring he had little to lose. Visitor papers and passport had to be arranged in New York and Jimi carried just \$50 and a few meagre possessions on a Pan Am flight from New York to Heathrow airport, London, on Friday, September 23rd 1966. Not wanting to attract attention as a working immigrant, Jimi's guitar was brought in the next day by the Animals road manager.

It was at this moment Jimi's life had taken a sudden turn: he was heading into a new life in a new universe, although no one knew it then.

Within hours of his arrival he had met future girlfriend Kathy Etchingham and they moved into Hyde Park Towers, overlooking Hyde Park in West London. It was likely a step up from what he had been used to, although reportedly in worse condition then than the luxury block it is today.

Hendrix was soon touring Britain with the Jimi Hendrix Experience to support his first single, Hey Joe, recorded in Kingsway Studios, London, October 23rd just four weeks after landing!

Hey Joe, written by Tim Rose, reached No 4 in the UK charts, December 1966. The flip side, Stone Free, was written by Jimi however and that's how it was to remain: Jimi would write most of his own songs from then on.

Jimi Hendrix became a phenomenon, and his life went into fast forward. He achieved fame in the U.S. when he played Monterrey in June 18th 1967, barely six months later

Understandably Jimi was drawn back to the U.S. But his home was still, technically at least, at 23 Brook Street, in the heart of London. And it is the home he returned to before his death.

By today's standards it's small.

But you can visit it, as I did recently,
and it is worth it to see what

Hendrix saw and experienced.

WORLD LASSICS

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

1998 £200 CD4SE

A touch soft in the treble and tonally light, but outstanding in every other respect.

LINN KARIK III

albeit tonally dry.

1995 £1775 The final Karik was a gem. Superb transport gives a brilliantly tight, grippy dynamic sound,

1983 £700 **MARANTZ CD73**

A riot of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC -super musical



MARANTZ SA-I 2000 £5,000

The greatest argument for SACD. This sublime Ken Ishiwata design is utterly musically convincing with both CD and SACD, beating most audiophile CD spinners hands down.



MERIDIAN 207

1988 £995

Beautifully-built two-box with pre-amp stage. Very musical although not as refined as modern Bitstream gear. No digital output.

1984 MERIDIAN MCD €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 grininducing sonics.



€800 SONY CDP-101 1982

The first Japanese CD spinner was powerful and involving. Brilliant transport more than compensated for 16x2 DAC, and you even got remote control!

SONY CDP-RI/DAS-R11987 £3,000

Sony's first two boxer was right first time. Tonally lean, but probably the most detailed and architectural sounding machine of the



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-P1200 1987 €800

CD version of the Technics SL-1200 turntable. Massively built to withstand the rigours of 'pro' use and laden with facilities - a great eighties icon. Sonically, it's pure fun, with hefty bass that can still show weedy modern players a thing or two!

YAMAHA CD-XI 1983 €340

Nicely built 16x2 machine with a very sharp and detailed sound; sometimes too much so Excellent ergonomics, unlike almost every other rival of the time.

COMPACT DISC TRANSPORTS

TEAC VRDS-TI

1994 €600

Warm and expansive sound made this a mid price hit. Well built, with a slick mech.



ESOTERIC PA

1997 **48.000**

£99

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

Good value upgrade for budget CD players with extensive facilities and detailed sonics.



DCS ELGAR

€8500 1997

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 DAČAPO

1993 £ N/A

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



QED DIGIT 1991

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

TURNTABLES

ARISTON RDI IS 1972 £94

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

ADC ACCUTRAC 4000 | 976 £300
Bonkers 1970s direct drive that uses an infra
red beam to allow track selection and pro-

red beam to allow track selection and programming. More of a visual and operational delight than a sonic stunner.

PIONEER PLI2D 1973 £36

The beginning of the end for the British turntable industry. When vinyl was the leading source, this bought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later 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 nowobsolete ICs.

LINN SONDEK LP12 1973 £86

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



DUAL CS505

1982

£75

Simple high quality engineering and a respectable low mass tonearm made for a brilliant budget buy. Polished, smooth and slightly bland sound.

GOLDRING LENCO

GL75

1970 £15.6S

Simple, well engineered motor unit with soft, sweet sound and reasonable tonearm. Good spares and servicing support even today from specialists. Eminently tweakable. Similar 88 and 99 motor units are budget 301/TD124 rivals.

LINN AXIS 1987

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 SPI0 1973 £400

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

REGA PLANAR 3 1978 £79

Brilliantly simple but clean and musical performer, complete with Acos-derived 5-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 translents. 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 base.



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

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 HRIOOS 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

050 6

£75

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



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 A7S 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 C51/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 A1198S £350
Beguiling Class A integrated with exquisite styling. Questionable reliability.



NAIM NAIT 1984 2350
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

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

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-I 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, TL/12 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 Ils. 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.

DUAD 303 1968 £5

Bullet proof build, but woolly sound. Off the pace, but endearing nonetheless. Some pipe smoking slipper wearers swear by them!

RADFORD STA25 RENAISSANCE

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

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 £29

Another of the serious classic solid-staters. Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build.

YAMAHA CT7000 1977 £444

Reputedly the best of the classic Jap analogues, this combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

NAD 4140 1995 £199

Brilliant affordable digital tuner has a smooth, detailed musical sound plus sensible realworld facilities.

LEAK TROUGHLINE 1956 £25

Series 1 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.



OUAD 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.

1977 **SONY ST-5950** £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

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

£600 1989

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

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-IE555ES 2000 €900

The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding.



MARANTZ DR-17 1999 £1100

Probably the best sounding CD recorder made; built like a brick outhouse with a true audiophile sound and HDCD compatibility.



KENWOOD DM-9090 1997 €500

Serious and sophisticated sound thanks to well implemented ATRAC 4.5; surprisingly musical MD recorder.

SONY TCD-8

DATMAN

1996 £599

Super clean sound makes this an amazing portable, but fragile.

LOUDSPEAKERS

ACOUSTIC RESEARCH

1978 ARI8S €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...

1972 £88 BBC LS3/5A

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 £110 AMPLIFIERS 1973

Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not exactly stylish, however.

IR 149 1977 £120

Infamous cylindrical speaker that was ignored for decades but now back in fashion! Based on classic KEFT27 / 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 image like few others.

SPENDOR BCI

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 £45 **EACH**

Wonderfully open and neutral sound puts box loudspeakers to shame. Properly serviced they give superb midband performance, although frequency extremes less impressive Ideally, use in stacked pairs or with subwoofers and supertweeters



MAGNEPLANAR SMGA 198X £800

Technological loudspeker with genuinely musical abilities; fast, smooth, open, dry.

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.

Warm and powerful nineteen seventics behemoth with transmission loading and a mixture of KEF and Celestion drive units. Impressively physical wideband sound but rhythms aren't

MISSION 770 1980

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

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

OUAD ESL63 1980 £1200

An update of the ESL57, with stiffer cabinets. Until the 989, the best of the Quad electro-

CELESTION SL6 1984 €350

Smallish two way design complete with aluminium dome tweeter and plastic mid-bass unit set the blueprint for nineteen eighties loudspeakers. Very open and clean sounding, albeit course at high frequencies and limp in the bass. Speakers would never be the same again...

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

YAMAHA NS1000 1977

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



MISSION X-SPACE 1999

The first mass production sub and sat system using NXT panels is a sure-fire future classic - not flawless, but a tantalisingly unboxy sound nevertheless!

CLASSIC CONTACTS

When a classic goes 'pooof' your troubles have just started, but there may be a good ending. Replacing failing parts can improve the sound, so here is a short listing of all these companies who specialise in getting a classic up and running again after its deposited a small ring of soot on your ceiling!

GT AUDIO

(Graham Tricker, Bucks) Leak Troughline specialists. Also Quad and most classic tuners, radios and amplifiers restored, repaired. Tel: 01895 833099 Mob: 07960 962579 www.gtaudio.com

TECHNICAL AND GENERAL

(East Sussex) Turntable parts - wide range of spares and accessories, plus arms and cartridges. Tel: 01892 654534

CARTRIDGE MAN

(Len Gregory, London) Specialist cartridge re-tipping service and repairs. High quality special cartridges. Tel: 020 8688 6565

Email: thecartridgeman@talktalk.net www.thecartridgeman.com

QUAD ELECTROACOUSTICS

(Cambs) Quad's service department, able to repair almost all Quad products, from the very first. (Also Audiolab, Mission & Wharfedale). Tel: 0845 45800 | I www.quad-hifi.co.uk www.wembleyloudspeaker.com

Dr MARTIN BASTIN

(Shropshire) Garrard 301/401 restoration, renovation and service. Special plinths; rumble cures, etc. Tel: 01584 823446

ARKLESS ELECTRONICS

(Northumberland) Specialist in repairs, restoration and modifications to all amplifiers, valve or solid state, ancient and modern. Tel.: 01670 530674 Email: info@arklesselectronics.com www.arklesselectronics.com

CLASSIQUE SOUNDS

(Paul Greenfield, Leicester) ESL-57s restored, rebuilt, fully renovated or improved. Leak, Quad valves amps etc. Tel: 0845 123 5137/ Mob: 0116 2835821 Email: classique sounds@yahoo.co.uk www.flashbacksales.co.uk/classique

WEMBLEY LOUDSPEAKER

(Paul MacCallam, London) Comprehensive loudspeaker servicing. Tel: 020 8 743 4567 Email: paul@wembleyloudspeaker.co.uk

CLASSIC NAKAMICHI

(Paul Wilkins, Worthing, West Sussex). Restore, Repair & Service Nakamichi Cassette Decks. Tel: 01903 695695 Email: paul@bowersandwilkins.co.uk www.bowersandwilkins.co.uk

ONE THING

(Coventry) Specialist in electrostatic panel manufacture and repair. Can refurbish ESL 57s and 63s as well as Leak Troughlines and Quad Ils. Email: one.thing@ntlworld.com www.onethingaudio.com

LORICRAFT AUDIO

(Terry O'Sullivan, Bucks) Garrard 301/401 and their own 501 repair, spares and service .: Tel: 01488 72267 www.garrard501.com

EXPERT STYLUS COMPANY

(Wyndham Hodgson, Surrey) Stylus replacement service for all types of cartridge. Including precise profiling for 78s. Tel: 01372 276604 Email: w.hodgson@btclick.com

OCTAVE AUDIO WOODWORKING

(Bristol) Unit 2, 16 Midland Street, St Phillips. Bristol. Tel: 0117 925 6015 www.octave-aw.co.uk

REVOX

(Brian Reeves, Cheshire) Revox tape recorder spares, service and repair. Accessories also available. Tel: 0161 499 2349 Email: brian@revoxservice.co.uk www.revox.freeuk.com

SOWTER TRANSFORMERS

(Brian Sowter, Ipswich) Large range of audio transformers for valve amps, cartridges, line drive, interstage plus all associated services. Tel: 01473 252794 www.sowter.co.uk

LOCKWOOD AUDIO

(London)

Tannoy loudspeaker parts, restoration and repair. Also Epos and TDL loudspeakers. Tel: 020 8 864 8008 www.lockwoodaudio.co.uk

ATV AUDIO

(Henry Dulat, Surrey) Repairs, restorations and upgrades to valve and transistor amps and all analogue audio including Revox. Tel: 01372 456921 Mobile: 07730 134973

HI-FI WORLD WILL BE EXHIBITING AT THE NATIONAL AUDIO SHOW 2013 PLEASE COME AND SEE US THERE!



LATEST TOP NAMES 18.07.13

Adam Audio AKG

Alacrity Audio Art Vinvl

Audio Cabinel Audio Emotion Audio Fly

Audio Physic

Audio Quest Audio-Technica

AUDIOFREAKS Audionote

Audiovector

Auralic Black Rhodium

Blue Horizon Box Design by-

Pro-Ject Audio

Brian and Trevors Brodmann Acoustics Canor

Claro Audio

Classic Album Sundays

Clearaudio Clearlight Audio

Concert Fidelity Custom Design

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IRI

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Good Book

Jon Myles listens to Bayan Audio's portable Soundbook mobile 'phone loudspeaker and radio.

ot so many moons ago Bluetooth seemed like a clever idea desperately in search of a market. Slow speed, compatibility issues and connection problems all conspired to hold back its widespread adoption. But maturing standards have given it a new lease of life - not least in the area of portable loudspeakers. New models are appearing at a rate of knots with Bayan Audio's Soundbook being one of the latest contenders.

It's a combined Bluetooth speaker/FM radio retailing at £150 - which puts it at the relatively higher end of the market when you consider models from the likes of Sony can be had for around £60. But unboxed that price starts to make sense when you see the quality

Measuring 160mm wide x 88mm tall and 38mm deep, the main casing is solid aluminium

with a

ballistic nylon non-detachable cover. That cover's front face folds out and under the unit to act as a stand and also doubles as an on/off switch - close it to preserve battery life or open to play.

Volume, radio tuning and main on/off controls are situated on top while the back has single 3.5mm jack input and output connections and a mini USB socket for the supplied charger. Battery life is put at over 10 hours. Sound is provided by a 15 Watt amplifier driving a pair of 1-inch neodymium speakers coupled to a 2inch passive bass radiator. Tested with a variety of Apple/ Android tablets and mobiles connection via Bluetooth proved almost instantaneous and stayed solid throughout.

SOUND QUALITY

The Soundbook is very much a gimmick-free design and that ethos extends to its sound. There's no attempt to artificially boost bass or treble. Instead it majors on producing a nice, clear, articulate sound.

The Pet Shop Boys' version of Bruce Springsteen's 'The Last To Die' in Apple Lossless had plenty of bounce and detail with a decent amount of bass on offer.

The advantage of the solid aluminium casing shows when you push the volume

as well. Instead of the rattle and hum you'll start to hear on cheaper competitors the Soundbook retained its composure without any obvious sense of strain.

Listening to 'The Rite Of Spring' outdoors - with all the attendant background noise - proved a thoroughly enjoyable experience. There's enough delineation between instruments and sense of timing to take the Bayan's sound well beyond being simply background noise.

Connect via the rear aux-in socket and performance takes a step forward with more defined highs and better bass.

Usefully, the Bayan also switches into conference-call mode if someone rings while you're listening, allowing hands-free conversation via the builtin microphone.

The internal FM aerial pulls in a decent signal too. Presenters on Radio 4 sounded lifelike without any obvious chestiness or sibilance.

CONCLUSION

Anyone looking for a portable Bluetooth speaker should put the Bayan Soundbook at the top of their shopping list. It's beautifully designed and constructed and delivers a clean, crisp sound with plenty of detail. Pairing to a mobile or tablet via Bluetooth is simple and stable while the FM radio is a nice addition.

BAYAN AUDIO SOUNDBOOK £149.99









VERDICT

Not the cheapest but certainly one of the best portable 8luetooth speaker/radios on the market. Highly recommended.

FOR

- clean, crisp sound
- good bass
- solid construction
- ease of use

AGAINST

- nothing at the price

Bayan Audio +44 (0) 844 880 1010 www.bayanaudio.com

vinyi section

contents

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SMARTRACTOR ALIGNMENT GAUGE 87 Tony Bolton investigates arm aligment with a new guage.

PRO-JECT PHONO BOX DS+ 89 A new phono stage that's inexpensive but good, Tony Bolton

news

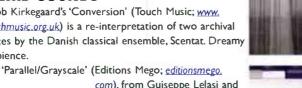
WEIRD SOUNDS

Jacob Kirkegaard's 'Conversion' (Touch Music; www. touchmusic.org.uk) is a re-interpretation of two archival pieces by the Danish classical ensemble, Scentat. Dreamy ambience.

> com), from Guiseppe Lelasi and Kassel laeger features electronic improv from 2011 (analogue) and 2012 (laptop-derived). Moody soundscapes.

Daniel Meche's 'Marriage of Metals' (Editions Mego) is a harmonic melange of Gamelan gongs from Indonesia, sampled and deconstructed.

Also look out for Jason Kahn's Open Space (Editions), a piece commissioned by the now NOW festival in Sydney, Australia. Released as a double album, limited to 250 copies with hand-painted covers, it features low key ambience, more aggressive music concrete and found sounds from organic instruments and electronics.











adventurous approach).









SLICE OF JAZZ

THE COSMIC SCENE SPACEMEN

This month's jazz selection is divided between Music On Vinyl (www.mov.com) and Pure Pleasure (www.burebleasurerecords.com). From the latter, 'The Cosmic Scene: Duke Ellington's Spacemen' (1958) featuring standards with extended trombone roles and modified arrangements.

Nancy Wilson's 'This Mother's Daughter' (1976) is her most soulful Capitol-era release with a flirty yet sophisticated delivery.

From Music On Vinyl, are two Miles Davis LPs in mono: 'Sketches of Spain' (1960; enduring and innovative), 'Porgy And Bess' (1958; reinventing Gershwin with Gil Evans), Art Blakey's 'A Night In Tunisia' (1957; the best recording by the second version of the group) and Charles Mingus 'Changes One' (1974; excellent late-period Mingus with an

BE DAZED

Released by US-based Sundazed, Tandyn Almer, writer of The Association's 'Along Comes Mary' and collaborator with The Beach Boys' Brian Wilson, amongst many other obscure psych singles, 'Along Come Tandyn' is a collection of fifteen rare pop-psych demos from 1965-66.

Beach Boys fans should check out 'Kustom City U.S.A' (1964) from The Kustom Kings starring Beach Boys, man, Bruce Johnston, as writer and cowriter that also starred other Beach Boys luminaries, Glen Campbell and Hal Blaine. A must buy for West Coast and BB fans.

Also look out for 'Jerk And Twine Time' from The Knickerbockers (1965) a frat rock LP of British invasion songs plus the bands 'Lies' (1965), also featuring Glen Campbell, which continues the theme, alongside the top notch, title track.









HEAVY DUTY

German-based SPV (www.spv.de) has a wealth of cracking heavy rock on offer. The latest batch includes Anvil's new album, 'Hope In Hell', full of simple, traditional, classic heavy metal.

Sodom's 'Epitome Of Torture' is the latest from this black metal outfit, full of gritty, breakneck, thrash – but of a slick nature. Also look out for the Irish hard rocking Mama's Boys' 'Power and Passion' (1985) that lacked both, while the new hard rock and heavy metal LP from Vicious Rumours, 'Electric Punishment', is more intense and energetic foray.



WAH WAH

From Spain's excellent, eclectic label, Wah Wah (www.wah-wahsupersonic. com) comes Can Am Des Pulg's 'The Book Of Am Pts III & IV: Afternoon & Evening', an intriguing period piece combining acid folk, psych and prog with heavy doses of flower power hippiedom.

Next is Dantalian's Chariot's 'Charlot Rising' (1967) a rather Pink Floyd-esque British underground psychedelia LP with a mixture of pastoral and freaky sounds (including early works from future Police member, Andy

Summers and Zanagoria's 'Insight Modulation' (1972) this Italian library piece features rare electronic vibes, sounds and other noises from, it is rumoured, Giorgio Carnini.



...AND FINALLY

Collaborating with If Music for the Record Store Day event, Ninja Tune (<u>www.ninjatune.net</u>) has produced 'If Music is 10', a double album of rarities from the likes of Fink, Skalpel, Herbie Hancock, Bonobo and Dobie.

Next up is Ace International's (<u>www.acerecords.com</u>) beautiful 'C'est Chic!', a single LP of twelve tracks from the ye-ye girl vocalists of the sixties including the likes of France Gall, Michelle Torr and Jacqueline Taieb.

Anyone interested in the French record label, early hip hop and rap via Celluloid Records, should check out 'The Celluloid Records Story 1979-1987' (Strut: www.strut-records.com). A double album, it features tracks from the Last Poets and Material.

New from UK audiophile outfit, Pure Pleasure (www.purepleasurerecords.com) is 'Right Place, Wrong Time' (1976) from Otis Rush. A superb blues album that, puzzlingly, wasn't released for five years.

The vinyl version of The Skabbs' 'Idle Threat' (Jackpot; <u>www.jackpotrecords.com</u>) is now out. A collection of punk tracks, via 1977-1978, via this US-based punk outfit, it will appeal to Devo fans.

'Outlaw Gentlemen & Shady Ladies' (Universal) is the fifth album from Danish metal outfit, Volbeat and featuring US guitarist Rob Caggiano. From the PJP Band, '... And So It Goes' (OUF; www.pjpband.com) is limited to just 250 copies. Patrick-James Pearson (for it is he) fronts an indie-rock outfit full of hooks and pop traits.

New from Dutch-born Caro Emerald is 'The Shocking Miss Emerald' (Grandmono; www.grandmono.com) which continues that jazz and R&B theme and flavours

Released via Wax Cathedral Humble Pie's 'Performance: Rockin' The Fillmore' (1971) saw Peter Frampton's influence on the music losing out to Steve Marriot's heavy, harder edged rock.

Finally, Look out for Mobile Fidelity's (<u>www.mofi.com</u>) Rickie Lee Jones' astounding self-titled debut (1979), packed with colourful characters and a voice of immense flexibility.























Smart line up

Tony Bolton immerses himself in the world of cartridge alignment with a new cartridge protractor from Germany.

The magnifier in the correct position



ermany has long had a reputation for producing precision engineered products and one of the pleasures of visiting the High End Show in Munich this year was discovering some of them. Amongst these was the

SMARTractor, developed and built by Acoustical Systems, based in Utting, on the Ammersee lake to the West of Munich. Founded in 1998 by Dietrich Brakemeier, the company specialises in high end tonearms and alignment products.

The latest version of the latter is the SMARTractor

which was developed from their UNI - Protractor and features no less than five different alignment curves, allowing the user to fine tune the position of their cartridge depending upon the age and types of records being played.

The SMARTractor arrived virtually assembled in a well padded box with a comprehensive set of instructions in English. All that I needed to do was to ascertain which of the three spindle adaptors was most suited to the size of spindle on my turntable, pop it into position and place the SMARTractor on the platter. The choice of alignment grid is selected by unscrewing the thumb screw at the back of the central block and rotating the top-plate until the line running from the centre of the block to the chosen grid is lined up. The screw is then replaced and the long positioning arm adjusted

until it rests on the centre of the pivot point of the pickup arm.

The positioning arm has a locator pin protruding through the end which is terminated in a fine point, intended to engage with the centralising dimple which is provided on several arms, including my Clearaudio models. If the top of the pickup arm bearing housing is plain then the locating pin should be reversed, and the provided grid should be used to establish the centre point of the pickup arm bearing. This proved particularly useful with my Hadcock 242 Cryo where the top of the bearing housing is an unmarked circle of polished chrome. The positioning arm is calibrated at the factory with a very clearly marked Vernier scale that enables the spindle to pivot-point measurement to be compared to the arm manufacturers specification.

A glass magnifier is provided,

mounted in a metal frame, that sits in a trough in front of the alignment grid. It can be slid from side to side to ensure that it is correctly aligned with any of the five grids. The magnification allows for really accurate positioning of the stylus on the grid, but can also provide a scary view of the detritus that collects on the needle, even when playing records that have been through a vacuum cleaning machine.

There is also an option of fitting the UNI-Scope to the SMARTractor (available for £335). This is a USB microscope that fits into the mounting space normally occupied by the magnifying lens, and allows images of the stylus and alignment grid to be displayed on a computer. The UNI-Scope's software is fully compatible with Windows operating systems, and produces pictures on Apple operating systems but the measurement features for angle and dimensions will not work fully. Dietrich advises me that he is looking into other options to rectify this.

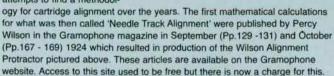
Of the various methodologies used to determine cartridge alignment, the most commonly used is Baerwald. This was originally calculated in the days of standard groove monophonic records and spherical styli. The advent of stereo, and the introduction of elliptical and bi-radial styli brought forth hitherto unforeseen problems, where the minimal contact area of these stylus designs made alignment more critical. Misalignment was found to cause phasing and distortion problems that were less apparent with the parallel groove walls of mono. Both the Baerwald and Loefgren curves were recalculated and both original and updated versions are included on the SMARTractor. Stevenson's curve is not used since this has a higher distortion level across most of the record than any of the above. only minimising it in the last few millimeters of the recorded area. The UNI-DIN curve was calculated by Dietrich Brakemeier and completed in 2011.

Being curious to see what differences these various alignments made to the sound I worked my way through all five curves on a variety of arms and cartridges, across all three speeds and groove formats (see System Used box). I found the least difference when using the 12 inch Universal arm, since the longer arm has better geometry compared to a 9 or 10 inch design. However, I still felt

THE WILSON ALIGNMENT **PROTRACTOR**

This is the world's first alignment gauge, introduced in 1925 and available from the Gramophone magazine for 1/- (the mug stains were made by a previous owner).

There have been many attempts to find a methodol-



In 1938 Erik Loefgren published "On the Non-Linear Distortion in the Reproduction of Phonograph Records Caused by Angular Deviation of the Pickup Needle". The translated paper (originally written in German) is available at www.durand-tonearms.com/Support/Support/alignment_files/loefgren_english_2008.pdf

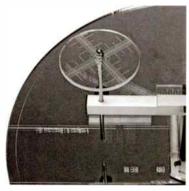
In December 1941 H. G. Baerwald published the "Analytic Treatment of Tracking Error and Notes on Optimal Pickup Design", this was followed in March 1945 by B. B. Bauer's "Tracking Angle in Phonograph Pickups". These two papers are available at www.helices.org/auDio/turnTable/.

In 1961 J. K. Stevenson published "Pickup Design - 1 and 2", also available at www.helices.org/auDio/turn-

Readers wishing to compare the above curves with the UNI-DIN can do so at www.acoustical-systems.com/ UNI-DINcurve where Dietrich has provided images of the curves and a basic explanation of their differences.

that the crescendo and intensity of Ogdon's playing of the last movement of Rachmaninov's 'Piano Concerto No. 2' seemed to make more sense musically when I used the UNI-DIN alignment, I felt that there was more air surrounding the instruments, whilst the presentation of the sound

The Vernier gauge can be seen on the top of the positioning arm. The spindle adaptor is a push fit into the hole provided below the main block.



seemed more cohesive.

Moving onto 'Screamadelica' using the 9 inch Magnify arm reinforced this sensation. The shape of the bass seemed tidier, with a little more definition to the stopping and starting points of notes while the midrange felt more open and inviting.

Changing to the upstairs system with the Hadcock unipivot arm, playing the Benny Goodman Trio's live version of 'One O'Clock Jump', again the UNI-DIN was my chosen setting. Any surface noise present

(the record is in good condition but not mint) seemed more muted. held more firmly behind the music, and the background details of the audience seemed to move forward and take a more prominent role in the proceedings.

I stayed on this system to try Janis Joplin's 'Cheap Thrills'. Along with Edith Piaf, I regard her voice as one of the most difficult to reproduce well, avoiding

the gargling glass sensation that she can provoke in a lot of systems. This time I felt that the Loefgren B setting came close to the UNI-DIN, but this still remained my preferred curve.

I have found this review fascinating and have come to the following choices of alignment: for my shellac, I will stick to the original Baerwald curve. For microgroove use, both mono and stereo, I shall now be using UNI-DIN. I liked the presentation of the music better, enjoying the greater space and definition of the shape and form of sounds.

I like this product. It is expensive, but the quality of finish, and the precision of the engineering make the cost worth while. It also allowed me to fine-tune a turntable to a better level than I could previously. With the result that my records sound clearer and more enjoyable, which is the whole object of the exercise in the first place.

SYSTEM USED

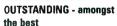
Linn Sondek/ Hadcock 242 Cryo/ Goldring 1022GX, Benz Ace Mono and Clearaudio Concept MC Luxman E200 phonostage Townshend Allegri passive pre-amp 2 x Quad 303 power amps Kelly KT3 loudspeakers

Clearaudio Master Solution/ Magnify and 12 inch Universal arms/ Benz Wood SL and Ortofon 2M 78 Leema Acoustics Agena phonostage and Tucana II amp Chario Ursa Major loudspeakers

> **SMARTRACTOR ALIGNMENT GAUGE £450**







VERDICT

Beautifully made and well thought out universal alignment gauge from German vinyl specialist.

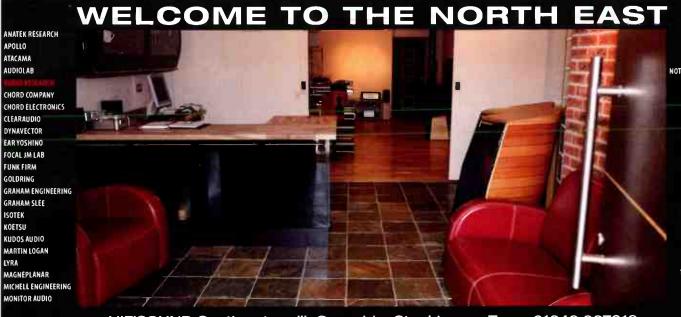
FDR

- ease of use
- build quality
- versatility

AGAINST

- nothing except price

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Analogue		Amplifiers		Digital		Loudspeakers	
Audio Technica AT1100 tonearm, excellent Ariston RD115, Q1 DC Kit Boulder MS11/MS01 Phono Stage, vgc Clearoudio Innovation Compact, good condition, EAR 834P Deluxe ex demo Garrard 401, SME 3009 excellent Garrard 401, SME 3009 excellent Garrard 301, vgc Graof GM70 Phono, excellent baxed Inspire Manarch Inr, original 1210 Platter, 12" arm Kaetsu Black, good condition Kuzma Stagi, excellent Linn Itak LVII, in rare black, excellent Linn Itak LVII, ari rare black, excellent Linn Itak LVII, in rare black, excellent Linn Sandek LP12, Akita arm, AT cortridge Mitchell Gyra SE, DC motor baxed Mitchell Gyra CSE, DC motor baxed Mitchell Gyra SE, DC motor baxed Project TOUD experlent baxed Project TDUB Bax Phono Stage Project RPM5, c/w arm, speedbax 2 & Ortofon 2M blue Project RPM4, with arm and cover Rega FRS, c/w arm, scellent baxed Rega RRS 20/2a, Series V arm, excellent SME 3012, early Thorens TD124, excellent Thorens TD124, excellent Thorens Graove, excellent Townshend Elite Rack c/w Excalibur arm vgc+ Wilson Benesch Act 1 Tanearm, armint superb Radio/Recorders	199 299 1299 1299 1299 1399 1399 601 499 749 649 149 699 149 229 99 99 3249 899 799 799	Arcam P90 Power amplifier Audio Note 010 PP Phono, excellent Audio Research Ref 610 Monoblocks, vgc boxed Audio Research Ref 210 Monoblocks, os new boxed	349 999 9749 349 1999 1199 1199 2649 349 349 1499 3499 1499 3499 1499 2299 9199 2299 9199 2299 9199 2299 9199 9199 9299 9349 9449 9449 9449 9449 9449 94	Accuphose DP800/DC801 Tronsport/DAC, AMR CD777 ex demo Arrom Alpho CD Arrom CD192, excellent Audiolob 8000CDW, vgc+ Audiolob 8000CDW Tronsport and 8000DAC AN' S2000MC, foir candition Ayre CX7e, excellent, remote Cyrus DVBB, vgc Cyrus (DBX, boxed, excellent Sosteric KO3, os new boxed Electrocamponiet EMC1UP, neor mint boxed Goldenote Koola, neor mint boxed Lectror U.6t, excellent boxed, due in Linn Majik CD, excellent boxed Linn Karik 3, excellent boxed Leemo Streom 3, nr mint boxed Mark Levinson 360 DAC, excellent boxed Meridion GoB2, excellent boxed in black Meridion GB2, excellent boxed in black Meridion 506/20, excellent Moon CD1, excellent boxed top roted player MAIM CD5i, excellent boxed remote NAIM CD5x, excellent boxed remote North stor Design Model 3 DAC, excellent boxed Puresound A8000, remote Coud 66, excellent remote Sony XA5400E5, excellent toxed Yusesound CD55050 vintage classic boxed	9499 Coll of the collection of	8&W PS, Rosenut floorstander, good condition 8&W CMI, excellent boxed 8&W CMIse, excellent boxed 8&W CMIse, excellent 8&W 805 Signature, Tiger eye finish Castle Inversion Subwoofer, near mint boxed Dynaudia Contaur I. Sm&Z, excellent boxed Ethos Acoustics LS12/Sb, excellent in glass black Focal 806Y, excellent boxed Linn AV5140 Aktiv, with x-avers, vgc baxed Linn AV5140 Aktiv, with x-avers, vgc baxed Linn AV6140 Aktiv, with x-avers, vgc baxed Maritin Lagan Quest, excellent, 81G bargain! Magneplanar M61.6, superb Merdian M1 Active speakers, baxed Manitor Audio RX80, Joss black, ex dema Manitor Audio RX87, glass black, baxed NAIM Audio Intro, excellent baxed Qued ESL57s, goad warking arder baxed Qued 111/Z, excellent baxed Qued SL57s, goad warking arder baxed Qued Linn Centre Channel Revel Ultima Studio, vgc Revel Ultima Centre Channel Revel Ultima Studio, vgc Revel Ultima Centre Channel Revel Ultima Studio, vgc Yea, just refurbished Triangle Cornette Sc, excellent baxed Usher S520 and matching Subwaofers Usher S520 in birch, excellent baxed Usher X616 centre speaker, excellent	199 299 1499 349 799 349 399 599 999 999 1199 3999 499 149 1399 Due in Due in Due in Due in 99 2199 2999 2999 249 699 279 399
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Delicious DS

Tony Bolton explores the capabilities of the latest affordable phonostage from Austrian manufacturer Pro-Ject Audio, the Phonobox DS+.

ver the fourteen years that I have been writing I have followed the growing range and sophistication of Vienna based Pro-Ject Audio's range of electronics. Starting as a compact, cigarette-packet-sized unit, the Phono Box now comes in no less than eleven different forms over a range of four separate lines. The Phono Box DS+ under discussion here fits into the second from top, DS Line series.

It is housed in a simple but smart looking steel case with a brushed alloy facia that is available in the customary black or silver. Measuring 103 x 72 x 144mm (h x w x d), and weighing 1.025kg, it is still a small unit. The size belies the variety of options that are available to fine tune the phonostage to your choice of cartridge. There are four stages of gain, impedance and, for Moving Magnet cartridges only, a similar number of input capacitance settings to choose from.

These are all selected by the

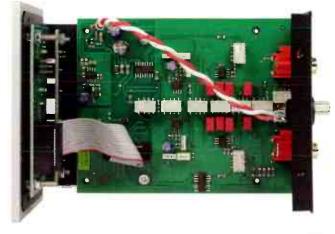
four buttons below the green display. This is bright enough to be legible in the bright sunlight that we have been finally blessed with this year, but is subdued enough not to be intrusive in low light listening sessions. The operation of the menus is fairly intuitive, although the manual is helpful in accessing the standby setting (actuated by holding the left key down for a few moments).

Having given the DS+ the customary 48 hours of running in, I

settled into serious listening while ransacking my 12inch singles. System 7's 'Habibi' opens into vocals with synth sounds sweeping from left to right, and back again. The first thought that struck me was that of the depth and solidity of the bass. It was surprisingly powerful and well tuned for a phonostage at this price point. It felt accurate in the duration of notes as well, with quite well defined

leading and trailing edges helping the track to bop along in a tightly timed way.

The sweeping synths were displayed in a very gentle arc across the soundstage. The Pro-Ject Tube Box (£425) that I reviewed in the July 2013 edition of this magazine played the effect with a far deeper curvature to the movement of the sound, but I would expect such differences when comparing the staging capabilities of solid state versus thermonic designs.



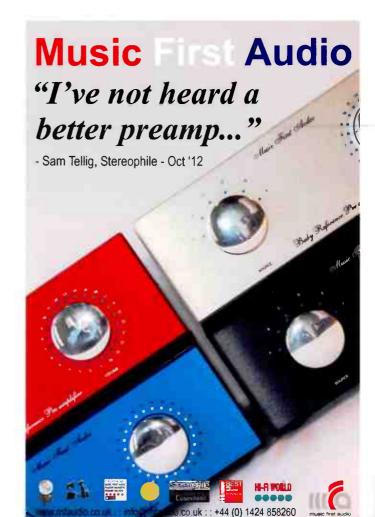
RETRO

REPRODUCTION

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ı	AMPLIFIERS	COOE	Michell Orbe with VC power supply special	1406
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ı	Audiolab 8000Q british built mint boxed	£395	Michell HR PSU silver finish	
ı	Anatek monoblocs £2400 new	£995 £795		£295
ı	Anatek A50R Arcam A32 integrated amp	£495	Michell Gyro SE special order black finish brand new box, sealed box	EPOA
ı	Cyrus onginal PSX great condition	£175	Minimax MMC valve phonostage	£845
ì	Cyrus 2	£225 £695	Naim superline phonostage £ Origin Live 1MC3 Encounter tonearm as new boxed	1295
ı	EAR 834L EAR V20 valve amplifier	£2495		£295
١	EAR 802 classic valve with pre amp phonostage	£1195	Pure Sound T10 moving coil transformer high and low	/
ı	Harmon Kardon PM665 top of the range integrated am Harmon Kardon HK560 receiver	£350 £195		£275 £175
ı	Harmon Kardon HK1400 line amplifier	£195		£295
١	Linn AV5125 5 channel power amp boxed as new	£795	SME 10 with tonearm with V	3295
ı	Mark Levinson ML12A with phonostage & external F Mark Levinson power amp	£895		£175 1095
Į	Meridian 100 series three box power amp	£295		POA
1	Meridian 518 digital audio processor	£445		£245
1	Mendian 201 MKIII pre amp remote Mission 776/777 pre and power amplifier 100w cast	£195	Syrinx LE1 tonearm recently wired with cardas cable t and checked by Audio Origami	fitted £275
1	case work a real classic	£795	Synnx PU2 tonearm	£295
1	Musical Fidelity valve X-pre amp	£225	Thorens TD125 MKII in plinth	£325
1	Musical Fidelity A100 Class A integrated amp Musical Fidelity Tri Vista integrated amp boxed	£275 £1795	CD PLAYERS, DACs	
ı	Naim 112 remote control pre with box	£395	Arcam CD33 cd player top of the range boxed	£545
ı	Naim NAP120	£225		£225 £145
ı	Naim NAC12S Naim NAC 82 pre with Teddy Pardo PSU	£150 £1495	Audio Alchemy V1.0 DAC B&O 9000 cd player with floorstands and speakers £	
I	Nam 90 power amp boxed	£225	Cambridge Azur DAC Magic boxed	£145
	Naim Flatcap 2 boxed	£395	Harmon Kardon CD30 twin CD recorder HDCD top of the range	£345
	Nam Flatcap boxed Nam 42.5	£225 £225	Leema Antilla CD player boxed mint £	1795
	Naim CD S with power supply	£1395	Marantz CD52 MKII special edition	£145
	Naim NACDS power supply new style front panel Pioneer SA510 with florencent meters	£695 £95	Marantz CD50 multibit dac Marantz CD7 one of the world's finest player £	£95 1495
I	Pioneer A400X integrated amp	£225		£395
ł	Pioneer M73 flagship power amp Class A		Mendian 208 and CD player with built in pre	£295
ł	operation boxed as new Phase Linear 700 power amp	£995 £495		£245 £345
1	Quad 520F power amp	£495	Musical Fidelity A3CD 24bit CD player boxed	£295
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1	Quad 66 pre with remote serviced Quad 34 pre amp boxed	£395 £225		£175 £175
ı	Quad 405 II	£295		2795
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J	Rotel PB971 power amp	£195	Phillips CD610 16bit cd player	£95
ı	Rotel RC972 remote pre amp	£125	Pioneer PDR509 legato link	£145
ı	Rotel RA840BX integrated amp Rotel RA350 70s vintage amp	£125 £95		£225 £495
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l	Sony F540E heavyweight integrated	£245		£195
ı	Wadia 151 DAC and amplifier	£495		£125 £195
ě	SPEAKERS		TEAC UDH01 USB DAC	£275
ł	Aurum Cantus black orchid speakers piano black	£495	Technics SL PA10 reference transport	£245
I	Beauhom Virtuoso reference Lowther hom loaded spks with brand new DX4 drive units	£2995	TUNER	
١	Boston VRM 50s Lynnfield series monitor speakers		Audiolab 8000T tuner boxed	£425
ı	Cabinet for 12* Tannoy with amplification	2042	Cyrus AM/FM tuner (onginal version) Meridian 204 tuner	£95 £245
ı	built in model M508 Castle Chester dark oak finish	£195 £345		£650
	Dyn Audio Audience 42 bookshelf speakers	£345	Pioneer F91 top of the range tuner	£245
ł	Goodmans Axion 201 12" full range 15ohm	2005		£175 £225
1	speaker 1 pair Goodmans Magnum K's	£295 £125		1.225 n £95
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1	KEF RDM Two monitor speakers	£395	Sony 700ES tuner Sony ST8900 QS DAB tuner	£75 £145
-	Linn Index Linn Sara active speakers	£125 £145	Technics STG90L top of the range tuner	£95
	Linn Kan early version Teak finish	£275		
	Lockwood Minor cabinet for Tannoy 10" Mission 752 black finish	£195	MISCELLANEOUS Analysis Plus Silver Oval speaker cable	£345
	Mission 773 beech finish	£295 £245	Akai GX77 open reel with various tapes mint condition	£495
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-	Mono Pulse 32S ex dem. Monitor Audio Silver 8i cherry finish	£645 £495		£375 £125
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	Monitor Audio reference 700	£395	Marantz super scope 3 head portable cassette	cone
	Quad ESL-989 Electrostatics black finish boxed Red Rose R3 Ribbon bookshelf speaker new £3000	£1995		£295 £195
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	Tannoy 12 inch silver Tannoy 12 inch monitor gold	£POA £POA	Technics RSB965 top of the line 3 head cassette deck	
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Į	Michell ISO/Hera phonostage	£375	Joe Henderson, Bobby Hutcherson Various other artists available please phone	
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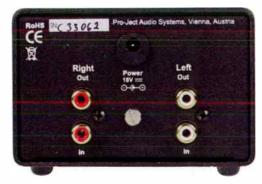
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Having said that, later on I found the display of the Philadelphia Orchestra in front of me was comfortably spacious and Jaqueline du Pre was a very focussed entity, placed a little off centre in front of me.

Apart from the staging, I would say the biggest presentational differences between the two phonostages are in the way the focus of the detailing of sound is aimed. The Tube Box DS is more about texture, whereas the Solid State Unit drew my attention to the lighting and colours of the sound.

This became obvious when playing 'Opus de Funk', the opening track on Milt Jackson's 'Opus De Jazz' LP. Jackson tended to set his vibraphone's oscillator to a fairly slow 3 revolutions per second (Lionel Hampton set his to 10) which produces a more subtle vibrato, and also, at times, gives a sheen to the sound, as though the sun is reflecting off something very highly polished.



The back contains the usual gold plated phono sockets, which are very well spaced, allowing the use of heavy cables.

but performed very well for a solid state design. I will express my usual complaint at a lack of a mono/stereo switch, which I could have done with on a couple of occasions, but even here it gave a generally good account of itself.

Phono Box DS+ is a well thought out and very flexible unit that gives a sound quality that seems a little more than you could realistically expect at the price. It is accommodating of a wide variety of cartridges and simple to use. At £325, it deserves the accolade of "audiophile bargain". Recommended.

> The menu options are accessed via the four buttons, the left hand one also engaging standby mode

MUSIC USED

Elgar. 'Cello Concerto, Op.85.' Jaqueline du Pre. Daniel Barenboim conducting Philadelphia Orchestra. Columbia Masterworks/ CBS Records. 76529. 1976.

Milt Jackson. 'Opus De Jazz.' Savoy Jazz Records. SJL 1116. 1979 (reissue)

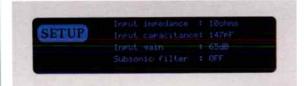
Various Artists. 'Woodstock - music from the original soundtrack and more.' Atlantic Records. 2663 001. 1969.

System 7. 'Habibi (Another World Mix).' Ten Records. TENXDJ 385. 1991.

SYSTEM USED

Linn Sondek/ Hadcock 242 Cryo/ Clearaudio Concept MC and Goldring 1022GX

Pro-Ject Tube Box DS phonostage Townshend Audio Allegri passive pre-amp 2 x Quad 303 power amps, also Ming Da Dynasty Duet 300B Kelly KT3 loudspeakers



The Phono Box DS+ described this, I felt, quite accurately. I was also quite taken with its way of describing rhythms, which had a snappy, but not over emphasised drive to them.

My final listening session ended up at the Woodstock pop festival. I dropped in on side two to hear Country Joe and The Fish give out 'The Fish Cheer' followed by the anti-war 'l-Feel-Like-l'm-Fixin'-To-Die-Rag' as a solo by Joe, but with enthusiastic backing from the audience. The presentation of the sound was wide enough that I felt almost part of the audience, although the crowd sounds were set away a little, between me and the stage. Apart from that there was scale, detail and a certain down-to-earth unfussiness to the sound that made for a convincing and enjoyable listen to this record.

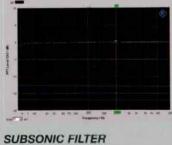
I think unfussy described the the sound of this phonostage very well. The sound was well grounded and, despite the opportunities presented by Jackson's vibraphone, didn't appear to gloss things up to try to impress the listener.

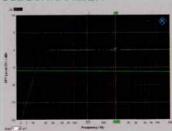
I wouldn't say that the sound was as organic in nature as the valve model,

MEASURED PERFORMANCE

Frequency response measured flat from 4Hz to 20kHz our analysis shows, with the subsonic filter switched out. RIAA equalisation was accurate but loudspeaker cone flap is likely with warped records. The subsonic filter was well tailored to pass all frequencies down to 20Hz, but attenuate subsonics heavily

FREQUENCY RESPONSE





using a second-order high pass filter. This is much better than the usual IEC warp filter, imposing -24dB attenuation to warps at 5Hz, two octaves below 20Hz.

Gain for Moving Magnet cartridges measured 40dB (x100), 45dB (x180), and for MCs, 60dB (x1000) and 65dB (x1800). These low and high settings are sufficient to cover most cartridges.

An output swing of 10V gives good leeway to avoid overload with high output cartridges, like Ortofon 2Ms that can deliver up to 35mV. Even High gain can be used without overload occurring, unlike phono stages that swing 4V output maximum.

Input noise figures were very low for both MM and MC so hiss will not be a problem, even with low output MCs.

This is a very well engineered stage that can cope with a wide range of cartridges. It measured very well in all areas. NK

4Hz-20kHz Frequency response Separation 78dB 0.48µV Noise Distortion 0.013% x100 (40dB), x1725 (65dB) Gain 10V out Overload

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The small Hendrix tribute you can see today in No 23, in a room one floor below the original flat. The wooden panelled walls are apparently original to the house, built in 1720. In the foreground is a Harpsichord that is part of the Handel exhibition – Hendrix did not play it!

Visiting Hendrix

Jimi Hendrix's first and only home was in London. Now a part of the Handel House Museum, you can visit it today. Here's what you'll see.

imi Hendrix was one of the most extraordinary Rock musicians of the twentieth century. He first found fame in the UK, flying in from New York during September 1966, alongside music manager Chas Chandler. After staying with Chandler for the first year he moved into 23 Brook Street, Mayfair — an upmarket area in the heart of London — with girlfriend Kathy Etchingham.

Hendrix called this flat his home. By one of the many peculiar twists of fate that affected his life, Hendrix found himself next door to the house of composer Handel, who lived 250 years earlier. Today, Handel's house at 25 Brook Street is a museum you can visit, to see not just Handel, but a small exhibition commemorating Hendrix's stay next door as well.

Yes, that does put Hendrix next to Handel – an unlikely pair of musicians. Hendrix saw the irony of the situation and immediately bought some Handel LPs from a local record shop to learn more about his famous predecessor. Today, Handel House museum use Hendrix's next-door flat as an office. Is this sacrilege? I'll go into that later.

Realising that happenstance has delivered them a museum exhibit of global interest, and wanting to show Hendrix alongside Handel, the Handel House museum hope to open, full time, a restored version of Hendrix's first 'home'. We spoke to them about this project, found what Hendrix fans can see today and what they may be able to see in 2015 if the project goes ahead. It's a small but vivid piece of London history that needs exposure, one that could attract the sort of crowds found today on the zebra crossing at Abbey Road, a mile or so North.

Probably the most fascinating part of this tale is that of the small

flat Hendrix stepped into at Brook Street in 1968. After a life on the road in the USA, playing as a backing musician with various bands on the Chitlin' circuit, it must have been a world apart for him.

But not only did Hendrix uproot from this earlier life, he dived straight into playing an intense roster of gigs across Britain through 1967, to promote his new band, the Jimi Hendrix Experience, and their first album, Are You Experienced.

The flat at 23 Brook Street was his home for a short three months it turned out, before he left on a long trip to the USA, but it put him at the heart of London's 1960s music scene and in a good position to play influential local clubs. When he did finally return, early 1970, Kathy Etchingham had married someone else. She sent a Rolls to collect him from Heathrow, but he booked into a suite at a nearby hotel. Kathy left 23

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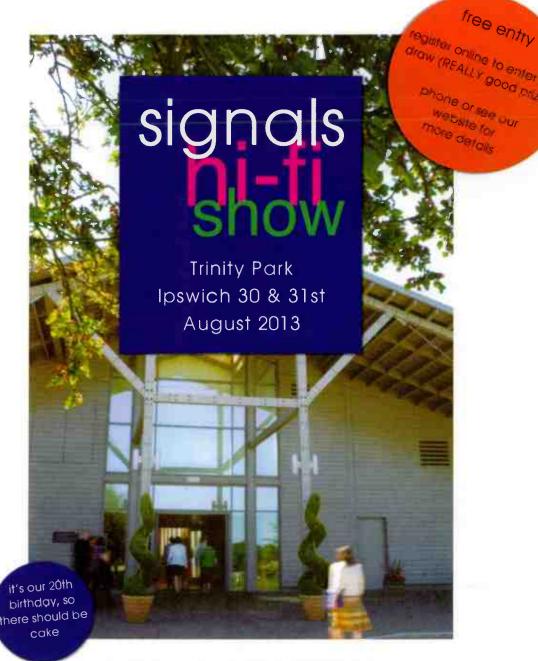
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hi-fi for grown-ups

Brook Street shortly afterward.

Sacrilege? Using Hendrix's first 'home' as an office, rather than opening it as a shrine, may strike dedicated Hendrix fans worldwide as sacrilege. Abbey Road tell us that even today Beatles fans kiss the floor of Studio 2. Places like this become shrines, attracting visitors from around the world.

However, the flat was not maintained in original form after his departure and nothing remains of what was there at the time. The new museum will be a well researched reconstruction – it can only be that. Handel House told us they are in contact with Kathy Etchingham and know many items were bought from John Lewis on Oxford Street, a stone's throw away. So presumably a John Lewis catalogue of the time will illustrate domestic details.

Will original items be there on display if and when his flat is opened to the public in 2015? His hat, his jacket, a guitar? Likely not, Ella Roberts, Communications Officer, explained to us. Hendrix possessions are held by the Hendrix Estate in

The staircases are narrow and the stairs worn and far from straight. Pictured here are those he and others trod to reach his flat (today an office and not accessible to the public).

High heels cannot be worn because they damage the floors, and photography is not allowed.





A Blue Plaque commemorates Hendrix's stay at No 23 Brook Street. He lived on the top floor and had no neighbours to disturb. The museum entrance is currently at the rear. Fashionable Bond Street is yards away.

America, overseen by an adopted sister and her husband (his father is dead). Some items appeared in a 2010 exhibition held at the flat (that Handel House temporarily vacated) but were returned to the Hendrix Estate. Because the flat is small security couldn't be guaranteed. so Handel House must use replicas.

A display of Hendrix memorabilia exists at the EMP museum (www.empmuseum.org), in Seattle his home town. But that's a lot different to where he lived, and Brook Street, Mayfair, was in the end his only 'home'. Being on London's tourist trail, a museum like this could attract a lot of traffic.

Having opened the flat to visitors in 2010 the Handel House Museum are aware that a museum like this may have to survive a heavy human traffic, up narrow staircases and into small rooms within a house originally built around 1720. It's a different world to the one Handel lived in and will attract a different audience. Handel House find themselves faced with a prospect different to the one they currently enjoy, but are aware that it's an opportunity not to be missed. A new entrance and exit, plus safe infrastructure must be built

and the museum have applied for a Heritage Lottery funded grant to carry out the work.

In the meantime, however, Hendrix fans can visit No 23 today to see a small tribute to the man, in the building he called 'home' – his only home.

OPENING TIMES

Tuesday to Saturday 10am - 6pm (until 8pm on Thursday) Sunday 12 noon - 6pm Closed Mondays, including bank holidays.

Last admissions half an hour before closing. During busy periods, tickets may be timed.

ADMISSION CHARGES

£6.00 adults

£5.00 concessions

£2.00 children (5-16 years). Children get FREE ENTRY on Saturdays and Sundays.

ADDRESS

Handel House Museum 25 Brook Street Mayfair London W1K 4HB Telephone: +44 (0)20 7495 1685 www.handelhouse.org e-mail mail@handelhouse.org

REFERENCES

Through Gypsy Eyes — Kathy Etchingham (2012 update) (www.kathyetchingham.com)

Jimi Hendrix Made in England

– Brian Southall (2012)

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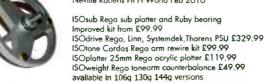


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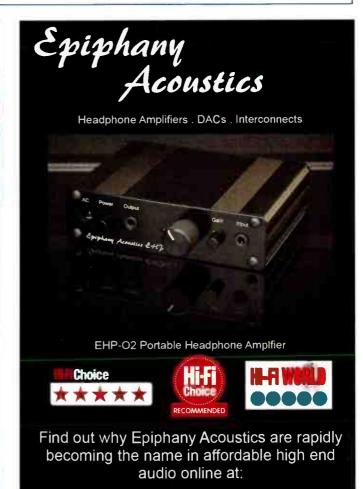
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Kenwood Martin Pipe rediscovers the virtues of direct-drive, courtesy of a Kenwood KD600 turntable.

n a visit to the 'Music and Goods Exchange' in Notting Hill during 1994 I came across an extraordinary turntable. It was a KD600 from Kenwood - as Trio used to be known anywhere outside the UK. It had an unusual marble finish, an SME IIIS tonearm and a Dynavector 10X highoutput moving-coil cartridge. And all this for £45!

The KD600 originally sold for over £200 without tonearm in the very early 1980s; at that time, a similar sum would have bought you an LP12. Topping the Kenwood/Trio range until the arrival of the L-07D 'superdeck', it was rare in the UK and tended to be imported specially (hence the 'Kenwood' branding).

Supplied with the KD600 were two different tonearm bases; one for an Ortofon AS-212 Mk2, and another for Infinity or SME models. However, a variant (the KD650) pre-fitted with a typically-Japanese tonearm was also

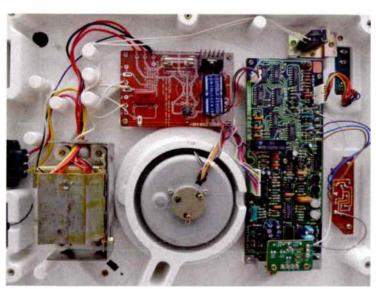


Massive stone and glass aggregate plinth, direct drive motor, heavy platter and SME IIIS tone arm.

sold. The reason for the weight - all 15 kilos-plus of it - is down to two factors. First of all, there was the plinth. That 'marble' look can be attributed to a specially-developed dense material that embeds

limestone and glass particles in resin. It was intended to damp resonances and reduce feedback.

Secondly, the platter weighs no less than 2.6kg. It sits on a hightorque quartz-locked 20 pole motor, engineered to reduce wow and flutter to inaudible levels. Unlike most direct-drive 'tables of the period. there are no quartz-lock overriding speed adjustments. This machine is designed to work at a rock-steady 33 or 45rpm. Nothing more, nothing less; pretty minimalist as Japanese direct-drive went. What looks like a strobe at first glance is in fact a simple 'quartz-lock' light indicating that the platter has been brought up to the desired speed - which, in the interests of keeping unwanted noise to the bare minimum, is selected with touch-pads as opposed to chunky buttons, Funnily enough, the chip that performs this role was actually developed for TV channel-switching applications! LEDs confirm the chosen speed, while the only 'conventional' switch isolates the unit from



A neat underside, with fused power supply. Many of the 1970s chips are still available.



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the mains.

Part of the reason for my specimen's relative cheapness was that one of the four feet (which were screwed on, enabling the deck to be 'levelled') was missing. There was also a broken lid hinge.

By 1994 Trio had become Kenwood and a call to them revealed that the parts I needed — plus an excellent KD600/650 service manual that also refers to a 'military' version (the mind boggles!) — were in stock. This manual, by the way, Is today a free download from vinylengine.com.

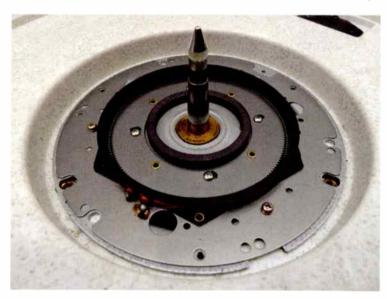
The SME IIIS is a very low-mass arm and needs to be used with high-compliance cartridges. The IOX was probably a borderline match for the arm and in any case the output was too low for satisfactory results with the amp I was using back then. A more suitable cartridge (an Ortofon MM, if I recall) went on the arm instead. I was satisfied with the sound of this massive turntable, but as I got more involved with hi-fi it was eclipsed by Regas, Systemdeks, Thorenses and Linns.

Recently, I thought I'd give it another go. I found a 'new old stock' Philips GP412 MkII — a midrange MM cartridge. The GP412 was a high-compliance unit with an elliptical stylus. The fitted SME arm, a

The turntable proved to need assistance - well, time and neglect aren't kind! Lower frequencies were rather stodgy. This unwanted characteristic was traced to hardened grommets on the tonearm base (internal ones that isolated the mains transformer from the plinth were also dealt with).

Removing the ild also helped to firm up the subjective bass performance. With this done, the speed selection then started taking on a mind of its own. Cleaning the touch-switch contacts didn't help — however, one of the three ceramic decoupling capacitors associated with them was found to be open-circuit and so all were replaced. A faulty touch-switch IC wouldn't have been disastrous, though; it's still available — as is the quartz-lock control chip.

The big power-supply electrolytic was also changed. Amazingly, the result of all this work transcended expectations. Not only did it do a pretty good job coping with the Hi-Fi Sound 1981 tracking tests, only coming a cropper with the third lateral-modulation band, but I enjoyed a spirited musical performance too — ancillary equipment tried included a modified Rotel RC1010 preamp with Onkyo ES-HF300 cans, and a Naim Nait 3 with MM phono stage driving

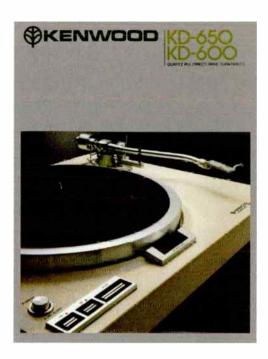


'simplified' version of the knife-edge bearing'd SME III, was then set up to take the new cart with a playing weight of just under a gram — there are numerous adjustments on this 'tweaker's paradise', and all need to be optimised if the arm's to give its best. Maybe that's why the III went out of fashion, although the late-70s move towards low-compliance moving-coil carts probably didn't help.

Acoustic Energy AEI09 floorstanders.

Pitch is rock-steady, the sustained bright synth tones of Vangelis' Spiral not – to borrow from a contemporary lager advert – 'wavering by a quaver'.

Moving to more soulful material (from the likes of Loose Ends and Roy Ayers) yielded warm yet articulate bass lines partnered with rhythmic pace; New Order's



evergreen Blue Monday (Substance 1987) was also driven along compellingly. Classical material (a Previn/LSO recording of Rimsky-Korsakov's Flight of the Bumblebee and a 1963 Supraphon recording of Neumann conducting the Prague SO in Dvorak's Fourth Symphony) demonstrated a solid soundstage, albeit with traces of mid-band thickness. But detailing was strong.

Such positive experiences encouraged me to dig out my Nakamichi cassette deck and indulge in the long-lost pleasures of making a compilation cassette!

So what conclusions can we draw? Firstly, ignore the jingoism of the 1980s. Direct-drives, nearly all of which are Japanese, aren't always the sonic disaster they're made out to be. Sure, cheap models with flimsy cabinetry and lightweight platters can 'cog' and howl-around – some reviewers discovered that an Oriental manufacturer's budget belt-drive decks audibly-outperformed direct-drives higher up the range – but solid, well-designed decks can deliver.

Secondly, the SME III arm, with ultra-low mass titanium arm tube and carbon fibre headshell, can sound pretty good with the sorts of cartridge it was intended to work with (apparently, it was designed around the Shure V15 III).

Finally, higher-end Philips cartridges are forgotten gems. However, that's not to say it wouldn't be interesting to try a more modern arm and cartridge with the KD600, as its substantial plinth, sturdy platter and necessarily strong motor do a very good job – especially for £45!

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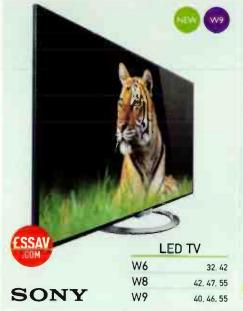
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YAMAHA YSP-3300 DIGITAL SOUND PROJECTOR

The 16 array speakers, controlled by Yamaha's YSP technology, plus two powerful woofer units in the large cabinet deliver excellent sound quality with clearly positioned dialogue and superb surround effects. The wireless





PIONEER X-SMC5 CD / DVD / iPOD WIRELESS SYSTEM

Stylish and compact, the X-SMC5 is a great all-in-one solution. Features built-in WiFi, support for AirPlay, Bluetooth and DLNA v1.5 along with Internet radio, a CD/DVD player and iPod Dock



MARANTZ • CD6004 / PM6004 • CD / AMPLIFIER

This award-winning CD player and amplifier is the result of extensive research and development by Marantz's engineering team, under the direction of Brand Ambassador Ken Ishiwata.



channel systems



NAD C 446 MUSIC STREAMER



Powerful digital media player featuring Internet radio and a FM/AM/DAB+ tuner. The C 446 allows you to stream your music collection from multiple networked storage devices using DLNA and Universal Plug and Play (UPnP) standards





Cables section

This month Tony Bolton looks at Audioquest cables.

have long been a believer that cables, interconnect, speaker and mains can have a powerful effect upon the sound of a system, for better or worse. I last reviewed cables from California based Audioquest a number of years ago, so was quite curious to see what progress the Company's products had made.

Audioquest was founded by Bill Low in 1980 after he had begun making his own cables and distributing them locally in Los Angeles. He soon found a market in Japan as well, and the Company now boasts several hundred outlets in America and distribution in 60 countries around the world.

Two affordably priced looms were chosen from the wide range of products on offer.

After I received them, the cables were run in for 48 hours using a Blue Horizon Pro-Burn cable burn-in accelerator. After this each cable was listened to individually before being connected up as two complete looms.

SPEAKER CABLES

TYPE 4/GO-4

107

INTERCONNECT CABLES

BIG SUR/VICTORIA

108

MAINS CABLES

NRG-X3/NRG-2

109

SPEAKER CABLES TYPE 4 SPEAKER CABLE



his cable has a history that stretches back to 1995, when it's basic geometry and conductor compliment were laid out. It uses four conductors of "Solid Long Grain Copper" with the two negative ones being insulated

with "Carbon Coated Polyethylene", and with "Nitrogen Injected Foamed Polyethylene" around the positive conductors. These are laid out in a star quad configuration which is claimed to allow for better dynamic contrasts than running conductors in parallel. They are also of different sizes

in what is called "Spread Spectrum Technology".

SOUND OUALITY

Starting off with the New Cologne Philharmonic Orchestra playing Vivaldi's 'Four Seasons' I was presented with a smooth, slightly rounded sound that was quite engaging. The soundstage was of good, but not exceptional width and depth, and quite well populated, although I felt that there was a little blurring of the precise placement of the players. The violins were handled well, with no trace of sharpness or uncouth behaviour.

Playing Morcheeba's 'Big Calm' demonstrated the smooth, slightly lush sound well. Vocal textures were well displayed and the sound washed over me in a very enjoyable way.

CONCLUSION

This interconnect will open up the sound of a budget system without revealing any of it's weaknesses.

AUDIOQUEST TYPE 4 SPEAKER CABLE. £11 PER M.





VERDICT

A smooth sounding cable that has a rounded and easy flowing sound

FOR

- gentle presentation
- quite deep bass
- smooth high frequencies

AGAINST

- could be a little soft sounding for some systems

Audioquest. +31 16554104 www.audioquest.nl

SPEAKER CABLESGO-4 SPEAKER CABLE



his cable is made of "Perfect
Surface Copper +" with
four solid core conductors. These are again insulated in "Carbon Loaded
Polyethylene" for the negative strands and the positive ones

are covered in air-filled "Nitrogen-Injected Foamed-Polyethylene". There is a rectangular box (the "Dielectric Bias System") attached to one end which contains a battery. This powers an electrostatic field that is claimed to saturate and polarise the molecules of the insulation to improve the blackness of the background and dynamic contrasts.

SOUND QUALITY

The presentation was radically different to the Type 4 cable above with a vivid and quite punchy sound. The cellos and bass sounds were full bodied and fast, giving a sprightly step to the music. The soundstage was well lit, allowing me to place the performers more accurately in front of me. This good lighting also extended to the treble, which was defined but stayed on the right side of sharpness.

CONCLUSION

A very open sounding cable with good dynamic range. Partnered with the Ming Da Dynasty Duet 300B amplifier, it brought out the richness of the 300B valves' sound, but still sounded fast and incisive. It could be a little too vivid with bright sounding electronics.

AUDIOQUEST GO-4 SPEAKER CABLE £40 PER M.



VERDICT

Quite vivid and punchy sounding cable that will add some sparkle to a system

FOR

deep bass open midrange wide soundstage

AGAINST

may be a little vivid for some systems

Audioquest. +31 16554104 www.audioquest.nl

INTERCONNECT CABLES **BIG SUR**

AUDIOQUEST BIG SUR INTERCONNECT £99 PER M.





VERDICT

seductively smooth sounding interconnect that has a good grasp of rhythms.

FOR

- smooth, rich sound
- good bass
- tight timing

AGAINST

- a little soft focus for some systems

Audioquest. +31 16554104 www.audioquest.nl



e conductors are made of "Solid Perfect Surface Copper +" which are surrounded by air filled "Foamed-Polyethylene" insulation. The geometry is described as "Asymmetrical Double Balanced" which is claimed to offer a relatively lower impedance for the ground, and separate signal paths for both the ground and the shield.

The cold welded, gold plated "Pure Purple Copper" RCA phono plugs are compact so should fit into nearly any system, but are a tight fit and could do with grips on them to prevent any tendency to pull them by the cables.

SOUND OUALITY

This cable equated well with the Type 4 speaker cable,

offering the same smooth and slightly rounded sound that would help tame the high frequency excesses of budget CD players. The violins in the 'Four Seasons' were presented with a smoothness that wasn't, to my ears, quite tonally accurate, but was very

The timing when playing 'Big Calm' was quite tight, adding a certain momentum to the music which suited it well.

CONCLUSION

Although a little soft and rounded at the frequency extremes, this interconnect coped well with both orchestral and electronic sounds. It's forte is its way of transmitting the snap of a beat giving music momentum and

INTERCONNECT CABLES VICTORIA

AUDIOQUEST VICTORIA INTERCONNECT £249 PER M.







OUTSTANDING - amongst the best

VERDICT

Open and direct sounding interconnect that has a big soundstage

- wide soundstage
- very deep bass
- smooth treble

AGAINST

- could be too open for some systems

Audioquest. +31 16554104 www.audioquest.nl



his interconnect is made up from solid "Perfect-Surface Copper +" conductors that are coated in polyethylene "Air-Tube" insulation. Like the GO-4 speaker cable, it boasts a box containing the "Dielectric Bias System" mounted at one end, so space needs to be allowed for this when fitting. RFI is rejected by Audioquest's metal and carbon loaded "Noise Dissipation System". Like the Big Sur it uses asymmetrical double balanced geometry and has "Direct Silver plated Pure Red Copper" RCA plugs of compact dimensions.

SOUND QUALITY

The Victoria sound has a family resemblance to that of the GO-4 speaker cable, being rather open and vivid in its presentation. It fitted in well between my Njoe Tjoeb 4000 reference CD player with its valve output stage, and the smoothness of the Ming Da 300B amplifier.

Vivaldi's violins had bite and shape, with the rasp of bow on string accurately described. The soundstage was big, allowing the orchestra to be pictured auite well.

The lush production values of 'Big Clam' were well displayed, with a deep rolling bass and good midrange and treble that went up high without being intrusive.

CONCLUSION

This is a very open and fast sounding cable that will perk up a jaded sounding system.

MAINS CABLES NRG-X3



his mains lead is made of "Long Grain Copper", with semi-solid conductors arranged in a helical array, and packed so that the conductors position in

relation to each other doesn't change down the length of the cable. This is claimed to lower distortion levels. The mains plugs are cold-welded in place using Audioquests proprietary system.

SOUND QUALITY

The results of this were a cable that showed off the differences in musical intensity in the 'Four Seasons' effort-lessly and at the same time managed to retain a smoothness to the treble that was impressive for the price. I felt that there was a little softening of the upper treble that robbed the violins of a little of their shape, but since this lead would probably be used with budget electronics then this was not necessarily a bad thing.

The bass sounds in 'Big Calm' were fast and had a good amount of weight behind them which made a good foundation for the rest of the sounds to stand upon.

CONCLUSION

A well mannered lead that provides enough openness to be satisfying but retains treble smoothness. It will work well with digital sources and less expensive solid state amplifiers. AUDIOQUEST NRG-X3 POWER LEAD £60 FOR 1.8M



DUTSTANDING - amongst the best

VERDICT

Sensibly priced budget mains lead with sophisticated sound

FNR

good dynamics fast bass smooth treble

AGAINST

nothing at the price

Audioquest. +31 16554104 www.audioquest.nl

MAINS CABLES



his thick lead consists of solid core "Long-Grain Copper" conductors wound in a counter-spiral geometry. The inner array of positive conductors spirals in one direction, while the outer negative conductors are would the other way. The mains plugs are fitted

with Audioquest's Cold Weld system.

SOUND QUALITY

This cable cannot be curved tightly so needs a lot of space behind a component to allow it to be fitted. It is also heavy enough that lightweight phonostages would need securing to a shelf to prevent them

being dragged off by the cable's weight.

The sound was immediately impressive from the first notes of the 'Four Seasons' with the Ming Da's 300B's sounding very forthright and assertive in their presentation. The soundstage was huge, with good lighting and performer placement. Frequency extremes were wide and well presented and the swelling of the orchestra to a crescendo occurred quickly and effortlessly.

With the deep rolling flow of 'Big Calm' this cable was in its element, showing off very deep and tuneful bass, with an open mid-band and a treble that seemed to reach up to the stratosphere.

CONCLUSION

An excellent lead that opens a system's sound right up, but does need marrying to smooth sounding electronics. This takes no prisoners if a component isn't up to scratch.

AUDIOQUEST NRG-2 POWER LEAD £169 FOR 1.8M





DUTSTANDING - amongst the best

VERDICT

Punchy and vivid sound that can be a real tonic to your system

FDR

- very deep bass
- fast transients
- huge soundstage

AGAINST

- may be too forward for some tastes

Audioquest. +31 16554104 www.audioquest.nl

free reader Classifieds

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MISSION 752 Freedom, 90 dB. Beautiful condition. Excellent all round. £325. Tel: 020 7253 5702 after 7pm. 07926 126 663 any time

AUDIOLAB 8000S/8000P, mint, boxes, manuals. £600. Marantz CD52Mk2SE, remote, mint, £150. Trichord Dino (standard), mint, manual, £150. Kef Q30's (mahogany) excellent, £70. Buyer collects (cash) Tel: 01782 205922 or 07708 597 027. Email: johntaylorhartwell @yahoo.co.uk (Staffordshire)

MAGNUM DYNALAB 107TR tuner. Remote control, 25' cable with FT2 aerial. Not used. Good reason. Cost £3598. Will accept £2650. Tel: 07854 266 620

CELEF PEI speakers (forerunner to Proac). Re-capped, £50. Good condition. Castle Warwick speakers, £20. Can demo. Collection only.Tel: 0114 236 9620 (Sheffield)

LATE VAN den Hul Frog Gold cartridge wanted. One requiring repair considered. Tel: 01505 346 791 (Renfrewshire)

AUDIO INNOVATIONS T2 moving coil transformer, £175. Pioneer F91 FM Reference digital synthesiser tuner, £150. Tel:Tom 07939 051944

YAMAHA CDR-H1500 CD recorder, titanium colour required, boxed, little used. Please call Peter: 07941 842 605

KEITH MONKS Lab9 low mass ultra tracking low stylus pressure 9" arm (new). Offers. 12" glass turntable mat, £12. Audio Generator 'Levell' TG152DM, 5 ranges, 3Hz-30Hz ×10, £25 (very good condition). Tel: John 01395 273 977 (Devon)

MERIDIAN 588-24, low hours. fab, £900. 502 and 557, excellent, £1200. Tel: Phil 07973 426 291 (Birmingham)

NEAT PETITE SX speakers, mint condition and boxed. £795. Tel: Martyn 0794 671 0965 (West Midlands)

WANTED: MARANTZ AV9000, Teac X1000R reel to reel. Buyer will collect. Tel: 01243 860 634 NAIM CD35, very good condition, boxed, manuals etc. Remote temperamental hence £200. Some interconnects included. Tel: 07538 774 946 (Northants)

DENON DVD 2900 multi region DVD player. Plays SACD's, DVD 'A's, DVD's, boxed, manuals, remote, excellent condition. Champagne finish. £100. Some interconnects included. Tel: 07538 774 946 (Northants)

ARMSTRONG 625 receiver, £45. Dual 505/2 turntable, £40. Marantz CD60, £60. Dynatron 1420 speakers, £25. Aiwa A30 mini amp tuner, £50. Carbon fibre record brush, unused, £6. Tel: 01708 457 691

DISK PLAYER Raysonic Model CD228, two box, top loading valve CD player. Top of the range. £700. Tel: 01903 506 479

CASTLE EDEN speakers Excellent cond. Light ash wood. £150. Buyer collects. High Wycombe. Tel 0207 551 5403

WANTED:Top quality Hi Fi seperates and complete systems, Naim, Linn, Cyrus, Meridian, Arcam etc,fast,friendly response and willing to travel/pay cash Please call me on 0781 5892458 TRICHORD DINO Mkll phono pre-amp, standard power supply, little used and in good condition £388 new, £170 ono + post/pick-up free Edinburgh. Dave on 07792414536 or drherd@talk21.com Images available.

RUSS ANDREWS Yellow mains cable 2m length £40 Also Yellow 6 way extension with 4m cable Super Clamp spike filter £90 buy both for £125 items mint Condition cheaper if collected Tel: 01902 884694 Email: jukey39 @yahoo.co.uk

CLASSIC NAIM tuner NAT101 complete with SNAPS power supply. Excellent condition giving superb performance. Serviced by Naim, receipts available. Recently checked by local Naim Dealer. Complete with Naim Boxes. £475+PP.Tel: 01768 870214.

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MAINS CABLES: LAT Ac-3 With Furutech And Oyaide Connectors. 1.5 Metres. 3 Cables. Price Paid £495 Each. Price: £200 Each Many other cables available. Please Email for full list peter.holliday @steria.co.uk

GAMUT L3 standmount speakers. Birds eye maple. Superb condition. Grills, manual etc. Demo welcome. Collection only. Fantastic sound and stunning looks. £1925ono (£5400). Jason. 07725 072878 (Leics)

POWER SUPPLY for Class A amplifiers, ideal for John Linsley Hood's 1996/1969 or any other low power Class A amplifier. Fully built, ready to use, in self contained enclosure, £279. Tel:-0207 499 8729.

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LINN LP12, fluted corner braced plinth, full Cirkus Upgrade, latest laminated Armboard and Lingo Power Supply. Fully loaded bearing with red cap so ready to go. In excellent condition with original boxes and internal packaging. together with set up instructions for the LP12 plus the Lingo manual. £765. Tel: 0121 704 1188 or boballen@sky.com for photo's and further details (Solihull, West Mids).

ANALOGUE INTERCONNECTS: JPS Labs Aluminata Balanced XIr (World's Best). I Metre Pair. Price Paid £2100. Price: £1500. Digital Interconnects: (Single Cable) Chord Sarum Tuned Aray. I Metre. Phono (Cd End) To Wbt (Dac End). Price Paid £1600. Price: £1000. Many other cables available. Please Email for full list peter.holliday @steria.co.uk

YAMAHA CR2020 Receiver, in nice condition. Bucket-loads of Wattsper-channel. Meters with glamorously-swinging needles. Chrome front. Offers invited from Shaft impersonators. Located Carmarthenshire, Wales. 07989 308634.

WANTED LARGE heavy power amplifier Sansui AU717, 919 or AU111, Pioneer A858, Rotel, Luxman, Quad, Leak, also Valve pre-amplifier & Linn Sondek turntable or Similar Any condition. Will collect. 01726812966.

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SPEAKER CABLES Kimber Cable 8tc Pair. 4.5 Metre. Lockable Wbt Bananas. Price Paid £500. Price: £250. MIT Avt I Pair. Spades At Amp End, Bananas At Speaker End. Furutech Jumper Cables (Banana) For Speakers With 3 Inputs. Price Paid £670. Price: £250. Many other cables available. Please Email for full list peter.holliday @steria.co.uk

WANTED A faulty or non working Quad 44 preamp later model grey with phono sockets. Contact Mike 01758 613790.

LATE VAN den Hul Frog Gold cartridge wanted. One requiring repair considered. Tel: 01505 346 791 (Renfrewshire)

YAMAHA CDR-H1500 CD recorder, titanium colour required, boxed, little used. Please call Peter: 07941 842 605

DISK PLAYER Raysonic Model CD228, two box, top loading valve CD player. Top of the range. £700. Tel: 01903 506 479

GUIDELINES FOR BUYING AND SELLING SECOND-HAND EQUIPMENT

FOR THE BUYER

- Not everyone is honest
 Buyer Beware!
- 2. Don't send cash!
- Accept no verbal guarantees.
- 4. Have you heard the item or something similar? If not, why do you want it?
- Don't pretend to have knowledge - it's your fingers that will get burnt!
- 6. Is it working? If not, why not? Can it be repaired and if so is it worth it?
- Has it been modified and, if so, have notes been kept?
- 8. Was it any good in the first place?
- 9. Don't send cash!
- 10. If you are in the slighest doubt, arrange an audition (see point 5) If it's too far, wait for another time.
- Either buy it or don't: vendors are excusably impatient with 'consultation' exercises.
- 12. Don't send cash!

FOR THE SELLER

- Not everyone is honest -Seller Beware!
- Make no verbal guarantees.
- Even 'nearly new' is still second-hand. If the manufacturer's guarantee is no longer in force, your price should reflect this.
- There is very little intrinsic value in secondhand hi-fi; it's only worth what someone will pay for it.
- 5. The best guide to pricing is last month's Classifieds: that a 'classic' was worth £xxx a year or two ago is no guide. Values fall as well as rise.
- Amateur second-hand dealing is not a big money game: you win some, you lose some.
- Be prompt with despatch.
 If in doubt about buyer's bona-fides, either wash out the deal or send C.O.D.
- 8. There will always be time-wasters; be tolerant within reason!

NEXT MONTH

OCTOBER 2013 ISSUE

Audio Research make valve amplifiers that are a hard rocking visceral sound experience, muscle amps that make all else sound under-nourished. Next month we will be taking a close and expert look at their new VSi75, pictured here. It uses KT120 power valves and sophisticated solid-state circuitry in unusual combination to deliver an impressive 75 Watts per channel. It's sure to be good. Read about it in our October 2013 issue.

Also in the October 2013 issue, we hope to bring you -

LOUDSPEAKERS

TANNOY 6.2/6.4 LOUDSPEAKERS Q ACOUSTICS CONCEPT 20 SONUS FABER VENERE 2.5

VINYL

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DIGITAL

AUDIOLAB M DAC
COLOUR FLY C4 MP3 PLAYER

COWAN D20 32GB MP3 PLAYER YAMAHA RX-A830 A/V AMP ARCAM RBLINK OLYMPUS LS12/14 PCM RECORDERS

AMPLIFICATION

AUDIO RESEARCH VSI75 VALVE AMP
NUFORCE 1A-18 AMP AND NUFORCE CUBE RED AND SILVER
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NOVEMBER - 3RD SEPTEMBER DECEMBER - 7TH OCTOBER

DONOVAN

Mellow Yellow 1967



'Mellow Yellow'
was significant because
it was part of
Donovan's spiritual awakening
and his move
towards meditation

here are not too many music artists out there who are known by a single name: Donovan is one of them. Dylan is another. That the former should be labelled Britain's answer to the latter was glib in the extreme. Donovan ploughed his own furrow, promoting the flowerpower optimism through a series of decorative songs, many hits and a whole heap of albums. 'Mellow Yellow' (now reissued by the USbased audiophile record label, Sundazed: www. sundazed.com) came at a very productive time for Donovan. In the year of its release, 1967, he also released 'Sunshine Superman', 'A Gift From A Flower To A Garden' (also released by Sundazed), 'For Little Ones' and 'Wear Your Love Like Heaven' (the third viny! Donovan release by Sundazed, this month).

'Mellow Yellow' (released here in a glorious mono mix) took a wide range of influences as the basis for its content, far more than 'Superman', for example, as the album seemed to take more notice of what was going on around it while Donovan himself also reached back into his recent past to merge his own favourite noises into the project.

"I wanted to relate [create hits]," said Donovan of this creative period. "It seems to me that in the folk world they were dead against popular music. But I felt that they needed all this music that was coming out of bohemia: this was peace and brotherhood. It was important information. Dylan signed a deal with Columbia. He didn't sign a deal with a folk label. He saw the possibilities in appealing to a mass."

Hence, you hear that cusp of change where Donovan moves from being a folk balladeer to a pop artist. So, while the John Paul Jones' (of Led Zeppelin) arrangement of 'Mellow Yellow', helped the song to become a hit, tracks two and three ('Writer In the Sun' and 'Sand And Foam') harked back to Donovan's folk roots.

The former was penned in Greece while the latter was written in Mexico, both penned while the artists believed that legal problems were going to destroy his career.

The album ends with 'Sunny South Kensington', an upbeat number driven by

glowing lyrics. As for the rumours that Paul McCartney sings on the Mellow Yellow track? According to Donovan himself, "No – when Paul came in the studio he was really just claps and good cheer and you can hear him saying "Mellow yellow," but he didn't do real word back-up."

'Mellow Yellow' was significant because it was part of Donovan's spiritual awakening and his move towards meditation and his meeting with the Maharishi. "Maharishi was on a tour of the world at the time, introducing his newly developed technique which is a simplified form for the west given to him by his teacher Guru Dev.

Pattie Boyd and George (Harrison) had been to India the year previously – he to study the sitar with Ravi (Shankar). And while he was in India the Shankar women put Pattie Boyd in a Sari and took her out and one of the things they took her out to was a lecture by a new yogi on the scene called 'Maharishi'.

When she went back to England the Beatles had never heard of him. When she saw in the press that he was coming to Wales she said, "George, the teacher is coming to Wales why don't we go down?"

George called me up saying, "We found the guy, he has got the meditation, he has got the mantra." So I met with Maharishi on the west coast when he came over here, he initiated me down in the lower flats of Beverly Hills. Then George phones me up and says "Now we've got it, we've been invited to India."

Sundazed has done all Donovan fans a great service by reissuing this and other albums. In fact, his music is more significant than you might think: "Thousands of people have said over the years that my poetry and music have helped them. I would like to be remembered as a living poet who now can be listened to.

Even beyond my death, the music will go on. But, in a more frivolous mood, I would say on my headstone, 'He played in between the notes.' Powerful and highly skilled musicians are known for their music not because of the notes they play, but for the spaces they leave in between the notes. The whole story of the doughnut is actually the hole". PR

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 or your nearest USHER dealer...





"2012 Editor's Choice" Awards --- AUDIO ART

Mini-X Diamand

2-way system: 1.25" Diamond DMD dome tweeter, 7" midrange Sensitivity: 87 dB @ 1 watt / 1m Nominal impedance: 8 ahms frequency response (-3 dB): 41 Hz ~ 40 kHz Power handling: 100 watts Crossover frequencies: 2.3 kHz Weight: 15.5 kgs/34.2 lbs. per piece

Dimensions (w x d x h): 26 cm x 37 cm x 43.5 cm;



Behind the scenes

Dr. Joseph D'Appolito a world renowned authority in audio and acoustics designs the crossover and performs prototype testing/final fine tuning for Usher Audio. Consulting to a couple of famous audio companies, Joe always finds the tremendous value Usher Audio products represent a delightful surprise in today's high end audio world.

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The living heart of your sound system.

hen Herman van de Dungen founded PrimaLuna, his mission was to create affordable valve amplifiers and CD players that not only harnessed the sheer, sensual musicality of valve technology, but also defied the issues of reliability that sometimes accompany it.

PrimaLuna's Prologue and Dialogue ranges continue to expand, featuring ground-breaking advances such as the unique Adaptive AutoBiasTM circuit that allows easy switching between valve types and the jitter-reducing SuperTubeClockTM, exclusively incorporated into PrimaLuna's CD players. These innovations help create a benchmark-setting suite of products that builds on the marque's past triumphs, combining excellent sonic definition with a beautifully balanced tonality.

Aesthetically stunning to look at, with a hand-polished black or silver faceplate, PrimaLuna consistently fulfils Herman's original promise of creating the best you can get for the least you can pay.

