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DECEMBER 2009

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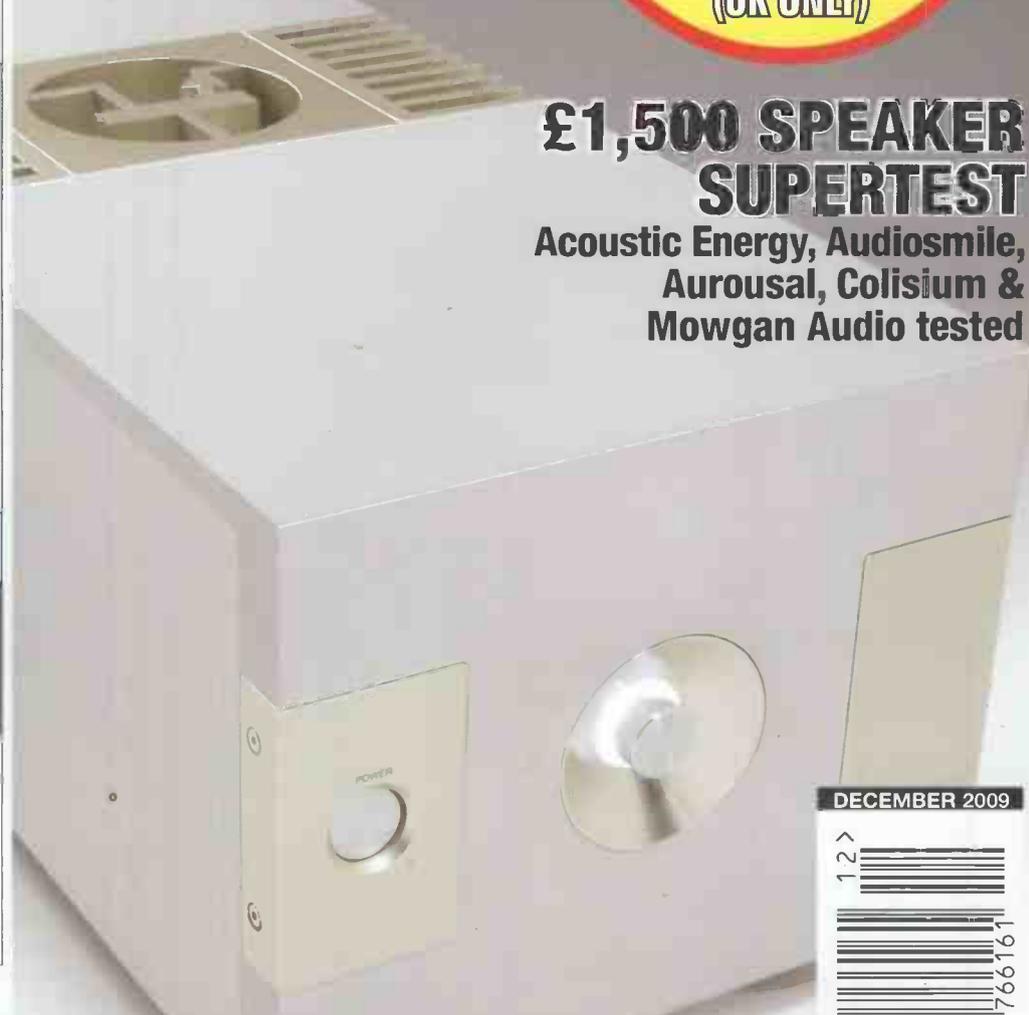
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DECEMBER 2009



11 PAGES OF LETTERS - THE BEST WINS A PAIR OF KEF iQ30 LOUDSPEAKERS! (UK ONLY)

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welcome

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verdicts

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



Remember 1999, and the feverish *fin de siècle* mood of that moment? Amazing isn't it, to think that we're now ten years on from talk of 'millennium bugs' and MP3s?

Back then, all the media talk was of Napster and the menace MP3 presented to the music industry, whilst Dixons started stocking the Diamond Multimedia Rio, with a whopping 64MB of memory!

Quirky as all this sounds now, life ten years ago wasn't so dramatically different, and nor was hi-fi.

Lest we forget, the vinyl revival had already started by 1999, but ten years on it's just taken for granted. At the same time, some super new analogue products are now out using sophisticated materials, like Origin Live's Enterprise C tonearm [p100] and Lyra's Titan i MC cartridge [p107], raising vinyl's sonic bar higher.

Digital's got better too, with cooking 16bit CD players sounding very nice thank you very much, but the real headline news is the arrival of 24bit FLAC downloads. As the distant cousin of MP3, but offering obviously superior sound, they've taken the baton from that pesky little compressed file format and run with it...

Ten years ago, valve amplifiers were slowly coming back into the mainstream, and now that's precisely where they live. It's no longer trendy to have one; you just buy them to do the job. Meanwhile transistors are striking back, with great powerhouses like Digital Do Main's BI-a FET power amplifier [p10] and Musical Fidelity's pure Class A behemoth, the AMS35i [p25], both of which give the top tube amps something to break out into a sweat about!

Likewise, loudspeakers have evolved into altogether finer things, but there have been no fundamental new developments. The ribbon tweeter, something of a favourite in the nineteen seventies, is back and speakers are all the better for it, as our supertest shows [p15]...

So nothing earth-shattering to report in the last month of the first decade of the new century, then. Hi-fi hasn't changed dramatically; it's better without a doubt, but I suspect the next ten years to be an altogether more profound transition. Get ready for fully networked houses with wireless hi-fi systems, running digital resolution that will make today's state of the art 24/96 FLAC files look like those early 128kbps MP3s. Bring it on!

David Price, editor



testing

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

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

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

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



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ELECTRONIC MAGAZINE

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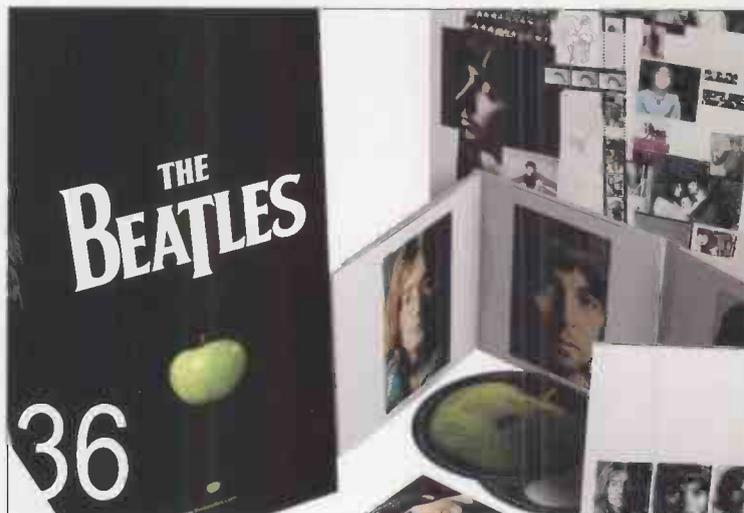
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Aquarius is the latest product in IsoTek's unique range of multi-award winning power conditioners that are designed and hand made in England using the finest materials and built to the highest of standards.

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HI-FI NEWS

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HI-FI WORLD

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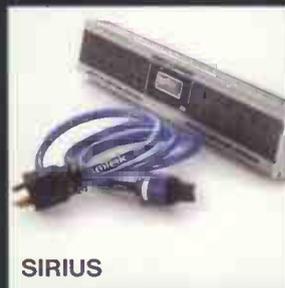
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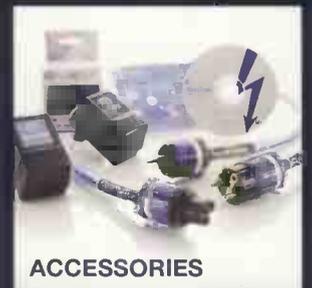


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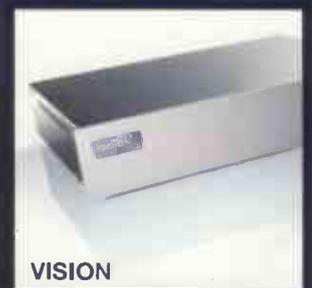
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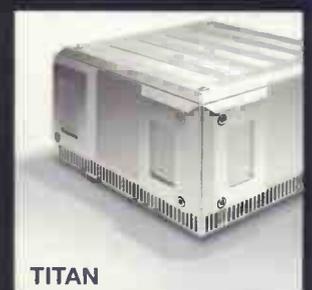
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SWEET FIFTEEN

Marantz's new £1,699 PM-15S2 integrated stereo amplifier comes finished in platinum, offset by subtle blue backlighting. The chassis sports double-layer construction, aluminium front and side panels, an additional bottom plate, and substantial shock-absorbing feet, to counter vibration.

At its core is an oversized audiophile-grade toroidal transformer delivering a meaty 200

Watts. Pre, power and volume-control

circuitry are separated and extensively shielded in discrete enclosures to prevent crosstalk and other unwanted interference. Substantial

heatsinks further eliminate cross-channel interference. Circuits are short path designs with

symmetrical layout, and the design also features Current Feedback amplification circuitry and Hyper Dynamic Amplifier Modules (HDAM-SA2 and -SA3) delivering fast signal handling with a high slew rate. Completing the package is a new Constant Current Feedback MM/MC phono stage.

The matching £1,699 SA-15S2 Super Audio CD player incorporates engineering lessons learnt from the construction of the flagship £5,000 SA-7S1, plus "a plethora of new features and internal components for exceptional sound quality", says Marantz. At its heart is the proprietary SACDM-10 mechanism which features an extruded aluminium case for precise, vibration-free reproduction with an ultra-stiff Xyron disc tray to absorb unwanted vibration. This feeds a high quality 24bit/192kHz stereo Digital to Analogue convertor from respected manufacturer Cirrus Logic. The CS4398 is a flagship design and utilises an advanced multi-bit Delta-Sigma modulator with DSD Support. Bespoke electrolytic, thick film capacitors are fitted, along with Shottky diodes, and Marantz's Current Feedback HDAM SA-2 op-amps. There is a high-grade power supply centred on a toroidal transformer, plus independent power supplies for each dedicated system block. A copper-plated zero-impedance matching joint is said to significantly improve signal to noise ratio, as is the shielding case for the digital output, and an optional 'display off' function. The SA-15S2's digital input is a rarity at this price point, so a music server or PC can be connected to make use of the internal DAC. For more information, click on www.marantz.co.uk.

THE LEGACY BEGINS

Goldring's new Legacy is a high end moving coil cartridge described as the company's "finest ever design, and the culmination of a century's knowledge and experience". It sports an ultra low resonance magnesium metal body which is both very light and extremely strong. For convenience and rigidity it has threaded inserts, allowing the cartridge to be easily mounted and accurately aligned into the tonearm's headshell. The diamond stylus is a highly polished, very low mass 'Vital' fine line design, chosen because of its exceptionally low distortion characteristics. To maintain rigidity, this is attached to a hard alloy cantilever which transfers the maximum level of detail from the diamond to the coils; the latter are hand wound using only the highest purity copper. The bespoke rubber mixture, used to form the stylus damper, ensures optimum compliance, helping The Legacy deliver a smooth, extended frequency response. A precision, rare earth, Neodymium iron boron magnet contributes to outstanding dynamics, the company says. For more information, click on www.goldring.co.uk.





responsible for the flash lighting of the Eiffel Tower). Didier is passionate about music and high-quality audio, and upon hearing of the opportunity to purchase Micromega in 2007, he proceeded to invest significant funds "to initiate a triumphant rebirth"! Micromega's founder, Daniel Schar, now leads the R&D department, alongside other core personnel considered instrumental to Micromega's audio design philosophy. As a result of Didier's input, the brand has a new and product range which includes three CD players, three integrated stereo amps, a stereo preamp, two power amps, an FM tuner and a surround sound preamp/processor. As ever with Micromega, every component is designed and manufactured in France, and available in a choice of black or silver finish. To find out more, visit www.micromega-hifi.com.

BIENVENUE ANGLETERRE!

The famous Parisian Micromega brand is back in the UK, distributed via Absolute Sounds. As a company, Micromega has recently undergone significant change. The brand has a new owner, Didier Hamdi, a former motorcycle racing world champion and founder of several successful businesses in the field of electrical engineering (including the company



RADIO GAGA

Legendary artist and producer Dr. Dre, Interscope Geffen A&M Chairman Jimmy Iovine and Monster are proud to announce the official introduction of 'Heartbeats by Lady Gaga', the latest addition to the 'Beats by Dr. Dre' headphone family from Monster. The self-inspired design, including every detail developed with Lady Gaga, is both a unique reflection of Lady Gaga's style and fashion sense as well as her commitment to the sound quality of her music and the way it's heard, says Monster. Lady Gaga touchingly explains that, "in the deepest hour of the night, I confess to myself three things; I would die if I was forbidden to write, forbidden to love, or forbidden to fashion. Heartbeats embody the trinity of my human being, with one additional vow: that sound matters. Wear heartbeats, love each other, and celebrate the art and lifestyle of music". The headphones feature a multi-faceted, glossy surface and high-tech build materials, with a jewel-inspired earpiece cosmetic. They're available in three separate versions, including a metal body with rose red jewel-shaped earpiece, metal body with all chrome jewel-shaped earpiece and black-on-black body and jewel-shaped earpiece design. The 'phones come in a beautifully designed red carrying case and an assortment of earbuds for comfort. For more details, click on www.monstercable.com.

DISK WORLD

Computer audiophiles will be interested to hear of the Verbatim InSight portable hard drive, a palm-sized 2.5" 500 GB external HDD with a display that shows the drive name and capacity available, even when disconnected. Housed in a premium black piano finish, InSight is suitable for both Windows and Mac users and is available for £119.99. The 21x128 pixel display is on a cholesteric liquid crystal display (ChLCD) which information to be displayed even without an external source of power. A glance is all that is needed to ascertain the capacity available. They can also personalise the name of the drive. The InSight HDD weighs just 164 grams and measures 153x87x16mm. Data is transferred at speeds of up to 480 Mbit/s via the USB 2.0 connection, which also provides the power for the drive. The drive operates at 5,400 rpm and has a cache of 8MB. For more details, click on www.verbatim.co.uk.



now based allows of power. A

NEW AGE

The new £795 IsoTek Aquarius is described as "a new benchmark in power conditioning for hi-fi". The heir to the Mini Sub's throne is said to enhance the performance of audio systems with greater clarity and focus. It's a six-way mains conditioning component that sits squarely in the middle of IsoTek's range, above the entry-level Sirius and below the high-end Sigmas, Nova and Titan. It sports two high-current and four medium-current outlets, all individually filtered and fully isolated from one another, together with a newly designed aluminium casing and a host of enhancements under the lid. Current delivery is greater than the Gil Mini Sub, with a full 16 Amps available from its two high-current outlets. Thermo-magnetic fusing contributes to this enhanced delivery, as does the use of a 16A IEC C20 inlet to connect Aquarius to the mains. The four medium-current outlets now feature IsoTek's Adaptive Gating technology – an auto-sensing filter stage that adapts to the current draw of the load, thus tailoring the filtering process to suit each individual piece of equipment attached. For details call +44 (0)1276 501392 or click on www.isoteksystems.com.



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TOUCH OF GLASS

Glass loudspeaker specialist Waterfall Audio has launched a new hi-fi loudspeaker concept called Serio. The diminutive satellite speaker features Waterfall's glass design expertise for both hi-fi and AV applications; it comes with on-wall, tabletop and stand-mounting options. It's available in three body colours: black, white and silver with matching grilles (orange and green 'fashion' grilles are also available). For more information, click on www.waterfallaudio.com.





ELEVEN PLUS

Denon's new AVR-4810 is the company's 'ultimate home cinema receiver'. With nine onboard amplifier channels, each rated at 180 Watts, the AVR-4810 is equipped with the latest high resolution audio decoders including Dolby TrueHD and dts-HD Master Audio, and also features Dolby

Pro Logic IIz and Audyssey DSX, delivering additional front height and/or front wide channels. It's also the first Denon to support the full Audyssey DSX setup through its 11.3 channel outputs. Any video signal, analogue or digital, can be upscaled to 1080p HDMI output via the built-in Anchor Bay advanced VRS processor. The AVR-4810 will be available in October at a suggested retail price of £2,799.99. For details, call +44(0) 2890 279830 or click on www.denon.co.uk.

PRO FEEL

Sennheiser's new HD 380 pro (£139.99) are described as "foldable professional monitoring headphones designed for audio professionals". The closed back design provides an extended frequency response (up to 27kHz) it is claimed, plus a high sound pressure level (up to 110dB). It also uses Sennheiser's Ergonomic Acoustic Refinement (E.A.R.) design which channels the audio signal directly into the user's ears. The space-saving foldable design of the HD 380 pro makes them very easy to

transport. After use, the headphones can be folded away and stored in the tough zipped carrying case provided. It has replaceable parts, weighs just 220g and has a 1m coiled cable extending to 3m. A carry case is supplied. For more details, call +44(0) 1494 551 551 or click on www.sennheiser.co.uk.



THREE SERIES

Pioneer announces its Series 3 loudspeakers. French product designer Steve Senescat has created a distinctive line of minimalist speakers with a slim silhouette, curved lines and flush mount grilles. The line-up consists of three models: the S-31 floor-standing speaker, the S-31B bookshelf speaker and the S-31C centre speaker, all available in a light or black wood coloured finish and with flush mounted, removable grilles. Complementing the range is a compact sized black subwoofer, the S-51W. For more information, click on www.pioneer.co.uk.



AIR TIME

Bowers & Wilkins' new £299 Zeppelin Mini is a compact iPod speaker system that boasts USB iPod connectivity via the docking arm that synchronises with PCs or Macs, and offers ninety degree rotation for cover flow and video playback. It's said to attain "the same high standards in sound quality and design set by Zeppelin, but in a more compact form, it is reduced in size, not in sound". For more information, click on www.bowers-wilkins.com/zeppelinmini or call +44 (0)1903 221500.



TOUCHING

Pure's new Sensia is described as "the world's first visual radio with large colour touchscreen and advanced user-interface". It's a DAB and internet-connected radio with a unique, large 5.7" 640x480 high resolution colour touchscreen. It offers a unique way of interacting with internet and radio content including podcasts and listen again services, plus DAB/DAB+ and FM, a growing set of custom PURE 'Apps' such as weather, news, Picasa, Facebook or Twitter and new broadcast material such as station slideshows. Sensia is also a media streamer enabling users to listen to music stored on a home computer or network storage device via Wi-Fi technology. Four striking colour choices are offered; bright red, vivid yellow, sleek black and cool white. A moulded stand is supplied, which allows the user to angle the radio to an optimum viewing position and a matching remote control completes the look. A bespoke microsite has been created for Sensia at www.touchmyradio.com. Other features include a claimed 30W RMS, an input for an iPod/MP3 player, alarm and countdown timer, sleep timer and a headphone socket. Sensia will be available in time for Christmas at £249.99. For more information, visit www.pure.com or call 0845 1489001.



SPOTTED!

Vantage Audio's Richard Peachey showcases his legendary turntable set-up skills with the editor's recently restored Marantz TT-1000 direct drive...

Field of Dreams

Following in the footsteps of Japan's legendary 1970s MOSFET amplifiers, Noel Keywood assesses the new Digital Do Main B-1a stereo power amp sporting special Field Effect Transistors...

Drawn by the eerie purple glow of a corona discharge, I went into a room at the Munich High End show earlier this year to see the Lansche Audio No3 loudspeakers. Seated in the gloom of this low lit room, however, I saw to my right a very unusual looking amplifier, the Digital Do Main B-1a you see pictured here. Beside was an earnest looking Japanese gentleman, Kazuhiko Nishi, eager to explain to me the inner workings of a radical amplifier that used custom made, large area audio power FETs (field effect transistors) able to give better sound quality than we get from today's general purpose industrial power transistors. With words like "silver vapour deposition", a "mirror image FET power supply" using the same devices, "gold plated heat-sink contact areas" and other esoterica, the Digital Do Main B-1a sounded like one highly specialised solid-state design to me, potentially able to overcome all the ills that afflict the breed, I thought, and hoped...

Aware that the amplifier has



2SK278B, 2SK78 and 2SJ78 low power static induction transistors used in the B-1a.

been little seen in Europe or the UK, I beseeched our Japanese speaking editor to phone 'em in Hamamatsu and get one if he could. I don't know

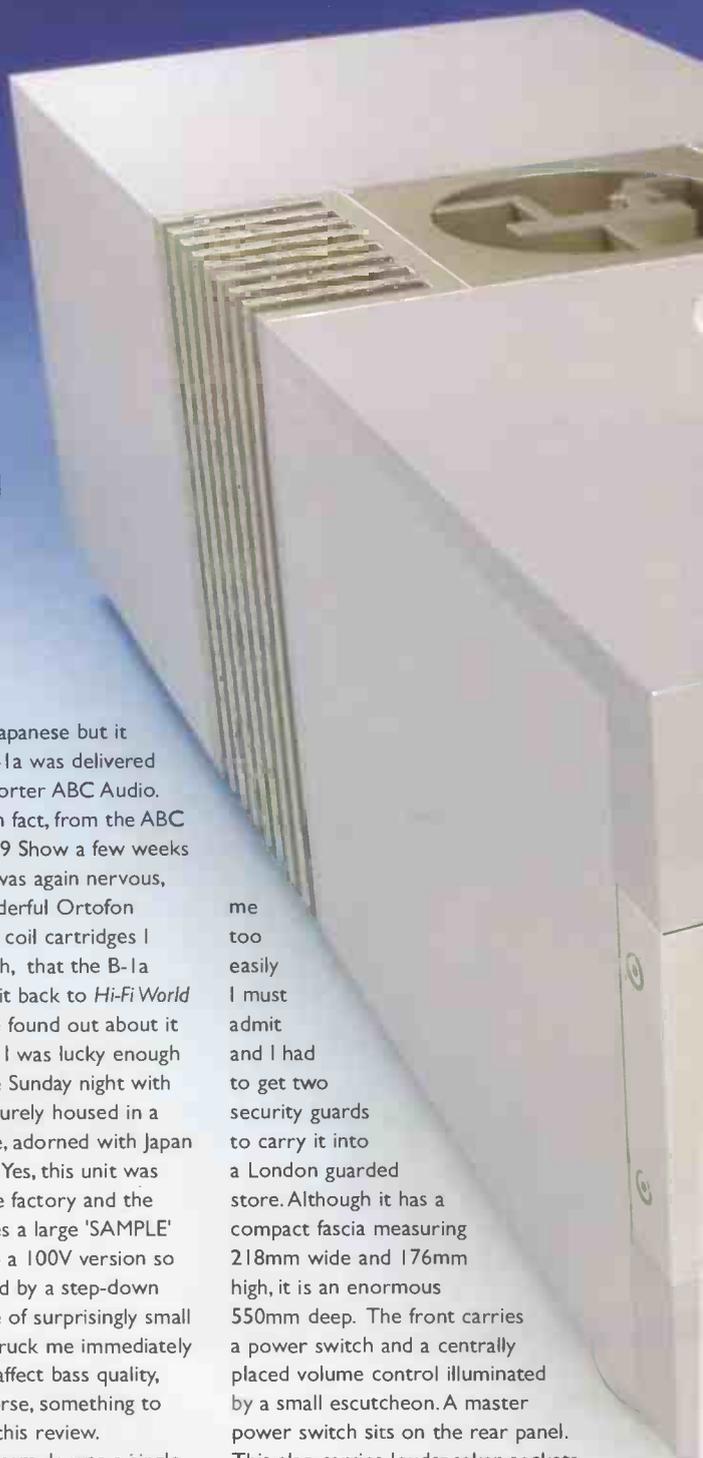
what he said in Japanese but it worked, and a B-1a was delivered through UK importer ABC Audio. Well, collected in fact, from the ABC room at Audio 09 Show a few weeks ago by myself. I was again nervous, as with the wonderful Ortofon Cadenza moving coil cartridges I nabbed at Munich, that the B-1a might not make it back to *Hi-Fi World* towers if anyone found out about it at the Show, but I was lucky enough to make it home Sunday night with a single B-1a securely housed in a sturdy flight case, adorned with Japan Airlines stickers. Yes, this unit was straight from the factory and the rear panel carries a large 'SAMPLE' sticker. It is also a 100V version so was accompanied by a step-down transformer, one of surprisingly small dimensions. It struck me immediately that this would affect bass quality, likely for the worse, something to bear in mind in this review.

Our review sample was a single stereo power amplifier. But this amplifier can be set to bridge mode to double power output, in which case it becomes a monoblock and two are needed, doubling available power for those that need more than 150 Watts per channel. With rear mounted input level controls for each channel, plus a big volume control in the centre of the front panel, a preamplifier isn't needed, so we did not use one, running a Stello DA-100 DAC straight in for CD purposes and an Eastern Electric Minimax phono stage for vinyl. Loudspeakers were our Sendor S8e benchmark references, chosen for a nicely damped, colouration-free midband.

Weighing 35kgs – and much more in its flight case – our B-1a wasn't going to be spirited away from

me too easily I must admit and I had to get two security guards to carry it into a London guarded store. Although it has a compact fascia measuring 218mm wide and 176mm high, it is an enormous 550mm deep. The front carries a power switch and a centrally placed volume control illuminated by a small escutcheon. A master power switch sits on the rear panel. This also carries loudspeaker sockets able to accept bare wires, 4mm plugs and spade terminals. Balanced XLR inputs and unbalanced phono inputs are provided, each channel having its own input level trim control able to reduce volume to zero. These can be used to lower sensitivity (although at 1.25V it isn't high) or adjust channel balance. The amplifier switches on and off silently.

At the heart of this amplifier lies something known as a Static Induction Transistor. Originally described by J. Nishizawa in Japan in 1975 it is in fact a Field Effect Transistor, with Drain, Source and Gate, as usual. Digital Do Main manufacture the 2SK77b high voltage / current output device used in their B-1a, as well as smaller signal devices. It seems that the Static Induction



"this is the only amplifier that I know to have output transistors optimised for audio use..."



Transistor (SIT) is difficult to fabricate and its excellent properties are only really needed in high voltage transmitters, where it can replace valves, and audio amplifiers – not a sufficiently large market to sustain profitable manufacture. So the SIT has been in and out of use for a long time, never having quite managed to secure its future. Its voltage transfer characteristics are triode-like, it does not suffer thermal runaway and it is able to work up to 225 degrees C.

All of this looks very good, but mismatching between devices will affect crossover distortion, which still exists, so feedback remains necessary. And also, the sound of 'triodes' isn't really something easily determined, as the few main types in use (300B, 211 and 845) all sound quite different and, in my experience (I use a 300B at home and 845 at work, so I

suppose I am Mr Triode!) is nothing like any solid-state amplifier I have ever heard, including this one. Since the current density and dielectric within thermionic triodes both differ radically from any solid-state device, and since the latter don't suffer secondary emission, saying they sound the same is like saying a Mini and Ferrari are the same because they both have round wheels.

Best to forget simple but misleading comparisons like this; the B-1a can justify its existence without it and there is a need for solid-state amplifiers built around custom designed, linear audio transistors I believe. This is why I was so excited to hear about the B-1a in the first place, and why in audio it is a radical amplifier: this is the only amplifier I know to have output transistors optimised for audio use. By way of contrast, any 300B or KT88 based valve amplifier enjoys dedicated audio valves inside – almost an unfair advantage!

SOUND QUALITY

FET amplifiers of various flavours I have heard came across as dry in delivery, almost prim and proper and very much of the solid-state breed. And, broadly speaking, the B-1a is in this mould, although it is obviously a *highly* refined hi-fi product of its time, by which I mean that attention to component quality all through gives it a sense of being consummately well preened for its purpose. FET amps of the 1970s were nothing like this, mainly because apart from their V-FETs, general component quality was poor, as with other amplifiers of the era, and this compromised both clarity and precision.

The most striking feature of the B-1a I felt was a sense of intense insight and detailing quite beyond the almost - by comparison - approximate sound stage set up by modern transistor amplifiers. Dry in nature, and constrained in a way a valve amplifier is not, the B-1a was at the same time intensely insightful, bringing a spotlight onto vocals that revealed every little inflection and nuance of delivery, as well as all the production details within the recording that act to enhance a studio recorded performance.



The 2sk77b output device, a vertically arranged static induction transistor designed for audio.



A single B-1a can be set to bridge mode (single channel) to double power. Channel level controls are provided, as well as balanced and unbalanced inputs.

Gabrielle's usually warm, dusky tones in 'People May Come' almost crackled at me as information in the midband and upper midband jumped from our Spondor S8e loudspeakers, projected forward in megaphonic fashion. Her own backing harmonies also leapt out and the smallest fades and echoes used to add depth and embellish the recording all became intensely etched and very obvious. The only reservation here came from a diminution of warmth and body, from a singer whose vocals rely these qualities

Do you think Hugh Cornwell has a strong, deep but almost rasping voice as he heads The Stranglers? Well, the B-1a makes more of all the tiny details that make up his vocal delivery rather than standing back and presenting a singer whose delivery suits his idiom. In this the B-1a's sense of analysis can detach content from performance slightly, at least until you acclimatise to it. I would describe the B-1a as more academic than atmospheric in basic character, but that it can get so much out of a recording where others seem to struggle suggests it has a lot going for it; it's just this amplifier puts it all together differently.

The B-1a is astonishingly forthright and peers right into a performance, pulling it apart with cool precision. Grippingly concise, it places every fine detail into place in the acoustic picture with military precision and, by way of contrast, makes normal amplifiers sound quite vague, both spatially and temporally. Although that makes the B-1a impressive rather than romantic, its abilities are obviously quite beyond the current norm and there were some fascinating consequences.

One feature that intrigued me

was that its intensity and precision resulted in a conspicuously well ordered sound stage on which instruments seemed to have a more forceful locational presence than I have heard before, so a cymbal would ring from just *there* - a point in space no bigger than a 5p piece 3 metres distant! This seemed to be a function of both the drily wrought, forcefully projected nature of instruments, as well as vivid insight into their character that made them seemingly closer. There's no doubt also that great midband and upper midband presence helped toward this effect and here I suspect the step down transformer was not helping by lessening bass impact, reducing emphasis of low frequencies. However, I have to say that the B-1a has the sort of tightly ordered delivery of a high feedback amplifier and its enormous damping factor was holding back even our usually quite loose sounding Spondor S8e loudspeakers. As expected, the more I turned up volume the better it all got, bass coming across as viciously tight and impactful, if dry as a bone.

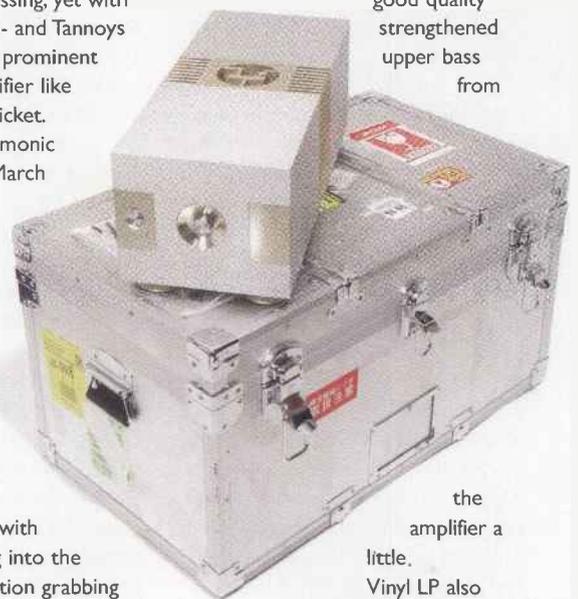
There was a small but obvious de-emphasis, as it were, of upper treble that at times made the delivery almost creamy smooth in balance - until that is my attention was yanked back to the blare of a trumpet, the crash of cymbals or an attention grabbing vocal delivery much closer to my ear than I am used to. Not only does this amplifier possess clinical precision, it really does see into music and dynamically support it across midband and treble. As usual, the taut bass of a high damping factor amplifier is a mixed blessing, yet with the right loudspeakers - and Tannoys come to mind - having prominent and deep bass, an amplifier like this might be just the ticket. With the Royal Philharmonic playing Tchaikovsky's 'March Slave', for example, all the emphasis was on the upper registers, yet when the tubas took up the slow main theme it sounded suitably hearty and physical, razor-sharp timing bringing precision that didn't go amiss. Violins interjected repeatedly with precise timing, stabbing into the sound stage with attention grabbing force.

Whimsically comparing pianists John Ogden with Volodos after someone had insisted the latter was a great player (technically true...

but I prefer John Ogden's more romantic style) I heard barely a trace of the piano's body. Although both recordings I listened to were themselves short on low end information from the piano, probably due to microphone positioning, this amplifier does nothing to tease out information from the lower end of the musical spectrum. Yet at the same time, strong plucked bass rolled along solidly to provide a cheeky support line behind Amy Winehouse's 'You Know I'm No Good', and kick drum had a nice tight thud to it. Both seemed to reach downward without constraint and here the B-1a benefitted from its all-direct coupled design I suspect, our measurements showing it reaches down to d.c.

Over a few weeks of use with a variety of loudspeakers the B-1a remained consistently impressive, being both concise and revealing to a degree that is the hallmark of true high end. This is a highly developed and specialised product, that's obvious when listening to it. It does, however, need appropriate matching loudspeakers and here life may get a little tricky. Princesound Prince II electrostatics may be one choice, having complementary insight and also a need for high power (well, voltage swing). Tannoys like the Definition Series DC8s or 10s would match character-wise, even though they don't need the power of the B-1a, unless you have a baronial hall full of merry souls to amuse perhaps. The B&W CM9s I review in this issue worked quite well, the B-1a's slow roll down in upper treble acting to damp their treble unit just a tad, whilst their nicely balanced bass of

good quality strengthened upper bass from



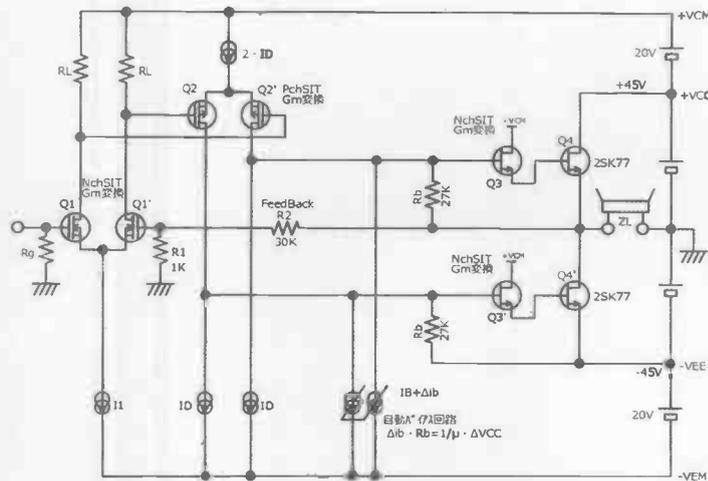
the amplifier a little.

Vinyl LP also proved a nice match, although I felt a need to step up from an Ortofon 2M Black to the moving coil Cadenza Bronze to gain transparency, then quality cuts like

Mark Knopfler's 'Punish the Monkey', from the album 'Kill to Get Crimson', sounded wonderfully tidy and poised, guitar strings displaying a firm, cutting twang, hand drums having substance behind the outline of their sound. Knopfler's voice was starkly clear centre stage, gloriously fleshed out with fine detail, enunciation highly specific as a result.

Digital Do Main's claim that this is a unique amplifier from a company that believes its products can go down in (Japanese?) history as classics possessing assured value (it's all in the company's founding documents, and why Canon invested), I completely believe. The B-1a is quite an amazing amplifier based on the unique technology of the Static Induction Transistor, developed in Japan and little known or used elsewhere. Likened to the triode valve in operating characteristics, in the B-1a amplifier it finds a suitable home. So like the original Yamaha BI V-FET amplifier, the Digital Do Main B-1a is a unique and advanced design that is flawless in what it does.

Our 100V factory sample from Japan I suspect does not fully represent what a final 240V model will sound like. Forgive me for pleading with our editor DP to phone



The B-1a basic circuit topology, with phase splitting and gain from two differential pairs, and one pair of N Channel 2SK77 output devices. The amplifier is all direct coupled. Not shown here are protection circuits, servo circuits, power supply and suchlike.

Hamamatsu straight away to get a sample, but on this magazine we have a lot of respect for product from Japan. And what Dr Nishi told me at the High End Show in Munich, and what I read on the info CD he gave me, was enough to make reviewing this product a must. The B-1a is a very special amplifier and when UK samples arrive

at importers ABC Audio, if you have the money and inclination it is worth a close audition. Their deep clarity and sense of ordered precision will I suspect make many rivals sound quite vague and win hearts.



A guard wheeling in the weighty B-1a in its flight case, after the Audio 09 show at Whittlebury, where it was on display.



The Yamaha B-1 MOSFET amplifier from 1974, after which the Digital Do Main B-1a is named.

VERDICT ●●●●●
 Unusual and highly advanced power amplifier using special FETs, the B-1a is wonderfully detailed and concise.

DIGITAL DOMAIN B-1A £8000
 ABC Audio
 ☎ +44(0) 20 8462 1379
 www.abc-audio.co.uk

- FOR**
- midrange insight and detail
 - strong imaging
 - beautifully built
- AGAINST**
- awkward proportions
 - overly tight bass
 - no remote volume

MEASURED PERFORMANCE

I wondered before testing this amplifier whether its FETs would display the usual wide bandwidth these devices are known for, or whether the designers would avoid working up to radio frequencies. Well, it looks like the latter, because frequency response of the B-1a starts to roll down above 10kHz no less - a very low limit. It measured -0.3dB at 20kHz - not much of a drop but still unusually low as hi-fi amplifiers go and enough to ensure the B-1a will not sound sharp or bright. Measuring -3dB at 100kHz (our quoted upper limit of 55kHz is at -1dB) the B-1a exhibits a very slow roll off in high frequency output and - thankfully - a sane high frequency limit not at radio frequencies.

Damping factor measured an extraordinarily high 100. This suggests substantial feedback is used, but the amplifier's special FETs are very high bandwidth devices with good linearity, so it may not be as high as early Japanese V-FET amplifiers. In itself this has no implications for sound quality, but high damping factors (above 30 or thereabouts) can make for dry bass, except when underdamped (boomy) loudspeakers are used, in which case the extra control is beneficial.

Distortion levels were low in the midband but rose toward high frequencies, unlike early high feedback FET amplifiers of the 1970s. However, a worst case distortion figure of 0.02% at 1 W into 4 Ohms is low, so harshness will not be evident. The distortion spectrum shows extended harmonics and another analysis, not shown,

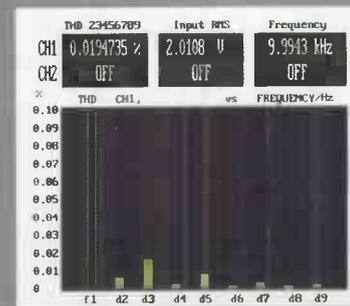
revealed this was classic crossover distortion. At a low level however, this is not a problem.

The B-1a produces plenty of power, 160 Watts into 8 Ohms and 240 Watts into 4 Ohms. It ran cool on the test bench, in spite of having big heatsinks. Input sensitivity was 1.25V through both unbalanced phono socket inputs and balanced XLR inputs (at full volume). The volume controls did not affect frequency response and performance figures were identical through either input.

The B-1a turns in a good set of performance figures, free of weaknesses. Its peculiarly limited bandwidth and high damping factor suggest there is something different inside. NK

Power	160 Watts
Frequency response	1Hz-55kHz
Separation	97dB
Noise	-116dB
Distortion	0.02%
Sensitivity	1.25V
Damping factor	100

DISTORTION, 10kHz, 1W



YAMAHA



Soavo-1

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distilled into our ultimate Hi-Fi:
it could only be Yamaha



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A-S2000 Integrated Amp

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Multiple Choice

Adam Smith investigates five different ways to spend £1,500 on a pair of loudspeakers...

There's rarely been a time when prospective purchasers have been offered so much choice in the loudspeaker market. It seems that rather than technologies coming and going, most have simply come and stayed, so that it is possible to buy a loudspeaker in virtually any size you like, with any number of drivers of all sorts of different types and configured in a wide variety of ways...

With this in mind we felt it was high time to take a look at the various different ways of spending money on a speaker. We set a notional budget of £1,500 and came up with a diverse range of contenders. The line up includes the Acoustic Energy Radiance 3 floorstanders, the Mowgan Audio Artio standmounters, the Audiosmile Kensai standmounters with slot port loading and a ribbon tweeter, Aurousal's VS floorstanders, which are based around full range drive units, and finally thrown a newcomer into the mix in the form of the Colisium Carillon, which is a conventionally ported standmounter using a ribbon tweeter.

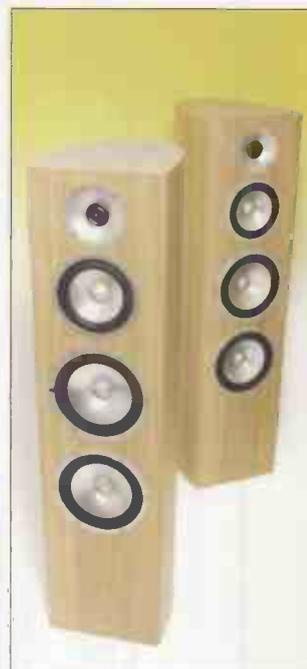
We wondered how these differences would show themselves and if those denizens of deep thought back in the nineteen eighties, the Fun Boy Three and Bananarama, were correct in their assertion that "it ain't what you do, it's the way that you do it". Read on to find out...

CONTENDERS

Audiosmile Kensai	£1,499
Acoustic Energy Radiance 3	£1,500
Colisium Carillon (Walnut)	£1,540
Mowgan Audio Artio	£1,585
Aurousal VS	£1,600

REFERENCE SYSTEM

Garrard 301 turntable
 Alphason HR-100S tonearm
 Ortofon Kontrapunkt B cartridge
 Marantz CD94 and CDA94 CD player/DAC
 Anatek MC1 phono stage
 Naim Supernait amplifier



AUDIOSMILE KENSAI £1,499

Starting at the diminutive end of the size scale, we have the Audiosmile Kensais. Their positively petite dimensions do however contain some highly impressive engineering and drive units, like the 120mm magnesium coned bass/midrange driver and isoplanar ribbon tweeter, offering an "effective area equivalent to 2.5 times that of a conventional dome". The bass driver also features a copper phase plug and copper rings in the motor structure which reduces distortion, as Audiosmile rightly point out, but also has the added advantage of increasing the upper frequency range of the driver due to lowered motor assembly inductance. This is highly important when using a ribbon tweeter, as they generally do not work down the frequency range as low as a dome. The Kensais measure 250x150x200mm (HxVxD) and utilise an aperiodically damped slot port for bass loading, rather than the more common circular type. They are available with Beech or Black Walnut side panels, and white or black simulated leather for the remaining faces.

SOUND QUALITY

The Kensais are not like any small loudspeaker I have heard before. Whilst they have the traditional compact monitor strengths of detailing and fine imaging, this was rolled up in a package that is one of the most complete and polished I have heard in a long while. They do not try to trick you into thinking they are bigger than they are, but they set forth such a precise, detailed and completely encompassing performance that it really doesn't seem to matter.

Vocal and instrument details were stunning, with pianos in particular sounding as realistic as I have heard from any loudspeaker at the price, or even rather more expensive, and every single nuance within the soundstage was captured and laid forth immaculately. That soundstage was not cavernous, but the Kensais seemed able to strike just

the right level of scale to offer the impression that I was getting up close and personal with the performers in question. Aided by a superb tweeter, this meant bags of fine detail allied to a smooth, effortless and captivating midrange.

At the bottom end, the Kensais continued to impress. Obviously they don't shake the floor or punch you in the chest like a larger design, but neither do they try to do things that the laws of physics would put

a stop to. Their bass simply offers magnificent detail and a good sense of punch, allied to impeccable timing, and then as one ventures deeper and deeper, they simply quietly roll off without any fuss or strain. Double basses and bass guitars were vivid and blessed with a really three-dimensional form, and kick drums had surprising impact and drop-dead timing. All in all, supremely impressive as small standmounters go - but big bass fiends should look elsewhere.



MEASURED PERFORMANCE

Frequency response of this ported miniature is reasonably even across the audio band, lacking the upward tilt toward high frequencies so common nowadays. All the same, frequencies below 200Hz roll downward slowly our published analysis, and a third octave analysis, show. So bass will be light unless the Kensai is used close to a wall, doubtless as intended by its designer. Output from the small bass unit rolls down below 80Hz but the front slot port is tuned to 43Hz our impedance analysis shows, and works down to 35Hz. It provides a good degree of damping so the Kensai should have well controlled bass.

A lift in the response curve from 2kHz-4kHz will improve vocal intelligibility and output from the treble unit looks encouragingly smooth and even, suggesting it will sound less resonant than many domes.

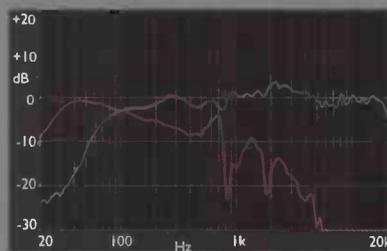
Like all miniatures the Kensai is insensitive, producing just 82dB SPL from one nominal watt (2.84V) of input, part of the reason being it uses a 6 Ohm (DCR) bass unit which pushes impedance up to a high 9 Ohms. So a powerful amplifier is needed for good volumes, at least 60 Watts.

The long term 200mS decay spectrum was impressively clean,

suggesting electrostatic levels of cleanliness.

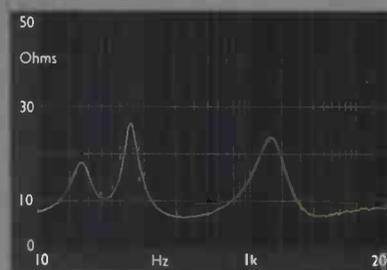
The little Kensai measures very well. Don't expect massive bass, but it is super clean, very even and should give sophisticated results. NK

FREQUENCY RESPONSE



Green - driver output
Red - port output

IMPEDANCE



VERDICT

Small but perfectly formed, they have the heart of a loudspeaker ten times as big, offering detail, timing and musicality by the bucketload.

AUDIOSMILE KENSAI £1,499

Audiosmile

+44 (0)7952 478193

www.audiosmile.co.uk

FOR

- superb top end
- fine detail
- overall integration

AGAINST

- limited loudness

ACOUSTIC ENERGY RADIANCE 3

£1,500

Conventional as they come, the AEs are a three way, four drive unit design in a floorstanding enclosure. Bass duties are handled by a pair of 160mm pressed alloy drive units, each mounted in its own rear-ported enclosure and above this sits a similar 130mm drive unit which handles the midrange. At the top of the cabinet is a brand new tweeter, which bears very close visual resemblance to the Scanspeak Discovery unit. AE have however located it at the centre of their own new 'DXT' acoustic lens promising excellent directional capabilities across the frequency range. These units are housed in a neat but rather ordinary floorstanding cabinet with curved sides and this sits atop four outboard feet. Sadly, these were neither ordinary nor neat, looking to my eyes like an afterthought. Vital statistics are 920x230x297mm & 18kg,

to behold, combining detail and crispness with an assured sense of fluidity very neatly indeed. Across the mid, vocalists were placed nicely centre-stage and the image of their

backing companions pushed off into the distance very nicely. The Radiance 3s pull you back from the action slightly, while puffing it up in front of you very neatly indeed!

MEASURED PERFORMANCE

Our frequency response analysis shows a lack of peaking that means absence of local resonance. The tweeter in particular has an unusually even frequency response, suggesting it will lack most of the usual clatter from metal domes. However, a small lowering of output below 500Hz may give the Radiance 3 a dry balance and it should be used close to a rear wall. A small rise in output around 80Hz may add some extra bass zest.

The ports work over a very wide band and will damp the bass unit's resonance around 40Hz. So the Radiance 3 has well tailored acoustic damping and this is reflected in the impedance curve where the motional impedance element sitting above the DCR component (as it were) is quite small. Measurement showed a DCR of 5 Ohms and an impedance, with pink noise, of 6.5 Ohms. Together with a healthy sensitivity of 89dB SPL at 1m the Radiance 3 is an amenable amplifier load that produces plenty of volume from 40 Watts or more.

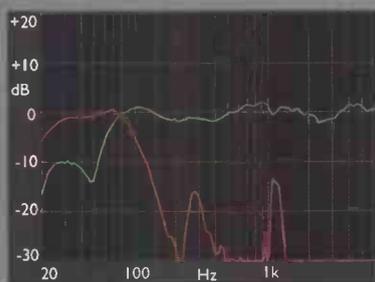
Spectral decay analysis shows little colouration, although the bass unit looks 'hot' around 80Hz where there's peaking and it overhangs too, but the lower midband is clean.

Distortion below 100Hz distortion stays below 2% all the way down to 40Hz at 90dB SPL. The ports give a similar result down to 40Hz, exhibiting

more distortion below this frequency (5% at 30Hz).

The Radiance 3 will have an even balance, treble should be smooth and clean and bass well controlled. Strong upper midrange output means detailing will be good and a small amount of midrange emphasis suggests well projected vocals. NK

FREQUENCY RESPONSE



Green - driver output

Red - port output

IMPEDANCE



SOUND QUALITY

Moving from the Audiosmiles to the AEs was quite a culture shock. With a big cabinet and much greater driver area, the Radiance 3s go much lower, with real weight and punch, whilst the upper bass is lithe and detailed. Unfortunately they're a little unbalanced, as a test track of mine that features a gradual wander down the fretboard of a bass guitar showed, where the intelligibility and leading edges of the upper notes became more and more blurred as things ventured lower. The Radiance 3s do go low, but become rather blobby and vague at the very bottom. Much as I am no great dissenter when it comes to ports in loudspeakers, I cannot help but wonder if those three on the back of the Radiance 3s are not helping this situation in some way here...

Higher up the frequency range, though, I had no such complaints, with the midrange driver doing sterling work and handing over seamlessly to the very smooth and inviting tweeter. There was no sign of any harshness here and the AEs' treble is a very fine thing

VERDICT

Traditional big loudspeaker strengths with an extra sense of polish make for a highly musical floorstander.

ACOUSTIC ENERGY
RADIANCE 3 £1,500

Acoustic Energy
☎ +44 (0)1285 646580
www.acoustic-energy.co.uk

FOR

- sweet treble
- upper bass detail
- fine spatiality

AGAINST

- bloated bottom end
- ugly feet

COLISIUM CARILLON £1,540

A brand new loudspeaker from a brand new company, the Carillons show the second ribbon tweeter of the group, sourced from Fountek and unusually offering a claimed effective frequency response from 1.4kHz upwards thanks to its large diaphragm and low resonant frequency. This crosses over at 3.5kHz to a Hi-Vi research 6 inch bass/midrange driver which is ported to the front of the cabinet in the conventional manner. The cabinet itself is made from Valcromat, which is apparently a sustainable green product, and this can be finished in a wide range of veneers including Ash, Maple and Zebrano. More exotic versions are available for a £40 premium, such as the Birds Eye finish of the review samples, or a plain painted finish can be had for £200 less. The Carillons measure 430x210x260mm (HxWxD).



or concert hall. Instrument detail was beyond reproach and, up at the very top of the frequency range, the ribbon tweeter offered the traditional strengths of smoothness, insight and fluidity, albeit with an occasional sense of blur that tended to merge,

for example, a gently brushed jazz drumkit cymbal into a steady hiss rather than a series of distinguishable strokes. A genuinely interesting loudspeaker this, and one that deserves audition, but its style is not for all.

SOUND QUALITY

Firing up the Carillons showed me a very strong sense of central image, which really did fill the space in between the loudspeakers in a very forthright and confident manner. Vocal performances were nailed firmly in the centre of proceedings, with surrounding and backing instruments clearly etched around, but I was less impressed with the expansiveness of the recorded acoustic. Images were resolutely locked into the fore-aft plane of the loudspeakers, but there was relatively little width beyond the physical limits of the loudspeakers. Everything was firmly and neatly tucked into the area enclosed by the cabinets, and there it tended to stay.

In pure resolution terms, the Carillons did well. Bass lines bounded along enthusiastically with a good measure of insight into the instrument being played, but there was some looseness right at the very bottom end, somewhat curtailing the effervescence of any punchy low end action. The upper bass fared better however, and handed over to a midrange that was deftly capable at picking out the minutiae of the recording studio

MEASURED PERFORMANCE

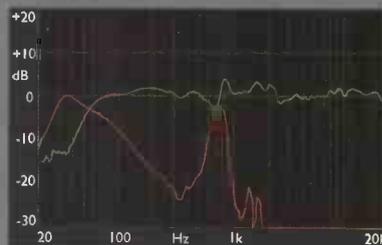
Getting a ribbon tweeter to integrate with a single bass/midrange driver, as in the Carillon, isn't easy. Most ribbons do not go low enough, stopping at 4kHz or so, and most bass/midrange units cannot reach up that far. With overall level from the tweeter similar to that of the bass/midrange the Carillon has an impressively smooth frequency response. The bass/midrange unit handles most of the audio band so it will greatly influence sound quality, a spikiness around 2kHz possibly adding a little edge, but raising intelligibility.

Our red trace of port output clearly shows a large internal cabinet resonance exists, causing a peak around 800Hz that will be audible at this level and it inserts a large phase excursion into the forward response. A spectral decay analysis over 200ms showed it wasn't prominent, however, and the Carillon is otherwise colouration free. The port is narrow tuned around 40Hz, our impedance graph suggesting it is also slightly off-tuned, as one of the residual peaks is higher than the other, resulting in enormous reactance: there will be a full 90 degree V/I phase swing here. The impedance curve also shows the Carillon has a very high overall impedance, since minima are 7 Ohms. We measured 11.4 Ohms and not surprisingly sensitivity was very low at 82dB sound pressure level from 1 Watt (2.84V), so the Carillon will need to be driven by an amplifier of at

least 60W and 100W would be better. Having said that, bass goes low from its small cabinet, flat down to 60Hz our analysis shows, an impressive result, and distortion was low, 1% at 80Hz from driver and port, rising to 3% at 40Hz, again from both driver and port, so bass level and quality should be good.

The Carillon has some flaws, but otherwise turns in a good basic result, although low voltage sensitivity will demand high amplifier power. NK

FREQUENCY RESPONSE



Green - driver output
Red - port output

IMPEDANCE



V Interesting and revealing loudspeakers with good central imaging, but lack dimensionality

COLISIUM CARILLON £1,540
Colisium Developments
☎ +44(0)1225 852271
www.colisiumdevelopments.co.uk

FOR
- super central image
- revealing nature

AGAINST
- constrained soundstage
- drab low bass

MOWGAN AUDIO

ARTIO £1,585

Still content to quietly churn out high quality loudspeakers with little fuss, the Artio has been Mowgan Audio's entry-level design since the company was formed. The bass/mid driver is a seven inch item sourced from Eton in Germany, and uses their honey-comb structure cone allied to a well damped but highly flexible rubber surround. Above this is a 25mm tweeter featuring a fabric dome that is coated with four coats of a proprietary damping compound in order to control and optimise its behaviour throughout the frequency range. Unlike the other designs in the test, the Artios are 'handed' for optimum imaging, with the tweeters offset above the bass driver to a different side on each loudspeaker. The Artios measure 390x232x340mm, so they are quite large, and also nicely weighty at 9.4kg each.

SOUND QUALITY

The Artios are a pair of loudspeakers that really make you sit up and take notice, thanks to a bright open balance, with bags of top end detail. For those of you who are thinking 'harsh' at this point, let me assure you that nothing could be further from the truth as the Mowgans are as composed and couth as could be hoped for, but that rise in output around 15kHz that can be seen in the frequency response plot [see MEASURED PERFORMANCE] definitely adds a good sprinkling of crispness to proceedings. The result is captivating, but will require a modicum of care in choosing partnering equipment if it is not to veer too far towards glare...

The result is a loudspeaker that really pushes the performance out at the listener and, combined with a well balanced and vivid midrange plus a uniformly expansive soundstage, offers a thrilling sonic ride. Indeed, that soundstage is probably the best in the test due to the way in which it doesn't uniformly push things wide or into the distance, or pull the action universally close, but simply distributes it wherever the action and the recording decree it should be.



As a result, simpler studio recordings are intimate and soft, whilst grander orchestral gatherings are suitably well scaled and dynamic.

At the low end, the Artios require a little work to give of their best. Initially I felt they were a little unbalanced, offering plenty of weight in the lowest registers, but a simultaneous lack of body in

the upper bass. Experimenting with positioning helped here, with the best results around eight inches from a rear wall, compared to the eighteen where my loudspeakers usually reside. The Artios are quite tuneable as a result, and once the best spot is found, the low end snaps into focus perfectly, offering a uniform sense of impact, timing and dexterity.

MEASURED PERFORMANCE

Our frequency response analysis of the Artio shows it has a fairly even balance across the audio band with no broadband emphases. However, there are some points of interest. A plateau lift of output from 600Hz to 1.2kHz will add a little to vocal presence, making the Artio sound conspicuously articulate. However, the port output trace and decay spectrum show energy here which may colour the sound, albeit only to a small degree our 200ms decay spectrum shows.

The peak at 15kHz will add a little hiss to treble when a lot of treble energy is present.

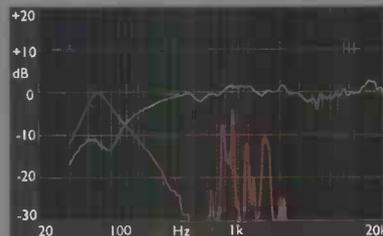
The most obvious feature of our analysis though is a roll off in output below 250Hz, a sign that the loudspeaker is for wall placement. This sort of over damped response gives fast, tight bass against a wall, but benefits from a weighty sounding amplifier, like those from Leema or Naim. A powerful amplifier is needed due to a modest sensitivity of 86dB, due to high measured overall impedance; the Artio will need at least 60 Watts if played loud.

The impedance curve is flat across the audio band, unreactive and amplifier friendly, so the Artio should be consistent between amplifiers and get the best from them. The port is narrow tuned to 40Hz however, so large reactive residual peaks exists either side.

With port output 2dB less than driver forward output, when it is usually 6dB more, the port contributes less energy than most and bass will be on the lighter side. Distortion was low, less than 1% from the bass unit down to 40Hz and the port was linear too, producing 3% at 40Hz.

Measurement suggests the Artio is for smaller rooms, and higher powers. It offers a tonally balanced sound and should come over well. NK

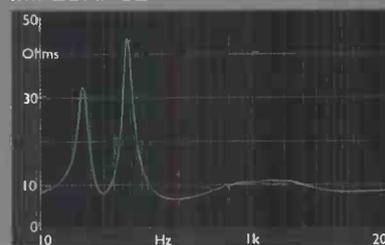
FREQUENCY RESPONSE



Green - driver output

Red - port output

IMPEDANCE



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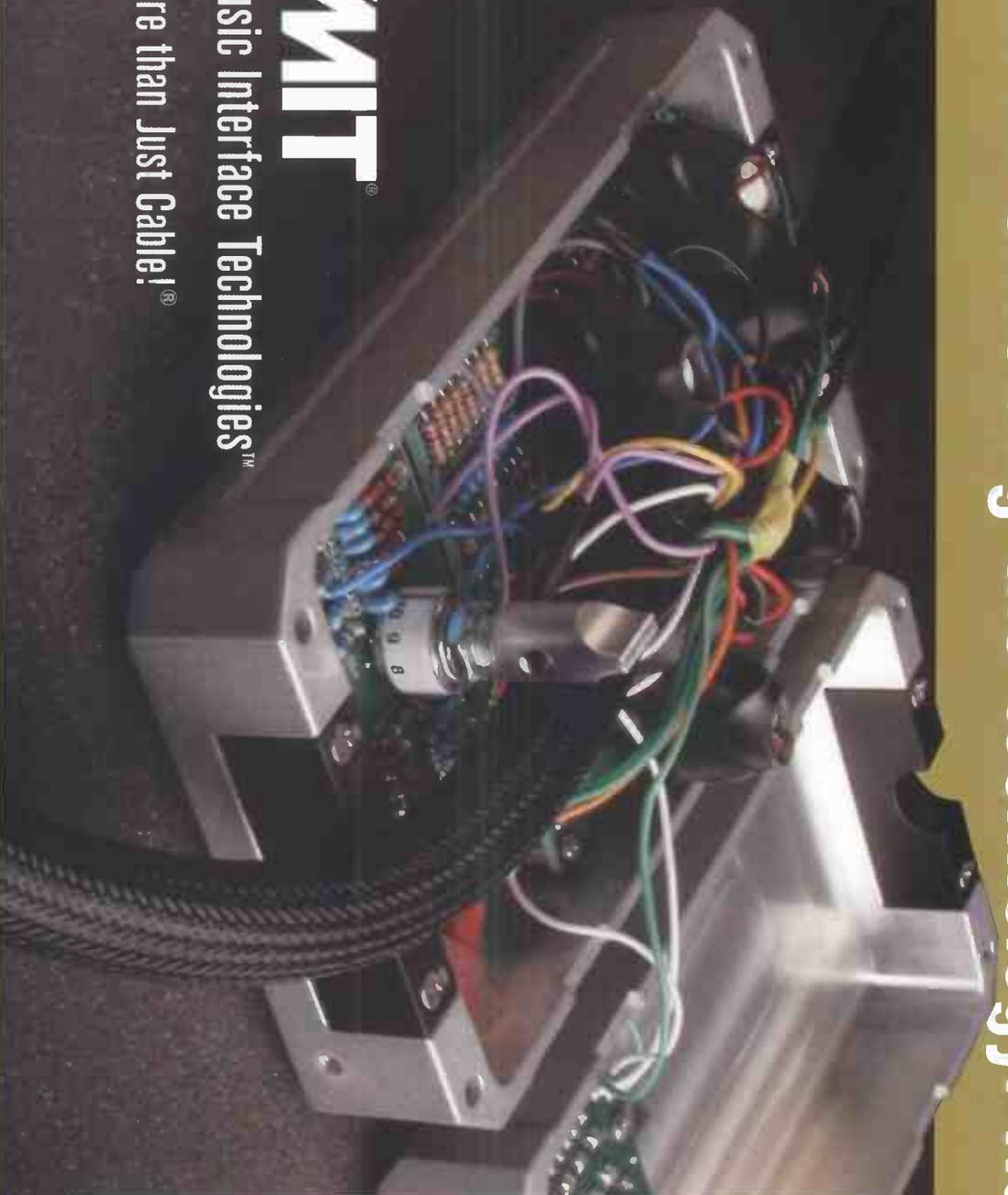
FOR

- dynamics and pace
- excellent soundstaging
- crisp top end

AGAINST

- position-sensitive
- need smooth ancillaries

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AUROUSAL VS £1,600

The VS is the first floorstander from Aurousal. At the bass end, the drive units are loaded by a "reflex loaded straight quarter wave transmission line" (that look suspiciously like a port!) and this exits at the centre bottom of the front baffle, extending the response down to a claimed 30Hz, which is impressive for such small drivers in a relatively compact enclosure. Treble-wise, Aurousal have implemented an attempt to counter the fact that the full range drivers' output does tend to be directional at high frequencies, giving the impression of dullness unless listening right on the driver axis. To this end, the additional 25mm soft dome tweeter does not so much extend the frequency range upwards, as take what the main drive units already deliver and augment it over a wider lateral area. The tweeter can be switched on or off as required and have its level of operation adjusted. They're the largest at 1075x215x268mm & 20kg each.

SOUND QUALITY

With the tweeter control switched off, I felt that I was locked into the sweet spot, so I fired up the additional tweeter at around 2/3 of maximum output, and this offered extra air plus improved dispersion. Best results were obtained exactly as the manual says, with the axes of the loudspeakers crossing in front of the listening position. This done, the sound seems to spread from behind their plane, stretching gently outwards with delicate sense of subtlety and order. Once again, that image doesn't project especially well right into your lap, but settles for giving a broader sonic view of the musical action.

At the low end, the twin drivers and vented enclosure do indeed offer an impressive sense of authority. Unfortunately this bass seems to lack drive and this lessens the impact of kick drums and enthusiastically hammered orchestral tympani. Fortunately this is somewhat exacerbated by the delightfully well integrated frequency range above this, which confers

control and evenness to the upper bass that carries through the midband and up into the treble. As a result, more complex performances are sewn together perfectly and kept

in excellent rhythmical time, with the Aurousals never seeming to favour one area of action over another. A fine, even-handed all rounder, but headbangers should look elsewhere.

MEASURED PERFORMANCE

The Aurousal gives some unusual but interesting results. First off is a near flat 4 Ohm impedance characteristic, making this a pure 4 Ohm loudspeaker (it measured out at 4.6 Ohms), one that is resistive as a load, does not store energy and will work well with all amplifiers, including valve amplifiers with a 4 Ohm tap. The red trace of port output in our frequency response analysis clearly shows port output is a maximum at 30Hz and it works up to 80Hz and beyond. The VS does go low, its port strongly exciting the 24Hz main mode of our room. Port output was +2dB up on driver output at 80Hz, less than the usual 6dB or so.

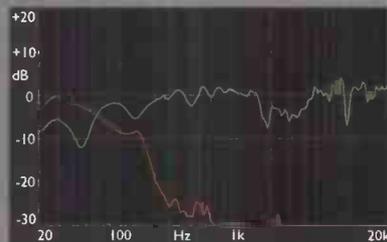
Frequency response was flat with the microphone 1m or more distant, set between the treble unit and top driver. Moving downward onto the axis of the full range Jordan drive units lifted high frequencies and made pink noise sound fierce; results change with ear height. Our published stepped, gated sine wave analysis clearly shows a midband suckout that arises from this effect. Switching HF to Off smoothed the midband, as well as rolling off treble sharply above 10kHz, making for a much warmer sound. The rotary control allows intermediate adjustment to be made, so the VS can be fine tuned.

This isn't a low colouration loudspeaker our 200ms decay analysis suggests, with overhangs at 200Hz and

2kHz, and at 80Hz in the bass. However, they were not great and best judged subjectively. Distortion was low, 2% in the bass and down to 0.1% across the midband.

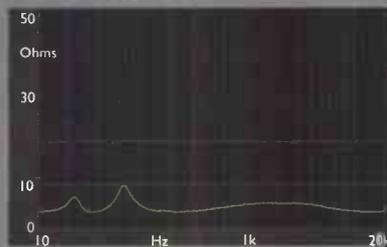
The VS should give good, if characterful, results and may offer an interesting alternative to current fare, especially in its ability to get the best from all amplifiers, valve and transistor. NK

FREQUENCY RESPONSE



Green - driver output
Red - port output

IMPEDANCE



RECOMMENDATION ●●●●●
Well balanced and versatile floorstanders that offer traditional full range strengths with few of the weaknesses.

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FOR
- uniformity of performance
- versatile HF adjustment
- sonically transparent

AGAINST
- bass lacks impact
- soundstage could project more

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AND THERE WAS CHA'AM



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This was an intriguing review to perform, as it finally gave me an opportunity to assess the different ways in which modern designers approach their loudspeaker construction. This is a funny situation in many ways as there seems that there is no right or wrong way of doing things, just differing methods, all of which have their advantages and disadvantages. The end result is then determined more by the skills of the designer and how he or she approaches the inevitable compromises that are part and parcel of loudspeaker design. A look at the units on test would seem to suggest that, even at their relatively modest price point, these compromises are becoming not only well understood, but very well managed indeed.

Starting with the Colisium Carillons, these turned in a promising performance in frequency terms, but one that was let down by a confined soundstage. This was a shame as in many ways they have the makings of a great pair of monitors, being the most revealing of all the units on test in terms of pointing out the flaws in recordings - which given the standards of the group is no small feat. I feel that their basic ingredients are well chosen, and that they're undoubtedly good value for money, but for my proclivities they need additional finessing. We welcome this new name to the loudspeaker fray!

I've said in the past that Arousal's AIs were the only full range design that I had heard that I could live with, and that list now numbers two, even though purists may be horrified by the addition of the second (albeit identical) driver, and the fill-in tweeter. The thing is though, both of these shift the loudspeakers' performance up a gear by taking that excellent middle section common to both designs and polishing things up at the extremes of the frequency range. The VS are still position-critical, and must be aligned as the manual says, which will seem strange to those who are reluctant to toe their loudspeakers in at all, but do this and they reward handsomely, and are one of the few loudspeakers at the price where even as the eyes can see the boxes, the brain is convinced the sound is not coming directly from them.

Less rare at this price is a loudspeaker that offers ebullience and dynamics, but few can do it in quite the way that the Mowgan Audio Artios do. These are big as standmounters go, and to go with this physical presence they have an aural stature that is hard

to dismiss. Some cheaper designs feature a simple treble lift that sounds impressive in the showroom but soon becomes tiring, but the Mowgans are far better than this and extended listening merely reveals the conclusion that these are actually fabulously forthright and detailed loudspeakers, whose aim is simply to put you right at the heart of the music. Once again, positioning is more critical than some competitors and inappropriate matching could provoke that top end a little too far, but get it right and the end result is more than worth the effort.

Moving to our penultimate contender, I personally feel that the Acoustic Energy Radiance 3s are a big leap forward for the company. Their more affordable loudspeakers have never been anything less than utterly competent, with the odd real star tucked into the range, but I have

nor do they try and pull off the trick of sounding like something six feet tall - they are small loudspeakers and their soundstage scale doesn't quite compare to that from the AEs or the Mowgans. Frankly, however this doesn't seem to matter once you start listening as they really do everything else so superbly that whatever you care to put through them is an absolute revelation and delight. Instrument detail is simply staggering at times and vocalists seem to be pouring their innermost thoughts at you straight from the heart, rather than just singing lines half-heartedly from a lyric sheet. I cannot recall ever being quite so captivated by such a small loudspeaker before and can offer them nothing but unreserved praise.

The technology used in a loudspeaker at this price does not make it automatically better or

"as quality loudspeaker design goes, it all begins with what you do, rather than the way you do it..."

found one or two models in the past to be a little bit ordinary. You could live with them quite happily, but they somehow never quite really captivated in the way a good design should. That is a distant memory with the Radiance 3s however, as I feel that they are very probably Acoustic Energy's best affordable floorstander to date. They offer magnificent scale and depth to proceedings, allied to a revealing midrange and a delightfully lucid treble that almost has a slight whiff of ribbon-style control and poise to it. If only there were that last modicum of solidity and fine detail at the very low end of the bass, I would be awarding them a sneaky extra globe over Noel's four in his original review last month.

So how can a pair of tiddlers like the Audiosmile Kensais possibly compare to the likes of the AEs then? Well not only do they compare, they actually surpass in a number of key areas. Let's get the obvious points out of the way first, though - they don't do deep bass, so don't listen to them hoping that they might,

worse than a differently-equipped competitor, after all my two favourites on this occasion were a big three-way floorstander and a tiny standmounter; surely more polar opposites than most. As far as quality loudspeaker designs go, it turns out that it all begins with *what* you do, and much less the way that you do it!



Audiosmile Kensai - our preferred way to spend £1,500 on a speaker...

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Hotter Than July

Brand new from Musical Fidelity is the gargantuan "pure Class A" AMS35i integrated amplifier. David Price warms to it...

Talk to Antony Michaelson about his prodigious product portfolio and there are a few select designs about which he speaks with particular affection, the A1000 being one of them. This was one of the first British battleship integrations. Of course, Japanese marques like Sansui once specialised in the breed - producing massive, usually heavily Class A, powerhouses with lavish looks and a fine feel - but here in the UK it wasn't until the advent of the A1000 in the early nineties that super integrations ever existed.

Michaelson's monolith was a lavish affair, being a two-box design, the first being the amp itself and the second the power supply (11kg and 7kg respectively). It boasted 50W RMS in pure Class A from two sets of eight heavily heatsinked transistors, aspirated by two chunky toroidal transformers in the other box. Switch it on and within an hour most of the casework was too hot to handle despite all that elaborate heatsinking, such was its prodigious power

consumption...

On delivering this, the new AMS35i to me, Antony declared it to be the A1000's spiritual successor, and you can see why. It's pure Class A into 8 Ohms. He argues that many manufacturers assert their products to be 'pure Class A' amplifiers, but are actually simply Class AB amps biased just a bit more towards Class A. This is emphatically not the case with the '35i, he says, and the temperature rise of the massive heatsinks (about 35C) is testimony to this. Suffice to say, after my review sample had been on for an hour, the central heating went off and I was contemplating making myself some cheese on toast right there in my listening room...

Boasting 35W RMS per channel into 8 Ohms [see MEASURED PERFORMANCE], the AMS35i is a dual mono amplifier, each 'bank' with its own separate transformer. The preamp also has separate power supplies with discrete windings on the transformer. The circuitry itself is said to be "a direct descendant of the

Titan and AMS50 circuit designs and is very closely related to them".

I have to say that this is one of the most attractive modern Musical Fidelity products I've seen for a while, looking purposeful and imposing (it's not small at 483x148x475mm and 28.3kg), yet subtle and classy too - especially in the black satin finish of our review sample. Whilst it lacks the silky perfection of Japanese esoterica, it's certainly very well made and finished. The front panel is machined from solid, milspec aluminium billet, with an exclusive titanium G2 finish, in silver or black. The badge is made from medical grade stainless steel. The top and back are machined from solid and the heatsinks are custom made for maximum efficiency.

The front panel layout consists of a large, smooth operating central volume control, with smaller source selector buttons with individual blue LEDs. Round the back there are four RCA phono inputs (including a tape loop) and one balanced XLR, and one fixed (tape-out) and one variable (pre out) RCA phono outputs, plus

two pairs of 4mm speaker binding post outputs. The AMS35i remote is "one of the single most expensive components" of the package. Exquisitely machined from solid, it's a handy thing to have in your dressing gown pocket should a midnight burglar decide he has as much right to own your hi-fi as you.

SOUND QUALITY

As with everyone here at *Hi-Fi World*, I am an ardent fan of valve amplifiers, but I personally must confess that I don't listen to them very much at the moment. My World Audio Design K5881 (heavily modded) is one of the most divine performers when in its comfort zone, but as valve aficionados will know, this is easier said than done. My own listening room is quite large and my choice of reference loudspeakers is demanding on any amplifier; while my NS1000Ms have a quoted 91dB sensitivity they're a

a profoundly different quality to what people are used to. Music is suddenly clear, almost icily so, like a frozen sea under blistering blue sky. All the grey 'fug' that the switching distortion of Class AB disappears at a stroke, and it's like the sun has come out.

Still, just being Class A isn't a guarantee of perfection. I very much like the £3,500 Sugden IA4 for what it does to the music - which is to make it very clean and fun - but there's certainly a bright upper midband there to be heard, especially through speakers such as mine which, like most metal drivered speakers, aren't backward in coming forward. It's a great amp, the Sugden, but not perfect. Fascinating then to get the chance to try the Musical Fidelity AMS35i, which at £6,000 is surely the most expensive example of the integrated breed I've heard, and without doubt the most purposeful...

After about an hour's warm up

stop-starts wasn't forced or muddled. Instead the Musical Fidelity remained in confident control, happy to amble when the song demanded, then ready to rock when the song's energetic, Hammond organ-driven bridge came to be.

Impressed as I was with the AMS35i's unforced musicality, this amplifier's tonality really made its mark. The brass section that permeates the song was rendered with unexpected accuracy, the strings had a supernaturally silken sheen and McCartney's vocals were carried with an almost disconcerting realism, overdubs and all. Tonally this amplifier is a smoothie alright, but only in the sense that it doesn't add grain or grit.

Warping forward twelve years, and The Orb's 'Little Fluffy Clouds', a classic slice of ambient house from 1990, was next on the turntable. With a heavy sequenced sampled drum loop driving the song, it



stiff load and reduce many transistor amplifiers to nervous wrecks. Hitting the loud pedal with the K5881 driving the Yams simply causes the poor old valve amp's (admittedly very tough) transformers to saturate, and suddenly my hi-fi is doing a passable impersonation of a small motorboat chugging in to Portishead marina...

When the K5881 is in its comfort zone, it displays those splendiferous virtues of any fine tubular belle. It is tonally smooth, spatially accurate and rhythmically eerily natural; music just flows forth like the words of your mother-in-law who won't stop talking. For this reason, and in the absence of any comprehensively bigger and better tube amplifiers, I found myself investigating Class A transistor amplifiers, and these have now become my preferred tool for listening in my own room.

The key drawback of Class A is the amps get hot, because they run in such a way that the output transistors are permanently switched on (whereas in Class AB of course they switch on and off at higher outputs). The key benefit is the lack of switching distortion, which invests the humble transistor amplifier with

(the amp, my room and then me - in that order), my first instinct was to reach for the nearest LP. Duly, Wings' 'London Town' ("ah, Wings, the band the Beatles could have been", to quote Alan Partridge!) was cued up, and I sat back. As Musical Fidelity amplifiers go, this was one of the sweetest and most beguiling I've heard. Their kW stuff sounds impressive in my system, but the AMS35i sounded beautiful. There's a smoothness, delicacy and warmth to this amplifier that I haven't heard outside of a valve amplifier, and it was so pronounced that I'm still trying to fathom it weeks after first setting ears upon it.

'London Town' is a typical late seventies analogue recording (done mostly at Abbey Road Studios, of course). It has a richness and a sheen that's simply not possible to hear anywhere now. I'm not sure if it was McCartney's (and Denny Laine's) choice of exotic cigarettes, but the song lilts along with an unusually relaxed gait, and practically every transistor amplifier fails to catch this lackadaisical feel. Not so the AMS35i, which opened up the song and let the listener in. The slightly shambling, pedestrian rhythm with its various

represents a distinct upping of the pace compared to the Wings track, and immediately the AMS35i snapped into life. The amplifier was able to 'pick up its skirt and run', so to speak, showing its natural speed to great effect. Even at high volume, with the Yamahas' twelve inch cones flapping like flares in seventies Coca Cola advert, the big Musical Fidelity served up large dollops of clean power, stopping and starting like its very life depended on it. Despite all its low frequency travails, the Rickie Lee Jones sample was rendered with cut-glass clarity, and the sampled keyboard loops chimed cleanly and purposefully out of the mix. Despite its low rated power, this is as confident a 35W as I've heard, with prodigious amounts of low frequencies served up. Compared to my reference Sugden, there seemed to be a whole extra octave of bass!

Time for



a wilfully unpleasant recording, then. XTC's 'Skylarking' is a great baroque pop album from 1986, but ambitious as it was, Todd Rundgren's production was typically low rent mid-eighties, sounding bright and brash with just

about as rich as I've ever heard it via recorded music, and her phrasing was exceptionally well carried. Even though this amp isn't dynamic in a shouty, showy way, it was better able to carry the emotion of a musical

and clean, yet errs on the sweet and velvety side (whereas the Sugden Class A amps fall the other side of the middle marker). It has blistering perceived power given its rated power output, and a strangely capacious bass that underlines the music just in the right way, yet it's never overblown or ponderous and doesn't slow things down. Treble is silkier than a Chinese cheongsam and yet the midband is clear enough to communicate every last nuance of the recording, right at the back of the room.

Given my obvious enthusiasm for the Musical Fidelity AMS35i then, I feel I should find some criticism by way of balance, but it's not easy. I suppose you could say it's not quite as lavishly finished as some of the most expensive Japanese integrations, but I'm afraid that's the best I can do by way of retort. So if you're looking for an exceptionally beguiling, wonderfully open integration with just enough power for a large room, this is bound to warm the cockles of your heart.

"a beguiling, wonderfully open integration with just enough power for a large room, this is bound to warm the cockles of your heart..."

a few too many clanging early digital keyboard sounds for my tastes. The Meeting Place' is quintessential XTC fare, Colin Moulding's vocals counterpointed by chiming DX7s in a lovely melodic way, but it's hard work on most high end hi-fi systems. Not so on the AMS35i, which seemed to cut through the top layer of grit like an expensive car polish, letting the recording's true colour shine through. Although not exactly warm, this big integration simply refused to 'take the bait' and go grainy, whereas I'm sorry to say that the (admittedly a lot cheaper) Sugden duly ran with it. This amp was able to unlock the recording, getting me closer to the song and its performer. Impressed as I was by its svelte tonality, all along the Musical Fidelity carried the song's rhythm with remarkable subtlety. On this track the drummer shows a certain Ringo Starr sensibility when bashing his snare and hi hat, but his ability to float around the beat in a Beatles style has rarely been as apparent as through the AMS35i.

Moving to a great slice of modern jazz funk with sky-high production values and masterful recording quality, and The Crusaders' 'Street Life' (Japanese pressing) was duly cued up. Here the big Musical Fidelity flew, showing its ability to drive my speakers with complete confidence. The system conjured up a wonderfully expansive recorded acoustic; the speakers disappeared and the listener took on a front row seat. The low level detail was breathtaking; I was amazed to hear maracas I'd never previously heard (despite listening to this song regularly since 1979!), and I loved the way it was suddenly so obvious that the drummer was playing the hi hats way off the beat. Singer Randy Crawford's voice was

crescendo than any other integration I've heard. It doesn't 'turbocharge' attack transients, making them artificially pronounced, like some transistor amps I've heard, yet is nevertheless blisteringly fast and expressive.

CONCLUSION

Have moaned tediously for many years about never quite finding the right amplifier to match my annoying picky speakers, I suddenly find myself listening to it. To be brutally frank, this is quite a strange amplifier, taken by the standards of the rest of the market. It is exceptionally clear

REFERENCE SYSTEM

- Marantz TT1000/SME V/Lyra Titan i turntable
- ANT Audio Kora 3T Ltd. phono stage
- Sugden IA4 integrated amplifier
- MF Audio Passive Magnetic Preamplifier (silver)
- NuForce Reference 9SE monoblock power amplifiers
- World Audio Design K5881 (modded) power amplifier
- Yamaha NS1000M loudspeakers

MEASURED PERFORMANCE

In spite of its massive size and weight the AMS35i produces just 32 Watts into 8 Ohms, so it will need reasonably sensitive loudspeakers. However, nowadays, large floorstanders are relatively sensitive, offering 89dB or so from 1 Watt (nominal, 2.8V) and working into a 4 Ohm load the AMS35i perfectly doubles its power to 64 Watts. In real life then, with nominally 6 Ohm loudspeakers that usually sink to 4 Ohms at low frequencies the AMS35i will go loud enough for most people.

Distortion was all but negligible at low output powers, even at 10kHz into 4 Ohms, a test that usually provokes some distortion. Only at high power into 4 Ohms at 10kHz did distortion rise a little to 0.015%, still a negligible amount. So the AMS35i offers very clean reproduction. A damping factor of 44 suggests reasonable but not overly large amounts of feedback are used.

Input sensitivity was very high at 120mV via unbalanced phono socket inputs and balanced XLR inputs, so low volume control settings will give high volume from the loudspeakers. Noise was 3dB higher from the balanced line inputs, measuring -80dB, than the unbalanced inputs at -83dB, likely due to internal balanced receiver chips.

Balanced inputs can cancel cable noise however and usually give good sonic results.

The AMS35i measured very well in all respects. It is best used with low impedance loudspeakers to maximise its output potential, then a healthy Class A 60 Watts should give great results. NK

Power	32 Watts
CD/tuner/aux.	
Frequency response	4Hz-55kHz
Separation	110dB
Noise	-83dB
Distortion	0.0045%
Sensitivity	120mV

DISTORTION



VERDICT

Blissfully sweet yet open sounding integration with superlative rhythms and eye-watering detail.

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- remote control

AGAINST

- price

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VIVID audio



STAMFORD AUDIO PEGASUS £399

It is surprising that a power supply can affect the sound of a turntable. After all, it's the stylus and cartridge that do all the hard work, with the arm chipping in a bit, but how can the bit that goes round make things sound different? Well, the fact is that the mains supply we receive into our houses is very rarely pure and any anomalies contained within it will inevitably find their way into the motor of your turntable, especially if that motor is a synchronous AC type. Then, no matter what your chosen drive system is, if the motor has unwanted noise entering its coils,

that will transfer itself to the pulley and then onto the platter, and then up into your stylus.

Consequently, a proper power supply that can generate a clean and undistorted signal to drive your motor is an obvious step, and the latest to join the fray is the Stamford Audio Pegasus. This is rather more advanced than their current offboard Mose design, sporting no less than a two line LCD screen on which information is displayed! Two switches are fitted; one to allow you to step through the speed menu and the second to select the one you want, which starts the platter turning, or deselect it, which stops rotation. Speed options are fixed 33, 45 and 78 rpm plus a 'Vari' option which starts you off at 78rpm but then allows for a good range of adjustment to suit those old shellac discs you'd forgotten up in the loft. Connection to your turntable is through an IEC socket, and Stamford also provided an IEC to UK mains socket adaptor lead, so you can just plug your deck right in.

Connected up to my Sonab 65S and setting the belt to the 45rpm pulley, I was pleased at how the Pegasus whipped it up to speed smartly and peering at a strobe disc sat on the platter showed that everything was rock steady at all three speeds. Spinning an LP revealed an eyebrow-raising difference; it was as if everything had just slipped into better focus, with the Pegasus seeming to sharpen details perfectly. Cymbals seemed snappier, drum beats more solid and the location of players within the soundstage was much more vivid, making them easier to locate. Classical recordings gained more air and rhythmical precision, and some snappy funk courtesy of the Average White Band really picked itself up and flew from my loudspeakers. Pegasus is another success for Stamford Audio's quest to have us all powering our turntables properly. Operationally a pleasant change from the ubiquitous black box with a couple of switches on the front, it also scores highly in both compatibility and sonic terms and can be heartily recommended. **AS**

[Contact: +44(0)845 6035781,
www.stamfordaudio.co.uk]

soundbites

ARTISAN SILVER DREAM XLR £159/M

Artisan Silver Cables is another new British cable company, and offer very good value for money. The cable is nicely presented and feels a quality item. Its conductors are high-purity slow-drawn solid silver, arranged in a double-balanced four conductor Litz braid and sheathed in Teflon insulation. This is deliberately a slightly loose-fit, so as to make the conductors surrounded by a mainly air-dielectric, which is now viewed as one of the best performing dielectric materials. The cushioning effect of the air-gap around the conductors also increases isolation from external physical vibrations, which is also important as cables are effectively mechanical energy paths, bringing ground-borne vibrations into components. Artisan say that the conductors "are neither too thin, nor too thick", apparently being the

optimum diameter for best sound, and the Litz braiding rejects external interference which can cause rough, impure sounding treble. The braiding is deliberately fairly loose: an over-tight weave does not have the same noise rejection properties, the company says. Terminations use solder with a very high silver content, with very high quality silver-plated plugs. Whilst standard RCAs are available, the Silver Dream cabbies can be terminated with balanced XLR connectors, using high quality Neutrik plugs with silver contacts.

Considering the silly prices that some manufacturers ask for silver cables, I wasn't expecting this very 'affordable' product to come close to its higher priced cousins, but I was wrong. The Silver Dream showed itself to be a very clean, open and engaging performer, with all the characteristic finesse of silver and lack of 'fuzz' you get from many

copper-based designs. The Who's 'Won't Get Fooled Again' was a great experience with Artisan Silver wire between CD player and MF Audio Passive Preamp, full of detail with a wonderful 'hear-through' clarity across the midband, and a taut and propulsive bass. Cymbals were deliciously subtle and smooth, and vocals were carried with real immediacy. Given the very modest price, it would have been churlish to carp about the slightly light bass; it lacks the blustery, 'blood and guts' delivery of a good copper cable, instead choosing to major on delicacy and detail. Overall, a lovely performer at the price, and especially good value in XLR form. **DP**

[Contact:
www.artisansilvercables.com]





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According to the world's press, this is one of the very best CD players, even at twice the price! And now the "made for high-end audio" digital "engine" in this CD 8 SE has just been awarded "Technology of the year" by Hi-Fi Plus. Recognition that reinforces the fact that each of our three CD models are recognised as "best in class" all around the world.



The new Cyrus 8 XP amplifier has just been awarded "group test winner" by What Hi-Fi. The XP platform is upgradeable from the £900 6XP all the way up to the amazing DAC equipped 8 XP d Qx model with USB and SPDIF options, making this new amplifier range the darlings of both audiophiles and computer based music lovers alike.



The rack is the new HARK2. Like all Cyrus products it is expandable, so if you start with just a couple of our die-cast magnesium audio components, you can rest assured the rack will be able to expand all the way up to 8 boxes!

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WIN A SUPERB SUGDEN MYSTRO INTEGRATED AMPLIFIER WORTH £1,225 IN THIS MONTH'S GREAT GIVEAWAY!

Here's your chance to win one of our favourite of the latest crop of integrated amplifiers, the Sugden Mystro reviewed in the November 2009 edition of *Hi-Fi World* magazine! Here's what David Price said...

"This amplifier has radically new underpinnings, including some circuitry designed for a high end range coming next year, to sit above Masterclass. The Mystro is the first Sugden amplifier to include a 'Voltage Current Voltage (VCV) preamplifier stage, which includes a buffered input, voltage to current converter (Howland Current Pump) and current to voltage output stage. This produces a perfect current, says Sugden, independent of the volume control setting in the HCP stage. This current drives the virtual earth output stage, combined with a Class AB power amp stage, configured as dual mono, which we found to be

running very low negative feedback on its multi emitter, bi-polar output devices. A large, clearly laid out printed circuit board houses selected discrete audio components, together with individually selected, low noise, low distortion, high slew rate and high bandwidth op-amps. The power supply is a robust triple secondary wound toroidal transformer of 200va, smoothed by 6800uf capacitors. There's an MM phono stage, three stereo line inputs, and that's your lot. The slimline 430x340x90mm box is very good, and the metal casing is decent, explaining some of that 9kg weight, and the front fascia is sumptuous and sleek looking. Finish is excellent considering the price.

The Mystro has a joyful rhythmic snap. Kicking off with Sniff'n'the Tears' 'Driver's Seat', and I was impressed by the way the song powered along in such a bubbly way. Given that the A21a S2 is rhythmically no slouch at all, I was more than slightly surprised

to find the Mystro an even more urgent, friskier sounding musical tool than its more expensive sibling. The song's basic guitar riff just seemed more spirited, the drums more impactful and the syncopation of the singer's voice more dramatic. Dynamic contrasts were no less vivid than the A21, with the kick drum and snares conveyed with gusto, while a surprisingly strong bass guitar sound underpinned the song in an unremittingly insistent way. Indeed, the new baby Sugden's bass truly surprised me; being large in stature and unexpectedly full bodied, it didn't bat an eyelid with my big Yamaha speakers (where the A21a S2 sounded less comfortable), and came over all big hearted and full of swagger. It so enjoys big, widescreen rock and pop music. I came away completely beguiled by this new Sugden. It just loves to make music, sounds utterly compelling in its delivery, and gives away almost nothing to any of its price rivals, including its talented A21a sibling."

For a chance to win this great new product, just answer the following four easy questions. Send your entries on a postcard only by 30th November 2009 to:

December 2009 Competition, Hi-Fi World magazine, Unit G4, Argo House, The Park Business Centre, Kilburn Park Road, London NW6 5LF.

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QUESTIONS

[1] What does 'VCV' stand for?

- [a] Very Clever Vehicle
- [b] Voltage Current Voltage
- [c] Victor's Central Vision
- [d] Vertical Control Velocity

[2] What's the Mystro's mode of operation?

- [a] Class A
- [b] Class AB
- [c] Class C
- [d] Class D

[3] What's the rating of its toroidal transformer?

- [a] 100va
- [b] 200va
- [c] 300va
- [d] 400va

[4] What Sugden amp did DP compare the Mystro to?

- [a] IA4
- [b] A21a S2
- [c] A21
- [d] A41

December Competition
Hi-Fi World Magazine
Unit G4 Argo House
The Park Business Centre
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KEF
INNOVATORS IN SOUND



DEVILSOUND DAC £235

Back in 1999, *Hi-Fi World* started bundling a small magazine called *Computer Audio World*, which yours truly had the honour to edit. It was packed with tidbits about computer soundcards, MP3 encoders and CD burners - and how to get the best out of them all when using your PC as a sound source. The trouble was, most people weren't, and it's only now, a decade later, that it's truly normal to play out your music from your PC or Mac. The problem was then, and is now, that computers are notoriously noisy environments - and I don't just mean the cooling fans. They invariably have cheap switched

mode power supplies which throw lots of electrical 'scunge' into the system, and as anyone who's ever really tried to get serious sound from their hi-fi will know, noise annoys - in fact, it destroys!

The answer then for computer audiophiles is to use an offboard soundcard such as the DevilSound.

This is a lovely little thing; it's a very small and compact DAC that sports its own analogue output stage hard wired to high quality RCA phono leads, ready to feed your amplifier direct. It uses hi-fi best practice in many areas; it's a 16bit, NOS (non-oversampled) design running at 32, 44.1 and 48 kHz with no resampling or upsampling. It is said to contain special circuitry to regenerate clean power from the USB port, said to provide "extremely clean and stable positive and negative 5V power rails". It sports a Burr Brown PCM2706 digital receiver chip, bypassing its built-in DAC to generate a clean, low-jitter digital audio stream. This feeds a stereo pair of Analog Devices AD1851s, the best quality 'J' variants surface mounted and run in non-oversampled mode.

A single-stage op-amp output, which integrates a current to voltage (I/V) converter with a gentle low-pass filter, is employed. All in all, it's a very well engineered, and finely built thing, but so it should be at £235!

Sonically it's impressive; I used it from my MacBook Pro, playing 16bit FLAC via Songbird and iTunes in ALAC, and in both instances the DevilSound significantly improved on the Mac's own analogue line/headphone output. By comparison, the latter sounded hard, two dimensional, and rather chrome plated in the upper mid and treble, despite an obvious top-end roll off. This is standard computer audio sound, whereas the DevilSound bought real depth to the soundstage, pulled out a lot of glare and added a fuller and more tuneful bass. It's a great 'plug and play' package then, but at the price you have to remember it's competing against the likes of Cambridge Audio's DAC Magic (£200) which sound better still and offer real 24/96 play through. So where the DevilSound scores is its sheer compactness and portability. If you're a laptop using, travelling man it's superb, if not then look to the aforementioned Cambridge Audio or Musical Fidelity V-DAC. **DP**

[Contact: www.istereos.co.uk]

soundbites

M.A.D. BALANCED POWER ISOLATION PLATFORM £895

An imaginative concept, this. Many people are looking for massy supports to isolate their equipment, and what's heavier than a vast toroidal transformer, a layer of granite and an oak box? This My Audio Design accessory is both a mains conditioner and an isolation platform. The balanced transformer is accurately wound on a German made silicon alloy core with "the finest laminated high purity copper wire" (also available as a Special Edition with 99.997% silver) onto two Clipsal sockets. It has two specially designed high frequency interference in your mains power supply, it's claimed. The box is nicely finished from handcrafted English Oak and granite.

Sonically, I found the BPIP made a discernible difference to my system

sound, even though I'm fortunate enough to live in a fairly quiet mains environment. The difference was even evident with something as rudimentary as a Cambridge Audio DV30 DVD player, there being a reduction in the hardness of its CD sound, a gentle widening of the soundstage and extension to stage depth.

Running a high end Sony CD transport into a Stello DA100 Signature (two sockets are provided), things got even nicer, with an obvious reduction in upper midband 'sheen' and an increase in detail; the music flowed better and there wasn't the slightest slowing of the music or

lessening of dynamics. A fine, quirky, interesting product worth trying. **DP**

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Quad II Eighty Valve Mono Blocks. One owner from new, in unmarked condition, stunning performance and great reviews. Original box/packing. 5-year warranty for the new owner. (£6000) £3995

Eastern Electric M520 Integrated Amplifier. Ex-demo unit in fantastic condition. Reviewed to very high acclaim, and has a quite exceptional presentation with the EL34 valve as its base and pure Class A output. Complete with aluminium full function remote control, packing and manual. We've been astonished at the sonic performance of this amp, humbling many a unit at far higher price points. (£1950 new). £POA with a 5-year warranty.

Audio Analogue Maestro Settanta Integrated Amplifier. Wonderful condition, with all original Boxes, Packing, Manuals and Brass Remote Control. As always, we have updated the Display to current specification. Incredible transparency and dynamics, make the Maestro a favourite with reviewers and buyers alike. (£2500 New) £895

MBL 7008 Integrated Amplifier. One owner, boxed, manuals. As new. Brilliant reviews. (£6500) £4878

Van den Hull (VDH) Array A-1 pre-amplifier. One owner from new, a very rare item indeed. Cost best part of £3000 when new, this pre-amplifier will surprise many with its incredible performance. (£3000) £995

Quad 909 Power Amplifier. One owner from new, 4 mths old. Unmarked, boxed, manuals. (£999.95) £625

DIGITAL

Marantz CD17 mkII CD player. Excellent condition in silver with original box, packing manual. Incredible value for money at only £279

Naim CD5i-2 CD player. Newest version (italic i). Only months old, mint condition. Our price including 5-year warranty is £595

Wadia 301 CD player. One owner from new in silver, boxed, packing, excellent condition. Comes with the upgrade metal remote (these normally have a plastic one) Can be run directly into a power amplifier using the digital volume control. (£4000 new) £1495

DCS Verona Master Clock. One very careful owner from new. Original box, packing and manual. The reviews and reputation speak for themselves. Price includes a 5-year warranty (£6000) £1795

Raysonic 228 two box CD player. Stunning red book cd replay. One owner, upgrade vintage Mullard NOS valves included (cost £300). Unmarked condition. (£3800 - £4100 Inc valves) £2495

Acoustic Arts DAC1 mk4. Fully balanced or single ended operation, current model with latest spec. 66 bit, 1536khz upsampling. 4x digital inputs. One owner from new, unmarked condition. Boxed, manual. 5-year warranty for the new owner. A bargain. (£3950) £1895

LOUDSPEAKERS

Lumley Lampros 400 mkII. Stunning in Cherry. One owner from new and in excellent condition. Cost new £8000 nothing less than a bargain at £2795

Dali Mentor 6 Speakers. In cherry. Excellent condition, one owner from new. Original boxes and packing. Great reviews. (Cost new £2445) £1145

Linn Komponent 104 Speakers (pair) in silver. Unmarked original condition with factory box and packing. One owner as new. (£335) £195

Quad ESL 989 Speakers. Stunning in Classique finish. One owner from new, 5-year warranty for the new owner. Original box and packing. (£5500) £1895

Cyrus Icon X4 Speakers. One owner from new and very rare indeed. Stunning sound, unmarked with original boxes. (£2795) £1295

Audio Physic Virgo III. Almost as new having had one extremely careful owner from new. Original boxes and packing. Stunning in cherry. (£4500) £1795

Jas Audio Orsa Loudspeakers. One owner from new, finished in Hi-Gloss Cherry. Ribbon tweeter and adjustable crossover - amazing value for money. Hi-Fi+ Product Of The Year Award. (£1795) £795

Martin Logan Aeon Electrostatic Loudspeakers. One owner from new. Exceptional condition. Finished in Light Oak, complete with immaculate original boxes, packing, accessories and paperwork. (£2995) £1395

ATC SCM19. Cherry, 1 owner, as new. (£1524) £995

ATC EL 150 SLP. A rare opportunity indeed. Only 30 pairs of these will ever be manufactured (no.11 of 30). Our ex-demo pair in unmarked condition, complete with the original wooden crates. These also come with a lifetime warranty for the first owner. (£26393) £POA

ATC SCM40 Loudspeakers. One owner from new, 18 months old, finished in cherry. Boxed, manuals and balance of 6-year warranty. Slight mark on bottom edge and rear edge (£2044) £1395

Audio Physic Scorpio. Boxed in Cherry, one owner from new, excellent condition. (£3800) £2495

Klipsch P-39F Flagship Palladium Speakers. Simply breathtaking and have recently had a stunning review by Stereophile magazine (link below). Ex-demo with a few minor marks. Finished in the Merlot veneer. (£14798) £POA

Audio Physic Avanti V speakers. Finished in the Macassar Ebony (premium finish), ex-dem. Unmarked condition, sensational performance and reviews. Make no mistake, if these cost twice as much, they would still represent great value for money! (£9823) £POA

Audio Physic Scorpio II. Latest model, finished in cherry, ex-dem, unmarked condition. (£3773) £POA

ATC SCM 50 ASL active speakers. In Yew, one owner, unmarked. Current spec (£8500) £5695

ANALOGUE

Acoustic Solid. Solid Machine with Music Maker Conductor Parallel tracking air bearing tonearm. There have been some fantastic reviews on this combination. This is our ex-dem unit and it is in unmarked condition with light use. (£5100) £2995 or available at £1995 without the tonearm.

Eastern Electric Minimax Phono Stage. This probably holds a record (no pun intended) for the most outstanding reviews of any product currently available. Boxed in unmarked condition. One owner from new, only months old. Simply sensational (£1495) £949

Whest PS20 complete with MSU20. One owner from new, stunning 2-box phono stage in black, original box and packing. Incredible reviews. (£1299) £595

MAINS CONDITIONING

Vertex Silver Plus Jaya. One owner from new in excellent condition. The reviews speak for themselves. Grab yourself a bargain. (£560) £349

Vertex AQ Taga - 6-way distribution mains filter. Great reviews. One owner from new, unmarked. (£863) £595

Vertex AQ Jaya, boxed with manual, some very slight marks, one owner. (£302) £225

CABLES

Chord Signature speaker cable. One owner, boxed, as new. 2.5m, amazing reviews. (£695) £395

Vertex AQ HiRez Solfohn XLR interconnect. 1.5m. 8 months old. Original Technology demonstrator for the new HiRez range of cables. As new condition, stunning performance. (£2990) £POA

Transparent Reference Digital XLR (110ohm AES EBU) - Red Sleeve - 2m, cost £1092 new, huge saving at £395

Transparent Reference Digital XLR (110ohm AES EBU) - Red Sleeve - 1m, cost £856 new, bargain price £349

Transparent Reference XL Balanced Interconnect 2.2m, cost a staggering £6999 new - visit true high end for only £1850

Transparent MusicLink Super RCA. 1m, £429 new, a snip at only £195

Transparent MusicLink Super RCA. 2m, £519 new, huge saving at only £259

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Stand By Me

Arising from the lifestyle market, is the Geneva Model L just one of the most expensive iPod docks available or, asks Paul Rigby, is it something more?



The quest to squeeze a half-decent noise from your basic Apple iPod has been a long and often painful affair. The market has been swamped with plastic trash; boxes that offer more form than substance and others that could easily be responsible for a spate of UFO sightings.

The Geneva Model L is not one of these. In fact, it looks like it may have escaped from a Habitat showroom. Striking and a little daunting to look at, this standalone iPod dock... isn't. That is, the parent company, Geneva Lab, describes the unit as a 'sound system' because it also features a built-in CD player (with a grab slot) plus FM radio. Offering 50W of power, the single box also holds two 5.25" bass drivers and two 1" tweeters to form the company's own 'Embracing Sound' system, hopefully increasing the size of the soundstage. It's no surprise, therefore, that the 448x365x291mm box weighs a hefty 38lbs – and that's without the separate pedestal stand.

On the top of the casing sits a flip-top lid that, when opened, reveals an iPod dock and controls for volume, CD eject, power and a port for non-docking MP3 players. Additional adapters are available for different iPod flavours. Secreted away at the rear, under the chassis,

are ports for an external FM radio aerial and Line Out ports for a TV, computer, DVD or VHS player. The Model L under review was presented in an attractive piano black (although red and white are also available).

A sturdy remote is supplied that includes basic commands only. Additional CD controls such as 'repeat', for example, would have been welcome. In addition, the six radio preset buttons are labelled P-R-E-S-E-T which, to my mind, is not funny and is not clever. What's wrong with numbers? A large, front mounted, LED display tells you what mode the Model L is in.

SOUND QUALITY

One of its principal operations might be to serve as an iPod dock and users, the world over, may primarily listen to MP3 files but the Model L won't thank you for it. In fact, it'll turn up its nose pretty quickly because MP3s of all stripes, via my iPod Classic, did not sound good, rather thin and a little harsh. So it was with a sense of relief that .wav files proved far more successful, but the Model L's particularly transparent nature never covered up for the intrinsic source. Yes, as we know all too well, iPods sound comparatively constricted, dynamically, and a little shallow, and this system didn't disguise this. On jazz, the Model L's tendency

towards a slightly forward sound provided a crisp, clean midrange presentation – which could become less comfortable with a brighter sounding track - with fast and precise bass while lower midrange reproduction and instrumental separation was a

standout on bass-heavy rock.

The difference in quality between the iPod and ye olde Compact Disc was obvious and welcome, as the CD produced a far fuller, more rounded presentation across all frequencies. The large increase in sound quality is, actually, a testament to the Model L as a sound reproducer while the enhanced sound stage was more convincing in CD mode.

FM radio sound quality, via a roof-mounted aerial, was especially pleasing, despite the rather clunky station scanning via the remote. Pop music, from local stations, was inherently musical triggering many a foot-tap while Radio 3's live, solo harp recital was a delight, despite a slight hum at high volumes – upper-mids and treble being particularly airy and light. Radio 2's closely-miked speaking voices were also well modulated, desk papers rustled and radio car interviews even featured their own type of hiss.

CONCLUSION

The Geneva Model L might be a few pounds short of £1,000 (with the stand) but there have been plenty of iPod docks out there – of whatever cost - which have still failed to deliver the goods commensurate to their respective price. The Geneva Model L, however, is worth the asking price, I feel. In fact, the company is right to call the box a sound system as some users, especially if space is tight or interior design is a priority, will only require a Model L as their primary sound system. Not quite the equal of hi-fi separates, but a nice device nevertheless.



VERDICT

Lifts itself up from being a 'mere' iPod dock to become a viable and feisty competitor in the music centre market.

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 - remote





Get Back!

Finally, after a project run of around four and half years, the entire Beatles catalogue has been updated, remastered and released as two separate CD box sets, for the first time since 1987. Paul Rigby gives his studied verdict of the new Beatles boxsets...

Since the first time that the Beatles catalogue was remastered back in 1987, there have been tremendous technical improvements in analogue to digital convertors. With this in mind, along with the fact that the original remasters weren't exactly regarded as a resounding sonic success, the decision was taken to remaster this great body of musical work.

Each box arrives with all albums carrying the original UK art, expanded booklets featuring original and new liner notes plus rare photos. Quicktime, mini-documentaries are included too which can be viewed via computer. All the Beatles albums are featured in the stereo box along with the Past Masters collection, now squeezed on one CD. The mono box set features all ten of the albums created in that format plus two additional CDs of 'Mono Masters' covering similar territory to the stereo tracks on the 'Past Masters' CDs. The mono albums, pressed in Japan, have been reproduced as mini-vinyl editions, complete with miniature versions of the sleeves plus all original inserts.

Project Coordinator Allan Rouse was very happy with the final remastered tracks. Producing a 24-bit/192kHz master to work from, he believed, "digital, now being what it is, the new digital masters sound very close to the original master tapes. In fact, if I sat them down here in the studio and compared the original analogue tapes to the 24bit/192kHz master, I would defy most people to tell the difference between the two."

So, what do they sound like? It is interesting to hear how poor the original stereo mixing is and how long it took to get to grips with the subtleties of the process. 'With The Beatles', for example, is played with all of the vocals played out of one speaker and all the instruments out of the other. At this time, mono was

the dominant format and, in fact, the stereo process was utilised more to achieve a good balance between vocals and instruments before the final mono mix was created.

The stereo version of Revolver is a proper stereo mix with integrated vocals and instruments. However, it is also extremely annoying. You can tell that, at this time, that stereo was the 'in thing' to play with. The engineers were having a whale of a time moving vocals and instruments around willy-nilly. However, because the effect has been handled like a technical toy, the stereo process is, in itself, distracting.

It's only when you reach the later albums, such as 'Abbey Road', which reflected the contemporary dominance of stereo, that you can hear that the engineers have settled down, gotten used to the process and finally produced a mature album. 'Abbey Road', on purely 'stereo' grounds, is a joy to listen to; it provides subtlety and nuance, building a 3D soundstage instead of the three-ring circus act that is 'Revolver'.

My reason for babbling on about the original stereo mixes? To emphasise just how important the mono box is to us audiophiles. Frankly, if you have a decent hi-fi system, you are going to find the original mono mixes of the albums found on 'The Beatles in Mono' far superior to those same albums found in the stereo box set, remaster or no remaster. Never mind the improved quality and better balance to many of the mono mixes themselves.

After all, The Beatles as a group and the back room staff saw mono as the prime format up until the release of Yellow Submarine (a crossover release which features a 'fold down' vinyl pressing trick, providing a mono sound for people with mono system; which is why this album doesn't appear in the mono box set) and Abbey Road (which was true stereo). Until that point, the mono master was treated more seriously while

the stereo mix was an annoying afterthought. This is borne out by dozens of minor differences between the mono and stereo versions. Some tracks are longer in mono, contain the correct lyrics, more effects, extra guitar solo time, new instruments, corrected mistakes, and more.

COME TOGETHER

On to the remastering itself. I listened to the stereo and mono tracks via two CD systems; my reference system powered by 845 valves and ending in One Thing-modified, Quad ESL-57 electrostatic speakers. For the front end, I shipped in a swish Esoteric P-05 transport and D-05 DAC which retails for £10,000. I also hooked up the Cyrus CD-XT transport which was twinned with the Benchmark DAC-1S, both of which retail for around £2,000.

My selection of the Esoteric as a front-end of choice reflected one of the pre-release criticisms of the stereo remasters: the revelation that some element of compression would be imposed on the mixes. The Esoteric duo has been known for its analytical approach to CD play so, if any peak limiting had been applied to the CDs, I was sure to hear it via the Esoterics.

Taking the remastered stereo albums first and directly comparing them with the same albums from the 1987 release series, I can confirm that all of the remastered albums sound *louder*. I can also confirm that the peak limiting has not been imposed to extremes. That is, there is no clipping. None of the albums have received the same sort of extreme peak limiting that often makes chart-bound albums practically unlistenable. The fact remains however that the entire stereo remastering process is somewhat of a Curate's Egg. So why was limiting introduced?

"We could have gone a lot louder but we chose not to, actually. But I think what we've done helps

the sound," said Rouse. "The limiting adds slightly more drive and there are, in fact, at least 20 stereo tracks that contain no EQ at all. There's also upwards of another 100 that might have a single dB of compression or a dB at a single frequency. Anything that needed a bit of assistance. Some songs, the middle portion of the song 'Yellow Submarine', for example, were EQ'd in sections because each portion required a different type of assistance."

During my listening tests and starting at 'With the Beatles', initially released in 1963, the general remastering is impressive. Ringo Starr, who was largely absent from the 1987 version of 'It Won't Be Long', is back with a vengeance on the remastered version as his bass drum acts as a driving force over the entire track while his drum fills, wholly hidden behind Harrison's clanging guitar on the 1987 version, can be heard for the first time on the remaster. Who knows, maybe Starr's reputation will have to be re-examined after the launch of the remasters?

Midrange frequencies now enjoy a greater clarity. Harrison's guitar benefits from greater definition and focus. His own clipped, stuttering, strumming on the same track is revealed properly for the first time here while more air and space separates the vocal harmonies and multitracked lead vocal.

'All I've Got To Do' actually sounds closer miked than the 1987 version, sounding more personal while McCartney's bass is more easily tracked.

Any compression, on this album, has been applied only for good. In fact, because of the introduction of more bass on the remaster, the original 1987 mix now sounds surprisingly difficult to listen to at higher volumes. Being churlish, the only downside to the remastered album, in pure listening terms, is the annoying split-stereo effect but even that has a place on historical grounds and, for the dedicated fan and archivist, is to be welcomed.

'Revolver' (1966) proved intriguing. Played through the transparent Esoteric system, the rendition of 'Taxman' revealed a much busier performance than the original CD master. That is mostly because both the drums and bass play a much more active role and the greater midrange definition lifts the extra percussive effects, focusing more attention upon them. Here however, compression can be annoying. Via the Esoteric, the rhythm guitar line was a touch bright. At

high volumes, it was even slightly oppressive. This single guitar was the only problem with the track however. The compression was hardly ruinous but the edge was certainly taken off the brilliance of the remastering, on this track especially.

The remastering was made for tracks like 'Tomorrow Never Knows', however. This complex, patchwork quilt-like track of treated vocals, backwards guitars, tape loops et al. was enhanced by the superior clarity. The track came to life during the remastered version while the improved bass added a real sense of pace. Again, you can discern the subtle compressive effects placed upon the track but no element of the song was in any way offensive. However, because the ear could pick up the compression, there was, I must admit, an edge taken off my enjoyment of the track as a whole, via the Esoteric duo.

Yet, on 'Abbey Road', 'Come Together' was superb. The remastering supplied the mature stereo mix with an entirely new life from the subtle – such as the new but delicate reverb found on Lennon's vocal – to the more dramatic – such as the new weight and power supplied by Starr's drums and Harrison's guitar. Midrange enhancements include the rendition of the organ which now exudes a multilayered complexity that just wasn't there before.

'Here Comes The Sun' presents a series of sparkling treble tones, informative and communicative upper mids, thrilling lower mids, focused and believable upper bass frequencies and a lower bass that binds the lot together skillfully.

I then ran the tracks through the Cyrus/Benchmark duo, which is much more balanced as a front-end, warming up the clinical Esoteric edges. As expected, any worrying compression elements were suitably less problematic with this new hardware source. Jarring edges were softened while harsh frequencies were quelled to such an extent that many listeners might wonder what all the fuss is about. That said however, even with this balanced system, I can still hear that compression has been added, even though it is presented in a far friendlier form.

As Rouse himself has stated, the compression is targeted so some tracks will display the effects more than others while some ears will discern the limiting more than others. You certainly cannot damn the stereo remasters because of the attendant limiting. However, buy the box with your eyes (and ears) wide open...

Again, for those who are concerned about such things, the above serves to emphasise just how important the mono box is to the Beatles fan and why, despite the high price, it should be on your purchase list. For not only does the mono box provide many of the positives of the remastering process, although possibly without the punch of the stereos, and a more considered mono mix (the early albums, especially, can be positively primitive in their conveyance of energy and passion, whisking you back to those early, heady, Hamburg days) but there is absolutely *no* compression of any sort placed on these mono versions. They are clean except for some very subtle EQing; subtle because of the nature of the 'simple' mono presentation. Incidentally, the monos also feature the original time between tracks which, in those days, could be four to six seconds!

THE END

For the dedicated Beatles fan, buy both box sets. For those looking after their pennies and anti-compression listeners, buy the mono box set and then purchase the remastered stereo 'Yellow Submarine', 'Abbey Road' and 'Let It Be' to complete the set. For those who might own a CD player that is rather clinical in its approach such as the Esoteric or, on the lower end of the scale, the Pioneer PD-D9, for example, buy the mono box then borrow one of the final three remastered CDs and see if the compression offends. If so, top up your collection with the 1987 era releases. For those who might describe themselves as more casual listeners with more balanced, warmer or sweeter CD systems or those looking to immediately transfer the CDs to iPod, buy the stereo box set only.

And for the future? Can we expect a box-set version that, like the recent Neil Young archives, provides another version of the same boxes but are packed with tons of archival material on both audio and video that also throws in the Beatles films and more? Hmm, maybe. My enquiries to that effect didn't rule out such a project. As for vinyl fans? Well, I received the same reply: it's a definite maybe. I personally feel that a vinyl version will appear but it will be taken from the new 24bit/192kHz masters of the original master tapes that were used to create the CD versions. If so, I, for one can't wait.



Tall Story

Noel Keywood recalls his experiences with B&W's latest large sub-£2,000 floorstanding loudspeaker, the CM9...

B&W say the CM Series sits between the 600 Series and the 800 Series, and regular readers will notice a distinct similarity between the CM9 and the 683 I reviewed in our March 09 issue.

It isn't unreasonable to see the CM9 as a tuned up version of the 683 I found, with a smoother sounding tweeter, improved standard of finish and – inevitably – higher price tag of £1,760, or £860 more than the 683. Happily, the 683 was a good loudspeaker so improving upon it can justify a high end price, and by staying under £2,000 the CM9 is still a competitive modern floorstander. It is a product so judiciously balanced in all respects, from sound to build quality, that it's something of a yardstick against which other loudspeakers in this popular slot can be measured. It offers a nice, bright, shiny modern sound, without possessing the character of so many rivals that, in trying too hard perhaps, make selection very much a matter of taste.

Like the 683 the CM9 is a large floorstander distinguished by its eye catching yellow Kevlar midrange unit. This works from 350Hz to 4kHz – an unusual working range for a modern 3-way loudspeaker because it means the bass units are handling the lower midrange and there will be a character change here when crossing over from bass to midrange. Which is why, I suspect, B&W fit different bass units to the CM9, ones with a paper/Kevlar cone, instead of the aluminium/paper/Kevlar cones used in the 683. The Kevlar coned yellow FST midrange unit, with its direct cone edge termination (it has no roll surround) appears to be the same in both loudspeakers, appearance suggests, although it measures differently.

Both the 683 and CM9 have a 25mm (1in) aluminium dome tweeter and you could assume these behave identically too, but again they do not I found. The CM9 tweeter is more civilised than the 683 and it makes quite a difference. However, to be brutally frank the opposition are pedalling off into the sunset here, leaving B&W with a tweeter that is no great shakes all the same. Ribbons are appearing everywhere,



Audiosmile use a lovely Isoplanar tweeter and the superb Vifa ring tweeter in Acoustic Energy's Radiance 3 is gaining popularity fast. All give audibly better results than even the best aluminium domes so it is against this wider background the CM9 is judged.

Study the specs closely and you will find the CM9 is dimensionally very close to the 683, but B&W give it a plinth to add stability and raise it up a little. Fitting the plinth is part of the set up ceremony and it is best to keep a set of (supplied) clear moulded plastic protective covers on whilst doing so, because the exposed dome of B&W's aluminium tweeter is readily damaged.

With the plinth fitted, spikes or soft plastic dome feet can be attached, to give a very stable loudspeaker I found, much more so than the 683. The aluminium trim rings of the CM9 and its superbly veneered cabinet – only Monitor Audio do it better – do make for a professionally finished product that will sit in a modern lounge and look the part. Cloth grilles ease its visual alliance with more traditional surroundings. The rear carries a port and bi-wire terminals that accept 4mm plugs, bare wires or spades. Foam port bungs can be used to damp down bass, but we did not use them.

SOUND QUALITY

I started listening with a Stello CDT-100 CD transport feeding a DA-100 DAC and Icon MB845 valve monoblocks. B&W loudspeakers generally have an open and spacious sound, characterised by a modern light air to their presentation, but just off the discernible character of metal cone loudspeakers. The more I listen to and measure the B&W Kevlar cone units, however, the more aware I become of their own sound, and the CM9 driver very much reflects this. There is in its quality a peculiar "schhh" and in its decay spectrum some obvious modes, suggesting the origin. Add in some midband peaking linked into these effects and the lightening of vocal timbre that I heard with Amy Winehouse singing 'Rehab', the word "depressed" issuing forth in a pinched manner, the phenomena is explained. Surprisingly, the 683 had a smoother midband, so why the step back in this development of it I do not understand. However, with female vocals of the fuller variety, such as Gabrielle singing 'Forget About The World', as well as Amy Winehouse to give just two examples, the CM9s were both timbrally light and also a trifle spiky; theirs is not an even

midband by any means.

These days we are getting many loudspeakers through with raised midbands (and all are projective with vocals), but emphasis like this has to be exploited with care or it becomes an upsetting influence and in the CM9s I believe B&W have allowed their grip on balance and tonality to slip too far. The 683 was smoother and better in this respect.

As the CD version of 'Rehab' ended and simple kick drum and plucked bass of 'You Know I'm No Good' entered, the CM9 started to show its mettle. Full, firm and lucid as bass from a cabinet of the size goes, the CM9 arguably offers one of the more conspicuously better

"it really does deliver a conspicuously shiny high fidelity sound, one that's overwhelmingly impressive..."

bass performances available. There's real depth yet no wallow, nor the dissociated low frequency rumble that some ports give. Spinning my Angelique Kidjo torture tracks with overpowering bass down to 30Hz (we have measured it) showed the CM9s deliver nicely. They are judiciously balanced to give bass at just the right level, nicely integrated with the midband so bass lines stay firm, taut, tuneful and of consistent character, right down to the lowest notes. I suspect the easy handling of bass fundamentals from 40Hz upward and absence of port waffle contribute toward this. It is a big plus point for the CM9 though, as it was for the 683, and contributes strongly to a perception of ability that makes them a pleasing listen.

The light midband quality of the CM9 translated into plentiful amounts of insight and detail being generated. No matter where I sat there was little phasiness, inconsistency or softness to be heard, just a wide open upper midband that was airy and spacious. However, I did tilt them back on their spikes to intensify the midband very slightly. The downside is that the CM9s, like other B&Ws, have somewhat diffuse imaging, so Beethoven's 'Missa Solemnis' from the Berliner Philharmoniker sounded fluffy in positioning of choral sections, with emphasis toward the centre, a phenomenon I noticed with much Rock. But for every CD where I had reservations about details of the CM9's performance, there seemed to be another where, overall, they shone.

So spinning Santana's Yaleo from Supernatural, a track full of activity from its Latin American rhythms, dense percussion and multi-track vocals the CM9s constructed a huge, open panorama of sound in front of me that seethed with detail and action. As I've noted before, B&Ws always sound deliciously open and airy and the CM9s were all of this. With a lot of treble energy to exercise the tweeter it hung on well, showing an even nature that was easy enough; the loudspeaker's spikiness comes from its midrange unit. So the CM9 doesn't offend up top when pushed; it is shiny and open, but not unpleasant. A nicely clean and concise lower midband and bass region with

plenty of dynamic life and goodly amounts of punch when called upon do much to make for an attractive presentation that rivals can't quite get a grip on. It is here that the CM9s score strongly, they sound so clean, even and tidy.

Moving from the Icon Audio MB845 valve power amplifiers to a transistor Leema Pulse in this case was an interesting contrast. The Leema has pronounced treble but it is sweet and very well differentiated by solid-state standards and worked surprisingly well with the CM9s, so much so that I mused whether Quad II-eighty power amplifiers with their characteristically zingy KT88 treble might be a better choice of valve amp. But that isn't the whole story. Whilst extraordinarily shiny and highly detailed treble brought Carlos Santana's guitar strings right out into my lap, density of vocal images was diminished and bass became more an outline than an instrument. All the same,



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the CM9s sounded spectacularly forthright with the Pulse and I can see listeners falling for this sound, even if I was more impressed than convinced (about its naturalness).

But it prompted me to swap the Creek OBH-22 passive preamp for an Icon Audio LA4 valve preamp and this showed the Creek was holding things back. Normally its damping influence is welcome, but the CM9s showed it was also suppressing speed and detailing. So the CM9s have real insight and are amplifier sensitive as a result, a sign of a good loudspeaker. In fact they are a great loudspeaker with some blemishes that need clearing, the midband peak being the most obvious.

Working through classical music from CD the CM9s were entertaining but not perfect. The midrange unit all but worked alone at times it seemed, giving Renee Fleming great presence but a light nature that I didn't find very convincing. It was a pleasant listen, but presentationally unbalanced. Nigel Kennedy playing Max Bruch's Violin Concerto No 1 was light, airy and smooth, but an orchestral climax was over-lit in the midband. With a stronger orchestral contribution within a Sibelius piece, the CM9s reignited it seemed, as the bass/mids made their presence known but on balance the CM9s were least convincing with classical music from CD. This isn't their forte.

The picture changed for the better with LP. The extra warmth, bass power and

cohesiveness helped knit the CM9's drive units and the loudspeaker really showed its mettle, turning in great performances from old and new recordings alike. The Who's first album, 'My Generation', survived nicely in spite of its own "recorded through a baked bean tin" sound. The CM9s emphasised Daltrey's voice a little, but the performance still held together and was enjoyable. Old Reggae tracks like the Pioneers' 'Long Shot Kick De Bucket' (well, it always brings a smile to my face!) worked very nicely, supported by a nice firm bass line and great insight into the studio recorded harmonies that made for an atmospheric sound; I like to feel I'm in an old 1970s Jamaican studio – simple but effective – with this track and the CM9s delivered beautifully.

The CM9s worked equally well with modern material like Any Winehouse's 12in 45rpm single of 'Tears Dry on Their Own', consistently sounding squeaky clean, well ordered, tonally even and free from obvious artifice, yet punchy and

dynamic. From our Ortofon Cadenza Bronze cartridge through an Eastern Electric Minimax phono stage, LP sounded so good as to be consistently ahead of CD much of the time; the midband emphasis of the CM9 sat better with vinyl than CD.

CONCLUSION

The B&W CM9 leaves me with rather contradictory feelings. Use it with a good amplifier and source and it really does deliver a conspicuously shiny high fidelity sound, one that is overwhelmingly impressive even to casual listeners. And its strengths are real too; listen closely and you truly can hear right into a performance, yet the wide open, airy presentation has a nice flavour to it that it, a bit like the draft of sweet early morning air. But – er – cows leave things lying around and these can taint even the sweetest air. A little tidying would improve the CM9s even more, making this a great loudspeaker. Not entirely accurate it may be, but it is impressive in bucketloads and mightily capable too.

MEASURED PERFORMANCE

In frequency response the CM9 is well balanced along the 0dB datum, from low frequencies to highs, so subjectively it will not have either excessive bass or treble, a common phenomenon these days. Even by B&W's own standards, treble is more restrained than usual, and the tweeter less peaky in itself, so the CM9 should sound less bright than typical B&Ws, and also less coloured.

Due to the slow crossover slope used between midrange and treble units frequency response varies with microphone position due to phase addition/cancellation but there is some loss in the upper midrange as shown in our analysis, just enough to bring a smoothness to the sound, possibly at the expense of a little detail. Bass output is also in good check, so near-wall positioning is likely best. The lower bass limit is 60Hz, below which the CM9 cuts off sharply and this characteristic helps give a tighter, less waffly sound to low frequencies. Our impedance curve shows that the port works over a wide range and damps well. The port is tuned very low, to 26Hz (red trace), and output isn't high either, so it will not add greatly to perceived bass.

Sensitivity was high at 89dB, partly because this is a 4 Ohm loudspeaker, a few reactive peaks taking the overall measured value to 5 Ohms. Valve amps should be set to 4 Ohms. As a load the CM9 is quite reasonable and will not demand too much current / power because of its sensitivity.

An analysis of signal decay over 200ms shows the CM9 is generally low

on colouration, except at the peaking around 1kHz, where some overhang is evident in the decay plot and may add some colour.

B&W usually manage to keep bass distortion low and the CM9 was no exception, registering 2% from both bass drivers and port at 40Hz and not rising much below this frequency. Across the midband distortion was a very low 0.1%.

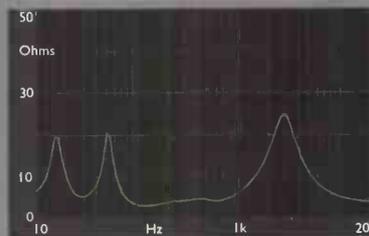
The CM9 has peculiarities and the midband peak is one of them. The treble unit looks to be improved, whilst bass looks dry and well engineered. It will have likely sound clear and bright, if characterful. NK

FREQUENCY RESPONSE



Green - driver output
Red - port output

IMPEDANCE



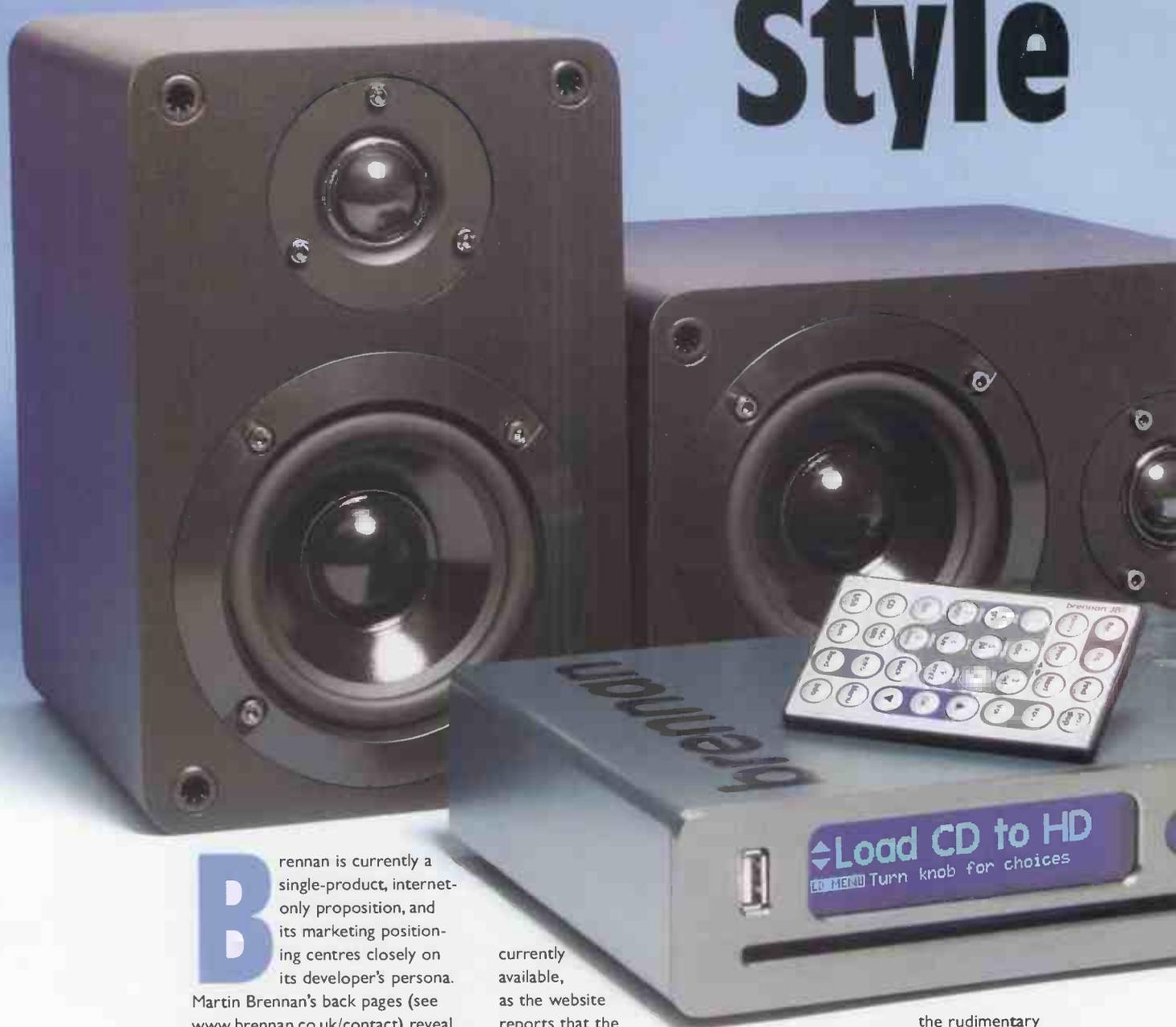
VERDICT ●●●●●
 Fabulously impressive 'hi-fi' sound with great strengths, but some will find the midband over explicit.

B&W CM9 £1,760
 Bowers & Wilkins
 ☎ +44 (0) 1903 221 500
 www.bowers-wilkins.co.uk

FOR
 - clean, well ordered sound
 - firm, even bass
 - smooth treble

AGAINST
 - forward upper midband
 - diffuse imaging
 - unbalanced with classical

Style



Brennan is currently a single-product, internet-only proposition, and its marketing positioning centres closely on its developer's persona. Martin Brennan's back pages (see www.brennan.co.uk/contact) reveal his electronic engineering background to be the typical Cambridge, Sinclair-affiliated computer games development one, co-designing as he did the Atari Jaguar micro.

For a while now, the JB7 has been appearing in the back pages of music magazines, along with more lifestyle titles (and the *New Statesman*). In this way, Brennan is pushing the concept of CD collection conversion to those who may not be aware that this is well-trodden ground. To those of us who have been trying to find the best route to lossless CD ripping and playout these last five years, a closed-box limited-codec solution, no matter how attractively styled, is pretty much anathema...

But that price point is tempting enough for the affluent gadget seeker; a range of capacities are available from 80 through 160 to 320 GB, postage-inclusive price points ranging from £339 to £409. Not all are

currently available, as the website reports that the year thus far has seen a 600% increase in business, and exhausted stocks of the 80GB unit. That stat. alone reveals the demographic the device is catering to, namely small compressed audio collection territory. For those of the less-than-audiophile persuasion, Brennan speakers are available for £69, or in bundled packages.

It should be no secret that to my mind the most flexible, future-proof and high-performance system is separate storage, music serving software and a high-resolution-capable front end such as a Logitech Transporter or some flavour of Linn DS. But for those who don't wish to confront the complexities involved in running such a setup, particularly those on the networking side of the equation the Brennan JB7 may be the ideal solution. In many ways, the extent and limits of its functionality are analogous to the Arcam MS250 of a couple of years ago, albeit without

the rudimentary network capabilities, and with the addition of amplification. Regrettably it shares that machine's ignorance of space-saving FLAC usage for lossless enthusiasts, and in this age of DRM-free iTunes Plus files, a criminal lack of .m4a file compatibility.

The one thing the JB7 does have in addition to usual CD storage and playout is the ability to record from a line input. So it could be used for convenient LP/Tape conversion, but the specs of the machine's AD/DA converters are not evident in all the smooth PR puff work. The only option is to hook the machine up and listen to and analyse the results...

GETTING GOING

The main unit comes shipped in a soft cloth bag ideal for mobile use, along with a box of cabling, remote control and manual. The unit itself is solidly built and reassuringly robust. It is barely bigger than your average Lacie d2 design hard-drive, which

Counsel

"British company reinvents the hi-fi", says the marketing. The Brennan JB7 may look pretty in lifestyle magazines, but can it cut the mustard as a true hi-fi source? Patrick Cleasby decides...

is more or less what it is. But as is helpfully pointed out in the manual, it's "not really a CD player", the disc drive being intended for digital audio extraction as its primary purpose. However, rear ports provided, as well as the clip-type speaker terminals, are three simple 3.5mm stereo jack sockets - headphones, line in and line out. A gold-plated 3.5mm stereo to left-right phono Interconnect is provided.

The power supply is the expected laptop/hard drive-type, and the remote is the equally expected cheap Chinese-made, flat, plastic skinned touch button-type. The manual however,

is an endearingly quirky annotated picture deal, highlighting some of the genuinely inventively tweaks on the device.

These include starting the box up while holding the 'next' key which kicks it immediately into random play mode, and the press and hold of the 'stop' button which is 'a kind of panic button'!

It is around this point that one of the most disappointing functionality gaps of the JB7 begins to dawn. If you have a non-internet connected ripping device, how does the audio data get conveniently tagged in the way iTunes users have been used to for nigh-on ten years now?

Well, the answer is that the machine used to come with a CD containing a static (if extensive) CD-identification database, and it is now preloaded at the factory. But this fixes the intended use of the device as being for the once-only conversion of a legacy CD

collection. CDs are still being made and for those of us who continue to acquire them, not having access to the constantly updated internet databases is extremely inconvenient! As it happens, the database can still be updated intermittently from a CD-ROM, but it is hardly ideal is it?

Concessions are made to file-based audio on the move (and backup) in the form of a front-mounted USB 2.0 socket, but if your interests are in the ubiquitous iPod, you can forget about proper integration. The FAQs suggest you offload your Brennan's contents to iTunes and drop it back to the iPod that way. But the USB media requirements are FAT32, so the best you can say is that those of us who use Rockboxed iPods as FAT32 mass-storage music players should be ideally suited to MP3 and/or WAV loading to and from the Brennan. 'Should be' because while USB import from the Rockboxed iPod is fine (or the mass storage folders of any FAT32 iPod for that matter), because Rockbox leaves the iPod software intact with a changed bootloader, the Brennan sees the iPod as 'Read Only'. This is all extremely frustrating for tweeky people like me, but I suppose Brennan would say it's not really a mainstream issue, and wouldn't concern the average JB7 buyer?

Anyway, once fired up the tactile and operational appeal of the Brennan becomes apparent. The fluorescent display is large enough in its album and track naming to see and navigate across the room. The simple front panel operations are generally exceedingly intuitive, as are those from the remotes.

A simple check revealed that editor Price had, of course, left the device in 'No compression' (or .wav) mode. No need to change the settings then, as that's just how I was intending to use it! The JB7's preloaded database successfully

identified a copy of King Crimson's 'THRAK', and a quick hit of the 'rip' button on the remote saw it being imported at a fair old pace, all done in around six minutes. The second attempt at identification, the last Finn Brothers album, got a primary return of some random compilation title, but the correct details were second on the scrollable list. My remastered copy of Bryan Ferry's 'Boys and Girls' was successfully identified, but the hybrid SACD of the same title was not found. Somewhat disappointing for a four year old, albeit obscure title. Reassuringly the relatively recent 'Insurgent' by Steven Wilson was found successfully and all the track information was accessed.

Despite Mr Brennan's assurances of his device's hi-fi status the listening results are not entirely convincing. It's not bad, especially if you've graduated from lifestyle iPod docks (and suchlike), but it's not quite up there with a budget CD player such as Cambridge Audio's 650C, or even close. In uncompressed mode, expect a smooth, tidy sound devoid from any particular nasties, and with decent levels of detail. Yet there's little in the way of bass heft or dynamic articulation; the Brennan just plays away in the background in an inoffensive manner. The line-out connection delivered a slightly flat presentation of the epic, widescreen soundfields of 'Boys and Girls'. So there is nothing terribly compelling about listening to the Brennan then, but it's not bad considering the price.

CONCLUSION

It is easy to see why the stylish looks of the Brennan JB7 have apparently made such a success of this machine. Admirable though Martin Brennan's enterprise is, it is to be hoped that he is working on a more hi-fi, higher capacity, network-capable successor to this appealing, quaint, but slightly aged design. The really essential development, once one has experienced Sonos or Squeeze controllers, is a graphical, scrollable view of your library in your hand, rather than the type of fluorescent front-panel display we had five years ago in the Squeezeboxes and Soundbridges of yore.

VERDICT

A worthy stab at a universal, easy to use hard disk music player, but it has various unresolved issues, particularly lack of FLAC and AAC. Fine value as a starter product, but you may soon outgrow it...

BRENNAN JB7 320G

METALLIC £399

Brennan

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www.brennan.co.uk

FOR

- compact design
- ingenious operation
- USB integration
- inoffensive sound

AGAINST

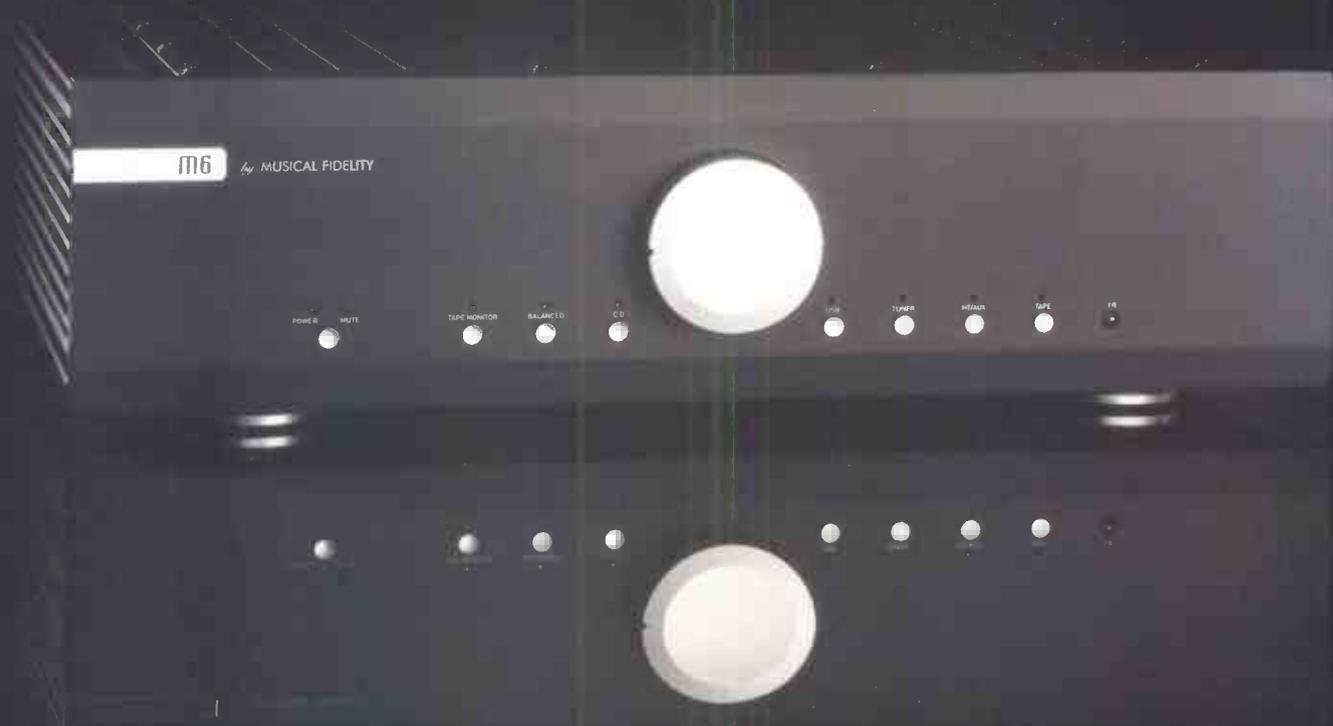
- Internet unaware
- MP3/WAV only
- no digital output



MUSICAL FIDELITY

M6i Integrated Amplifier

New from Musical Fidelity. 200 wpc. Dual mono power amps.
Inbuilt, separate, dedicated preamp PSU. Balanced inputs.



mail



LETTER OF THE MONTH PRIZE



KEF iQ30 LOUDSPEAKERS

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 iQ30 loudspeakers and one years FREE subscription to Hi-Fi World.

A pair of KEF iQ30 loudspeakers is on their way to RON KOORM, Letter of the Month winner in our November 2009 issue.

Letter of the Month

THE MAINS THING

I started off with a classic Linn Sondek front end back in the early 1980s. I had a Linn Asaka moving coil cartridge which was considered a poor man's Linn Asak. The Sondek had a certain euphony to the sound which made every record sound emotive and engaging. I soon became tired of the bad tracking ability of the Asaka cartridge and the inherent high frequency distortion. I was also disappointed with the lack of consistency between recordings of the same artists from different record labels.

Being a full time electronics engineer, I could design and build the partnering preamps and power amps to the point where they could be considered blameless in comparison with the ancillary equipment. My amplifier is based on the Electrocompaniet 50W Class A design dating from the 1970s but with substantial power supply and component updates. The Electrocompaniet amplifier philosophy is also extolled in the current dartZeel amplifier designs using an ultra-wide bandwidth, low overall feedback concept. I incorporated a stepped attenuator into the input stage of my amplifier such as to remove the requirement for a separate line amplifier between DAC and amplifier.

My speakers are closed box, two way designs augmented by an active Isobarik closed box sub-bass loudspeaker. This uses an active Linkwitz-Riley crossover to boost the low frequency response down to 20Hz but still retains a box Q of 0.5. This produces a beautifully clean low end response which hardly excites room resonances.

When my cartridge stylus finally



Usher Be-10, one of the best conventional loudspeakers we have ever heard, up there with electrostatics – but with bass!

wore out I took the step into the digital domain with my first CD system. This comprised a Marantz CD63 CD player serving as a transport feeding an Audio Synthesis DAX DAC. The sound was very good but not as musically involving as the Linn Sondek front end.

I used this system for many years until I recently purchased the Cyrus CD XT SE transport and PSX-R power supply. This was a revelation in terms of musical performance and my system was now starting to sound like a good analogue turntable system.

However, the most important updates to my system have been the recent introduction of a dedicated mains spur to my system connected via Kimber woven cable and a PS Audio Quintessence mains power conditioner, along with new interconnects. I actually preferred the Quintessence to the Power Plant Premier. The conditioner and CD transport/power supply are fed via Russ Andrews Reference power cords. The digital interconnect between the CD transport and DAC is a Kimber

Select KS2020 and the analogue interconnects to the amplifier are Kimber Select KS1021.

The musicality, three dimensionality and level of detail now achieved from CD is a revelation to me and I continually play all my old CDs to hear instruments that had previously been a blur.

I have a pair of Stax Signature electrostatic headphones for monitoring purposes which provide a true insight into a particular recording. These headphones show the sound integration that can only be achieved when using a single transducer for the whole audio spectrum.

My point here is that you can design and build the audio electronics yourself to a point of perfection with the best components available. However, purchasing the best digital / analogue interconnects and mains power conditioner can transform a CD based system with a typical clinical and slightly clanky sound into something quite superb, with all the attributes of a good turntable front end.

I would be interested if you could review high end analogue / digital interconnects in a future Hi-Fi World publication to show how products like the Cyrus CD XT SE transport can really sound when used with the best interconnects.

Also, I would be interested if a future review could show the improvement a dedicated mains spur can provide in conjunction with a good mains power conditioner. I have had an interest in audio amplifier design for about thirty years but have only recently appreciated the significant improvement that interconnects and power conditioners can have on a system sound. It may take some persuading for other people to spend large sums of money on interconnects and conditioners but I am personally convinced.

One last point, your recent review on the Usher Be-10 loudspeaker has convinced me that I should obtain a pair, probably second-hand, if they should ever materialise. In the meantime, would you consider that your own WD25T loudspeaker design could give me an insight into the performance that the Usher currently offers but at a far more affordable price.

One other advantage of a CD based system, you can buy CDs at car boot sales for no more than £1 each!

Geoff le Good

Mains cables, conditioning and such like are always going to be a controversial topic Geoff, because it is difficult to prove anything, if not for

obvious reasons. In truth, an audio spectrum analyser can be used to look at noise of all sorts and I used one successfully when probing the effects of using a fully balanced mains transformer, finding it cut earth leakage currents significantly. However, in a careless moment I misconnected and blew the front end of the £9k analyser immediately! A special interface is needed and a step down transformer is most obvious as one solution, but it will introduce its own problems.

Then there is the variability of supply lines, as I have mentioned many times before. Long power lines from which industrial and agricultural machinery are driven are known to be noisy and prone to large voltage fluctuations and in this circumstance mains conditioning will be influential, as Adam Smith has found living in a Hampshire Village. However, both the magazine and my home are fed from nearby St Johns Wood power station and mains conditioners have little impact, we find. The voltage is very high (246V as I write!) and stays that way, and the lines are clean, the spectrum analyser showed me before it blew up! So the impact of mains conditioning varies according to location, I believe. All the same, that you find it so beneficial is very interesting, and also that conditioning in your case eliminates the "clankiness" of CD. Most engineers believe otherwise as I am sure you well know, so your views are interesting and cautionary to the rest of us.

The WD25T will give good insight but it is a vastly different animal to the Be-10: the former you can lift, the latter you cannot! As conventional loudspeakers go the Be-10 is arguably one of the least coloured and most revealing. The WD25T is for medium sized rooms and offers a very tight, dry

sound that is both neutral, balanced and revealing. Also, DIY is the final answer (well, sort of) as you can tweak to get the sort of sound you prefer - very suitable for engineers!
NK

BUDGET COIL

I am considering upgrading from a twenty year old Planar 3 with absolutely no mods whatsoever and being quite happy with the house sound, figure the P5 (with TT PSU) and P7 are possible upgrades. The rest of the system is Naim based (I22x, I50x, Stageline, B&W CDM7se) and I use the dreaded Denon DL103 cartridge (which I know you hate but I am quite taken with it given cost vs. performance)! I 'downgraded' to it from a Goldring Elite and it just sounded better (to my ears - everything just sounded more natural and easy) and only cost me €115 compared to nearly €350 which the Goldring cost. If you had the time to consider the TT upgrade options, I would be curious to hear your opinions on the options - I have heard the LP12 (not overly impressed to be honest, given the price) and the GyroDec (sounded different but still lacked a 'wow' factor that I expected to hear given the price difference) but the reference system was all Leema and Sendor S8s which is a million miles sound wise (I'm guessing) from what I have.

Mark Finucane

Hi Mark. For what it's worth, my advice would be to get a Denon DL103R, which I found significantly better than the hazy 103, assuming that it is still available at a sensible price. It is currently listed at £280 or thereabouts, quite a hike up from the £130 or so for the normal DL103, which even I would admit is fair value. I am still not convinced budget moving coil cartridges are a good idea quite frankly, but if people like the DL103 then that's fine. It's



The lovely Rega P5 turntable with glass platter.

just that DL103 users seem more excited about finding "a bargain" than whether that bargain sounds any good or not.

We have never recommended the Goldring Electra, nor the budget Ortofon. The Ortofon M25FL was the moving coil cartridge to beat them all; it measured fabulously well – but sounded as dull as ditchwater! Then there is today's Samba and Salsa that are good value but do not possess much MC magic, I feel.

My view is that conventional moving magnet cartridges are best value up to £400, and as always the fine treble of the Goldrings and the

really liked the DSP-AX759SE amplifier as a stereo amplifier, it doesn't seem to be able to drive the NS1000M speakers properly, and the sound is a bit flat in the lower midrange and bass. When I disable all the DSP features and only use the pure sound functionality, it helps a little bit but the overall sound projection is still tiresome and monotonous.

So I have decided that I need to find a new amplifier and later a new SACD player, I have a budget of around £1,000 for the amplifier and I have been recommended to take a look at Audiolab's 8000 series, and Creek's Destiny integrated amp, and I personally

Hi Neils. David Price is our Yamaha NS1000 expert and can advise, but I suspect the Leema Pulse would be a good choice, or perhaps the powerful Tucana II that Tony Bolton likes so much.

I'm afraid to say that only Marantz seem to make a good sounding receiver by normal hi-fi standards, followed closely by Onkyo. Should you want to revive the idea of stereo + surround sound get an Onkyo PR-SC886 surround preamp and power amplifiers of choice to go with it (valve or transistor). Turn off the Centre channel and remove the Centre loudspeaker, then you can run in stereo or surround-sound. Yamaha make a very nice CD/SACD player in the CD-S2000 that gives top quality from SACD. **NK**

Noel's quite right here; the Leema Pulse is the best match at around £1,000, in my opinion, although in truth the NS1000Ms are one of the most revealing speakers around and they deserve something closer to five times that price. The Yams will simply tell you that the Leema is a nice, big and bouncy sounding transistor amp, a little mushy across the midband compared to the likes of Musical Fidelity's AMS35i (reviewed in this issue) for example, and a tad two dimensional. But most of the other rivals to the Leema will simply sound shrill, or flat, or both! If you must have an SACD player, go for the Marantz SA-8003 (£830). The Cyrus CD8 SE is better still as a CD player, but of course has no SACD functionality. Good luck with getting the Thorens back on the road; you'll find the Yams will enjoy the chance to reproduce vinyl!

DP



For Yamaha NS1000s, get a Musical Fidelity AMS35i, says NS1000 owner and aficionado, editor David Price.



Yamaha NS1000s, a Golden Oldie – look at those 12in woofers! – with a cult following.

thought that the Leema Pulse would be a good choice. However I don't know any of the brands very well, so I would like some guidance, also if you are aware of other possibilities.

I mainly listen to Rock, pop, easy listening, and acoustic music on CDs or SACD. I have an old Thorens 147D deck, but it's situated in the loft together with my LPs, and I haven't used it since I moved house three years ago, mainly due to lack of space in the living room. I might bring it back to life again, after hearing your demonstration at the National Audio show in Whittlebury last Saturday, but that will take some negotiation with the domestic controller.

stunning correctness of Ortofon's 2M Black still top my list.

Just above this price level there is the very good Audio Technica AT-OC9ML/II moving coil cartridge if you can live with its emphasised treble; at least treble quality is very good, sounding very finely differentiated and it has firm, deep bass. It is light years ahead of both Denons.

A Rega Planar P3-24 (reviewed in our July 09 issue) will handle all these cartridges nicely, as will a P5 or P7 of course. **NK**

SURROUND TO STEREO

My current system is a Yamaha DSP-AX759SE, Denon 1920 DVD/CD player, Yamaha NS1000M front speakers, Mission 73C center speaker and Mission 760i back speakers. I use a Squeezebox 3 for streaming music, when I just need some background music. I have never

SME IV arm - loveliness on pivots!



I would also like you to recommend a CD/SACD player in the £500-£1,000 range, I'm only interested in two channel stereo, but it's okay if the player can do multichannel as well. I have looked at several brands, such as Marantz, Pioneer, Sony and Denon. I know they are all Japanese, but I guess it's where the big market for SACD is at the moment. **Niels Nielsen**

ARM LOCK

Once again Noel's review of the SME 312s has pushed me yet another rung up the ladder to buying a 401112" arm/valve set up. Super piece of writing, to the point where I visualised the headshell washer rolling off into the sunset as I was reading on.

However, I digress! Arm Lock – or lack of, more to the point. Easy peasy.



Tucana II



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SOUND AND VISION
AWARDS 2009**

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Two lengths of sticky back hook and loop (Velcro stuff). Cut them off about 4/5 inches long, peel off the backing, stick em together, cut into a strip about 8mm wide (5/16 old money) as this makes it more pliable, job done.

It is more arm friendly than a bit of wire and looks the part too. I leave mine on my SME Series IV after a session as it's far too easy to get distracted and give the arm a wallop with the dust cover on the next outing.

Keith Burford

PETITION

Thank you for starting the petition on the Number 10 website. I fear though that it has fallen on deaf ears (if they could hear then they'd know DAB was bad).

I got a reply suggesting that it would be a bad thing if the people who have DAB had to buy another technology. It made no mention of those of us who have FM receivers. There was no consideration of any other digital technology. The reply suggested that subjectively I may be receiving poor quality digital because I was in a "bad" area. I am

because we don't want to cause DAB owners any inconvenience"! Erm, excuse me, what about the analogue radios, which outnumber DAB radio listeners by a factor that makes even the government's budget deficit look small? On reading the official reply to my Number 10 petition which recently expired (I asked for six months, and it was given one), my wife (who grew up in China in the nineteen eighties) told me "that's the sort of nonsense the Communist Party bureaucrats tell local people when they're bulldozing their houses for a new road"! George Orwell will be sighing from up high... **DP**

NOW HEAR THIS!

Adam Smith's uneasy relationship with the Tesco 'hi-fi' in the November issue made me smile and certainly got me thinking. One line, in particular, reminded me of my own musical epiphany this last couple of years; his suggestion that the music itself should matter 'first and foremost', a fact forgotten by more than a few hi-fi enthusiasts, struck a harmonious chord in this little corner of

down from that audio precipice must rank up there with the best. My hi-fi, a relatively humble Regal/Arcom/Ruark set up, wouldn't win many prizes in these hallowed pages, but was the end result of years spent as one of those 'enthusiasts' Adam was referring to in his piece. Countless Saturdays demo-ing kit I knew I'd never afford. Blagging my way into the trade days at Heathrow on a crusade to amass a small rainforest's worth of glossy brochures. Sitting cooing and billing over gently glowing valves in darkened hotel rooms. Been there, done it. I've biwired and bi-amped, I've changed cables and interconnects, I've granited and squash-balled my kit, I've even measured speaker toe-in angles.

In short, I was listening to the kit; skipping through albums to find the tracks that would show it off, reducing someone's musical efforts to bite-size chunks that would show how tight the bass was, or the lack of any mid-range honk. I'd forgotten about the music; that was just something you had to have to underline what a shrewd judge you were.

The two years since my op have proved to be a bit of a revelation. I spent some time at a friend's house, where an old iPod feeding budget amp and speakers provided some fantastic music. They didn't sit facing their kit with reverential looks on their faces, or worry whether speakers were too near the back wall. They just played music and got on with stuff. They chatted, they ate and all the while this sublime soundtrack played in the background. I'm still not sure what half the stuff I heard was, but I know I fell in love with music again. It prompted me to crank up the hi-fi at home, and it's been on almost permanently ever since. I haven't tweaked, or meddled, haven't cleaned any contacts or tightened plugs and the speakers remain resolutely in the same spot they've been for months. I've rediscovered vinyl and CDs that I'd forgotten I'd even bought; terrific pieces of music that just sound fantastic, even to my one, good ear.

This has been a difficult way to re-ignite my passion for music; 'tough love' if you like; and there are times I'm given a sharp reminder of what I've lost. I certainly won't be listening through those scarily-priced headphones any time soon! I still read the magazines, of course (that's an even harder habit to break!), but I'm sticking with the audio hand I've been dealt. A classic case of swings and roundabouts; the music is everything again. It's worth reminding yourself of that once in while.

Chris Treece

Sorry to hear about the hearing loss, Chris, but glad you still enjoy music. The idea must be to get a good system, then simply enjoy it and both



Tesco Hi-Fi System puts music first ('cos sound quality comes second!).

an electronic engineer by trade (2. I honours degree from University of Ulster) and I can say, completely objectively that DAB is inferior to FM.

Those of us who care about high fidelity sound would welcome digital radio if it were 192kHz and 24bits. DAB, as you know doesn't measure up.

I intend to write to all of the mainstream newspapers to express my disgust at this decision to bulldoze through an obsolete technology. I hope that you will support me in my quest to keep FM in the UK.

Peter Brett

Hi Peter - yes, it's an amazing display of logic to say, effectively, "we're replacing DAB because FM is old hat, but we won't replace DAB which is also old hat with DAB+

the audio firmament.

Two years ago, I lost pretty much all the hearing in my right ear - the end product of an infection, a burst ear drum and a spiteful little growth that had destroyed those tiny bones you only usually get involved with in O-level Biology. One lengthy operation later and I found myself free from its clutches, but minus 50% of my hearing.

Obviously the first, rational and practical thing you do is come home and stare wistfully at the hi-fi you've tweaked to within an inch of its life down the years. I made an immediate decision to sell the lot. 'No use to me now' was the story I spun to my wife, with visions of a small micro all-in-one standing in its place and a wad of cash to spend.

There are many, many things I must thank my wife for, but talking me

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Benchmark DAC Pre "enjoyed endlessly since I bought it" says Bob Harvie.

editor David Price and I as publisher support this idea. We actually do not encourage continual upgrading and David has said repeatedly, spend what it takes to get a good sound – then enjoy your music. But hi-fi does have a starting point and a decent basic system isn't truly cheap. If I put Q Acoustics 1050i loudspeakers (£350) with a Leema Pulse amplifier (£1,000) and a Stello DA-100 DAC (£600), say, then we are looking at £2,000 or so minimum. This should give the average listener at least five years of steady, upgraditis-free pleasure, possibly more. That's a lot longer I am finding than you get out of a camcorder or camera costing £1k – and we won't talk about cars! **NK**

LIVING BY NUMBERS

I was very interested in your group test review of DACs in the September issue of *Hi-Fi World*. Whilst the debate on digital versus vinyl rumbles on, and is unlikely to be resolved anytime soon, I firmly pin my colours to the mast and declare myself a digital devotee. I still remember the frustration with pops, clicks and bumps which manifested themselves with LPs, no matter how diligent one was in looking after the precious content. And having to change sides every twenty minutes just meant there were too many interruptions and distractions to allow enjoyment of the music to flow. As a consequence, my Linn turntable remains in a box in my garage, or loft, or wherever!

CD can be a fine medium, and my previous CD player, a two piece TEAC model (predecessor to the now highly regarded Esoteric models) plus my current player, a Unison Unico CD player offer very fine sound. However, I have moved on from CD and have embraced PC based music. I have managed to assemble a system which offers finer sound than any of my CD players, and dare I say it, better than that afforded by vinyl. Of course at the heart of the matter is the use of a DAC, and it is my experiences in getting to where I have that has prompted me to write.

First off, I will briefly explain the source components of my PC based system: a Dell Inspiron laptop with 500GB HDD; Windows Vista; WASAPI; JRiver Media Center (XMPlay is a hand-

o-matic player which I also use), plus a Benchmark DAC1 Pre connected with USB. I have ripped all of my CDs to WMA lossless and recorded all of my LPs to WAV files using my Linn turntable and phono stage before retiring it to the garage – the WAV files were subsequently split, transcoded to WMA lossless and tagged. I would suggest that for the tweakers out there, PC audio offers unlimited opportunity to fiddle. I won't recall the efforts I made trying to get ASIO to work with XP, configuring the different players; working out the benefits of USB via optical, etc., but suffice to say it has taken me some time to get to a position where I can relax and enjoy my music again.

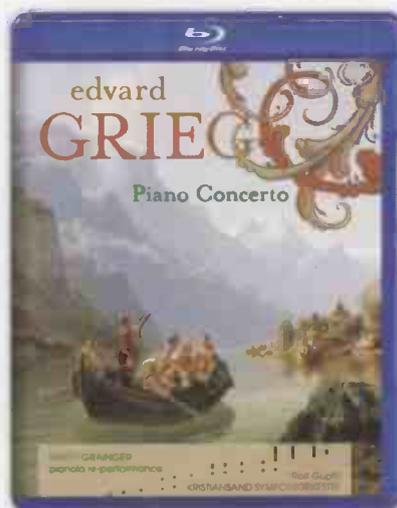
On to the DAC Supertest and my comments on it: My first comment is that you reviewed the Beresford TC-7510, or should that be the TC-7520? To clarify, you should confirm that it is indeed the 7520 you reviewed despite your repeated references to 7510, since that is the model which offers a USB input (and is also the model shown in the photograph).

Your review of the Beresford was very fair and the description of performance offered sits very comfortably with me and my experiences of it (I own both the 7510 and 7520). However, readers may be interested to note that the story offered by you is not the whole story: the DAC chip on the Beresford 7520 can be easily changed out, and various users on a host of forums have reported significant improvements through so doing. However, more interesting is that nearly all users report large improvements in this unit's performance following a period of burn in. Your comments on how the various DACs sounded after extended periods of use would be interesting. My use of the Beresford as a DAC is as a portable device. I travel a lot, and often do so for extended periods (i.e. more than a week or two). The Beresford is small enough that I can pop it in my suitcase alongside my trusted Sennheiser HD650s and the aforementioned laptop and voila, I have a stunning alternative to watching CNN in a hotel bedroom (I do find alternative alternatives as well, but that's not for this magazine). So,

the Beresford warrants the 4 Globes you offered, and then some, because of the flexibility it affords alongside a very acceptable sound quality.

I use a Benchmark DAC1 Pre for my main domestic setup, and whilst this is not the same model as that you reviewed, I can only comment that the Benchmark is one of the best value pieces of hi-fi equipment on the market today. On sound quality alone it far outperforms the Beresford, offering a very high quality and engaging sound. To those reading the review of DACs I would add that in going for the Benchmark you can be assured that you are comfortably inside the law of diminishing returns (or bang for the buck) threshold. My Benchmark DAC is one purchase I have enjoyed endlessly since I bought it. Very highly recommended. I know that *Hi-Fi World* praised the Benchmark, and rightly so, but I would endorse the view you offered and suggest that it offers even better value than one may suppose.

I enjoy seeing the resurgence of vinyl, not least because it appears that a new generation have found out about its merits, but also because of the very fine sound I know it can offer. I am also supportive of the industry's new support for the format, but it's not for me. For the first time since first indulging in hi-fi over 35 years ago, I can get excellent



2L Blu-ray music disc, a rare source of high quality 24/192 digital. See www.2l.no

sound quality from any piece of music in my large music collection, nearly instantly, every time, and just about anywhere I go.

PC Audio has not yet reached a stage where it is ready for the hi-fi mainstream, but it has come on a lot in the last year or so. If someone is prepared and competent enough to fiddle about with turntables, tonearms and cartridges, etc., then the benefits of PC audio should be well within their grasp. The rewards can be very satisfying, and the hi-fi community should welcome

the world of PC Audio into its arms. I don't believe that PC Audio is competing with vinyl; I view it as fulfilling different needs. I am a Linn owner, I have several hundred LPs, but I really enjoy my digital set-up, and because of it I am enjoying my music as much as I ever have.

Bob Harvie
Western Australia

Hi Bob. We always like to hear about the other side of the coin.

On the matter of digital can I respectfully note that whilst you have wrestled a working digital system into place, even after conquering Asynchronous In Out systems and converting CD and LP to WMA lossless, that none of this relates to or improves audio quality per se. For better digital you need to use better code and here a move to 24bit, in say 24/48 format, clearly demonstrates that 16bit of CD is strictly limited in resolution. How to get higher resolution digital is still a bit iffy at present but Linn, Naim and B&W offer high resolution music in 24bit FLAC form and Apple are going that way, perhaps? If you haven't got a decent 'net connection able to download the 86MB that 5 minutes of music at 24/48 resolution represents, then life gets a little difficult because Blu-ray music repertoire is a bit limited at present. So as you say we are getting there, but I won't tell you why violin invariably sounds rough on digital, about how much distortion you are really, really listening to – and all that. If I did you might end up staggering around the world with a Dansette and a stack of LPs, and even I have to admit that isn't a good idea. **NK**

POWER CRAZY

I have a pair of World Audio Kel 80 monoblocks, bought as non-working, or rather one of them wasn't. I guessed (and hoped!) from the information given to me that the fault was not too serious, and this turned out to be correct. As I live in the North West, I am only about half an hour's travelling distance away from Haden Boardman's home in Westhoughton, so I contacted him, and he has now repaired the faulty unit. I also enjoyed a couple of pleasant chats about hi-fi with Haden.

The amps had been heavily modified, something that Haden was none too keen on, as although the parts used were of high quality (Jensen PIO, Black Gate and Aerovox caps, Kiwame resistors, etc.) some were not well installed, resulting in potential instability, which is probably what caused the fault. Haden has now rectified this, and amps are working well. However, I am not over keen on the sound; they have



World Audio Design KEL80 power amplifier - power for those that need it.

a 'powerful' sound, good with driving music, but my preference is classical and some older rock and pop. I cannot abide the music of the current era! (probably a sign of my age!). I find my attention wandering when listening to them! I also have a Shanling MC30, and I think it is this that has 'spoiled' me; it is a very sweet sounding unit, low powered as you know, but it drives my Mission 752F speakers well enough; not ideally for rock, but fine for classical. It is currently driving Mission 731's in another room, but not as well as it drove the 752s.

So, I am now considering selling the KEL 80s, but the problem is - what should I ask for them? That is my question for you gentlemen. Hence my first sentence. I really have no idea what they might be worth. If they were, say, Icon Audio MB90s (or MB845s, I wish!), then I would have an RRP to go on, and maybe other sellers prices. But apart from these, I have never seen any KEL80s for sale. I can't even remember what the kit cost when you sold it, or what they cost built.

The KEL 80s seem to have quite high input sensitivity, too high for my CJ PV10a pre-amp. The sound level is high with the volume control at 9 o'clock. A friend suggested that I use Rothwell's attenuators between the pre and power amps, or a Kimber interconnect with attenuation. I may try this. I used to own the CJ MV55 power amp but found it a bit too warm and woolly. The MC30 was much cleaner and clearer, even when driven from the PV10a (sometimes necessary as I have a lot of sources - MD and cassette included). I have found the PV10A to be very good; no complaints about that, the phono stage is particularly good. I use Ortofon T5 in-line transformers; they are amazing considering what they cost.

Just for info, the rest of my system is GyroDec (probably quite an old one, with twin belts and Gyropower PSU (not QC) OL modded RB250/ Ortofon

Quartz, Arcam Alpha 8SE CDP (I like this a lot), Creek 3140 tuner, Nakamichi DR10 cassette, Sony MDS-JB920 MD recorder, and the aforementioned Mission 752F speakers. Cabling is all basic Kimber, PBJ interconnects, 4PR speaker, their cheapest mains cables, and their mains extension blocks with built-in conditioner. I have had most of this kit for years and it has served me well.

I don't know what I would replace the KEL 80s with, perhaps I would use the MC30 as a power amp as I did before I bought them. I don't really need 80W per channel, but I would like a bit more than the 3 Watts of the MC30 on some occasions. But no solid state amps, they leave me cold. I have the much praised NAD C315BEE and am less than impressed. It stays in the dining room!

Rod Theobald.

Rod, it is very difficult to quote a price. Once upon a time a Garrard 401 was junk; now they sell for £400 minimum. I would guess it would sell with a price in the low hundreds.

The KEL80 wasn't the last word in finesse I have to admit; it was designed as a not too expensive solution for those who demanded power. I never got around to fine tuning one so do not know whether it had the potential to be improved or not, but from what you are saying it seems not.

If you want a really easy going purity of sound then the 300B triode is your valve. Amps that use them come in all shapes and sizes, but Icon Audio's Stereo 300B II priced at £1,800 is less costly than most and a great one for you personally to audition, I feel. **NK**

PUFF OF LOGIC

Could you and the lads help resolve an argument currently raging around the office at coffee break please?

We work in software development and inevitably logic tends to inform, or corrupt, any discussion. The current debate takes the form of a syllogism.

1. Premise: The purpose of hi-fi is to recreate as closely as possible the original performance in your living room.
2. Premise: The more high-end you go the closer you come to recreating the original sound.

3. Conclusion: Therefore the closer you get to the high-end, the closer the sound gets to the original performance, until at the very top all systems sound the same.

I have an all valve system (Audio Note), my colleague all solid-state (Naim), both around £25k's worth, and they certainly don't sound the same. Therefore where does the argument fall down? Logic dictates that our systems should sound much more similar to each other than they do.

Zap.

Er...Zap, it falls down everywhere!

Your hi-fi system can only reproduce what was recorded, which in too many cases is far from the original sound, when that is either human voice or an unamplified instrument. Between source and hi-fi lies the recording chain, complete with dodgy mics and their preamps, bad ADCs and the heavy hand of the recording engineer who may like to add his own flavour to the sound, as well as compress it and peak limit it.

The more high end you go the more interpretive hi-fi gets I find. This applies especially to loudspeakers. You and your friend have found this out, as your systems are chalk and cheese. Peter Quortrop of AudioNote is worse than me when it comes to valve amps (!) but an AudioNote on song is a fine experience, if an expensive one. Your mate wouldn't agree no doubt!

The conclusion is that you should relax, enjoy the music and stop thinking about it. It's a bit like the meaning of life really: by the time you've worked it out - it's too late! Best not to bother. **NK**

Logically, there should be only one 'truth', and the better hi-fi gets the closer it should take us to it. Therefore the better things are, the closer things should be. Well, as you rightly say they're not. So using your logic, which has a certain grace, the answer is that even high end systems are a long way from the truth - and it follows that lower end systems are even further. Noel's right to say that the 'better' hi-fi gets, the more 'interpretive' it becomes. That's because the designer hones in on a particular aspect of the sound (what he would argue is the defining aspect)

and goes hell-for-leather, so to speak to achieve it. In doing this, the nature of electronic and mechanical design is (currently) such that other aspects of the sound have to be deprioritised. This is when humans come in to spoil the logical sequence; systems are designed around human beings' subjective notions of accuracy, and these vary wildly. A 3 Watt single-ended triode or a 500W Class AB solid-stater, see what I mean?

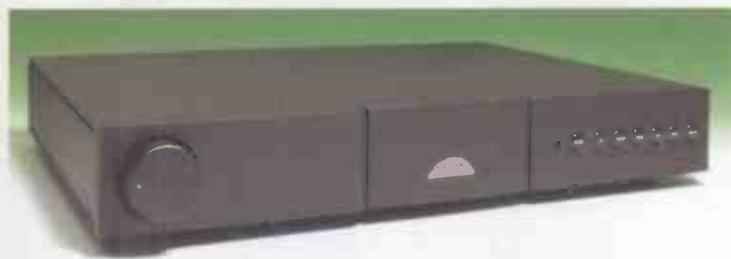
In the same way that we'll never invent a camera that takes pictures as good as our eyesight, I suspect we're a country mile away from anything approaching all-round-audio audiophile Nirvana. Logically though, that doesn't mean we shouldn't give up the search. Hearing some serious high end systems gives you a fleeting glimpse of what's possible; you suddenly start thinking 'wow' as the system breaks down the suspension of disbelief and suddenly

bit of a play with it and added a spare Rega Super Elys cartridge and was surprised how good it actually sounded. I know all about your enthusiasm for the Technics SL1200, but in your view is the Denon worth experimenting with?

If it can be done I was thinking of adding a basic OLI for now as it has the upgrade path, or may be even looking for something better second hand. Its more of a bit of fun really, something for me to play around with and see where it goes. Plus I like the idea of having another deck for some of my older records, but I don't want to waste money that could be spent on more new music. Any Advice ?

Steve W
Western Australia

Hi Steve. The Denon looks very tasty to me - and it even has 78rpm - do DJs really play these? It's layout is suspiciously Technics like, and I notice it is quartz-locked, which my



Naim solid-state and Audionote valve amplifiers. "Should sound much more similar than they do" says Zap.

you're there with the musicians. It's a fine feeling. No, more than that, it's a blissful feeling, and one we shouldn't stop chasing. That said, we shouldn't obsess over the means; the end is what we're there for, and even modest systems carefully chosen can get you closer to the original sound than you thought possible. **DP**

BREAK OUT!

I have valve based amplification powered by 300Bs, with my main source being a Rega P9 turntable, RB1000 arm and Denon DL-304 cartridge playing through a Trichord Dina+ phono stage. I really am very happy with the sound of my system but...

Due to my son upgrading his home DJ'ing turntables I've now inherited his old Denon DP-DJ101 turntable if I want it. It's in good condition and sound working order. Out of interest I had a

measurements show usually does result in accurate speed with little variation about the mean. My simple suggestion is fit a Rega RB250, perhaps picked up second-hand, to see if there are any fitting problems (I have never used this deck so cannot comment). If it all works and sounds good, then you can consider upgrading. Bear in mind that plinth isolation is likely to be poor, even though it is a DJ deck, so use a good table and one with no mains powered unit on it as the Denon will likely pick up transformer mechanical hum (our big, heavy Pioneer PLC-590 Direct Drives do this and need serious isolation). You should hear the temporal grip of a Direct Drive at least. Whether it appeals to you is another matter. Generally they deliver a clean, tight and pacy sound I find - and why not enjoy experimenting with one? **NK**

I'd suggest you sell it and buy a second-hand Technics SL1200, which is far better made and far more upgradeable, with service parts likely available for at least another twenty years. The Denon is more of a



Denon DP-DJ101 turntable - buy a second-hand Technics SL1200, says David.

plasticky toy, whereas the Technics is breathtakingly over engineered - and is alone in this respect in its price bracket. No other so-called 'DJ deck' comes close. **DP**

POWER TO THE PEOPLE

Although I am nowhere near high enough up the hi-fi ladder to experience regularly the likes of Naim audio can I offer some thoughts as to the validity of putting in a decent power supply and how this sometimes really does define the quality of audio?

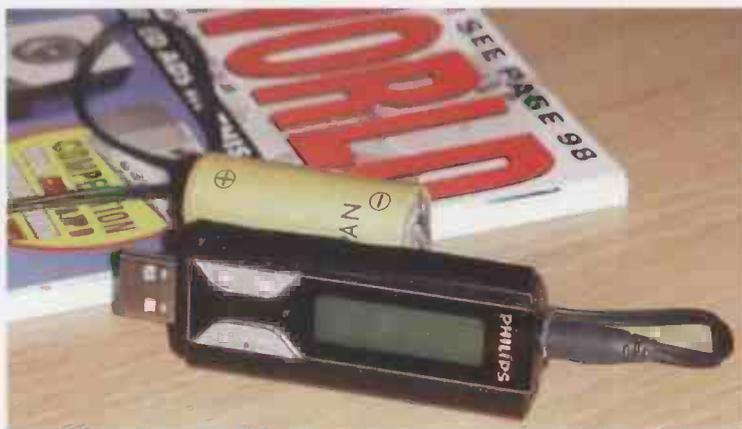
I have worked on the fringes of electronics, hi-fi and the world of gigging musicians for around thirty five years starting in my teens and now work full time for the BBC as my main job, keeping my hand in by doing repairs and modifications to all sorts of equipment. However, it is clear to me that some devices can be significantly improved by power supply modifications. Something that anyone can try relatively cheaply to prove it for themselves is the humble MP3 player. I have never been a fan of iTunes and the iPod although the cheap MP3 players using the best quality encoding can be quite good, my example here being a typical but not unique. But to improve them further try this!

With the single battery (AAA type) players like the one in my pictures: Make up a twin battery Nicad or Lion battery pack to create a 2.4 volt supply, with a single diode (1N4004 is fine although I use a BYV28 series in this instance) in series with the output, connect this up to the original battery connections. Use some capacitors directly across the original battery terminals. I suggest 10v, 220uf or 10v 470uf electrolytic (get it round the right way!) and 100v 0.47uf polyester. The diode will drop some 0.7volts and give you a very nice noise free supply of some 1.7 - 1.8 volts very close to a new and original AAA cell.

Have a listen. Bass improves, stopping and starting much cleaner. The fizz of the upper mid and treble disappears. Imaging through even very cheap earholebungs (well you can't really call them headphones!) just seems to appear wider, deeper and much

closer to what good speakers give. It's no louder, the supply increase of at best 5% really doesn't make that much difference.

Have a look at my couple of my pics and the scruffy lump that I carry with me. All superglue and welded plastic but very much worth it! I have been using this 1GB unit (£22) with its inelegant battery pack for 3 years. So



A tuned up MP3 player, used by Dave Tutt.

if this works at the very bottom of the scale there is no reason to believe that there will not be a similar effect higher up the quality range...

Many amps are very compromised in this respect. You only have to see the power output of amps into 8 and the 4 ohms to see some fundamental failures here. If its 50 Watts output at 8 then it should be as close as possible to 100 at 4 ohms. Many amps don't even get to 20W more into the lower load and you have to ask how this will affect dynamics, damping factor, headroom, etc., and the knock on effects of this right across the audio band. Indeed, various work I have carried out over the years seems to suggest that PSU design is just as important as the real nuts and bolts of the signal carrying circuitry. Stiffness rules okay!

Performance gains can be had across the board by capacitor replacement, going for the next physical value will improve the bass in most instances assuming the same type, voltage rating and manufacturer, or better still if upgrading to a more esoteric/ specialist manufacturer. Adding

multiple polyester, mylar or polypropylene small value caps across the power lines at strategic points will clean up the treble and upper mid. I know these things work. My 35 years would have to be proof of it and my customers are always very happy.

Samples? Well I have done Quad 33/303,44/405 the later with current dumping mods you will find on the web, early Arcam, JVC and Pioneer, Creek, etc from the hi-fi range to Fender, Peavey, and Marshall guitar amps the later being probably the poorest of all the muso hardware I ever have to touch.

Just so you know my system is currently: Marantz CD67 II, Cambridge Audio C and P 500, home made headphone amp and rewired and modified Sennheiser HD480-13Uk II phones, home made bookshelf speakers using Goodmans 4 ohm 5.25 inch 60w Watt bass mid drivers and Seas H107 tweeters and Rel Stadium II

sub. Turntable is Thorens 160 (hugely modified!) with SME 3009 fixed and Ortofon VMS20E, Akai GX600D r-r tape deck and Philips 741 non dab tuner (modified again!).

Dave Tutt

Interesting stuff! Contact me at the magazine if you'd like to take part in a project I am 'brewing'. Dave! **DP**

TRANSFER

I've got lots of the old, small audio tapes (about 4 inches by 2.5 inches) that I want to transfer to CD, as they hold "treasured music". Steepletone do the sort of direct transfer equipment I want - that is with no computer or software involved, but it's quite expensive at around £299. Can you recommend a cheaper, direct version please? The tape input could be via an input socket on the CD writer.

Peter Hughes

Hi Peter. CD recorders are rare beasts these days, but the Sony RCDW100B can be bought for £260 or so. Otherwise you need access to a computer with a sound card (for



Recording LP to CD isn't so easy without a computer, but Sony make the RCDW 100 CD recorder

decent quality) as most have CD burners on board nowadays. Trouble is this can involve faffing around with software, although Maplin have a programme for £39 that is likely to be easy to use. **NK**

FLOGGING A DEAD HORSE?

I have over the last year been upgrading my hi-fi (speakers, amplifier and cables) leaving me with the last component of my original system, the turntable.

My current system consists of a Systemdek IIX (in very good condition) with an early RB300 arm, Dynavector 10X5 cartridge and a record interface clamp and mat (made in the Netherlands). The speakers are 15" coaxial Hawthorne Silver Iris powered an Audio Space AS-3i integrated valve amplifier, with the phono stage being a Project Tube Box SE II (with a Little Pinkie power supply). All connected with good quality interconnects and speaker cable.

I would like your comments regarding either upgrading or replacing the Systemdek, the upgrade would consist of fitting an Origin Live universal turntable motor kit and later rewiring the RB300 with good quality internal cable.

The new turntable options (with in my budget) being either a Avid Diva II with the Jelco arm or a Scheu Analog Black Diamond with the Rega RB250, I would retain the Dynavector as I do like its sound. I have read your magazines reviews of both these turntables, and both appear to offering what I am looking for in a turntable (good bass and an open, wide and deep soundstage). Auditioning them could be a problem as I do not believe there are any dealers in Perth Western Australia. The only thing that concerns me with the Scheu is the nylon belt slipping against the drive pulley on start up and the wear (and eventual speed change) this will cause? Not that it should matter but I listen to a wide variety of music, except classical. Build quality / robustness are also important.

The question is would spending \$3,000 or so on a new turntable, as opposed to spending \$1,000 for the universal turntable motor kit be a worth while upgrade, or am I flogging a dead horse (my trusty Systemdek)?

Ian Lyne
Western Australia

*Hi Ian - no, you're not. If you're mechanically competent and can do the work to a good standard, the OL motor mod will drastically improve your turntable - maybe not quite up to an Avid Diva II, but it will be far cheaper. I'd counsel you to give this a go. Also invest in the OL structural mod for your arm. **DP***

*A small observation for you Ian: Rega have been busy improving the RB250 and 300, they are now up to RB251 and RB301 status. Our measurements show that the RB301 in particular is a very strong product and I'd encourage you to aim for an untuned RB301 as a minimum. By all means get a modded unit with better wiring, or perhaps an RB1000 arm. **NK***

EVEN KEEL

My current set up consists of Linn LP12 (upgraded except for the Radikal and Keel), Lingo power supply, Ittok LVIII arm, Dynavector Karat 17D3 cartridge along with a Naim 135 based 2-way active system including a 52 Preamp/Supercap.

On the digital side of things I use a Linn Klimax DS, Wadia iPod Dock and dCS P8i CD/SACD player. The speakers are Linn Ninkas.

I have always liked the "Linn/Naim/Linn" type presentation, musicality ("tap those feet") and a good level of detail. Okay, I know the soundstage may be a little flat compared to other systems. The Dynavector is a departure for me as I have generally used Ortofon MC cartridges. But, this gives an idea of my preferred sound.

I really do like active systems and have demo'd ATC50s with their own amplifiers included. I can have some passive ones made so that I can utilise my Naim set-up and I have spare kit so I can make up a 3-way active system this way.

I would like to build a 3-way system, but wondered if there were any alternatives to the ATCs? I am struggling to find other 3-way active loudspeakers I could consider for the same cost? I have demo'd a number of passive systems just in case this would be an alternative way to go. But, even at a similar cost to the ATCs, I haven't found anything that really approaches an active set-up. Any ideas?

On the analogue front, I have been listening to more LPs lately and intend to continue. As an aside, I have been replacing and running cables carefully in order to reduce the noise in the system when no music is playing.

In doing this I am conscious the phono stage on the NAC52 is quite noisy? Do you think I could improve on this with a dedicated phono stage? When dealers know my set-up they generally recommend the Naim one, but

I follow your reviews and think there must be an alternative to seriously consider? Any ideas? Budget, ideally up to £1,500. But, I would consider up to £3k if it means I do not have to upgrade this component again.

Your help would be very much appreciated as I have been trying to work this out for quite a while now. Listening taste is mainly jazz, popular and "contemporary" and includes a lot of strong vocal and acoustic instrumental work.

Colin Locke,

Hi Colin. I asked James Whest of Whest Audio about this, because he gave me an interesting insight onto the view from the studio and the popularity of active loudspeakers in this environment the other day. Names he reeled off were Adam loudspeakers of course, who have a huge range and are very well engineered we find, from the models we have tested. Their Heil Air Motion transformers are quite forward but the sound is fast, clean and incisive in a way few can match. ATC are well known of course and James is a fan. He also recommended PMC (and anyone who attended our Whittlebury demos will know that Martin Colloms of Hi-Fi Critic is also a fan).

Tannoy make a wide range of active loudspeakers for Pro use, about which James said the good ones were very good, but they were



Adam Tensor Gamma active loudspeakers, a fabulous sound for £12,500 we found. They make less expensive models.

a bit variable between models, so listening would be in order. Without a budget it is difficult to be specific but active loudspeakers are usually expensive, although in many cases the loudspeaker in passive form can be

used together with an external active crossover, allowing your own amps to be used, James told me. However, this does then demand the crossover be set up, a process that usually requires measuring mic and spectrum analyser of some sort - expensive and a specialist process.

A solid-state alternative to the Naim Stageline phono stage is the Whest PS30.RDT, Anatek MCR-1 and also the A.N.T. Audio Kora 3T Ltd. All these were reviewed in our July 09 issue, available online. I hope this helps. **NK**

FIXING THE CASTLE

An avid hi-fi fan since the 70s, the golden age of discovery for hi-fi freaks, I still follow the latest developments and theories in audio through your magazine, though unlike many of your readers I can no longer afford these gems but have to scour your online guide for used components in my lifetime search for perfect sound.

In my travels I have done some great deals, met some great people but had to become something of a technician along the way to deal with life's little niggles, especially used gear that needs a little TLC sometimes. A year or two ago I bought a pair of Castle Howard S2 speakers, my dream purchase, for a fraction of the original cost, they sounded fabulous but after a while one of the tweeters developed an intermittent fault.

Convinced this was the problem I duly found an exact matching pair of tweeters on eBay USA and managed to buy them for about £15. When they arrived and I soldered them in things seemed okay for a little while but back came the fault. There was nothing else for it but to take the back off and have a look at the crossover/ post assembly, a bunch of capacitors but which one is causing the trouble? I put the plate back and lo and behold no sound at all coming from the offending tweeter, maybe I disturbed something... aha! Let's have another look, and there it was staring at me, nothing more than a broken solder joint!

A few minutes later all working perfectly! I have much satisfaction listening to them knowing I cured a fault but silly it was such a simple one - how many perfectly good hi-fi components get chucked out for want of a simple repair? I know the manufacturers have to keep pumping out new models but I bet most audiophiles are still using equipment twenty plus years old and just read the mag at bedtime...?

Steve Trowbridge

I really liked the Howards - big, easy sound with great bass, I recall. The Castle name was bought by

International Audio Group, and it is likely a new range will appear in due course, a (rather large) dicky bird tells me. The Castle sound will be faithfully preserved I am glad to hear, because it relied to quite some extent on the use of carbon fibre drive units that I greatly prefer to all else. **NK**



Castle Howard loudspeakers - great bass and a smooth sound from carbon fibre drive units

SINGAPORE SOUND

My name's Amol and I just moved to Singapore from Tokyo. Currently, I have two large B&W 700 series speakers and one B&W 62 centre speaker and mainly play games and watch DVDs. These three speakers are attached to a Denon amp (I forget the model name as it is on a boat from Tokyo at the moment. It cost around £400 a year ago when I brought it in Japan).

Now that I live in bigger place, I would like to upgrade to full 5.1 surround sound thus am in the market for two back speakers with stands, and a subwoofer. My questions are:

- 1) is there a big difference between the 686, 700 and 800 for the small speakers?*
- 2) how important is it to spend more money on the back speakers?*
- 3) are there other factors that I should consider?*
- 4) which ones would you recommend?*

Amol

Hi Amol. It's usual and best to keep all the speakers as alike as possible. So rear loudspeakers should also be from the 700 Series. With gaming and some music the rears will take a lot of sound, so the bigger the better.

However, I find much of the music I play - mainly rock concerts on Blu-ray - in surround-sound (about 80%) puts little energy into the rears and most of it is ambient crowd noise and such like, where quality hardly matters to be frank. So what you choose to use depends largely on the material you play.

Bear in mind that DVD video sound track is usually Dolby or DTS compressed and quality isn't very high. You need to move to Blu-ray for high quality music and high impact film sound tracks: just listen to the canon fire in 'Master and Commander', 'Far Side of the World' on Blu-ray to be frightened at what a modern system can do. Happily, Blu-ray players will play DVDs and CDs.

I prefer to remove the Centre loudspeaker altogether. Not only is it physically impossible to integrate, but the lowest quality 'speaker of the set up often handles the greatest amount of musical content, including vocals and drums. This can really hold things back. Also, when the Centre is mixed to be loud, as some producers like to do, you end up listening to mono from something that's little better than a shoebox with a few drivers stuffed into it! So I recommend you go into the receiver menus and switch the Centre channel off. You do not lose the channel, it is directed into Left and Right loudspeakers to give a phantom centre image, as in ordinary stereo. This gives much more balanced results and better sound all round. **NK**

PC AUDIO

Being a regular reader of the magazine, I am writing to suggest that it might be time to have a special edition devoted to PC/computer audio? This would be of interest to those readers unable to afford the likes of the Naim HDX (£4,500) and the now numerous other hard disk players/servers that are on the market. How does the sound of a dedicated music PC or indeed a MAC compare to these more expensive items of equipment. Music PCs from companies like Inta Audio or Digital Village are occasionally reviewed in music industry magazines and they seem to offer the home user a large range of software to use to store and playback music in high definition DVD audio. Are the 'music' or 'audio' PCs or digital audio workstations only of use to musicians and recording engineers? Why not connect one of them up to the a system and the PC input of a Plasma screen and you have your very own audio/visual media centre! If you want to view rare videos of jazz and classical musicians on Youtube a 'music' centre connected to the internet

makes this a much more pleasurable experience.

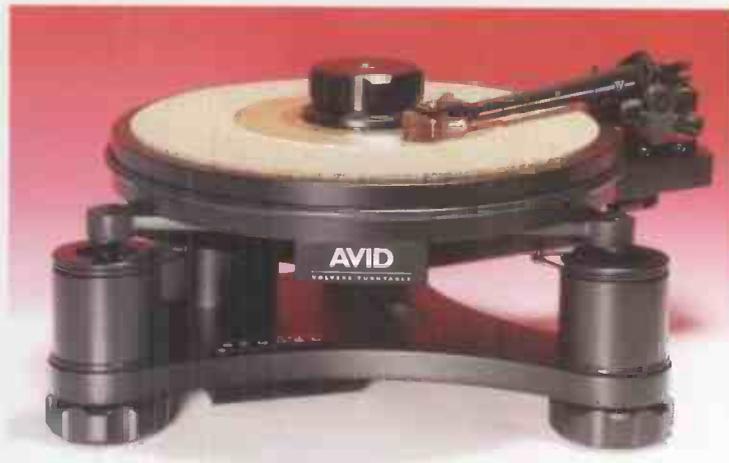
New software such as DVD audio Solo from Cirlinka that has been taken up in some form by Linn and others offering high definition downloads. This software is very easy to use and has good labelling of tracks and will copy images to display with the recording being played. High definition audio definitely approaches, dare I say, vinyl reproduction and has storage advantages even over the CD. To my ears, at least, 24/96 DVD-audio enhances the 1930s recordings of Lauritz Melchior and Kirsten Flagstad! However, while you get excellent 24/92 sound for music tracks, Solo unfortunately seems unable to burn a gapless reproduction of opera or any continuous musical event that has been divided up to allow access to specific parts of the whole. Pristine audio suggests other software for this particular task. There's a rumour that it might be possible soon to record your own SACDs too.

I purchased my high definition soundcard (a Hoontech/Staudio Media 7.1) after it was reviewed in Hi-Fi World but now I want to know what the latest 24/192 soundcards from companies like M Audio have to offer. Incidentally, I have searched in vain for advice on PC speakers since my son took my Hi-Fi World-recommended TDKs off to university! I did buy some M Audio audiophile AV20s which are excellent value for money, but will be auditioning some Definitive Audio 'Gems' soon.

Maybe you were right some time ago to drop the computer audio section as a regular part of every issue, but surely there's enough material for an update on the latest developments in technology and software every so often. Some of your readers may have a mindset problem regarding computer audio, but in some form it's beginning to look like playing an increasingly large part in the future growth of the industry.

Aidan Kelly

Hi Aidan. You are right in saying that computer audio is the way the world is going and we will be covering more of it in future. As you note we ran Computer Audio in the past but it wasn't especially popular. At the very same time interest in vinyl was ramping up, to everyone's surprise, and this proved far more interesting to most readers. I do not see the two as being mutually exclusive, although that does not mean I want to catalogue my LPs onto a hard drive, iPod or anything else. Rather, online music is a great resource and trying to shepherd it into the home, without getting involved routers, NAS and various other horrors, is an interesting challenge. **NK**



An Avid Volvere Sequel will give a very stable sound, says David.

FILLING A VOID

So I have a twenty year old Voyd Valdi with a Helius Aureus/Ortofon Quaser moving coil. I keep hearing that turntable technology has moved on and there seem to be a plethora of new makes and designs, so and I am really keen to know what would I need to do to improve on the current incumbent. I have enquired about a motor upgrade through Origin Live, but because the Valdi has two motors they don't think it would be worth the expense. Historically the Valdi has been attached to an Audio Innovations 800 step transformer and a Audio Innovations 500 (with upgraded valves) and Snell K's, but I do admit to a twenty year itch, so an amplifier and speaker change may also be on the cards. I have around £4,500 to spend.

Tim Jury

Hi Tim - an Avid Volvere Sequel will give an altogether more stable and powerful sound than your Voyd, with more detail and a cleaner and more expansive soundstage. However, your Valdi is still very good - especially if you treat it to a decent modern moving coil such as an Ortofon Cadenza (pick the model according to your budget). It will, for relatively little outlay, give a sound that you literally will have to spend lots of money to improve on. **DP**

TURNTABLE

Could you suggest some turntables to consider as a replacement for my fifteen year old GyroDec please, my first true hi-fi upgrade, which is starting to sound a little tired and perhaps off the pace compared with the rest of my system. My current system is: Audio Note ("AN") lo1 (low o/p mc), SME 4 (tonearm - silver wired), GyroDec with QC & old AC motor, AN-S4L (step-up transformer), AN M3Phono preamp, AN Quest Silver (SET monoblocks), AN/J (Speakers) - all connected with AN-V silver cables. I am quite fond of Audio Note products which seem to suit my

musical tastes, although I do use an old Naim NAT-03 tuner quite often and I deeply regret taking my Sony ST-5950 to the tip when I bought the NAT-03.

I'd like to keep the SME 4, my second upgrade from the RB300 supplied with the GyroDec, therefore I'm looking for a turntable that will work well with the SME 4 and also with an all-valve downstream system with silver wiring - the AN-S4L is a silver wired step-up.

I have identified various options but really would appreciate your advice. My local dealer suggests upgrading the GyroDec to an Orbe platter plus new DC motor, this would also involve drilling the plinth - the overall cost almost the same as buying a new Gyro. An Orbe would be a logical option. I'm also considering an SME 10 or 20, or maybe even the Audio Note TT2 (although I'm not too sure how it would work with the SME 4).

I feel sure that there must be some other options but as you know it's always difficult to get real advice from any dealer or indeed find a dealer with anything more than one or two of the usual suspects. I'm thinking of a budget up to £5,000 (ish) as a "cost of change" but I wouldn't rule out an "absolutely perfect match" if it cost more.

Edward

Well, the sky's the limit, but I think the latest spec Orbe SE would do the job nicely; possibly with an SME Series V for good measure (you can get a good part of this outlay back when selling your IV. The Orbe is a bigger jump from a Gyro than most think, especially if you're running an old AC variant. It brings considerably more bass that's tighter too, a more stable and open soundstage and superior dynamics, allied to a lovely wide open treble. It's still very much 'on the pace', and you're looking at least the likes of an Avid Volvere Sequel to improve on it.

DP

SHOWTIME

David Price is your guide to the first National Audio Show at Whittlebury Hall, near Silverstone, on the 26th and 27th of September. The Hi-Fi World team were there in full effect and a fine time was had by all...



The AstinTrew room was a particularly fine sounding one, showing Michael Osborn's obvious system set up prowess. On dem was the latest AT2000plus integrated amplifier and AT3500plus CD player, while an AT2000 was given away in prize draw. Here, Michael (left) holds the hat while show promoter Justin Bird pulls out the name of the lucky winner (David Armitage from Northampton).



In the Revolver room, this menacing looking new tube amplifier, the Audio Black Knight was on display. Lurking somewhat incongruously either side were the new Revolver Screen 3 loudspeakers; they look 'planar' but use conventional drivers, and made a very nice noise, I hasten to add...



With blistering dynamics, incredible speed and massive insight, every visitor to the GT Audio room was left in no doubt that the Avantgarde Acoustics Duos were horn loudspeakers! Brilliant as they were though, they were too toppy for this reporter's tastes - and that's saying something...



A particularly nice new product was Clearaudio's Concept - a true plug and play turntable (with cartridge pre-installed and aligned).

I loved its retro 1970s styling, and it is surprisingly solid and well built too.



A cluster of compact CM series boxes formed this B&W dem, with an interesting choice of amplification (Sugden's IA4 and Mystro; precisely what yours truly is running in his reference system right now). A fine sound, despite the room's diminutive dimensions.



Remember Derek Dunlop's original Systemdek, from way back when? Then came the Systemdek IIX, and now we have the brand new Systemdek 3D. Seen here, sporting an Audio Origami PU7 tonearm, it sounded superb. Hi-Fi World has the scoop, coming soon!

This turntable was one of the highlights of the show for this reporter, although it was a crying shame that it was a static display only! Brinkmann's Bardot is a high end direct drive, which although not exactly affordable isn't as expensive as you'd expect from this teutonic turntable specialist. Symmetry have promised *Hi-Fi World* an early review, so watch this space. Another brand gracing the Symmetry room was Esoteric; here is the C-03 and matching E-03 phonostage, and the SA-50 SACD player and matching G-03X master clock. Sadly they weren't plugged in to any loudspeakers, but I can confirm that the build quality, at least, is what you'd expect from this illustrious Japanese marque...



A&D Audio have become the official UK distributor of this; the Eminent Technology LTF-8b loudspeaker. Despite the cramped confines of the Whittlebury dem room, the sound was impressively open and expansive. Watch out for more about these speakers in the next issue...



From Hong Kong to Whittlebury via Whitehall, the charming My Audio Design crew showed a range of their own products including the Balanced Power Isolation Platform reviewed on p33.



Aha Mr Bond, we meet at last! In the Jordan Acoustics room was the enigmatic 'Johnny Seven' from Audio Origami, here well behind enemy lines, many miles away from his native Glasgow, with not a single can of Irn Bru to be seen! Ken Ishiwata was there too, demonstrating the new Marantz Pearl system...



An exquisite looking and sounding set of high end loudspeakers from Lumen White, the Artisan. Products like this are conclusive proof that the art of speaker design has moved on since the nineteen seventies, despite so many derivative designs still on sale!



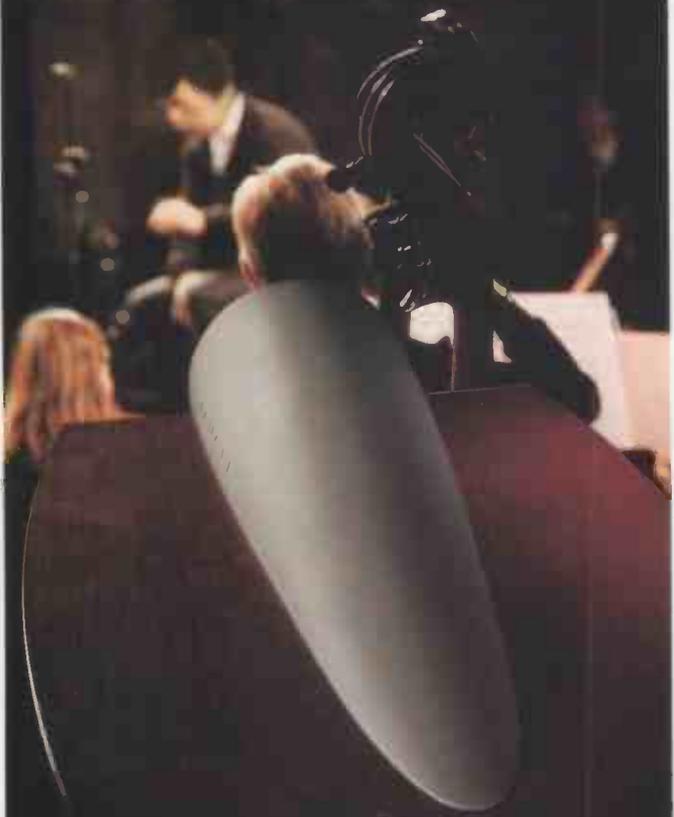
Icon Audio's room was a bewildering array of products old and new, with David Shaw seemingly having an amplifier for every occasion! Pictured here is the Stereo 40/III, which looks to be a real winner, offering fine sound and super value for money. Still, for yours truly there was only one thing in the room - the mighty MB845 power amplifiers!



The Music First Audio room sported their usual confection of spiffing passive pre-amplifiers, plus an interesting looking Mono Transformer Volume Control (with remote operation) for the princely sum of £895.



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The extremely affable Peter Curran from Claro-Audio stands behind a brace of Clarity 09 turntables. The decks were lovely but your editor couldn't stop eyeing up one of Peter's clamps (oh matron)!



Spotted! Quad's brand new Quad II Classic Integrated amplifier. It was (and still is) so new that I'm not sure I'm even allowed to tell you where I found it! It wasn't plugged in so I can't comment on the sonics, but I do love the sliding source selector - a lovely detail.



An inverted pyramid of perfection! The dCS room was brimming with the company's latest Paganini digital delectations, including transport, DAC, clock and brand new upsampler. Watch out for a review in this journal soon...



Dave Cawley of Sound Hi-Fi and ANT Audio's Alex Nikitin stand either side of a rather lovely Akai GX625 open reel recorder, used to demonstrate Alex's new headphone amplifier. This stand won the Hi-Fi World 'Geek Chic' Award for the use of the aforementioned magnetic film-based classic analogue source component!



Along with the superb Digital Do Main V-FET power amplifiers, ABC Audio had a range of other Japanese high end on show, including these Pioneer/TAD EX loudspeakers.



Three amigos! Yours truly and Hi-Fi World publisher Noel Keywood get a hearty embrace from an effervescent Ricardo Franassovici from Absolute Sounds, presumably for not blowing up the last Audio Research valve amp we reviewed! Note Ricardo's uber-cool Joy Division 'Unknown Pleasures' T-shirt, which looks like it's been through the washing machine a few times (hence could be an original 1970s garment)! His room sounded better still, with a beautiful sound emanating from Magico speakers.



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Pair Pressure

Tony Bolton samples the latest carpet crushing combination from Harman Kardon, the new HK990 integrated amplifier and HD990 CD player....

Some companies seem to have been around since the dawn of (audio) time. Started in 1953, with one of the founding partners, Sidney Harman, still involved at the age of 90, Harman Kardon have built a reputation for creating well made and innovative products. The latest of these are the HK990 amplifier and partnering HD 990 CD player under review here.

Priced at £1,000, the amplifier is a large and imposing beast measuring 165x440x435mm, and weighing a not inconsiderable 19.6kg. Its bulk is somewhat disguised by the curved edges of the cabinet and the horizontal divide across the front, where the brushed metal finish of the rest of the cabinet gives way to a high gloss black, which contains the display, and at the right hand side, the volume control.

Other functions are operated by a horizontal line of buttons which fit neatly into the gap between the

two parts of the fascia. Power is operated by a switch on the far left, then buttons control speakers 1 and 2, record out, source, input and speaker setup. These are followed by cursors and an enter button to allow navigation through the variety of control options, and a button for level setting. At the bottom right is a socket for headphones and also for inputting the set-up microphone if using the EzSet/EQ facility. I'd have preferred either a lighter colour for the button labels, or some form of backlighting, since they proved quite difficult to read under artificial light.

A quick glance at the back might cause you to think you were looking at a fully specified AV receiver, rather than a stereo amplifier. It is packed with sockets, including the very substantial speaker binding posts, and a plethora of connections for the six analogue and four digital inputs. The former are all unbalanced RCA phono sockets apart from one pair of balanced XLR sockets. The digital side

consists of two pairs of optical inputs and a pair of coaxial. There is also a USB socket allowing information to pass from a computer, but not the other way, so recording direct to the hard-drive is not an option.

For those wishing to record there are two analogue outputs and one coaxial digital output. Alongside this are two subwoofer outputs and an HRS (High resolution Synchronisation) link. This allows Harman Kardon CD players to link themselves to the external clock of the amplifier to give a jitter-free connection. There's even an onboard phono stage that can be switched between moving magnet or moving coil settings via either the remote control or using the input select section at the front.

Internally the amp is equally well specified with dual toroidal transformers and up to 16,000 microFarads of filtering. There are dual differential input stages with their own high voltage supply.



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The output stage transistors are 'ThermalTrak' units. These have two extra pins which are connected to internal temperature sensors which monitor and control the bias current of the output stage in real time. The DACs (Digital to Analogue Convertors) use proprietary RLS IV (fourth generation Real-time Linear Smoothing) technology through two stereo AD 1955 chips.

These same chips are used in the HD990 CD player alongside a 24bit/384kHz asynchronous sample rate convertor, and RLS III (3rd generation). The player shares the looks of the amp, but in a scaled down form, measuring a quite compact 63x440x332mm and weighs in at 3.9 kg. The split fascia styling and location of the buttons between the two finishes ape the amplifier, the buttons controlling the usual functions of stop, play, etc. The draw is located in the middle and display to the right. This is quite comprehensive and included text display for any discs that have track name and artist information imbedded in them. This scrolls across the lower part of the screen. Useful facilities include the ability to playback MP3 discs and the well equipped remote control includes buttons for folder access and scrolling through tracks in batches of ten. Given the huge amount of information that can be stored in a compressed format, this makes accessing it very easy.

"a quick glance at the back might cause you to think you were looking at a fully specified AV receiver, rather than a stereo amplifier..."

the amplifier's internal digital clock as described above. With such a range of options to choose from I ended up keeping life simple to start with, and connected everything up using normal RCA phono leads and letting the CD player's DAC do the conversion...

SOUND QUALITY

I have used Harman Kardon equipment before and have always found the sound to be very smooth and well mannered. These units kept up the family trait, but allied it with a huge amount of usable power that should satisfy all but the most stone deaf of listeners. Imagine having a 7 litre V8 engine under your right foot. You will probably never use all the power available, but the amount in reserve makes everything you do absolutely effortless, and so it was when listening to this system. Even at completely antisocial volume levels there was never a sign of any strain of lack of drive to the speakers, whether playing demanding classical like Saint-Saens Organ Symphony or the most banging Hi-NRGY Trance

place in a well defined, but not overly large soundstage that extended far back behind the speakers, but did not come very much forward into the room.

Swapping through the range of digital inputs produced some interesting results. I felt that the optical link gave a slightly softer, gentle sound, while the coaxial link (using an Atlas Opus 75 Ohm interconnect) had a bit more body and substance to the performance. The HRS link proved interesting, having a little more air than the coax, whilst retaining the impression of substance. Moving to the unbalanced analogue connection (using the CD player's DAC) added a bit more impression of stage depth to proceedings, and a slightly wider soundstage. I was using interconnects in the £500 to £700 per metre class, (Chord Co. Signature, and Black Rhodium Oratorio DCT) so given the more modest performance of cheaper interconnects, buyers may find that the digital links offer better reproduction than more affordable analogue leads.



A dizzying variety of connections awaits the new HK990 owner wanting to hook it up to his system!

Apart from the expected analogue and digital outputs (coaxial and optical) the back also contains a pair of XLR sockets for balanced connections and, unusually, two digital inputs (again coax and optical). These allow external devices such as DVD players and digi-boxes to be connected and decoded by the onboard processors. Beside this is the HRS jack to allow the transport to connect and synchronise with

that I could lay my hands on.

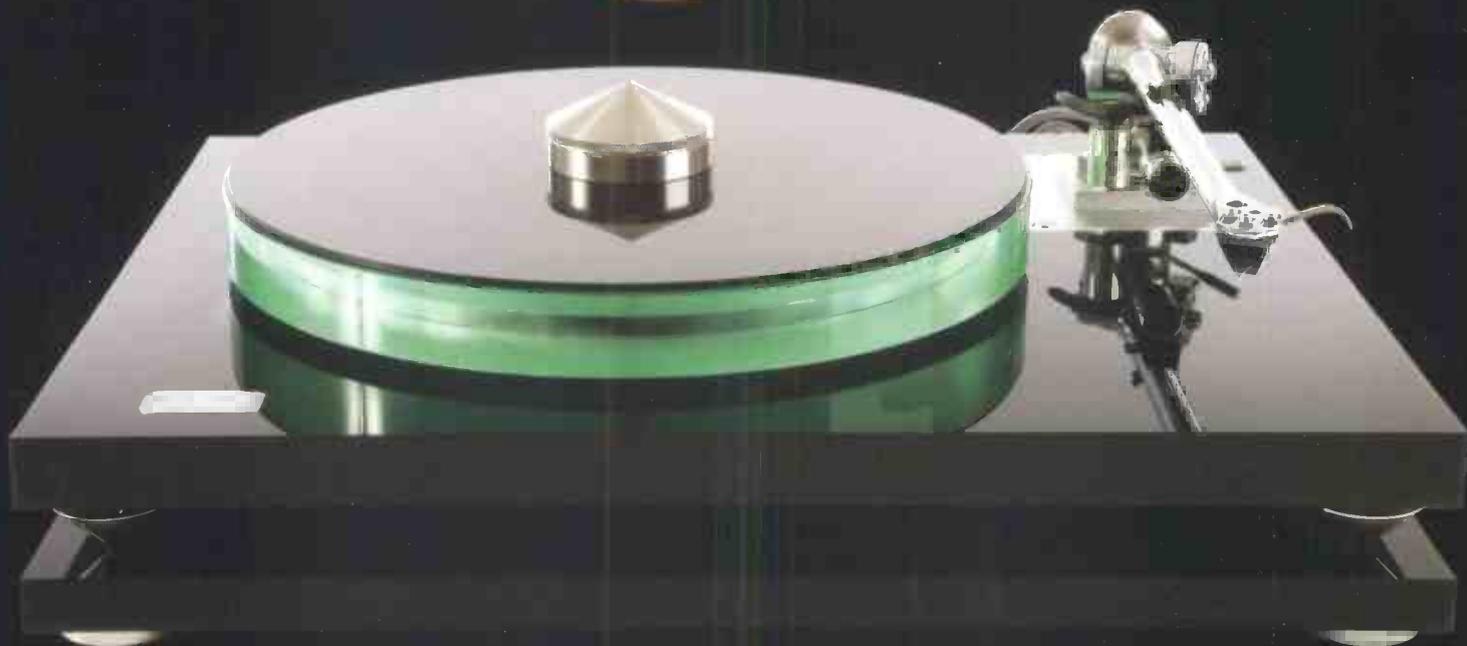
Some very powerful amps can make quiet and gentle music seem a bit overblown, with a solo voice sometimes appearing too big, as though the singer had just done a crash course of steroids. Here the HK990 displayed a pleasingly delicate touch, presenting a realistic difference in scale between the presence of one performer, and the intensity of a full orchestra or chorus. This all took

Connecting other digital sources (digi-box and DVD player) to the coaxial links of the amp added a whole new dimension of definition, shape and texture to the sounds being played. The effect was rather like cleaning your smudged glasses and enjoying a sudden clarity in your vision. Compared with the resident Cambridge Audio DAC Magic 3 I felt the amplifier's DACs gave a very good account of themselves. The



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eclipse



worth waiting for...



Review: September 2009

Superb build and finish allied to an effortlessly musical sound, makes the Inspire Eclipse a highly impressive debut.

"At all times, the Eclipse excelled at simply laying out the performance in a way that made me feel I was hearing the band exactly as they intended. All this comes about as a result of the Inspire's fine sense of uniformity and evenness across the midrange and treble. This flows together so well that overall effect is to imbue music with a lush expanse of detail and ebullient warmth, but with a delicious sprinkling of light top end and delicacy as a garnish. Acoustic instruments stand out as natural and full-bodied, whilst the Eclipse also captures the grittier style of electronic instruments and never leaves you in any doubt as to what is playing."

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Cambridge soundstage was wider, but not as deep, but both were well detailed and allowed the music to be displayed in an engaging manner. Considering the quality of the DAC Magic 3, that's an impressive feat for a bundled, built-in DAC.

Moving over to vinyl seemed to bring out a different character within the amp. When playing digital I found

"an excellent amplifier and CD combination, that offers enough connectivity options to satisfy most needs, and produces an enjoyable and musical sound...

the sound to be very correct, if occasionally a little careful and precise in its timing. Playing records from the Clearaudio Master Solution turntable, with an Ortofon Kontrapunkt a connected to the moving coil sockets of the amp, seemed to liberate a certain element of *joie de vivre* that the digital side lacked. I found myself tapping my feet and jiggling around the room to the music, whereas in digital mode I was more sofa-bound. There seemed to be more drive and energy behind rhythms. I compared CD and vinyl versions of Morcheeba's album 'Big Calm', finding the latter had more presence and substance to it. The CD sound was good, but lacked a certain conviction when compared to vinyl.

Overall, the HK 990 and HD 990 proved a very capable pair that made music in a highly enjoyable way. If I was being picky, I would describe the digital sound as good, but slightly emotionally dry, and the analogue option as being a bit more red-blooded. Whichever source was chosen there was always the gloss of good audio manners across it which suited most genres of music that I tried from classical through to folk. However, if you like the wailing guitars and more aggressive sounds of rock, and the newer neo-punk bands, then you may find that this equipment minds its manners just a little too much, and smoothes out the edge of the sound, which is part of the

raison d'être of such music. I also felt that it preferred naturally aspirated music to electronica. The latter being relayed in a pleasant but not overly inspired way, whereas something like jazz or classical seemed to melt out of the speakers in a way that made me keep heading back to those sections of my collection in preference to some others.

CONCLUSION

If this amp had been included in the recent integrated group test (HFW Oct 2009) then I think that I would have placed it in direct competition to the Cyrus 8 XPD, both sharing a smooth and solid sonic delivery. Pricewise, the closest competitor would have been the Leema Acoustics Pulse. The Harman Kardon had a little more power, but a more reserved presentation that I could live with, but, as I have said before, the Leema sound just happens to hit my audio taste buds perfectly. I find the slight exuberance appealing.

Whatever your taste, this is an excellent amp and CD combination, that offers enough connection options to satisfy most people's needs, and produces an enjoyable and musical sound. Recommended, both.

MEASURED PERFORMANCE

The HK990 produces 180 Watts into 8 Ohms and no less than 290W into 4 Ohms, so it has massive power and can drive anything loud, in any room - even a large American one. Harman say it has ultra wide bandwidth, a traditional boast of theirs, but happily it does not, reaching a sensible 65kHz (-1dB) and registering -2dB down at 100kHz, the upper limit for hi-res digital. At the low end it appears to be d.c. coupled, reproducing a 1Hz signal at full level, but Harman say it has d.c. servos to prevent d.c. drift. Although Harman say feedback is low, damping factor is quite high at 57 and distortion at high frequencies (10kHz) very low, so it certainly has plenty of feedback; I guess it all depends on what you mean by "low". No transistor amplifier has really low feedback, because they cannot work satisfactorily without it.

Distortion levels were very low at all power levels and frequencies, the worst case result being just 0.05% -1dB below full output power at 10kHz - a gruelling test. At 1 Watt, 10kHz, there was no sign of crossover products, a very good result.

The optical digital input was linear, returning 0.24% distortion at -60dB from a 16bit input, and a miniscule 0.03% from 24bit. Frequency response was well tailored, with just the slightest roll down at high frequencies (-0.3dB at 19kHz), enough to ensure CD lacks sharpness or spit. So digital conversion reaches a high standard.

The HD-990 player similarly has slightly falling treble, just like the amplifier, very low jitter and a linear DAC that produced just 0.188% distortion at -60dB, just a bit better than the amplifier.

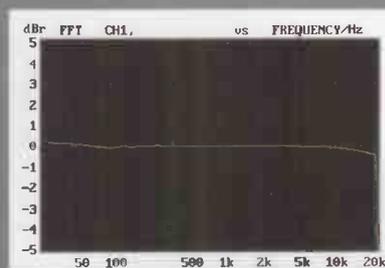
This combination measured well and has been thoroughly engineered. The option of balanced analogue output from the player is odd when there is

a digital link with separate clock line, especially as balanced introduces a line transmitter and receiver chip to degrade sound, but Harman say this is the best connection method, but Direct must be selected to remove conversion to digital and back again. NK

Power	180 Watts
Frequency response	1Hz-65kHz
Separation	87dB
Noise	-98dB
Distortion	0.005%
Sensitivity	350mV

Digital	
Frequency response	5Hz-20.8kHz
Separation	101dB
Noise	-98dB
Distortion (-60dB)	0.24%

AMPLIFIER DAC FREQUENCY RESPONSE



AMPLIFIER DISTORTION



VERDICT ●●●●●
Well equipped, svelte sounding silver disc spinner.

HARMAN KARDON
HD990 £500
Harman UK
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www.harman.com

FOR
- two digital inputs
- plays MP3 discs, etc.
- upsamples to 24bit

AGAINST
- slight firmness to the sound
- poor control labelling

VERDICT ●●●●● £
Solid and powerful integrated amp with superb connectivity and a strong onboard digital convertor.

HARMAN KARDON
HK990 £1,000
Harman UK
+44 (0)1707 278100
www.harman.com

FOR
- smooth and civilised
- decent onboard DAC and ADC
- huge power reserves
- good phono stage

AGAINST
- obscure switchgear



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Hi-Fi World
VERDICT

Tesla Accelerator speaker cable review - Hi-Fi World, August 2009

ABC Audio

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I really enjoy your website and find it very informative (and read it every day).

— Richard Holbrook

I have never replied to online audio reviews but wanted you to know that I have enjoyed several articles.

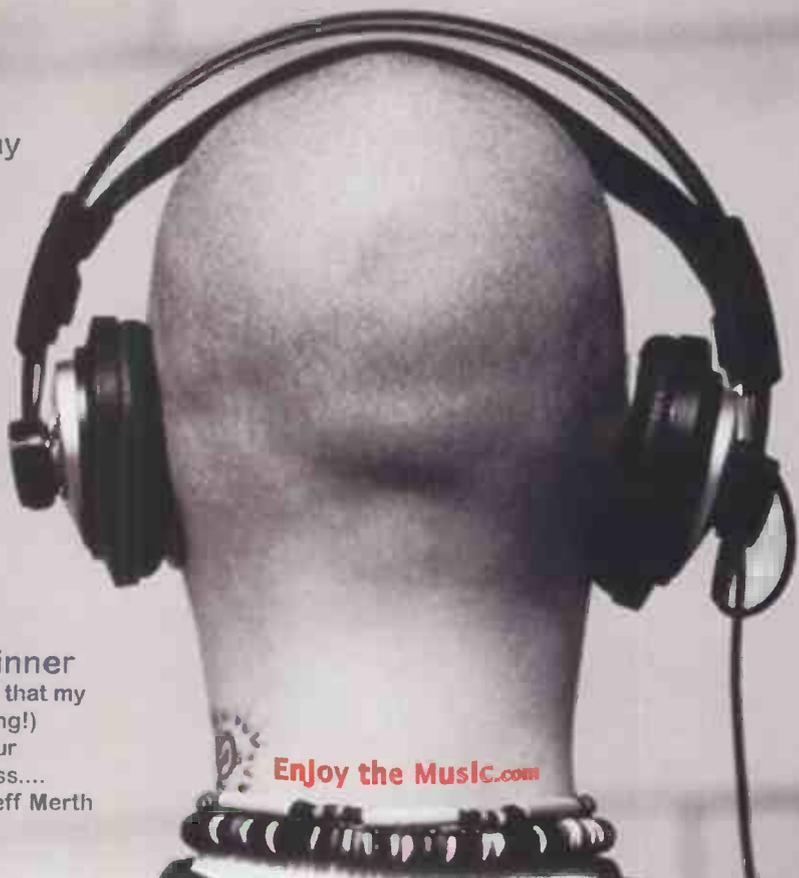
— Craig Mattice

What a great review! — Paul Kittingerk

Enjoy the Music.com Contest Winner

In fact, the Axiom Audio EP500 works so well that my wife and I both stood mouths open (not kidding!) as it shook the rafters and window glass in our house. Amazing! Love that palpable, tight bass....

Thank you again for the awesome prize! — Jeff Merth



Enjoy the Music.com

Going For The One

Tim Jarman tries the singularly special Philips GoGear Muse digital audio portable...

With all the recent interest in The Beatles reissuing their complete back catalogue in remastered form, it seems the perfect time to try out the latest portable music player from Philips. What's the connection? Back in 1963, when the Fab Four had just had their first success in the album chart, Philips were starting a musical revolution of their own, kick-starting personal audio with the launch of their EL3300 Pocket Recorder. The derivatives of this, the seminal Compact Cassette machine, would go on to conquer the world and outsell The Beatles many times over. But in the intervening years Philips has failed to repeat this early success, certainly the 'Sky Master' and 'Moving Sound' models never really hit the big time and are largely forgotten now.

The good news though is that Philips is back on the scene with a new model in their GoGear range. The £159 Muse is a 16GB MP3 video player with a big colour display very much in the modern mould. As such it goes head to head with the big guns, Apple's iPod touch and Sony's X series Walkman in particular.

Comparisons with the X series are particularly apt as the Muse also includes built-in noise cancelling, using microphones built into the earbuds. Whilst this system is reasonably effective, unless it is important to you, you may be better off forgoing it in favour of using better headphones, earbuds don't suit everybody and are a bit like the 'test. ride' pedals you get on a proper racing bike; fine for a quick go around the shop but the first upgrade you should make as soon as you get home.

To broaden the appeal of the Muse, Philips have offered a very impressive array of codecs to choose from, MP3, WMA, AAC, APE, FLAC, Ogg Vorbis, Real Audio and WAV are

all there. On top of this Philips also include some useful analogue functionality with an RDS FM radio and a built-in microphone, both of which can record to MP3. Various sound modes are offered including ten preset EQ patterns and Philips's own FullSound 2 technology (essentially a loudness button), although I'm sure no *Hi-Fi World* reader needs reminding that the best results come from using quality headphones and switching all of these functions off.

Philips has broken with the modern trend of using a touchscreen for controlling the major functions of its new model. Instead the black section to the right of the display forms a neatly styled rocker panel that operates mechanical switches which offer perfect tactile feedback and are fast and accurate to use. I've never been a fan of touchscreens and so the Philips is a real tonic in this respect. Also excellent is the FM radio, it is very easy to tune and impressively sensitive, RDS data comes through quickly and accurately for example. In this respect the Philips is streets ahead of the Sony X Series, whose radio is not such a pleasure. The Sony trumps the Philips in the quality of its display however; the Muse uses an LCD type of the sort that you may encounter in a mobile 'phone, which is no match for the OLED beauty of the Sony.

SOUND QUALITY

So how does it fare as a music player? Unlike the Apple and the Sony there is no internet browser built in



so all content transfer has to come from a PC. Windows Media Player 11 is included and the Muse will also work with non-DRM content from iTunes. With so many different formats to choose from it is difficult to know which to use so I picked MP3 192 kbps and .wav as these are the most popular and offer the best possible quality respectively. Listening using Sony MDR-D55 headphones revealed a sound that was slightly richer than the classic cold, bland iPod presentation, perhaps at the cost of some extreme treble detail.

Being critical I felt that the bass was a little clumsy at times, falling over itself when there was too much going on. The headphone stage offers only 2.4mW, Sony's upmarket models have nearly double that and therefore can offer not only more volume (the Philips doesn't offer quite enough I feel) but better, tighter control as well. MP3s were handled with reasonable competence but as ever never sounded that exciting and had a cramped soundstage. Uncompressed .wav was better, sounding a bit like a mid price CD personal and making for a more interesting listen whilst confirming at the same time that the headphone stage is the limiting factor.

CONCLUSION

I really liked the Muse, it looks smart and functions well. It is also very easy to use and largely devoid of needless frills; could Philips be on the verge of being a real force in portable audio again? The only problem I can see is one of marketing, the fashion conscious will still gravitate to Apple and the quality conscious to Sony, so Philips will have to work hard to get a foothold in a very crowded market. One for the free thinker then, I wish it the very best!

VERDICT

Fine all round music maker with a good feature set and versatile playback options.

PHILIPS GOGEAR MUSE

SAMUS16 £159

Philips

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www.consumer.philips.com

FOR

- fast, easy user interface
- excellent FM RDS radio
- wide choice of codecs

AGAINST:

- soft headphone stage
- average video quality



Boogie nights: Sony's HMK-80B was the high end choice of seventies swingers!

Staying Alive

It's official, the music centre is back! From the Meridian F80 to the AuraNote Premier, hi-fi is morphing towards single, do-it-all designs packed with features for all the family. But hang on, haven't they done that before? Yes, says Tim Jarman, as he remembers two iconic nineteen seventies music centres from Bang and Olufsen and Sony...

Any avid hi-fi trendspotter can't fail to have noticed that this past year or two has seen the reappearance of all-in-one designs. Products such as the Naim Uniti show that it's possible to combine all the sources you will ever need, and the amplification, into one compact, domestically acceptable package and still achieve a satisfying musical experience.

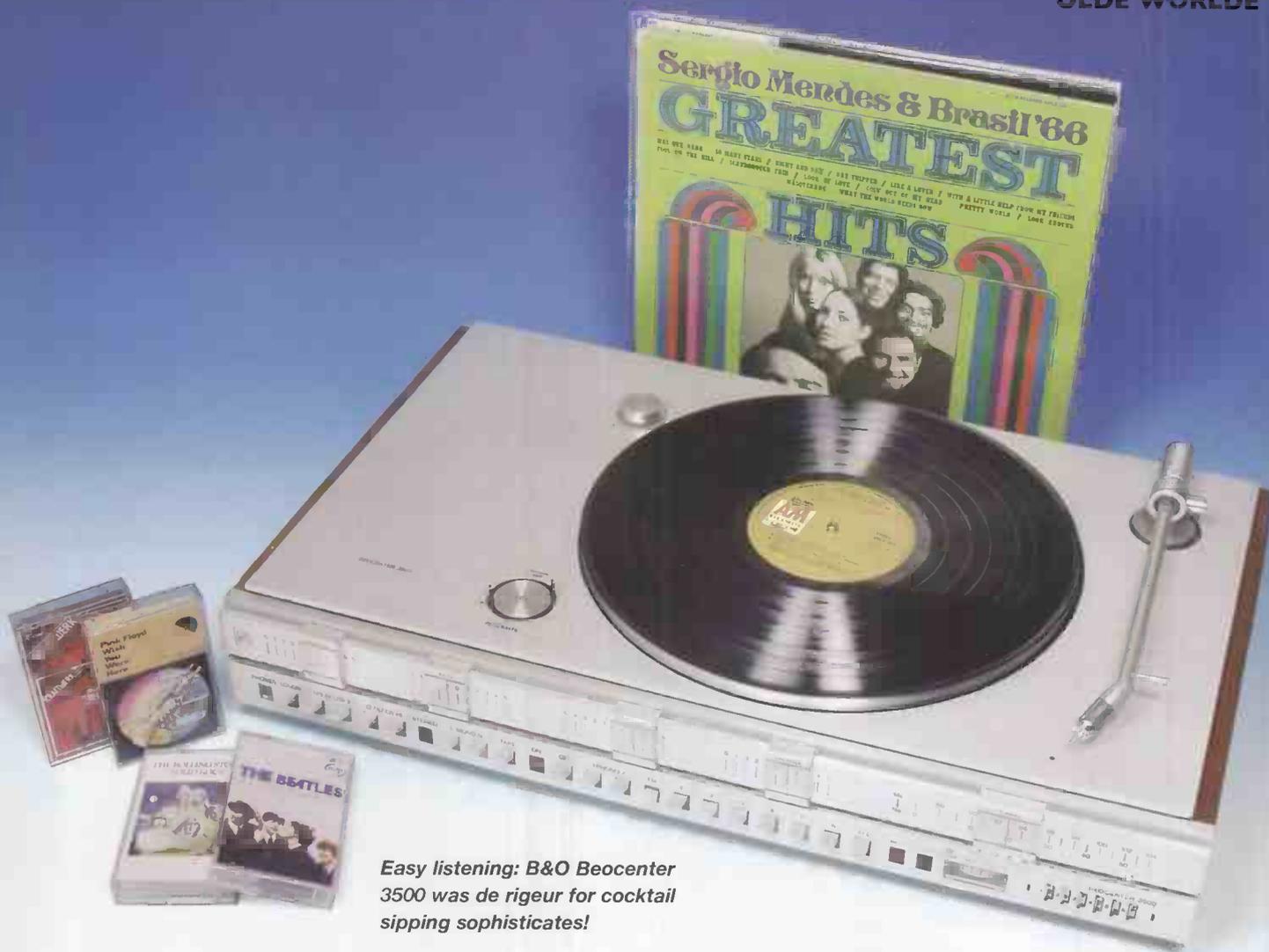
Combination units are nothing new of course, as they first appeared in the nineteen thirties as the radiogram, which was a radio set, record player and loudspeaker all housed in one (often imposing)

piece of furniture. The miniaturisation of electronic components and the realisation that better sound could be obtained by moving the loudspeakers out of the main unit and into cabinets of their own moved the game on considerably, leading by the early nineteen seventies to the most popular combination units of them all, the music centre...

Music centres simply combined a turntable, radio tuner and an amplifier in one low, wide unit. Some included tape recorders (either Compact Cassette or 8-track) as well to form a really complete suite of equipment. Sadly, most were utter rubbish. Cheap low-grade

turntables (BSR and Garrard were frequently responsible here) with appalling ceramic cartridges were combined with gutless, poorly designed transistor amplifiers which in turn played through low quality loudspeakers; instant ear-ache for any hi-fi fan! However, some manufacturers tried a little harder, using circuits and technology from their hi-fi separates ranges to build high price, high performance music centres that offered combination unit convenience with top drawer quality, much as the top music servers of today attempt to do.

Music centres dominated the audio scene throughout the nineteen



Easy listening: B&O Beocenter 3500 was de rigueur for cocktail sipping sophisticates!

seventies, but as the decade drew to a close they suddenly went from being desirable must-haves to unspeakably naff as far as the style-conscious buying public was concerned. Manufacturers soon realised that they could house the same basic equipment in tower and midi systems that in many cases were made to look like separate components and the public suddenly didn't want anything with wooden sides and a three foot wide clear plastic lid on top any more...

INSTANT REPLAY

For the hi-fi aficionado, the concept of a music centre was anathema; our separates philosophy unequivocally stated that you had to 'mix and match' the best components at the price for the best sound. Whilst this was true to a large extent, high end music centres of the time were nevertheless very well engineered pieces, sharing technology with the top of a manufacturer's separates range, so they shouldn't be dismissed out of hand. Indeed, the following two jewels in the music centre crown are a case in point. They're both very well made and finished, achieve a decent sound even by today's standards and the engineering inside

bespeaks a real desire to get them to perform. More than just a pretty face, then...

However, don't think even the top ones sound alike. The Bang & Olufsen Beocenter 3500 (of 1973) and a Sony HMK-80B (1978) show the different companies' contrasting sonic and design philosophies. When new, both were eye-wateringly expensive. In 1975 the B&O cost £266, twice as much as a Linn LPI2 turntable complete with Grace arm, and the Sony was £444 in 1979 money, as much as a top Trinitron colour TV! As was typical with high-end music centres neither included loudspeakers either so you would be paying out another big wedge on top before you heard anything.

Fast forward to today and neither costs more than a few rounds of drinks. The trouble is that for this sort of money you don't get much, in this case the B&O was seized solid mechanically whilst the Sony worked a bit but sounded dreadful. To restore the original performance both were first repaired and fully overhauled, a complicated process as both are packed with what was at the time state of the art technology. The Beocenter was then fitted with a new SPI2 elliptical stylus (only B&O

cartridges can be used with this type of arm) and the Sony with a Goldring 2100 cartridge as the original Sony VL-34G was damaged beyond repair. The Sony has the additional complexity of a cassette deck to deal with but this too was revived and calibrated to accurately match Sony's own latest spec UX-Pro tape.

And so to business. Freshly revitalised, the B&O sounded, unsurprisingly perhaps, highly redolent of high end B&O from that period. Tracy Chapman's 'Talking 'Bout a Revolution' instantly revealed a refined character, with the solid impression of competence and authority. What was particularly impressive was the way that the cartridge was never caught out by sudden, sharp transients that can cause others to briefly spit, sound harsh or mistrack. The whole setup sounded smooth, effortless and all-of-a-piece. Predictable perhaps, as the designer of each part of the music centre knew what he was working with.

On the whole, the turntable's idler/belt drive worked well but some notes were not quite as pitch-steady as can be achieved with the best Japanese direct drive units. More energetic music did test the



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Limited Edition Pearl Components

When they are gone - they are gone forever...

When you first encounter the new KI Pearls, the first thing you notice are their unique 'Silk Pearl' finishing. The first of its kind in fact for Marantz. But it's the magic that Ken Ishiwata has created inside the box that really gets the pulse racing. He has built-in everything possible to ensure that the music is reproduced exactly as the original artist and recording engineer intended.

SA-KI: "Fed all manner of SACDs from Mobile Fidelity, Linn, Telarc and other admirable die-hards, the SA-KI showed itself to be a thoroughbred player reminiscent of the far costlier Esoteric devices, though the voicing differs. Marantz itself used the adjective 'silky' to describe the Pearls' black finish."

Ken Kessler, Hi-Fi News Sept 09

PM-KI: "The phono stage was open, quiet and precise, especially the MM setting, and in every sense - from vinyl to CD to SACD - the bass was consistently quick. Decay or transient stops down below were as progressive or abrupt as required, nigh on perfect, while well-recorded bass drum kicks were reproduced with a vividly detailed sensation of pedal, hammer and skin in motion."

Ken Kessler, Hi-Fi News Sept 09

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EDITOR'S
CHOICE

B&O's abilities, The Thompson Twins' 'Love On Your Side' was somehow lacking in punch, as the Beocenter appeared to be trying to join all the notes together and smooth out the gaps between them. Like a good but overbearing music teacher it seemed to have its own idea about how the music should sound and then did its best to make it like that. However, listening to Fleetwood Mac's 'Isn't it Midnight' was sublime, I've never heard this particular track played so enjoyably on anything else; powerful and punchy the B&O was not, but it always beguiled.

The FM tuner was amazingly sensitive, getting usable stereo reception from a screwdriver pushed into the aerial socket! With a proper roof antenna it showed itself to be a clean and musical performer with plenty of warmth, although it didn't offer the last word in fine detail. Imaging however was first rate, no doubt due in part to the simple, transparent all-discrete stereo decoder circuit used. It showed that the whole unit was engineered to a uniformly high standard; not the equal of top notch separates hi-fi perhaps but still impressive.

Switching to the Sony was as much of a cultural shift as moving house from Denmark to Japan. If the B&O was designed by musicians then the Sony came from engineers, sounding as it did instantly more analytical and precise. The decently engineered direct drive turntable extracted that characteristic DD beat from the Pet Shop Boys' 'Introspective' album and tracks like 'Always On My Mind' were positively bursting with energy and drive. The Goldring 2100 cartridge seemed to suit the Sony arm well and was easy to set up, although it lacked the B&O's ability to easily deal with any situation, breaking occasionally into harshness when pushed. The Sony deck on the whole had the look and feel of a budget Technics SL1200 (no bad thing!) and in certain areas, notably pace and speed stability, it easily beats the latest budget stand-alone offerings. The automatic mechanism precludes the fitting of a better arm but so long as you like your music with a bit of an edge the one it comes with does a remarkably good job.

The amplifier clearly plays to the turntable's strengths and is able to convey the energy that the latter is pulling off the record. Despite being more modern than the B&O it doesn't seem to have the same reserves of power however, one can hear the bass harden up as the limits are closed in upon where as

"here are two machines of a long-forgotten design that couldn't be more different in character..."

the Beocenter just seems to go on and on. The Sony is better with fine treble however, it plays every note as a separate entity although this ability does seem to come at a slight cost in the imaging department. The tuner is a four band affair that includes short wave and as expected stations from all over the world flooded the dial after dark, Sony are the masters of world band receivers after all. On the FM side the sound was colder and harder than the soothing B&O, the results would be instantly familiar to anyone who has owned a budget Japanese tuner in the seventies.

The cassette deck was the real surprise: correctly calibrated it made very competent recordings from both sources. The sound was slightly warmer than that of the turntable which meant that recordings from LPs lost some of their attack and energy but strangely in some ways this made them more pleasant. One couldn't expect a basic tape deck to match the speed stability of a direct drive turntable but the Sony made a good stab at it, none of the recordings it made fell below my expectations in any way. Music cassette replay was a little dull, I suspected that the playback EQ curve did not match the latest specification perfectly and this slight flaw was exaggerated by the action of the Dolby circuit.

THE FINAL CUT

So there we have it, two machines of a long forgotten design that couldn't be more different in character. The fact that we are able to review them sensibly in a magazine like this disproves the opinion that all music centres were rubbish. The trouble is that although they are cheap to buy they will, on the whole, will need a lot of work to bring them back up to spec, so as an alternative to a basic modern system they are not a completely practical proposition. Music loving aesthetes would love the B&O, as it's as beautiful as a Citroen SM and as refined as lunch with Joanna Lumley. On the other hand, Escort RS2000 driving, medallion wearing seventies playboys dreaming of a night out at Stringfellows would surely have taken the Sony HMK80B; it really does sound as chunky as it looks. Both are excellent period pieces, well worth looking out for with a view to collect.

I wonder if we'll be able to say the same about today's variation on the music centre theme?

TECH TALK

The specifications read like those of a pretty serious hi-fi system. This comes as no surprise with the B&O as it is in simple terms a Beomaster 3000 receiver and a Beogram 3000 turntable (both second to the top of their respective ranges), combined into one unit with little or no modification to either. The turntable platter is supported by a precision needlepoint bearing and rides on a massive diecast aluminium sub chassis that also carries the arm. The subchassis floats on compliant springs and these, combined with the weight and bulk of the plinth give excellent isolation, so much so that B&O called it "danceproof"! The arm is a straight aluminium tube which is dynamically balanced. Anti-skating is controlled by ramps machined into the bearings, a clever trick made possible by the fact that all B&O cartridges are of the same weight and size. The cartridge itself is a moving magnet SP10 or SP12, a development of the original B&O SP cartridge of the late nineteen fifties which was arguably the first modern MM design. Inside, a magnetic cross with the cantilever at its centre opposes four longitudinal coils in a compact, efficient arrangement that was used (in miniaturised form) right up to the end of B&O cartridge production. To drive the platter, a two-stage system employing both an idler and a belt is used. The motor is suspended on its own sprung subchassis to prevent any vibrations reaching the arm or platter. The amplifier is a beefy 40 Watt affair that uses the same 2N3055 output transistors as most of the classic designs of this period. Being a single rail design it is AC coupled to the loudspeakers via large capacitors, a common technique at the time. The FM-only tuner would have been considered advanced, employing as it does electronic tuning, ceramic filters and integrated circuits in its amplifying stages. The B&O cabinet work is amazing, most of it is solid aluminium and finished to a high degree of precision.

In contrast to the B&O, the Sony is entirely purpose-built. Very unusually for a music centre it employs a direct drive turntable, which is powered by a huge motor of Sony's own design. The motor is not quartz-locked but it is servo controlled, a magnetic pickup just behind the rim of the platter monitors the speed and corrects the power accordingly. Unlike the B&O the Sony does not have a suspended subchassis, instead the arm, motor, bearing and mechanism are all rigidly mounted on a pressed steel plate which is then spring mounted in the cabinet. The S-shaped arm is typical of the period and features a removable magnesium headshell. The phono stage is also of unusually high quality for a music centre, it is built around a specially selected low noise bi-polar operational amplifier chip as opposed to the usual couple of cheap transistors. The 35 Watt power amplifier runs from split rails and is therefore DC coupled throughout, still a modern specification today. Sony were pouring money into tape recorders when the HMK-80B was made so it comes as no surprise to find a specially made, carefully engineered unit fitted. High points include a quality permalloy head and feedback controlled DC servo motor, again both of Sony's own design. If you thought Sony only made small things the HMK80B will surprise you, it is truly vast (it dwarfs the B&O), and is extremely heavy!



WORLD STANDARDS

These are the best products we've heard that are currently on sale in the UK, complete with the date they were originally launched and their current retail prices.

TURNTABLES

PROJECT GENIE 2 2008 £175

A masterpiece of minimalism, this is well made for the money and includes a decent Ortofon OM3 moving magnet cartridge. Great sound per pound.

REGA P2 2008 £220

Some say the cheapest real hi-fi turntable money can buy - excellent value for money engineering, easy set up and fine sound.

TECHNICS SL1200/II 1973 £395

Slick build makes it a respectable performer, although the cheapo arm limits it - fit a Rega RB250 and it's suddenly a brilliant mid-price machine.

REGA P3-24 2008 £400

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

MICHELL TECNODEC 2003 £579

Superb introduction to Michell turntables - on a budget. Top quality build and elegant design make it the class of the mid-price field.



ROKSAN RADIUS 5 2003 £750

Fantastic value allied to intelligent, interesting and 'out of the box' design makes for a wonderful entry-level superdeck. Open and musical sound is more inviting than Michell TecnoDec rival, and the bundled Nima Unipivot arm is a superstar.

FUNK FIRM VECTOR II 2009 £860

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



MARANTZ TT-ISS1 2005 £999

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

MICHELL GYRODEC SE2005 £1005

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.

AVID DIVA II 2008 £1,200

Commanding performer with great speed, dynamics and detail allied to an expansive soundstage; surely the one to beat.

ACOUSTIC SOLID CLASSIC WOOD 2008 £1,350

Majoring on impact, punch and drive, this is an impactful mid-price turntable in sonic terms as well as physical size.

PROJECT RPM 10 2006 £1,500

Brilliant 'fit and forget' deck that gives everything it plays a clean, warm, enjoyable sound - but not quite as effective in absolute terms as some price rivals.

REVOLVER REPLAY 2007 £1,500

Revolver spring back into the vinyl market like they've never been away, with a stylish and solidly built LP spinner. Welcome back!

SCHEU ANALOG BLACK DIAMOND 2007 £1,500

Stylish and highly capable turntable with seriously impressive bass. Comes with tweaked RB250 and high output Benz Micro MC cartridge as a package - superb value for money.

THORENS TD2030 2006 £1,895

Excellent design and a supplied Rega RB300 make this a highly capable vinyl spinner. Blue tint to the Perspex base is rather pretty, too!

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.



LINN LPI2SE 1973 £3,510

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

SME MODEL 10A 1995 £4,556

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

CLEARAUDIO REFERENCE 2003 £4,000

The company's best value vinyl spinner; good enough to get the best from almost any tonearm and cartridge combination. Brilliantly open and neutral sound; superlative pitch stability; stunning build and styling - Michell Orbe does most of this at half the price, however.

ACOUSTIC SOLID ONE 2007 £4,000

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

AVID VOLVERE SEQUEL 2007 £4,600

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

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 gain.

TO NEARMS

REGA RB251 1984 £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 very well to rewiring and counterweight modification.

MICHELL TECNOARM A2003 £442

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



ORIGIN LIVE SILVER 2006 £599

This expertly fettled Rega boasts a superbly even, transparent and tuneful sound. Gives away only a small degree of finesse and dimensionality to top arms.

HADCOCK 242 SE 2000 £649

Latest of a long line of unipivots, with added mass, revised geometry and better finish. Musical like no others at the price.

SME 309 1989 £767

Mid-range 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.

SME SERIES IV 1988 £1,127

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.

AUDIO ORIGAMI PU7 2007 £1,300

HFV's best tonearm of 2007 is a derivative of 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 V 1987 £1,614

The so-called Best Pickup Arm in the World isn't quite, but comes pretty close. Vice-like bass with incredible weight, ultra clear midband and treble. Does everything except beguile the listener.

LINN EKOS 1987 £1,700

Subtle mods over the years, including revised bearings and the recent new wiring has kept it a serious contender in the superarm stakes. Lacks the SME's slam, the OL's clarity or the ARO's emotion, but has a feisty musicality all of its own.

GRAHAM PHANTOM 2006 £2,495

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

ORIGIN LIVE CONQUEROR 3C 2002 £2,650

Latest carbon tubed version of OL's penultimate arm is a breathtakingly capable device with a dizzyingly fast and neutral sound.

**TRI-PLANAR PRECISION 2006 £3,600**

Stunning build, exquisite design and surely the most naturally musical and lucid sound around makes this a remarkable pickup arm.

CARTRIDGES**AUDIO TECHNICA AT-110E****1984 £29**

Great starter cartridge that's refined, detailed and musical beyond its price.

ORTOFON 2M RED/BLUE**2007 £60/£120**

The first new budget MM designs for many years, Ortofon's 2M Red and Blue are high resolution designs that are an engaging listen

**GOLDRING GI042 1994 £135**

One of the best MMs going, with sweet and extended treble and punchy, muscular bass.

ORTOFON SAMBA/SALSA**2006 £150/£200**

Fine cartridges that offer that MC magic at an affordable price. Samba is more dynamic and forward, Salsa rather smoother but both are great performers and track well.

DENON DL103R 2006 £200

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

DYNAVECTOR DV10X52003 £250

A distant descendent of the classic Ultimo 10X, this has warmth and sweetness in spades, allied to a punchy bass. Beats GI042 comfortably.

AUDIO TECHNICA AT-OC9MLII**2007 £399**

New and improved stylus and cantilever plus serious price reduction equals stunning dynamics and clarity. A real bargain

ORTOFON 2M BLACK 2007 £350

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

DYNAVECTOR DV20X-H2003 £395

The best modern budget MC combines deliciously sweet sound with fantastic get-up-and-go. High output version works a treat with valve phono stages too.

**LYRA DORIAN 2007 £495**

Incisive and musical, the Dorian is one of the most revealing cartridges at the price.

ORTOFON KONTRA' B1999 £720

Surprisingly articulate performer by Ortofon standards. All the brand's usual polish and detail allied to real vim. Loves making music!

**ORTOFON RONDO****BRONZE 2005 £500**

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

ZYX R-100H 2005 £625

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

BENZ MICRO GLIDER L2 2008 £650

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

TRANSFIGURATION AXIA**2007 £890**

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

ORTOFON KONTRA" C2004 £1,000

The most secure tracking MC we've heard; its super clean, fast, detailed and neutral sonics make it a brilliant partner to warmer sounding turntables.

ORTOFON MC WINDFELD 2008 £1,799

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 DISC PLAYERS**CAMBRIDGE AUDIO****640C V2 2006 £250**

Superb entry level CD player; crisp, composed, musical sound plus fine build and ergonomics.

REGA APOLLO 2006 £498

Highly rhythmic and beguiling performer, although lacks some warmth of tone. Superb ergonomics and design

RUSS ANDREWS**DAC-1 USB 2007 £599**

Not just a USB gadget, but a truly accomplished upgrade DAC that makes the best of CDs, MP3s and digital radio

CAMBRIDGE AUDIO**640H 2005 £599.95**

Fine sonics and decent build make this our favourite affordable HD music server.

MARANTZ SA7001KI SIG2006 £600

Brilliant CD/2ch SACD spinner with a big, sweet, analogue-like sound - CD is totally competitive at the price with the best dedicated machines..

AUDIOLAB 8000CD 2006 £450

Ultra clean and transparent sound with great detail retrieval; just a tad bright and analytical for some, though.

SHANLING CDT-80 2005 £650

Very impressive mid-price machine with a big, sumptuous, expansive sound - better still when tubes are changed.

**CAMBRIDGE AZUR 840C 2006 £800**

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

NAIM CDS1 2008 £895

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

EASTERN ELECTRIC**MINIMAX CD 2005 £925**

Highly accomplished tube-equipped all rounder with a clean, open and musically lucid sound; superb value.

**CYRUS CD8 SE 2008 £1,200**

New 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.

BENCHMARK DAC-1 USB 2007 £999

Pro-biased DAC with useful range of inputs and impressive headphone outputs, too. Save £250 if you don't need the USB-equipped version.

ELECTROCOMPANIE**PC-1 2008 £1,034**

Tidy and polished-sounding CD spinner with strong bass and an assured sense of confidence

EXPOSURE 3010 2003 £1,200

One of the most 'analogue' CD players, second only to the Shanling. Wonderfully beguiling balance leaves you looking for the tube output stage.

STELLO CD-T100/DA100 SIG 2008 £1,270

Fine top loading transport linked via i2s to an excellent upsampling DAC. Confident, detailed, explicit and architectural sound but smooth too.

REGA SATURN 2007 £1,298

Wacky looks surround a highly accomplished CD spinner that marries a smooth midband to excellent bass grip.

EDGAR CD-I 2007 £1,350

Quirky Slovakian CD spinner with all-valve output and a truly spine-tingling performance.

RAYSONIC CD128 2007 £1,599

Spaceship styling and fine build around a highly competent mid-priced CD spinner means a feast for the senses.

CHORD QBD64 2008 £3,000

Bespoke architecture gives a truly uniquely musical sound that's beguilingly musical in nature, with dizzying incision and grip.

SHANLING SCD-T2000 2007 £2,250

Updated version of original SCD-T200C standardises upgrades optional on the older model and adds a few more tweaks for good measure. The result is a stylish player that works superbly with both CD and SACD

TUBE TECHNOLOGY FUSION 64 2006 £2,200

Unique digital and analogue audio engineering makes for an exceptional CD player that, on some programme material, is peerless.

**NORTH STAR MODEL 192 TRANSPORT/EXTREMO DAC 2006 £2,918**

Superbly finessed and loquacious sound allied to excellent build and finish make for a brilliant value high end buy.

ELECTROCOMPANET EMC-IUP 2003 £3,450

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

ACCUSTIC ARTS CDP1MK2 2007 £3,985

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

NAIM CDX2-XPS2 2003 £4,950

A fine high end machine, but add an XPS2 and it becomes one of the most characteristically engaging 16bit machines we've ever heard. Plays music with such passion!

NAIM CDS3 2003 £7,050

The most polished Naim CD to date; tremendously capable and musical, but lacks the Rottweiler quality of the cheaper CDX2-XPS2.

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!

ESOTERIC X-01 2005 £8,995

Breathtaking feat of digital audio engineering, and surely the best sounding combination CD/SACD spinner money can buy.

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...

NAIM CD555/55SPS 2006 £14,000

Very probably the best CD player yet made - certainly the most expensive; a digital tour de force.

**DIGITAL RECORDERS****SONY RCD-W3 2002 £250**

Usual superb Sony ergonomics make for non-sense budget buy. Fine direct digital copies, but analogue input poor. Middling sonics, but there's a digital output!

NAIM HDX 2009 £4,405

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

PHONO STAGES**CAMBRIDGE AUDIO 640P £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.

PROJECT PHONOBOX LE2004 £99

Great little box that improves on most bundled phono stages found in budget integrated amplifiers, adding detail and definition and a measure of smoothness too.

TRICHORD DINO 2002 £299

Great all rounder with switchable MM/MC. Fast, fluid and smooth like no others at the price.

JOLIDA JD9 2006 £400

Hybrid tube/solid state phono stage with a good range of adjustability. Excellent value for money and a fine, dynamic sound.

GRAHAM SLEE ERA GOLD V 2004 £460

Wonderfully warm, open and musical nature makes this an essential audition for those wanting a top value mid-price phono stage.

PURESOUND P10 2007 £400

Guy Sargeant's new MM phono stage is an absolute belter. Simple but very effective.

AQVOX PHONO 2 CI 2006 £598

Brilliantly versatile yet affordable phonostage with a beguiling sound, but careful matching essential. Balanced operation of real benefit.

ICON AUDIO PSI.2 2007 £599

Excellent value valve phono stage with good range of facilities and fine imaging abilities.

A.N.T. AUDIO KORA 3T LTD 2008 £775

Exceptionally musical and natural sounding all discrete transistor phono stage, with highly lucid, valve-like presentation.

ANATEK MCI 2007 £850

Spectacularly good MC phono stage that offers serious insight underpinned by powerful and tuneful bass.

**LINN LINTO 2000 £900**

A musical and incisive performer, with more speed than the Delphini at the expense of detail and tonal colour.

QUAD QC24P 2007 £995

Dynamic performer that can be used on its own as a complete phono-level preamp.

EASTERN ELECTRIC MINIMAX PHONO 2006 £1,099

Highly capable valve phono stage with a relaxed yet involving demeanour. More beguiling than rival transistor designs, but sacrifices little in detail terms.

TRICHORD DIABLO + NCPSU 2006 £1,198

Highly musical performer, this is one of the best phonostages at or near the price, but lacks the polish of the rival Whest.

ICON AUDIO PS3 2008 £995

One of the very best valve phono preamplifier's we've heard, with an expansive, engaging and organic sound that makes vinyl a joy to listen to.

AMPLIFIERS**AUDIOLAB 8000S 2006 £400**

In other 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.

ICON AUDIO STEREO 25 2008 £500

Cracking entry-level valve integrated, with a warm and engaging sound. Limited power so needs careful partnering, though.

ROTEL RA-06 2008 £550

Vivacious sounding device that, whilst lacking the finer musical points, wears its heart on its sleeve and has plenty of power to match.

NAIM NAIT 5i 2007 £725

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

CAMBRIDGE 840A V2 2007 £750

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

JUNGSON JA-88D 2006 £899

Stunning value for money Class A monster integrated; extreme power and clarity at a puzzlingly low price.

**SUGDEN A21A S2 2007 £1,299**

More power and greater transparency improve even further on the already impressive A21a to give truly impressive results

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.

SHANLING STP-80 2007 £1,199

Well built and surprisingly muscular valve integrated. Engagingly musical.

CREEK DESTINY AMPLIFIER 2006 £1,200

Superb build, useful power plus a deep full bodied sound make this an excellent mid-price buy.

ELECTROCOMPANIET**PI-2** 2008 £1,430

Powerful integrated with seriously solid bass and impressive dynamic abilities. Superbly musical.

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.

ANATEK A50R 2007 £1,600

Simple integrated amplifier with spectacular bass grip and effortless dynamics.

**UNISON RESEARCH S62002** £1,625

Tremendously musical and lithe sound with real finesse and subtlety too. Very slightly upper mid forward encourages careful partnering with ancillaries (Revolver R45s are ideal), but overall fantastic value for money.

**MOON i-3RS** 2008 £1,890

Grippy and clean performer with fine sound-staging and build quality.

COPLAND CSA29 2006 £1,998

Unfilingly svelte, sophisticated and smooth - both to listen to and look at - this is a truly desirable high end integrated.

NAIM SUPERNAIT 2007 £2,475

Technological and sonic *tour de force* from Naim that combines impressive functionality and connectivity with superb sound quality.

VINCENT SA-TI/SP-T100 2006 £2,300

Impressively built and stylish pre/power combo that take any kind of music and make the best of it

LUXMAN L-550A 2007 £2,800

Monster Class A integrated with powerful and revealing sound and a whole host of useful features, including a highly competent MM/MC phono stage

AUDIO RESEARCH VS155

2003 £2,895

The Naim NAP250's tubular alter ego; oodles of power allied to a strong bass and smooth open midband makes this a brilliant all round amplifier. Lacks the subtlety and finesse of the low powered single-ended brigade but makes up for it with sheer brio.

LEEMA TUCANA 2007 £2,995

Leema's success story continues with this integrated amp that combines power, detail and great musicality in a solidly built package

**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-integrated.

AV AMPLIFIERS**YAMAHA DSP-AX861SE** 2007 £700

Highly capable A/V amplifier with mind-boggling array of surround sound options. Even has a decent MM phono stage!

ARCAM AVR350 2006 £1,500

Superbly accomplished do-it-all AV receiver package, with an uncommonly warm, natural and musical sound. A winner goes from strength to strength.

DENON AVR-4308 2007 £2,000

Huge behemoth festooned with facilities and sockets, plus two remotes! Fortunately it's a brilliantly flexible and powerful performer.

NAIM AV2/NAP 150/NAPV 175 2002 £4,190

Brilliant audiophile multichannel pre-power amplifier combo; not as good with music as a two-channel Naim set-up at the same price, obviously, but surprisingly close. Elegant control layout plus a strong, clean and brilliantly engaging sound make this a serious crossover product. Ultimately lacks power compared to similarly priced Arcam gear, but is more musically involving.

HEADPHONE AMPLIFIERS**CHANNEL ISLANDS VHP-1 / VAC-1** £390

A truly exceptional headphone output stage; the best at the price and an essential audition.

MUSICAL FIDELITY X-CAN V8 2008 £350

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

SUGDEN HEADMASTER 2003 £600

Unusual combined preamplifier and headphone amplifier, this boasts a surprisingly smooth and open sound.

PREAMPLIFIERS**CREEK OBH-12** 2000 £220

Brilliant value budget passive, giving little away in sonics to far more expensive designs. Connectivity and build aren't great, but what do you expect at this price?

**MF AUDIO PASSIVE PRE2003** £1,500

Effective pre with switchable gain via a transformer, and balanced operation. Open and incisive sound, yet makes most active rivals sound edgy by comparison. Silver version at the twice the price adds transparency.

**MODWRIGHT SWL9.0SE** £2,000

Captivating sound quality that will transform your system. Build quality is equally impressive and value top-notch. Highly recommended

NUFORCE P-9 2007 £2,200

Impressive two box preamp with superb resolution and an engaging sound.

MELODY PURE BLACK 101D 2007 £3,295

One of the best preamplifiers we have ever heard. Takes the clarity and openness we expect from valves and adds a staggering level of grip and detail. Stunning.

MUSICAL FIDELITY PRIMO 2009 £7,900

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

POWER AMPLIFIERS**ROKSAN KANDY LIII** 2008 £600

Fine budget power amp that punches well above its weight.

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 super value all the same. Lovely build, finish and Quad's legendary service are nice.

NAIM NAP150 2002 £795

Driven by a decent source and a NAC112, this gives highly enjoyable results - providing you like the Naim sound! Taut, fast and feisty despite its relative lack of power.

SUGDEN MUSIC MASTER 2003 £1,300

Quintessential Class A Sugden sound is not warm as many expect, but extremely neutral and open with real tonal colour. Superb when partnered with efficient loudspeakers like Revolver R45s, but many will find it underpowered

**NUFORCE REFERENCE 9SE V2** 2006 £1,750

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



ROTEL RB1092 2007 £1,595

Hugely powerful digital amp with neutral midrange and a wonderfully spacious treble

CHANNEL ISLANDS AUDIO D100 2005 £1,595

Clean and musical Class D monoblock power amplifiers in a neat, small package.

SILK GLOWMASTER KT88 2007 £1,699

KT88 based power amplifier offers dramatic clarity and excellent bass heft.

**ICON AUDIO MB845 2009 £2,499**

Creamy and seductive yet blisteringly fast and musically lucid, this pair of 845 tube monoblocks is staggering value for money.

QUAD II-40 2005 £3,230

Modern tube monoblock power amplifiers with plenty of power, liquid and open mid-band and spacious, airy treble. Explicit, engaging sound, but not as euphonic as some.

GRAAF GM20 OTL 2003 £3,300

Awesome output transformer-less valve power amp gives dazzling speed and Incision, with an ethereal soundstaging and delicious filigree detail. Tremendous punch belies its humble 20W power rating. Factor in one of the most exquisite finishes this side of an Aston Martin and it's very hard to say no...

ELECTROCOMPANET NEMO 2009 £4,450 (EACH)

Monoblock power amplifier with breathtakingly open and fast sound, and apparently infinite reserves of power. Match with a smooth source for big audio dynamite!

QUAD II-80 2005 £6,000

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

LOUDSPEAKERS**ACOUSTIC ENERGY NEO I 2007 £199**

Tidy and well balanced standmounters with pleasing clarity and detail.

B&W 686 2007 £279

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

USHER S-520 2006 £320

Astonishingly capable budget standmounters that offer detail and dynamics well beyond their price and dimensions

MORDAUNT SHORT AVANT 914i 2007 £300

Another pair of storming budget floorstanders from Mordaunt Short. Detailed, punchy and crisp.

REVOLVER RW16 2004 £400

Outstanding standmounter with tonal accuracy and speed that totally belies its price; good sensitivity for a small box makes it great with valve amps too. A budget audiophile classic.

LEEMA XERO 2007 £650

Superb mini-monitors that belie their modest price tag with a bold and finessed performance

ACOUSTIC ENERGY AEI CLASSIC £845

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

SPENDOR S3/5E 2004 £950

A natural successor to the BBC LS3/5a, whose impressive neutrality, imaging and evenhandedness makes this a superior, if less charismatic, loudspeaker.

WHARFEDALE OPUS 2-MI 2007 £999

Large standmounters with impressive mid-range dome and fine integration across the frequency range.

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.

YAMAHA SOAVO 2 2007 £1,200

Just as capable as their floorstanding brethren, the Soavo 2s have an assured sense of sophistication and poise.

REVOLVER RW451 2006 £1,199

Very musical floorstander that's clear, concise and truthful, whilst being exceptionally amplifier friendly - a dreamboat for valves.

ONE THING AUDIO ESL57 2007 £1,450

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

KIBRI NAIMA 2007 £1,550

Unusual-looking omnidirectional loudspeakers with an absolutely captivating performance. Huge soundstage and bags of clarity - brilliant!

GURU QM-10P 2007 £1,595

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

MARTIN LOGAN SOURCE 2008 £1,599

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

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.

SPENDOR S8E £1,895

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

**MONITOR AUDIO GS60 £2,000**

Brilliant modern rock loudspeaker with a fantastically lithe and engaging sound, but partner carefully with a warm front end.

YAMAHA SOAVO I 2006 £2,000

Musical and transparent floorstanders with impressive dynamics and cohesion. Fine build and finish.

**ISOPHON GALILEO 2007 £2,100**

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

MONITOR AUDIO PL100 2008 £2,300

The MA boys pull out all the stops for their flagship 'Platinum' series standmounter with stunning results.

PMC OB11 2008 £2,950

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

KEF IQ30 2009 £330

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

MOWGAN AUDIO MABON 2007 £3,995

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

B&O BEOLAB 9 2007 £5000

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

ARS AURES MI 2006 £5,995

Sublime build and finish allied to an insightful, assured and even-handed musical performance makes these an essential high end audition.

QUAD ESL-2905 2006 £5,995

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

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.

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**MONITOR AUDIO IDECK2006 £200**

Fine design, impressive flexibility and a lucidly musical sound make the iDeck the current iPod dock champion.

ISOTEK GII VISION 2006 £550

A genuinely effective and surprisingly cost effective upgrade, but results could vary so a home dem of the power conditioner is recommended.

**TOWNSHEND MAXIMUM****2003 £800**

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

HEADPHONES**SENNHEISER MX-550 2005 £19**

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

SENNHEISER PX-100 2002 £29

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

**GOLDRING DR150 2006 £70**

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

SENNHEISER HD-590 1998 £199

The company's best real-world cans to date. Open and smooth with plenty of detail. Brightly lit midband makes them an ideal partner for a valve headphone amp.

SENNHEISER HD-650 2004 £250

Not the best headphone in the world, but a superb all round reference all the same. Very crisp, detailed and even sound allied to superlative build and fine comfort makes all most people will ever want. Cable upgrade yields great results.

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**TECHLINK WIRES XS 2007 £20**

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

WIREWORLD OASIS 52003 £99/M

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

CHORD COMPANY**CHAMELEON 2 £90/M**

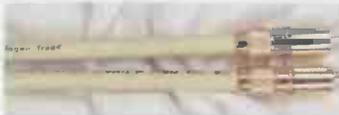
One of our favourites, these are musical performers with a smooth yet open sound.

**DNM RESON 2002 £40/M**

Neutral and transparent - a steal!

VDH ULTIMATE THE FIRST**2004 £260/0.6M**

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

**TCI CONSTRICTOR I3A-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 makes it a bargain.

**CAMBRIDGE AUDIO 640T2005 £250**

Sweet sounding digital/analogue hybrid with fine build and finish at the price.

MARANTZ ST-7001 2006 £299

Super performance on FM coupled with its ability to get the most from DAB broadcasts makes this the best affordable tuner.

YAMAHA TX-761 2007 £350

Sets the standard for FM performance at the price and is no slouch on DAB either.

ARCAM FMJ T32 2009 £550

The world's first DAB+ hi-fi tuner, and it also happens to be the best DAB/FM hybrid we've heard to date. A brilliant product that deserves to succeed.

CREEK CLASSIC TUNER2006 £550

No tuner offers better sound per pound; wonderfully three dimensional and smooth from bottom to top.

MYRYAD MXT-2000 2005 £800

Truly sumptuous sound and excellent build is all most will ever need in a tuner; superb.

MAGNUM DYNALAB**MD-100T 2006 £1,895**

One of the best ways to hear FM that we know; superbly open and musical sound in a quirky but characterful package.

**SYSTEMS****YAMAHA CRX-M170 2007 £200**

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

TEAC DR-H300DAB 2008 £329

Nicely built and styled mini with fine performance on all sources that even plays DVDs!

NAD C-715DAB 2008 £429

Small, neat looks cover a truly capable system that shows just what a compact design can achieve.

ARCAM SOLO MINI 2008 £650

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

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.

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.

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.

**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.

MARANTZ 'LEGEND' 2007 £22,000

The combination of SA-7S1 disc player, SC-7S2 preamp and MA-9S2 monoblocks delivers a truly jaw-dropping performance. Start saving now....

Easy Does It

Test Card F is the first of the colour test cards with the famous image of Carole Hersee on the card that was designed by her father George.



Remember the golden age of British broadcasting, when much of any week-day literally meant "nothing on the telly"? Before the mid nineteen eighties,

lest we forget, there would be clusters of television programming. The Open University and schools programming would occupy the morning slots on the Beeb, then there would be a gap, then the news, some childrens' stuff, and then another gap until the kids came home...

Between these slots, the test card appeared. Lovers of retro kitsch revere it, along with their beloved lava lamps, trim phones and teas-maids, but I put it to you that what was really treasurable was the music. Without doubt, a good deal of it was pure 'cheesy listening', but there was nevertheless a lot of very high quality material, recorded by some very respected session musicians, bands and conductors, too. Indeed, the huge diversity of musical genres, and the quality of the performances will surprise many who simply switched off as soon as the test card appeared on their screens, at the time!

TESTING TIMES

Television started in the UK in 1936. As television programmes were not broadcast continuously throughout the day, something was required to be transmitted between the programmes to allow television dealers to demonstrate their products. It was quite a skilled

job to set a TV up back then, with adjustments required for height, width, linearity, synchronisation, contrast and focus - and those settings often changed as sets were warmed up!

When colour came to Britain in the late sixties, things got more complex still, with the myriad of convergence, purity and linearity controls, all of which interacted with one another! The half-hour colour trade test films provided by companies like Shell with their imaginative titles of 'Paint' and 'Prospect for Plastics' and equally riveting epics from BP like 'The Tide of Traffic' were great for dealer showrooms, but of little use to television installers.

It was soon realised, therefore, that some form of test pattern to assist with the setting up of receivers was necessary. However, it was not until after the war that the first test card was actually broadcast. Not only was a video test pattern required, but an audio signal to accompany the picture was needed to check that the sound circuits were working. Of course, there was always the 440Hz tone (or for the musicians amongst you, the A above middle C) on BBC or 400Hz on ITA, but that did get a bit boring after a while. It was therefore decided that music should also be transmitted to accompany the test card.

SOUND GALLERY

The story starts in September 1955 when the BBC changed from the live playing of 78 records in random

Often incorrectly described as 'lift music' or 'muzak', the music that accompanied BBC and ITV testcards was far from bland, argues Neville Roberts, as he remembers this very British phenomenon...

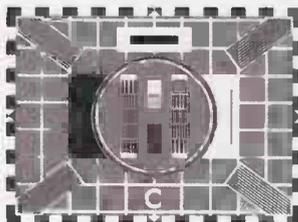
order to using music recorded on tapes. These were recordings of the 78s that were grouped under either a classical or light music theme.

For ITA the first trade test schedule commenced on Monday 17 June 1957 and, unlike with the BBC, it was always the practice to use commercially available records until they started using tapes in the late 1960s. The music played with the ITA test cards was all sourced from records that you could buy from your local record shop and spanned classical through to jazz and light orchestral.

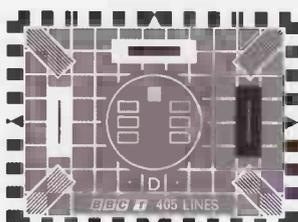
In October 1959, the BBC started building a library of half-hour tapes to accompany the famous Test Card C image. They consisted of two or three tunes, similar in style, followed by a BBC Ident (the well-known BBC Chimes played on a celeste and consisting of 3 notes: B-B-C!) and a thirty second silence. Tapes were known by the title of the first track as well as the BBC tape reference, for example, "My Friends" aka Tape BLN22/XE1 203a, which was the first of the BBC2 one-hour tapes and was transmitted between 13 June 1972 and 20 June 1973.

One of the problems for the BBC music compilers were the restrictions placed by the Musician's Union on the use of needle-time music, which meant that music recorded in the UK could not be used. As a consequence, the compilers had to go abroad for material and the first stop was France. These early tapes therefore exhibited a distinct French style with titles like 'La Foule', which was the first track of BBC TV Tape No. 1, and plenty of accordion music!

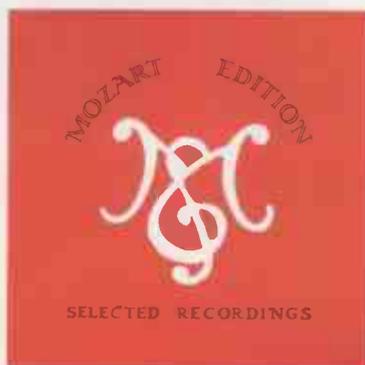
As more tapes were produced, music was sourced from further afield, for example, from Mozart Edition in Germany. The tapes



The familiar BBC Test Card C used in the '50s and '60s...



The less-familiar Test Card D for 405-line television...



Sleeve of a Mozart Edition Library Music LP record containing tracks used on '50s and '60s BBC tapes...

were themed, with some devoted to classical music, such as on the 1962 BBC Tape 17 'Handel's Water Music' performed by the Amsterdam Concertgebouw Orchestra, supported by some Paganini etudes and topped off with some Vivaldi played by the Hague Residentic Orchestra.

The quality of this music was high with superb orchestras and composers such as Roger Roger, Heinz Kiessling, Werner Tautz and our own Frank Chacksfield and Syd Dale. Music was purchased by the BBC from a variety of music publishers and made into BBC LPs and the BBC Coded Music library. In 1972, tapes were doubled in length to one hour compilations and, generally speaking, separate tapes were produced for BBC1 and BBC2 use. As this music came from abroad, it was not commercially available here.

These were not tin-pot recordings by third rate musicians. Many of the orchestras included the cream of library session musicians who were assembled abroad to record the music. One such orchestra was the Oscar Brandenburg Orchestra. In fact, Oscar Brandenburg was not a person, but a name conjured up from the OB nature of the recording – 'OB' standing for Outside Broadcast!

At this point, I should also mention that equally high quality music was used for other purposes, such as programme theme tunes and as other interval music. The composer Syd Dale, for example, wrote a piece called 'Walk and Talk' that was the tune used as interlude music before the BBC transmitter information bulletins. Going back to the fifties, the British film composer and conductor, Charles Williams, wrote 'The Young Ballerina', the background music for the famous 'Potter's Wheel' interlude film, as well as the theme to the BBC Farming programme entitled 'A Quiet Stroll',

played by the Queen's Hall Light Orchestra of which he was the conductor.

Moving across to ITA music, this was sourced from commercial LPs with styles ranging from easy listening music such as Mantovani, Michel Legrand, Frank Chacksfield and Robert Farnon to classical pieces performed by the Halle Orchestra, the Vienna Philharmonic Orchestra and the Royal Philharmonic Orchestra, to mention just a few. Many of these recordings are still available, albeit second-hand, from dealers such as GEMM.com.

November 1982 heralded the arrival of Channel 4 and this new channel was keen to establish an identity of its own. The music chosen to accompany test card transmissions was also very different from that of the BBC and ITA. Channel 4 used UK library LPs from publishers like KPM, Joseph Weinberger and Ready Music. Moog and ARP synthesisers were the order of the day and the music reflecting the modern era featured Reggae and funk music, interspersed with other styles. The first track of the first C4 test card tape entitled 'The Theme' was a synthesiser piece written by Val Podlasinski, who was an associate of Robert Moog. Other tracks featured works by Francis Monkman, Andy Clark, Richard Harvey, Bob Morgan and Keith Mansfield from the KPM 1000 series library, Anthony Mawer and David Snell (the Joseph Weinberger Programme Music label) and original piano compositions by Kathleen Crees in the style of classical composers sourced from a delightful Standard Music library LP.

As the eighties progressed and improvements in the design of television sets meant that less work (if any) was required to set them up, the poor old test card was squeezed out to make room for the altogether inferior material that is daytime TV! Gaps between programmes were filled with CEEFAX in Vision on the BBC and the music used tended to be tapes of single albums. By the 1990s, BBC1 had completely filled its daytime slots and there were only a few remaining slots on BBC2 for CEEFAX. Tragically, the test card was turned off!

WHAT'S GOING ON?

With the advent of organisations such as the Global Electronic Music Marketplace (www.gemm.com) and those specialising in rare and out of print classical records like Parnassus Records (www.parnassusrecords.com), it is possible to find quite a lot of this material. As radio stations turf

out their old LPs, many find their way to these dealers where they become available to buy, often for the first time.

To cater for the resurgence in interest in light music, a number of CDs have been made in recent years containing remasters from the original source material used by the BBC. Collections of such CDs are available from Apollo Sound (www.apollosound.com) and two from Chandos Flyback and, in particular, the registered charity Winchester Hospital Radio (www.whr.org.uk). The WHR CDs are worthy of note as the sound quality of the remastered recordings is extremely high and often familiar tunes are heard in stereo for the first time.

CDs from overseas are easy to get hold of nowadays and a fine example of the Heinz Kiessling recordings used on BBC trade are available from Bliss Records in Germany via the Brilliant Musik website at www.brilliant-musik.de.

Like the BBC, Channel 4 music was library music from a variety of music publishers and not, on the whole, commercially available. There were a few exceptions however, and Gordon Giltrap (www.giltrap.co.uk) released a great CD entitled 'Airwaves' in 2000 (La CooKa Ratcha LCVPI08CD) that contained the tracks from the LP TIM1038 released by Themes International, including 'Heroes' used as track 2 of the first C4 test card tape, 'El Greco' as track 6 of the third tape and 'Rainbells', which was track 4 of the fifth tape.

As the IBA music was sourced from commercial LPs, much of this material is readily available in its original LP format from GEMM and the like. In addition, an increasing number of CDs are emerging containing reissues of the original material from Amazon. Just go to the CD section and search for Mantovani, Bert Kaempfert, Herb Alpert and so on.

No article on test card music would be complete without a reference to the Test Card Circle. Members have access to a database that they have compiled containing details of all the BBC trade test tapes from the start in 1959 until 1982. Apart from links to CDs of the music there is also a wealth of information on test cards which, if you are anything like me, you will find fascinating! Have a look at www.testcardcircle.org.uk for more information.



LP disc label of the Ready Music containing the first track of the first ever Channel 4 Test Card tape...



Gordon Giltrap's commercial CD cover 'Airwaves' containing tracks used on the Channel 4 Testcard...



A selection of currently available CDs containing reissues of trade music used on the BBC Test Card and as TV programme interval music.

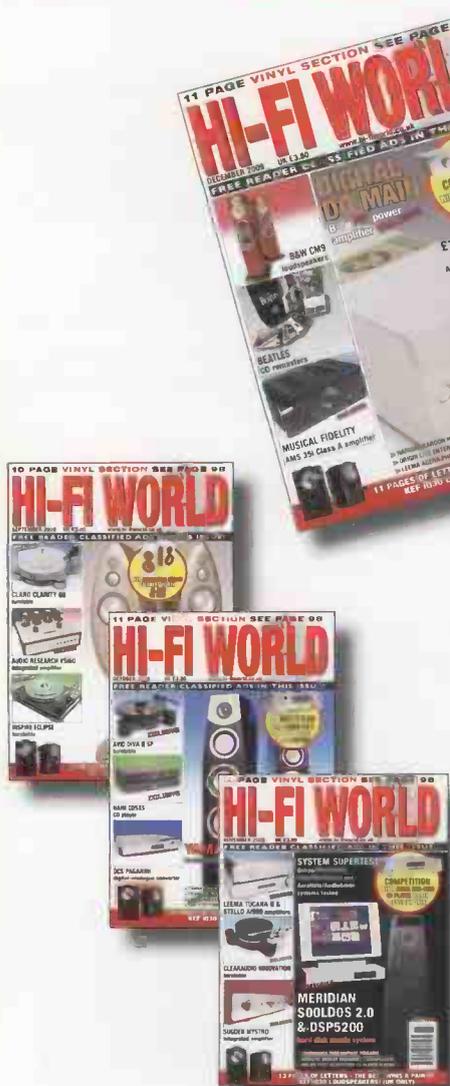
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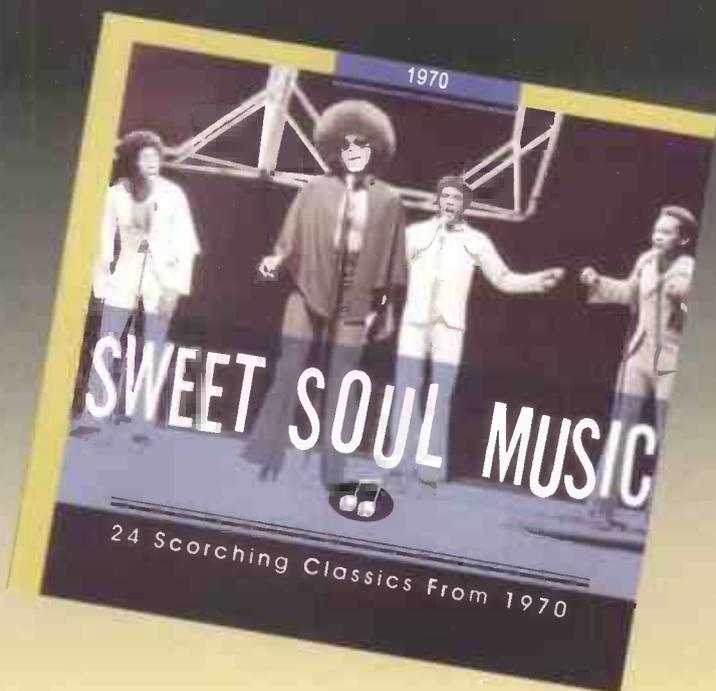
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JACKIE DESHANNON
Laurel Canyon
RPM

A highly talented lady, why she hasn't been given more attention and plaudits is a mystery to many. She began as a pop singer in the fifties, was one of the rare artists to open for The Beatles on tour, dated Elvis, wrote a gamut of songs for the likes of Brenda Lee, Marianne Faithfull and Irma Thomas and more. She also cowrote songs with Jimmy Page and Randy Newman, recorded with Brian Wilson and Burt Bacharach, was one of the first artists to cross folk and rock and had Top 10 hits including 'Needles and Pins' and 'When You Walk into the Room'.

This album, one of her best, was released in 1968, originally on the Imperial label. Laurel Canyon itself was quite a place at this time, occupied as it was by stars such as Joni Mitchell, Cass Elliot, Graham Nash and Carole King. DeShannon catches its mood and feel perfectly with a country-soul production that allowed her to deliver her music with a real edge, supported by the production techniques of soul legend Bobby Womack. "The making of the album was the first opportunity I had to record songs in a purely organic format or context," DeShannon said. "For once, there was not a lot of

feedback from the record company. Everyone brought their unique artistry into the sessions. It was the mix I'd been looking for throughout my recording career."

The swamp-folk of the mountains is spread all over the album, enhanced by contributions from the likes of Dr John. This reissue includes eight bonus tracks. Also look out for other DeShannon albums via RPM: 'Songs', 'Breakin' It Up On the Beatles Tour!', 'For You', 'Are You Ready For This?' and 'Put A Little Love In Your Heart'.

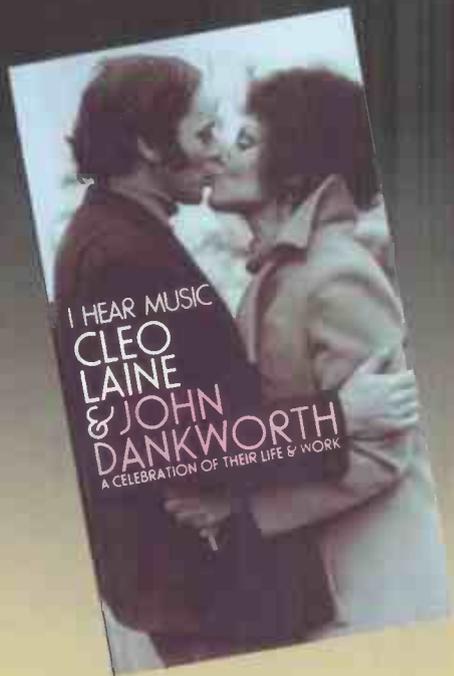
SWEET SOUL MUSIC
Various
Bear Family

A superb series of soul compilations collected in a year-by-year format, each release is contained in a beautifully produced fold-out digipack which, when opened up to the full, features a thick booklet centrally placed. Spanning around ninety-pages, each booklet features a track-by-track overview with colour glossy pages including rare photographs, cover art, posters and labels and artist mini-biographies, all compiled by Bill Dahl. Talking to Dave Booth, the reissue producer of the series, he revealed that, "Sweet Soul Music' has evolved from the original 'Blowin' The Fuse' series, which covered the

years from 1945 to 1960. 'Sweet Soul Music', begins from 1961 to 1970."

Coming from Bear Family, you expect a level of production quality but also sound quality and that's certainly true here. Derived from a variety of sources such as published singles but, where appropriate, acetates and other rare sources, the final master is uniformly excellent. The final list is a great mixture of well known, 'pop-like' and more hardcore productions that provide an ideal cross-section of the soul genre. From the 1970 disc for example, includes Brook Benton's version of 'Rainy Night In Georgia' and James Brown's 'Get Up (I Feel Like Being A Sex Machine)' along with the likes of Tyrone Davis' 'Turn Back the Hands Of Time' and Little Sister's 'You're The One Pt. I'.

The content was understandably contentious. That is, when Dave Booth had to decide what to leave out. Each package includes space for just one CD so a lot of judicious pruning and some painful decisions had to be carried out when deciding on the final mix. Booth admitted that he has subsequently received criticism from fans who protest that their favourite tracks have been left out. As he, himself, commented, however, "You can't please everyone!"



CLEO LAINE & JOHN DANKWORTH
I Hear Music: A Celebration Of Their Life And Work
Salvo

One of the great stalwart teams in British jazz, husband and wife, Sir and Dame, Dankworth and Laine have had careers both together and as solo artists. This box set includes four CDs, contained within a long-form box that includes a booklet of over sixty pages featuring rare photographs, rare cover sleeves and full track information.

The CDs are themed into 'Early Years' from the mid-forties and the Johnny Dankworth (Club XI) Quartet, the Johnny Dankworth Seven to Johnny Dankworth & His Orchestra with and without Cleo Laine. The second disc examines Dankworth's later works with big bands and film theme work. Disc three looks at the works of Cleo Laine as a solo artist and working with stars such as Ray Charles, John Williams and Gerry Mulligan. The final disc is entitled 'Family Affair' and includes members of the family included the singer Jacqui Dankworth, Alec Dankworth (bassist and composer) and Emily Dankworth (the youngest vocalist of the family).

There are plenty of classic moments including Laine's renditions of some of the Great American Songbook material plus Dankworth's

innovative arrangements. There's also some surprising inclusions. For example, did you know that Dankworth wrote the theme tunes for 'The Frost Report' and 'The Avengers'? How about the original theme tune for 'Tomorrow's World'? "I was only asked to write it for one pilot programme," Dankworth explained, "so I didn't pay a huge amount of attention to it. I had no idea it would be on for so long but it must have been heard for many hundreds of times."

There is some excellent jazz here, while the movements in time provide interesting context and appreciation to how each artist evolved over the years. Recommended.

THE LAURIE RECORDS STORY 3
Girls & Girl Groups
Ace

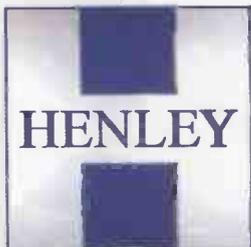
The latest release in Ace's exploration of the Laurie record label has reached volume three. Formed in 1958, the label had a quick hit, 'I Wonder Why' by Dion & the Belmonts, which appears on Volume One of the story along with an additional host of hits. Volume Two, subtitled, 'The Ernie Maresca Years', highlighted the man who wrote many of Dion's hits. This volume concentrates on the female contingent of the label. Probably the best known female act on the label

was The Chiffons who had several hits including 'He's So Fine'. This volume presents a number of their lesser known cuts including 'Love Me Like You're Gonna Lose Me' and 'If I Knew Then (What I Know Now)'.

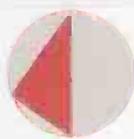
Amongst the songs presented here are one or two mysteries including the improbably named Marie Antoinette who sings 'He's My Dream Boy'. A rare single from 1964 and one that comprises of a convoluted story including the connection that Marie Antoinette is the one and the same vocalist who appeared as Alice Wonder Land with another single released during the previous year.

The material created for the Laurie girls was top notch with several of the tracks produced by some of the famous Brill building songwriters such as Gerry Goffin and Carole King and singer-songwriter, Ellie Greenwich. With groups and vocalists appearing here ranging from The Summits, The Cheese Cakes, The Charmers, Beverly Warren and Dawn, this is an excellent collection of quality pop.

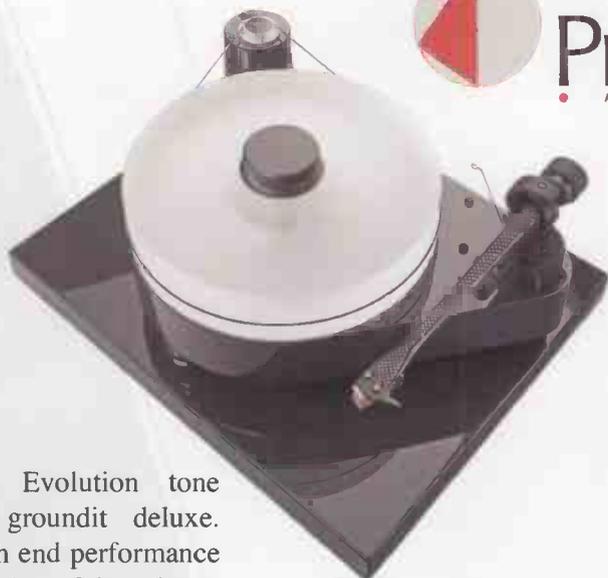
If you want to investigate the Laurie output in more depth, check out the additional CDs from Ace: 'The Belmonts: The Laurie, Sabina & United Artists Sides' (Volume One and Two), 'Laurie Vocal Groups: The Sixties Sound' and Laurie Vocal Groups: The Doo Wop Sound'.



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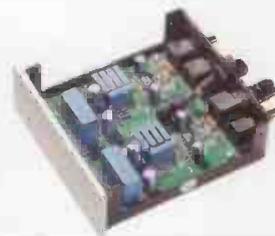


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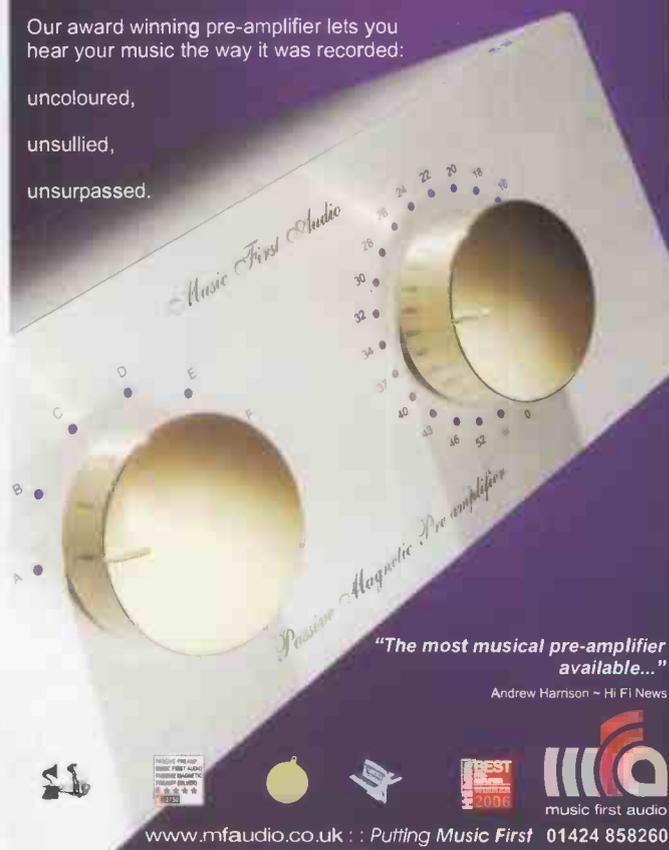
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"digital music distribution has finally made it possible to bring serious advances in sound to everyone..."



David Price

It's been a fascinating decade for hi-fi, hasn't it? There's been nothing of particular note in headline terms, no spectacular show-stopping new development that's defined the decade like Compact Disc did in the eighties, for example. Rather, there have been lots of subtle evolutions of ideas started in the decade before...

Whereas the nineties saw the decline of vinyl, the noughties saw its reappearance. Some thought it was merely a fad, like 'Cool Britannia' or the Millennium Bug, but it's now become an everyday reality again for many people. There are now more turntables launched every year than CD players, and seemingly more interest in the subject than the busted flush that was 'surround sound'. Two channel analogue is back, just like it never went away!

Loudspeaker design hasn't changed massively in the last ten years, but that's not to say speakers haven't got better. Whether it's the propagation of electrostatic panels, the burgeoning popularity of ribbon tweeters or the honing of conventional moving coil drive units, almost everything has evolved. Drive units have got better, cabinets have improved and the integration between the two has advanced apace too. Only the tiresome predilection for 'small footprint' floorstanders - neutered narrow baffled nothings - has worked against progress. Apparently no one wants to buy a big fat three way anymore, if you believe the bean counters at mass market speaker brands. Hence the nineties fad for column floorstanders started by the likes of Mission's 1995 752 is very much alive in 2009.

What of amplifying devices? A new generation of output transformers and passive componentry, allied to advances in wiring and production

techniques, has surely advanced the tubular breed. Alongside this, the Chinese government's decision to undervalue its currency and lock it to a weak dollar has given it an export-led boom the like of which we hadn't seen since the Japanese did the same thing in the mid nineteen sixties. The result is a thousand cheap Chinese valve amplifiers, iPod docks and anything else with a tube in it, swamping the high street and hi-fi shows alike. This is surely something we'd never have imagined ten years ago, despite those early signs that a valve revival was on its way. As for good old solid-state, I'd say it's had a good decade. There are some very decent transistor amps around now; not many, but some. And there's signs that there's life in the old devil yet, as this month's review of the Digital Do Main B-1a shows, transistors still being honed closer to perfection even in 2009.

How about digital? We all know that the roots of modern digital lie in Pulse Code Modulation (PCM). It was originally seen in commercial music recording back in 1972 (as developed by Denon), but arrived courtesy of Sony in 1982 as the Compact Disc format, with the optical disc work done by Philips. The trouble is, CD then stayed the same for decades, effectively freezing most people's experience of digital in time and space, a bit like the British government is now attempting to do with DAB! CD uses an ancient 16bit, 44.1kHz sampling rate specification that's now as old hat as dad's old Sinclair Spectrum computer. Earlier this decade, attempts were made to stretch it via DVD-Audio, but we all know how that particular format went from being the new gold dream of audiophiles to the stuff of audiojumbles and eBay auctions...

So *no*, you'd definitely have to say digital has been something of disappointment in the past ten years. Or at least you would have done until very recently. Because all of a sudden, hi res digital has started coming back, not in disc form but down a telephone line like most other aspects of modern life. DVD-Audio failed, I'd suggest, not because nobody wanted it, but because most people didn't know it existed. Shops wouldn't stock it, simply because they could make more money per square foot flogging standard movie DVDs.

Now though, hi res digital is getting a second lease of life as a digitally downloaded computer music file, often held in FLAC (Free Lossless Audio Codec) format. Like MP3, there's been a groundswell of interest around hi res FLAC, with Linn Products very shrewdly aligning themselves to it from an early moment. Now, Naim Label, Linn Records and B&W's Society of Sound are all doing hi res (24/96 or similar) downloads from subscription or pay websites. It's the reinvention of the nineteen eighties audiophile LP, the twenty first century equivalent of Rega's 'Jazz at the Pawnshop'. As I write, there are doubtless hundreds of Networked Attached Storage hard drives clacking away quietly, either rendering FLAC files out to a wireless network or slowly filling up as both downloaded and ripped music files populate them ever more densely...

So in the last few weeks of 2009, perhaps digital will mark itself out as the stand out event of the decade. Digital music distribution has finally made it possible to bring serious advances in sound to everyone (who's interested), when it could never happen as a disc-based physical format. Where's that going to leave us in 2019? I'd love to know! ●

CD replay is technically difficult, more like RF engineering than audio, and not all manufacturers have the necessary skills.

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"Why did that Ampex master tape become sticky in the first place? The answer is... whales!"



paul rigby

In this issue, I'm tying up some of the loose ends created by columns gone by and utilising a remarkable company as the tool to do it. That company is Delmark Records (www.delmark.com), a label that concentrates upon American jazz and blues. Born in 1953 and based in Chicago, USA, it was founded and is still owned by one of the industry's true veterans, Bob Koester. Delmark is famous for being one of the oldest independent record labels in the world. Responsible for recording classic jazz and digging up a range of legendary blues singers, the label is also a labour of love. "I produce music I like and believe in," Koester stated. "If I don't like an artist, I don't record them."

Often, an independent record label is, by inference, an extension of the owner's personality, reflecting his ambitions. For example, after its initial launch, Koester was so determined to record the music he loved, he asked his early partner, also a detective, to track down several elusive blues legends, bringing them to the label to record in the studio. This is why Delmark has the legendary Speckled Red on its roster via his 'Dirty Dozens' album, for example.

Being an independent means that money is tight and the company remains small. This does mean however, that the label can tackle projects that the majors wouldn't touch in a million years. Talking to Steve Wagner, Delmark's general manager, he talked about the company's size and, generally, what 'company size' can do to you. "If you expand a company past a certain point, you have to employ a certain amount of people to run it. It then

becomes a 'machine' and you have to feed the machine to keep it working", he told me.

This means that, as a larger company, you have to create and sell albums by artists which will be guaranteed to sell a certain amount of records to cover overheads and other costs. If not, the project is not worth it. This is largely why many niche artists never appear on major labels unless they break out to become national and international figures and why smaller labels are essential for the artistic and creative health of the music industry and also national cultural identity.

Delmark is not only national in its approach, it is also local being keen to promote new, contemporary jazz and blues. It's very active in the Chicago area, recording live albums for CD and performances to DVD. I talked about the live recording environment in the last issue, with jazzman John Surman. Delmark's Wagner readdressed my point that live performances suffer from a lack of detail. "I can find the aural 'sweet spot' in my studio but live? In any live room I'm stuck with the stage, obviously, which limits things. I've also got to work with the video director and the group set-up", he told me.

Hence, another reason that live performances feature less sound detail is *you*. You will insist on turning up to spoil the acoustics of the room and having your heroes stand on raised platforms away from the room's sweet spot so that you can see them and having whopping great boomy speakers blaring out so that you can hear them half a mile away. I dunno, some people!

One of the jewels of Delmark is its archive. Any company which can include Big Joe Williams' 'Piney Wood

Blues', Sleepy John Estes', 'The Legend Of Sleepy John Estes' and Junior Wells' 'Hoodoo Man Blues' with Buddy Guy as part of its catalogue has to be careful with its masters. However, as I've mentioned in the past, it's not so much these particular masters that cause the problem but those later master tapes during the seventies, largely from Ampex, that resulted in the infamous 'sticky' tape phenomenon. As I've mentioned in the past, such tape is prone to shedding oxide so, to play the tape, engineers have to bake it in a special oven in order to make it playable again...

What's always puzzled me, however, is how and why the tape became sticky in the first place. Wagner had the answer, "whales," he said, a little mysteriously... "The tape in the earlier days actually integrated whale oil into the chemical structure which enhanced its lifespan", he told me. However, when the call went out that whales were becoming endangered, the industry dropped the whale oil and reconfigured its tape recipe. The changed recipe was not as efficient however, which has resulted in those sticky tape problems. So now you know who to blame for that dodgy reissue of your favourite seventies outfit; a sea-faring mammal!

That growing archive is a precious thing, however and when you hear founder/owner, Koester, declare that, "I see the company more as a hobby," you realise that, in a way, you're peeking into and are able to enjoy one man's personal collection. It's a bit like turning up at a chap's house and asking to play with his prized model trains. It might be a hobby to Koester but it's also one that we can all appreciate, indulge in and enjoy. ●

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"it's a disgrace that the BBC and the BBC Trust make such wholly inaccurate statements about DAB's audio quality..."



steven green

I've had a major grievance for a long time with the way BBC executives who appear on the radio to defend DAB misrepresent important facts. Probably the best example of this occurred in 2003, when Simon Nelson, who was the BBC Controller in charge of digital radio at the time, claimed that, "for the vast majority of people, the sound quality they're getting through their digital radio set is vastly superior to that which they've ever had through their analogue radio". The *opposite* is in fact true, and since the Digital Britain report set a date for FM to be switched off (albeit that there's more chance of me winning the lottery than there is of FM being switched off in 2015, and I don't play the lottery), BBC representatives have made a number of similarly inaccurate claims...

The most significant recent example of this occurred when Tim Davie, the BBC's Director of Radio, appeared on Radio 4's 'Feedback' programme to answer questions about the plans to switch off FM. And when he was asked, "do you accept at the moment DAB is often inferior to the existing sound?", Tim Davie's response was that: "DAB doesn't have the coverage of FM at this point. And it's really straightforward that the quality of your audio is related to how close you are to a transmitter. So DAB currently has less transmitters, so those people who are farther away from a transmitter aren't getting as good sound." 'Feedback' presenter Roger Bolton then pointed out, "but that's a question about patchy reception, but the quality as well: even when you are getting what is supposed to be the best quality, there are some of our listeners who think that it still doesn't measure up to

what they're getting already through the analogue system." But Tim Davie simply repeated his original claim that "the quality of sound is based on where you are and the distance from a transmitter." That is simply *untrue*.

The correct answer is that DAB delivers poor audio quality because the bit rates being used are too low to provide good audio quality. And the reason why the bit rates are too low is because the broadcasters, in particular the BBC, chose to squeeze too many stations onto the multiplexes. The distance to the transmitter only affects reception quality, and it has *no* effect whatsoever on DAB's audio quality for anybody that has good DAB reception quality. As the broadcasters claim that 90% of people already have DAB coverage, even if the figure that actually have good DAB reception quality is significantly lower than that, I think it's fair to say that Tim Davie misinformed the vast majority of 'Feedback' listeners with his comments.

If it wasn't bad enough that the person in charge of BBC Radio couldn't admit the truth about DAB's audio quality, Sir Michael Lyons, the Chairman of the BBC Trust, which is the organisation that supposedly regulates the BBC, and claims to represent the interests of the public, also said on 'Feedback' that DAB would deliver "improved" audio quality compared to FM, with the *caveat* that this would only be possible "when you've actually got the same sort of coverage as you've got on FM".

The comments mentioned above are both highly inaccurate, but the prize for the most outrageous comments has to go to Tony Moretta, the chief executive of the Digital Radio Development Bureau (DRDB),

which is co-funded by the BBC and commercial radio to promote DAB, and its Vice-Chair is Tim Davie (so the BBC is jointly-responsible for Moretta's actions). Moretta has been wheeled out to defend DAB on BBC Radio on a number of occasions, and the inaccurate statements he's made are far too numerous to list here, so I'll just select some of the most outrageous ones.

First of all, when it was put to him that DAB is less advanced than DAB+, which a number of European countries have adopted, he said, "I think that's unfortunately one of the major urban myths about DAB"! Also on the subject of DAB+ he said that Germany and Australia had not rejected using DAB in favour of DAB+. And when asked about whether DAB+ was better than DAB, he said: "we don't believe it will make much difference to the vast majority of consumers", and when pressed about how much difference, he said, "well, the benefit is very, very marginal. You can potentially get slightly better audio quality [using DAB+]".

Needless to say, all of the above comments are complete and utter nonsense...

I honestly think it's an absolute disgrace that people at the top of the BBC and the BBC Trust consider it acceptable to make such wholly inaccurate and misleading statements about DAB's audio quality, or for people from organisations co-funded by licence fee money, such as the DRDB, to do the same. The people involved have clearly never bothered to look into the technical facts of the matter, or if they have done so then the only remaining conclusion is that they lied. Whichever is the case, it is completely unacceptable. ●

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"if you want a long and happy life then don't compare LP to CD, I could say..."



noel keyword

By the time this column makes it to print, the Audio 09 hi-fi show at Whittlebury Hall, Northants, will be a fading memory. If I'm lucky the criticism will be fading too! Let me explain.

Audio shows are always fun to attend and Whittlebury seemed to please a lot of people, but not all. I was busy upstairs in the Interlagos Suite working with Martin Colloms and Peter Comeau on the talks we were giving and this always was an 'interesting' experience, if for me not an entirely successful one this year. My comparison of LP to CD, received well at Manchester 07, didn't go down so well. Oh dear...

This year, as with Manchester 07, we were nearly scuppered by a curiously left field phenomenon: loudspeaker run in. For Manchester 07 I asked Tannoy for their mighty Westminster Royal SEs. I know Westminster Royals on song, driven by a quality valve amp, are a wonderful experience but 'ours' didn't sound right and it turned out they had been specially built for the demo and were not run in! We had no time to run them in. Luckily, B&W had supplied a well used pair of 80IDs that worked perfectly and went down well with the audience.

This year we were going to use a complete Electrocompaniet system but the Nordic Tone loudspeakers being built for us in Norway could not be completed in time, so we had to move to Plan B sharpish. This was to use a system Martin Colloms had ordered for his dem, which relied on a pair of PMC IB2 Studio Monitors (£8000), sitting on tall stands to fire over the heads of the audience. It seemed good to me, but when we arrived Friday they didn't sound right: incohesive, indistinct in the bass and

sharp in the mid. We panicked and borrowed a pair of floorstanders but by 10.30am Saturday morning the IB2s were beginning to sound better and we learnt later they too had been specially built and were not run in. Doh!

I am not a fan of studio monitors which, these days, commonly feature big midrange domes that are forward and sharp sounding, due to measurable and well understood break up modes. James Henriot of Whest Audio tells me that when sitting distant from them in a studio monitoring environment the problem isn't evident and Martin Colloms seemed smitten by the PMCs. On balance, bass apart, I thought the PMCs did a good job because we got a very consistent and revealing sound right to the back of the room, my main concern. But that wasn't good enough for our Advertising Manager, Debi Silver, who thought the sound was so bad she had to leave! Ouch.

What loudspeaker would I have chosen? My preference is for electrostatics, but they are not ideal for P.A. work (public address) because of the high sound pressure levels needed and Quads, Princesounds and Martin Logans do not come with stands. Tannoy Yorkminsters would work well but they do not come with stands either, so that leaves B&W 80IDs that worked well for us in Manchester and seemed to please the audience, when we conducted a straw poll. Whatever we ran, someone would be unhappy, but it is important to use a speaker that an audience agrees is decent under specific conditions of use.

Others were distinctly unhappy about my comparison of LP to CD however, for reasons I fully understand - and don't understand! There were many problems here. I chose ten albums I own on both

formats in an open comparison and in some cases the LPs sounded worse than CD. I wasn't trying to show that LP always sounds better, only making an open comparison between the two formats. Two people told me that other listeners around them were distinctly unhappy about this though; it didn't go down well at all. In future I will get demo LPs specially cut where I can control the whole process, then use them as a definitive comparison. I have already been promised a special half speed cut of Eleanor McElvoy on decent vinyl and a comparative CD. Next time I will be more selective and choose only good LPs, just to stay clear of the vinyl lynch mob! I understand their sensitivities though, because I prefer vinyl played properly to CD.

I used an affordable arm and cartridge (SME M2 10 + Ortofon 2M Black) to avoid being accused of unfair bias toward LP. But this did not go down well with vinyl lovers either who felt I was selling LP down the river by not demonstrating it to the best of its abilities with a good moving coil! Again, I understand this and will take two turntables next time, affordable and amazing.

Complicating everything, James of Whest Audio tells me he felt there was something wrong with LP replay and I suspect the output level control of our PSI.2 phono stage, which must be kept at maximum. I forgot this and we used it to equalise LP replay level to CD. Whoops!

Which all goes to show many things. If you want a long and happy life don't compare LP to CD I could say, but the truth is that there are many complexities and everything needs to be better thought through and implemented than I managed this year. Apologies to all who were upset, but as Arnie once said ominously "I'll be back"! ●



...ok paws up... maybe I did sell a few of my friends at the jumble sale... but it was only because I wanted my own Naim...



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adam smith

My obsession with turntables is well known to readers of this magazine, but what's less well understood is my relationship with loudspeakers. I spent a number of years wearing an Acoustic Engineer's hat, designing drive units, complete enclosures and active subwoofers. Yet I never tire of examining exactly how different people approach loudspeaker design; the aspects that they prioritise in order to obtain the best sound possible, and the way in which they approach the inevitable compromises when trying to make something affordable and stylish that covers every area of the frequency range with equal skill. In fact, I could quite easily become a loudspeaker hoarder alongside my turntable collection, but am assured by my nearest and dearest that this would be a very bad idea if I wish all parts of my anatomy to remain in the condition and position that Mother Nature intended [the nation can relax, then! Ed.]

As a result of this, I thoroughly enjoyed working through this month's group test contenders and taking the chance to re-examine some of those longstanding theories that have been expounded over the years. After all, we have all been conditioned to believe for so long that floorstanders are 'better' than standmounters, ribbon tweeters are 'better' than domes and sealed boxes are more often than not 'better' than ported ones, but I have never been convinced it's that simple. When talking turntables I often am asked questions like whether direct drive is better than belt drive and I have always answered that I believe the best way of driving a platter is by a well designed and properly implemented system, regardless of

whether a rubber band or a servo controller is involved. Equally with loudspeakers, I believe it is folly to follow the statements like those I have made above, as a loudspeaker encompasses so much more than just the raw materials that make it up.

The aforementioned group test was a perfect example of this as my general preference is for loudspeakers that are on the large side ("the bigger and uglier the better") as the wife succinctly puts it. So no one was more surprised than me when I discovered that the loudspeaker I would choose to live with from this month's selection was the one that would sit cheerfully on my upturned palm; the Audiosmile Kensai!

These units spotlight exactly how a loudspeaker design *should* be approached, in my opinion. They use very high quality drive units in a simple and yet effective construction and they have been voiced to really play to their strengths, but simultaneously making sure that the inevitable weaknesses, in this case, loudness and low bass, are carefully controlled and not allowed to overshadow the good parts. To my ears, this has worked a treat.

Eagle-eyed readers may also have noticed an omission from the test this month as well. After all, it was intended as an exploration of different loudspeaker design methods to encompass domes and ribbons, and small and large boxes, amongst others, but one extra angle I had hoped to cover was to include a sealed box loudspeaker. However, upon researching models I was very surprised indeed by just how few there are around these days, so the test remained an infinite baffle-free zone. What brought this home to me even more was leafing through my 1978 *Hi-Fi Year Book* recently to

put a name to a loudspeaker found at a car boot sale by a friend. I was astonished at the page after page of infinite baffle designs I saw as I searched, from the likes of Acoustic Research, Richard Allan, Celestion, Decca, Eagle, Mission, Tangent and Yamaha, to name but eight. It seems that the closed box has seriously fallen out of favour in recent times and ports appear to be the way everyone is going.

As to why this might be, I can only surmise that it is through cost-cutting and ease of design. After all, a sealed box requires very careful matching of driver properties to box dimensions and the two have to be designed in conjunction from the beginning. If for some reason a driver cannot easily be made to the specification that stems from the enclosure requirements, then any alterations made will impact back on the enclosure as well. Frankly, a ported design is a lot simpler and if your overall system doesn't quite sound quite right, it's a damn sight easier to chop a bit off the port tube, or stuff a different diameter one into the hole from which it came!

This is not being quite fair however, as designing a ported enclosure that really and truly gels completely with its drivers is actually every bit as challenging as coming up with a successful infinite baffle type, but the ported variety is definitely much more forgiving in terms of getting things 'approximately' right. As with so many things in life, the good old 80/20 rule can be applied again, in that a ported design can be brought to about 80% of its potential in around 20% of the time it takes to attain the ideal and fully optimised design. I just worry sometimes that some manufacturers are not quite allowing the remaining 80% of the time to fill that last 20% of potential. ●

vinyl section

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DECEMBER 2009

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ORIGIN LIVE ENTERPRISE C 100

David Price tries the latest incarnation of Origin Live's flagship tonearm...

LEEMA AGENA 104

Tony Bolton auditions Leema's new high end phono stage.

LYRA TITAN i 107

David Price is enamoured by Lyra's top moving coil cartridge.

GOING FOR A SPIN 111

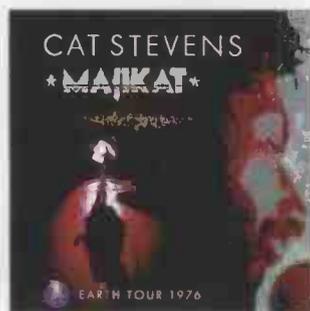
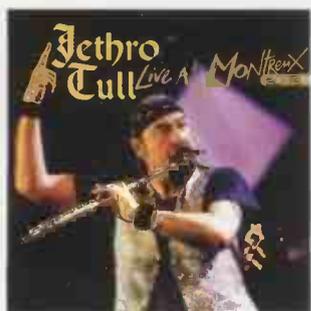
Paul Rigby rounds a range of the latest vinyl accessories.

news

FEELING BLUE?

Reissue label Monk, is offering a range of classic guitar blues tracks on a new range of vinyl LPs – the first time that they've been on the format for many years, if at all. As such, they represent an excellent archive and provide, for the first time, an analogue tint during reproduction. They include two albums from Charlie Patton. 'Electrically Recorded: Jesus Is A Dying-Bed Maker' and 'Electrically Recorded: High Water Everywhere' were both recorded in Grafton, Wisconsin, USA in October 1929 – the year he began his brief recorded output.

Also look out for Blind Willie Johnson's 'If I Had My Way, I'd Tear The Building Down', covering 1927-1929, Blind Willie McTell's 'Scarey Day Blues' covering tracks from 1927-1931 and the Mississippi Sheiks' 'Sitting On Top Of The World' from 1930.



LIVE ON VINYL

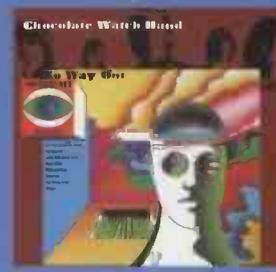
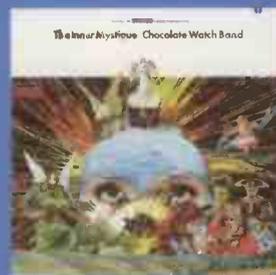
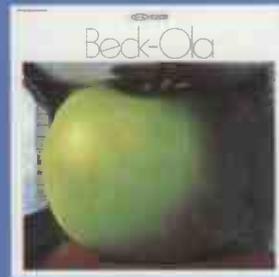
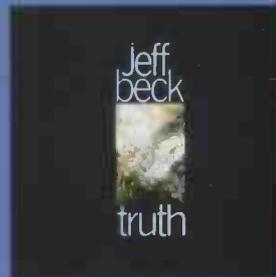
Two new live double albums have appeared on Audio Fidelity's 'Live On Vinyl' imprint, pressed on 180gm virgin vinyl. Mastered by Steve Hoffman, Jethro Tull's 'Live At Montreux 2003' features classics like 'Aqualung' and 'Living In the Past'. Cat Stevens' 'Majikat' is from his Earth Tour in 1976 and includes 'Moonshadow' and 'Father & Son'.

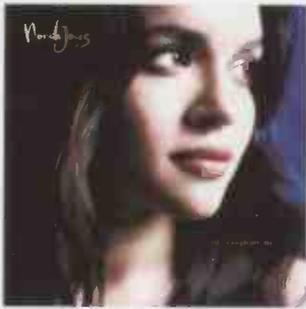
AMAZED AND SUNDAZED

Sundazed has released a batch of notable and very welcome vinyl LPs this month, beginning with two of the best albums ever made by Jeff Beck: 'Truth' (1968), a groundbreaking and immensely influential album that presaged heavy metal and 'Beck-Ola' (1969), that featured Rod Stewart and Ronnie Wood, the debut and follow-up albums that followed Beck's break with the Yardbirds.

Funk-soul fans should also look out for Betty Davis' 'Love Or Desire', a strong, feisty album that was presumed lost for many years after its 1976 recording. Now, Sundazed has restored the album via the original master tapes.

Also look out for three garage/psychedelic gems from the sixties. The Chocolate Watch Band, a garage/punk outfit, has both 'The Inner Mystique' (1968), despite being rushed and actually only featuring the band on side two, is a rock triumph while 'No Way Out' (1967) is the band's debut that, if you bought the original, would set you back in excess of £100. Finally, look out for Hapshash and The Coloured Coat's self-titled album (1967), a cult-ish, psychedelic rarity.



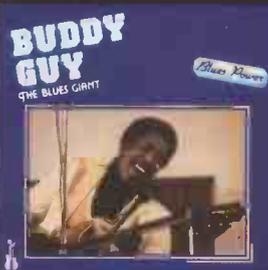


45 EDITIONS

Classic Records in the USA, has continued to exploit its latest vinyl technology, dividing albums into two, single-sided discs played at 45rpm on 200gm vinyl for the ultimate in sound reproduction. Sheer decadence! The first is Norah Jones' debut release, 'Come Away With Me' (2002), a low-key affair, quickly followed up by Lorna Hunt's 'All In One Day' (1999) – followers of Joni Mitchell should take a listen to this lady.

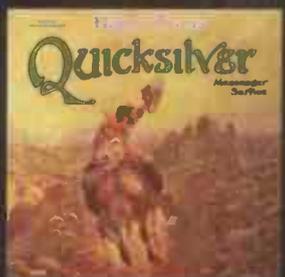


lorna hunt
all in one day



PURE SOUND

Responsible for some of the best sounding reissues currently on the market – all are pressed by the audiophile-friendly outfit, Pallas, in Germany – UK-based Pure Pleasure has a range of fascinating releases this month including Jefferson Airplane's 'Bless Its Pointed Little Head' (1969), the band's first live album featuring rearranged favourites. Also, there's Quicksilver Messenger Service's 'Happy Trails', the band's second release and the last to feature the original quartet, and Mary Black's 'Full Tide' which is a reissue of the 2005 album that was never properly marketed but fans need to hear it as Black's performances are sparkling. Also look out for Duke Ellington and Count Basie's 'First Time! The Count Meets The Duke' (1962), J.B. Lenoir's startling 'Alabama Blues!' (1965) and Buddy Guy's 'The Blues Giant', a controversial recording because of the long track lengths and rock-infused direction.

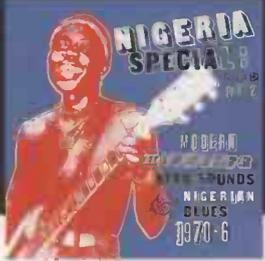
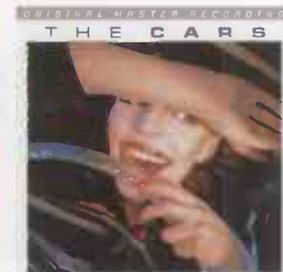
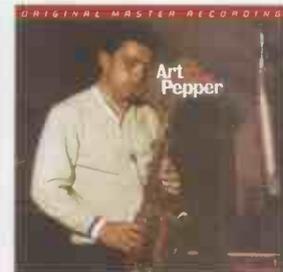


FOUR FROM FIDELITY

Mobile Fidelity has a reputation for going the extra mile with its reissues as well as delaying releases in order to make sure that each LP is just right. So we should be thankful that four albums have made it through the door.

Linda Ronstadt's 'Hasten Down The Wind' (1976) was a pop/country cross-over featuring songs of varying quality, The Cars' self-titled debut (1978) is a superb rock album from the new wave era featuring hits such as 'My Best Friend's Girl' and 'Just What I Needed'.

Jazz legend, Art Pepper's 'The Way It Was!' is a collection of tracks, released in 1972, from material recorded in 1957-1960 and is a quality album while Little Feat's 'Sailin' Shoes' was the band's superb second album release that is vastly different from their debut: less raw, more foot tappin' songs.



...AND FINALLY

Look out for the Arctic Monkeys' new album on vinyl. 'Humbug' has been pressed on 180gm virgin vinyl and comes with a MP3 voucher. Trinidadian poet/novelist, Anthony Joseph & the Spasm Band's 'Bird Head Son' was recorded live in the studio with no overdubs and it shows as the jazz/funk/rock music is full of verve and life. In the same theme, 'Nigeria Special' takes rock, blues and afro rarities from 1970-1976 and spreads them over two albums.



Carbon Mating

It's not only the marriage of carbon fibre and ebony wood that makes the new flagship Origin Live Enterprise C tonearm different to its predecessor, finds David Price...

The new Enterprise is, according to Origin Live's Mark Baker, the company's "last tonearm", at least for the foreseeable future. He sees its competitors as several European made arms costing around £12,000 rather than anything more affordable and closer to home. He suggests to me that he could have positioned his arm in that same market segment, but decided not to. "Origin Live have fought hard to avoid sending the arm completely into the stratospheric price league - which could so easily have happened", he confides. Still, its four thousand pound plus price tag is stiff, I feel. He answers that, as is the case with all high end hi-fi, part of the cost of the tonearm is in "the endless number of prototype parts and countless hours of testing needed to deliver the right balance of attributes".

Well, this newest Enterprise is certainly a well made product, with

a fine finish and an attractive look. My only criticism is that, at the not inconsiderable sum it sells for, OL could have taken more effort to make it easier, and indeed nicer, to set up. After all, unlike the SME Series V or Graham Phantom for example, there's no dial-in tracking force, VTA, azimuth or cartridge adjustment. Instead, we're back to moving weights along the arm end stub and securing it with an allen bolt, and fiddling with the cartridge body in the headshell slides. Not exactly a premium analogue experience!

"I know", says Mark, "but you've got to remember these things cost money that could go on the real build of the arm. The production Enterprise C is designed with sound quality in mind, and this means that certain sacrifices are made regarding ease of set up. To be honest this does not always sit well with dealers and reviewers who need to change their cartridges every other day. However,

for an owner, that extra five minutes required to set the counterweight translates into years of added listening pleasure".

He's right - it certainly *doesn't* sit well with allen key wielding hi-fi hacks. I always grumble about this, but then again I suppose if you buy a Lotus, you can't expect comfy seats, can you? What I am sure has got to go is the low rent packaging and a rather arcane and very heavily text-based instruction sheet. It's not as good as the instruction booklets SME were supplying forty years ago. But I'm assured this is changing, now that the new arm has reached full series production...

The new Enterprise's performance soon began to justify its price when installed on my turntable. The best way to characterise OL designs, I'd wager, is 'unipivots without tears'. They're a long way from that ultra precise and controlled, almost overdamped SME sound. But that's

not to say they can't do the 'hi-fi' bit too, because they're always as impressive to listen to as they are musically satisfying. "Unipivots have the advantage of very low friction along with good isolation; the sound is more transparent than conventional bearing arms", Mark tells me. "However, Unipivots never seem to have quite sufficient weight or grip in the very low octaves when compared to gimbal arms and this comes down to low frequency stability of the arm which is not prevented from rocking".

Agreed. This point was forcibly rammed home to me when, as a mere babe back in the late eighties, I went to audition the new Naim Aro unipivot against the new Linn Ekos (conventional) on my Linn Sondek LPI2. I ended up wanting the best of both worlds, not

quite satisfied with either...

The answer, as far as Origin Live are concerned, is the dual pivot bearing, where vertical movement of the arm is handled by the dual pivot and horizontal movement by conventional bearings. "It is interesting that three different high end arms (including the OL Enterprise) introduced dual pivot at almost exactly the same time – this idea almost certainly arrived simultaneously via original thinking because dual pivot is the ultimate system to pivot an arm", he argues. "It is very low friction like unipivot but unlike unipivot, it prevents the arm from rocking. Some may argue that air or magnetic bearings are the ultimate, but 'earthing' vibration is important to kill resonance. Completely disconnecting the arm tube from everything, via magnets or air, removes the earth path. A simple illustration is to hold a tuning fork as it rings, and then touch it on a surface to instantly stop the ringing".

The new Enterprise C retains the dual pivot bearings introduced earlier, but brings a new arm tube material, which Mark argues, "affects performance more than anything else. The effect of detrimental arm tube resonances amplified 8,000 times by the cartridge, destroys sound quality in a way that is almost unimaginable". He compares the resonant waves coming off a tonearm at a microscopic level to be "like watching the Atlantic sea in a hurricane". The cartridge's accuracy reading the

grooves of the record is determined by arm vibration, which is why *Hi-Fi World* uses an accelerometer to measure resonant modes; something he has watched with great interest. "Resonance can occur in torsional modes, main bending (vertical and horizontal) modes, and elastic elongation and spring back also occurs not to mention the effects of wall ripple in radial and axial directions. As if this was not enough, the resonance needs to be controlled evenly (evenly is the difficult bit) across the entire audible frequency band", he says.

As a result of this, the new Enterprise employs a very rigid structure to form the tube, including carbon fibre and ebony wood for damping, although "this is only the tip of the iceberg", as there are many other facets that Mark would prefer to keep quiet about. He argues that there's no one ideal arm tube material, and that it's wrong to obsess about arm tubes to the exclusion of other aspects of the design

- which seems to be becoming the vogue - but says they are still of fundamental importance.

One of the things he always talks about is decoupling, which is why he likes floating rather than rigid bearings for example, along with not hard-tightening certain arms on to arm boards. As for headshells, the Enterprise's headshell mounting plate is glued to the tube for strength, but bolted to the cartridge mount to slightly decouple it. It's very rigid, yet designed in an unusual way. "General wisdom dictates that an arm should be designed such that the cartridge tip is level with an arm's pivot point. This is done to minimise moments of inertia in vertical movement, but in the new Enterprise, the cartridge tip is brought slightly below the arm's pivot point. The secondary reason why this is an advantage was explained, when someone who has been measuring cartridge cantilever distortion, pointed out that because a cartridge cantilever (and suspension) is not horizontal but mounted at an angle, tracking distortion is actually reduced by effectively raising the pivot point (measurably so)", he

points out. The RS Labs RS-A1 is an arm that appears to take this argument to its logical conclusion, Mark observes.

Inside the arm, copper Litz wire is used, whereas outside Origin Live's new Linear Flow 2 cable is used, with RCA phono or XLR fittings offered. A fully balanced design, it uses a combination of over 5 dielectric insulators to ensure an even response across the audible frequency range. Great care has been taken to optimise key electrical characteristics such as impedance, inductance and capacitance. High purity copper was ultimately selected for its "more natural" tonal balance, regarded as being superior to silver in this application.

GETTING GOING

As I've said, installing the Enterprise wasn't the tactile pleasure that some arms can be, with particular criticism going to the fiddly VTA adjuster and annoying counterweight locking arrangement. But all this was a mere stroll in the park on a warm spring afternoon compared to the living hell that some unipivots or air bearing designs can be, so I shall let it be! After about an hour, the arm

was on the deck, and the cartridge in the arm. I used my usual reference Ortofon Windfeld, and later a Lyra Titan i, as it's a fave of Mark Baker. "Zyx and Dynavector are our default choice as being very even handed but Lyra and many others are also great", he told me.

Kicking off with Boz Scaggs' 'Lido Shuffle', and my first reaction was one of surprise at how superb the Lyra sounded. I found myself transfixed by its emotional insight, wonderfully propulsive midband and a joyfully deep and expansive soundstage. The music was audaciously powerful yet filigree detailed at the same time. But then I remembered I wasn't reviewing the cartridge, but the tonearm. Several days later, with the same album track and the Ortofon MC Windfeld now installed, my reaction was the same. How delightful that cartridge sounded, and wasn't the phono stage superb? Once again, I





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had to remind myself of the Origin Live tonearm's presence...

At the risk of putting the cart before the horses, this epitomises the new Enterprise's sound. It is as pure as the proverbial freshly fallen frozen water. The new arm tube is an instantly recognisable change to the product; whereas the earlier incarnation of the Enterprise had sounded a little warmer in the bass and more lively across the upper midband and treble, the new tube is like pressing an active noise cancelling button. Everything snaps back to a flat response, to so speak, with the euphonic colourations of the previous arm removed. But the



The counterweight (shown upside down here) has a flat to clear the arm pillar assembly below.

really clever thing is that the superior damping hasn't slowed the sound down. The arm doesn't sound slow or leaden as some rivals; quite the reverse in fact.

Donald Byrd's 'Streetlady', a classic BlueNote early seventies slice of rare groove (as jazz/soul of this period is now called), showed how breezy the Enterprise is. Bass was tuneful and fast, with nothing in the way of overhang yet very powerful when it needed to be. Across the midband, I appreciated the natural tonality of this arm; instruments sounded just as they should, whilst the recording studio's distinctive signature was faithfully revealed. This arm is superb in conveying the 'texture' of strings, or the breathy 'feel' of a flute; acoustic instruments sound precisely as they should without the sort of airbrushed quality I've heard from some other high end arms. The Enterprise's treble was a joy; hi hat cymbals and snare drums were rendered superbly, the tonearm allowing the Lyra

to showcase its exceptionally delicate and atmospheric high end to best effect; anyone who thinks DVD-Audio 24/96 treble is natural should hear this!

Moving to the darker, electric rock strains of My Bloody Valentine's 'Isn't Anything', and my favourite track 'When You Sleep' showed the innate sophistication of this arm. By anyone else's standards, this song is a four minute long feedback drenched wall of noise, and it isn't exactly easy to listen to. But the new OL arm managed to scythe through the dense mix, pulling out Kevin Shields' plaintive vocals with ease, and rendering them with a coffee-cream smoothness. By way of comparison, hear this on a stock Rega RB300 through my reference Yamaha NS1000Ms at high volumes and you'll be running for the door. This arm has a dark, velvety tonality that's much closer to the SMEV than OL arms of yore, and yet it doesn't sound quite so damped; whereas the SME is almost too controlled, the OL

little compartment, whereupon it's forced to sit quietly with its seat belt on and behave itself. The Enterprise however is a little more expansive and exuberant by nature; the musicians seem to be better able to breathe and assume their own critical mass, as it were. I find the SME peerless in a cerebral sense, whereas the Origin Live seemed altogether more organic sounding.

CONCLUSION

If, as we are told, this is to be the last Origin Live arm in a long time, then I can understand why. In terms of sound quality (if not packaging, set up and finish), tonearms don't get much better than this. It's a gloriously natural sounding design, considerably more open even than its illustrious predecessors, and showcases the magic of vinyl. Partnered with a top grade turntable and moving coil cartridge, it returns a dazzlingly fast and musical sound, yet with breathtaking clarity and sweetness too - surely the essential joy of vinyl.

"it returns a dazzlingly fast and musical sound, yet with breathtaking clarity and sweetness too..."

seems to get things just right.

The soundstaging of this arm isn't quite as tightly defined as the SME Series V. Whereas the latter has an architectural precision about where every instrument or strand in the mix goes, the OL sounds fractionally more diffuse, but more expansive too. As my fave DG pressing of Beethoven's Pastoral Symphony showed, the SME seeks to push everything into its own

REFERENCE SYSTEM

Marantz TT1000 turntable
SME Series V tonearm
Lyra Titan i cartridge
Ortofon MC Windfeld cartridge
A.N.T. Audio Kora 3T Ltd phono stage
Sugden IA4 integrated amplifier
Yamaha NS1000M loudspeakers

MEASURED PERFORMANCE

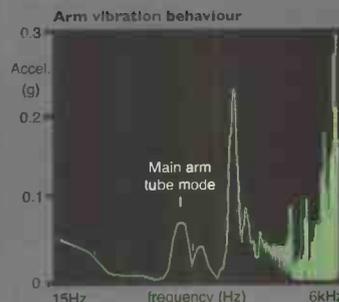
The first bending mode of this arm is at 325Hz, our analysis with an accelerometer shows. The peak is well damped though so the structure is quite stiff and damped in this basic resonant mode. There is some consistent peaking around 950Hz at 0.2g or so, likely third order behaviourally, and this isn't expected in an expensive arm. The peak is narrow so there is little energy in the mode and it isn't likely to be especially audible as a tubular 'ting'.

Above 6kHz the Enterprise C gets lively but this isn't uncommon with tubular arms possessing headshells and again the arm compared well with its rivals.

The Enterprise C has a nicely controlled structure that behaves well,

if not superbly considering price, across the audio band. It isn't quite as well damped as an SME V for example, but otherwise it compares with rivals that possess its easy usability. NK

ARM VIBRATION



VERDICT

Blissfully smooth, sweet and open sounding device showcasing vinyl in all its splendour; sullied only by middling packaging and fiddly set up.

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FOR

- superlative tonal accuracy
- joyous rhythmic fluidity
- atmospheric midband
- expansive soundstage

AGAINST

- fiddly set-up
- unlovely packaging

Leema Acoustics' flagship Agena is an exceptionally flexible phono stage, says Tony Bolton...



Multi Choice

This new phono stage comes clothed in Leema's trademark alloy casing with cooling fins along both sides, and its plethora of controls across the front panel and 11kg weight hint that this is not just another plug in and play product. A glance at the back confirms this, where there are two RCA phono unbalanced inputs, an optional XLR balanced input, RCA and XLR output sockets, along with a USB socket, S/PDIF digital output, and a pair of RCA sockets labelled 'monitor'.

Along with all the appropriate switchgear for these inputs, the fascia also contains a display, cursor pad for navigating the different setup options, mono, mute and standby buttons. Another button labelled Sleep Lock powers down the display, LEDs and processing functions, leaving only analogue circuitry in action. I felt that it made a small but useful improvement to the detail and texture of the sound.

The moving magnet and RIAA equalisation sections use NE5534 op-amps; the moving coil stages are fully discrete and use multiple, hand matched input devices. The output stage uses NE5532 op-amps. The USB and S/PDIF sockets connect to a Burr Brown PCM2906, 16bit delta-sigma Analogue to Digital Converter/ Digital to Analogue Converter. This allows for direct connection of your computer to the Agena via either of these sockets for archiving purposes.

The three analogue inputs have programming which allows two

different headshell settings to be memorised for each input, each being configurable for two levels of MM gain and resistance, and MC settings from 20 Ohms to 1 kOhm resistance, capacitance from 100pF to 1560pF, and gain from 1.6mV to 135µV.

SOUND QUALITY

Navigating the menu system proved very easy and I soon had two inputs configured for the Ortofon Kontrapunkt a (MC) and the MusicMaker III (moving iron, so the same setting as normal MM). Initially I would describe the sound as good, but a little tight. After a few hours listening things began to loosen up and open out, with bass notes beginning to exhibit better extension, and the treble reaching upwards more smoothly. The sound seemed to have stabilised after about thirty hours usage when I began to really explore the Agena's capabilities.

It's quite an honest sounding machine that certainly doesn't try to paint a rosy hue over the proceedings, but neither does it give you the other extreme of relentless spotlighting of every single detail, which can get rather wearing to listen to for long periods. Instead, it tried to find a middle path, a task that I feel it succeeded in.

A good example of this being the way it handled a moderate condition mid 1950s HMV copy of Jascha Heifetz playing the Bruch Violin Concerto No. 1 in G Minor and Mozart's 5th Violin Concerto in A Major, 'Turkish'. Listening first in

stereo, then switching to mono, the size of the soundstage didn't alter, merely losing the pops and crackles along each side. The condition of the groove walls were not flattered, but neither were they given more than passing notice. The detailing of the recording was excellent. I felt that I could look into the performance, and enjoy the London Symphony Orchestra, under the baton of Sir Malcolm Sargent in their full scale and glory, without the feeling of peering into a slightly murky box that some phono stages impart to such elderly and well used recordings. The soundstage was impressively deep, and occupied most of the area between the speakers.

The Agena arrived whilst I was working on the Tucana II/ Stello Ai500 review, so found itself connected to both of these amps, as well as spending an evening feeding Editor DP's reference Sugden Masterclass Class A integrated amp. The size and scale of the soundstage when fed through pure Class A electronics really showed off the Agena's ability to create a vibrant sonic picture.

Changing to a 1981 stereo recording of Trevor Pinnock (now CBE) playing Scarlatti Harpsichord Sonatas and I found myself sitting opposite a close miked instrument, each creak of the pedals, and the wooden mechanism flowing in concord with the music. The piece ended with a subtle movement of wood against wood as the sustain pedal was released after the last notes had completely decayed.



I was slightly concerned that the seemingly open nature of the Agena might have caused a few undignified jangles from the harpsichord, but I need not have worried. The forwardness of the sound remained within acceptable boundaries. Well lit enough to be detailed but not overexposed to the point of rawness. It was a point of balance maintained well enough to make the LP thoroughly enjoyable and absorbing, rather than the trial that it can be through overtly forward equipment.

Coming a little more up to date found me playing the Mamas and the Papas live at the 1967 Monterey Pop Festival on a good condition, original Dunhill stereo pressing. Here there were no holds barred in the flow of detail. The (organised?) chaos of the event, and the excitement of the group fell out of the Ursa Majors in waves. The detail came alive with a tingle of energy that seemed to characterise the Agena's reproduction of anything I played through it.

A lot of audio equipment I have heard over the years tends to confuse displaying emotion in music with making things sound a bit warm, friendly, and often rolled off at the top end. Electronics that are more honest, often coming across as a bit cool and detached instead. Here the Agena was fearless, exploring high frequencies and the peril of what little surface noise there was, with a discerning eye for what was actually wanted, but at the same time expressing the humanity that created that piece of music in the first place.

Curious to see just how well behaved the Leema was, I swapped Hadcock arm tubes and plugged in the one permanently equipped with a modified Denon DL103 moving coil cartridge. This sports a .32 truncated conical stylus for 78 reproduction. The shape misses the bottom of the groove where most shellac surface noise lurks, and combined with the gentle but effective high frequency filter made listening to an evening's worth of '20s, '30s and '40s jazz records a satisfying experience. Good condition '50s recordings were played without the filter and offered microgroove levels of insight and detail. The higher recording levels of 78s proved no problem for the Agena, unlike some phono stages which can get shouty.

CONCLUSION

Expensive yes, but the Leema Agena has a host of facilities that will be useful to some, plus sound quality that hit all of the right spots for me. It displayed great detail and real emotion, although others might find it a little too boisterous in some systems, preferring the cooler, less emotionally intense sound produced by the rival Whest

REFERENCE SYSTEM

Clearaudio Master Solution/
Carbon Satisfy Tonearm/
Ortofon Kontrapunkt a turntable

Linn Sondek LP12/
Hadcock 242 Cryo/
Denon DL103 turntable

Leema Tucana II amplifier

Chario Ursa Major loudspeakers

PS.30RDT [see *Hi-Fi World*, July 2009].
The Agena is a must for audition then, and comes highly recommended for sonics, facilities and build.

VERDICT

Reference class phono stage with unusual connectivity.

LEEMA ACOUSTICS

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FOR

- clean, lively sound
- fine onboard ADC/DAC
- mono switch and filters
- takes up to six headshells

AGAINST

- price

MEASURED PERFORMANCE

Gain with MM was low at x63 (36dB) and x126 (42dB) with 4mV and 2mV settings respectively. Insensitive amplifiers (e.g. Arcams at 400mV) need double these values, so volume control settings will be high. Gain with MC had a far wider range, from x277 (49dB) up to a usefully high x3174 (70dB) and input noise was also extremely low at the highest gain setting, measuring 0.05uV IEC A Weighted, around -4dB quieter than the 0.08uV or so that is common.

Equalisation was accurate, giving flat frequency response from 8Hz to past 100kHz (-1dB). There is no warp filter, so low bass will sound extended. A small amount of lift toward high frequencies (+0.2dB) can be seen in our frequency response analysis, so the Agena will not sound warm by any means.

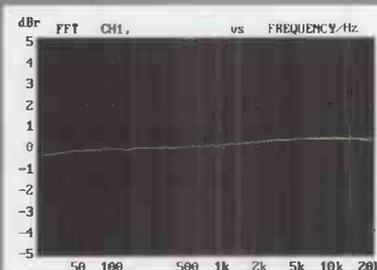
Output overload was a common 9V, usually set by the supply rails of internal ICs. Input overload values were satisfactory as a result, lower

gain settings giving the highest overload margin.

The Agena measured well and will sound accurate and silent in use. It especially suits super low output moving coils. NK

Frequency response	8Hz-100kHz
Separation	71dB
Noise (MM/MC)	0.34 / 0.08uV
Distortion	0.002%
Sensitivity (MM /MC)	x126 / x3174
Overload	9V out

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Star Struck

David Price is enamoured with Lyra's flagship moving coil cartridge, the Titan i...

Surely the real area of excitement in the past few years has been analogue. The leaps that turntables, tonearms and cartridges have made in the past two decades are manifold. The reason for this of course that it's an *infinite* system, theoretically limited down to the atomic level. Equipment that can trace ever more accurately the minute undulations of the record groove keeps appearing, bringing ever higher replay quality from black plastic. This is down to advances in good old fashioned mechanical engineering; the use of ever more appropriate materials in ever more intelligent ways is bearing fruit. Turntable bearings, suspension systems, drive and speed control systems, tonearm tube materials and wiring, and cartridge body, generator and suspension systems, plus ever better styli and cantilevers, have taken us closer than ever to what's really in the groove.

One designer who understands this more than most is Jonathan Carr. An American living in Tokyo, I knew him during my residence in Japan in the nineties. On visiting his apartment and hearing his system (s), I'd never fail to be amazed by the breadth of his knowledge of analogue systems, and his unfaltering interest in materials technology. It is he, along with his expert cartridge builder Yoshinori Mishima, who form Lyra. The company was launched in Japan at a time when vinyl's star was very much on the descendent and every company was leaving the market, it's now one of the most experienced cartridge brands of the modern age.

The Titan i is the fourth generation of Lyra flagship, and shows all of Jonathan's accumulated experience. The body is machined from a single piece of lightweight titanium alloy, shaped to minimise standing waves and thus resonance.

The internal body structures are said to be "too intricate to be formed by mechanical means", and so a non-contact process known as electrical discharge machining is used. This makes for an extremely rigid yet light structure, which has a "clearly defined reference pivot" for the cantilever, meaning the body can 'sink' the vibrations from the stylus out into the tonearm, sparing the critical signal generator area and its magnetic gap and signal generator coils.

For similar reasons, the front magnet carrier of the Titan i is both non-magnetic and non-conductive. This is said to prevent dynamically induced variable eddy currents that would otherwise interfere with the primary magnetic field and distort the signal generation process. Two symmetrical disc magnets are used in the generator system, and the signal coils are wound from high-purity 6N copper over a chemically-refined high-purity iron core, gold-plated to reduce eddy currents. The cartridge uses a very short suspension wire, and the cantilever assembly of the Titan i has been mounted directly to the body, obviating the need for intermediate mounting methods such as pole-pieces or subcarriers.

The cantilever is made from a "compound structure", designed to speed the transmission of energy down it yet damp itself in other planes. It comprises a solid boron core, an outer diamond layer and an additional metal jacket for reinforcement. Both it and the insides of the body have been shaped so that when the two components are joined to each other, a double-knife-edge system is created, which concentrates as much pressure as possible on the joint area and thereby achieves a type of cold weld, says Lyra. This minimises the number of mechanical joints between the cantilever and tonearm, and maximises mechanical

energy transfer away from the stylus and generator area. The Lyra-designed, Ogura made stylus rides at the tip of a low-mass diamond block.

SOUND QUALITY

I installed the Titan i in both SME Series V and Origin Live Enterprise C tonearms, on both Sony TT-S8000 and Marantz TT-1000 turntables. It's not especially difficult to fit, and I do like the excellent stylus guard, which can only go on (or come off) one way and protects the cartridge, and indeed much of the body too, during fitting. In my thirty years of installing cartridges, I've caused more damage when removing or fitting stylus guards than I have any other way, so this is an important point. The best venue for the Titan i turned out to be in the Marantz/Origin Live deck, tracking at 1.75g.

I've been fortunate enough to have experienced a good number of high end moving coils in my time, but it's fair to say that none have impressed me as much as this one. Generally it's a case of loving what a particular moving coil does in one respect, such as the Koetsu's beguiling musicality or the Ortofon Windfeld's analysis, but for me the Lyra Titan i just did everything I could want from a cartridge straight out of the box. It is such a conspicuously gifted performer that, aside from marvelling at its amazing twenty first century high resolution analogue sound, you start wondering why you've never heard the rest of your system in this way before. And as one who's becoming increasingly seduced by high end digital, thanks to my few weeks spent with dCS's Paganini DAC, suddenly analogue delivered a crushing counterpunch!

Simply put, the Titan has a wonderfully open, expansive and fast sound. But it's not at the expense of



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harshness or lack of subtlety. Its trick is to give you everything that's great about state-of-the-art, high resolution vinyl playback with absolutely none of the usual drawbacks. Normally a blindingly fast and incisive MC gets some of this character through an artificial edge, a certain 'zing' to give it some swing, if you like. Yet here we have a dizzyingly fast, spectacularly dynamic transducer that's as sweet as a baby with chocolate around its mouth. Yes, you *can* have it all!

Having spent a good long time with the cartridge, I can cite countless examples of its breath-taking all round ability. Boz Scaggs' 'Lido Shuffle' sounds like a decently recorded late seventies AOR tune through most moving coils, but the Titan i unwrapped it like a parcel to expose a far more sophisticated production. On a superficial level, it has immense clarity; suddenly you feel the mist has lifted to reveal a blinding autumn morning in all its glory. But with that comes delicious subtlety too, as it's not as if the Lyra gets this clarity by turning the contrast up a touch too much. Suddenly I could peer right into the back of the vocal booth, hear every last vocal inflection, languish in the grain of the singer's voice and get behind what via most other moving coils sounds like a nasal wine.

At the same time, the Lyra unfolds layer after layer of detail about the mix, and all the instruments used. It's like you can hear right into the original multi-track, snapping your focus on to any one of twenty (or more) tracks and hear the musicians pound out their part. Cumulatively it's a spectacular experience, as you realise you've finally got what the producer was hearing all those years ago - pulsating kick drum, hi hat cymbals crashing emphatically, guitars cranked up bashing out power chords with nail-breaking force and a blistering vocal performance from Mr Scaggs. Via this cartridge, the rhythm is so infectious, the dynamic accenting so arresting and the overall feel of the performance so powerful. Yet despite this barnstorming delivery, the Titan i remains curiously delicate and discreet.

Tonally, the Lyra is about as near to neutral as I've heard, but if there's any coloration at all, it's an ever so slightly silky patina to the upper midband and treble. There's the faintest hint of chiffon across female vocals, for example. Kate Bush's 'Moving' from the kick inside has a faint silky glint, the slightest shimmer of sweetness that perhaps you could say wasn't originally there. Alongside

this, the Titan i conveyed the majesty of the song's musicianship, with those long, languishing bass notes pushing the piece along gently, that swaggering rock drumming and gentle piano cadences. Everything was located with such architectural precision, locked in space like a laser light show, and once again, the effect was mesmeric. I found myself basking in the warmth and atmosphere of the performance, hypnotised by a blazing vocal performance from a doe-eyed eighteen year old girl at Abbey Road studios.

Give this cartridge more modern music of an entirely different genre and it remains completely consistent. Everything that I loved about its blistering rendition of 'Lido' or the seductiveness of 'Moving' shines out through 808 State's 'Pacific 202'. One again, the cartridge starts with a deep, powerful and expressive bassline that switches on and off like a light emitting diode. It's wonderfully

tuneful, yet tonally just as rich as it should be. This classic slice of late eighties house music isn't the most open

sounding however, so I was delighted by the way the Lyra unpicked the dense mix. The midband was exceptionally detailed, with countless new elements of the recording that I'd never quite discerned before, all laid in front of me like a freshly microwaved ready meal on a plate. The classic Roland TR808 drum machine was wonderfully carried, the dense layers of percussion all neatly presented for all to hear where so often they've come as a single indistinct mess of noise. Once again, I adored the Titan's treble, those electronic hi hat sounds glinting out of the mix like ships on the night sea, and with such sweetness too.

CONCLUSION

I could go on. Every type of music I've tried with the Lyra Titan i

has shown it to be an exceptional performer. It is so neutral and detailed and open and expansive, yet is never cerebral or matter of fact. It's infectiously rhythmic and so expressively dynamic yet never unsubtle or clumsy, and remains completely devoid of bluster. It invests the music with a creamy, silky sweetness yet you couldn't ever call it coloured, and it's so gifted at getting right into the tonal patina of an instrument or conveying the grain of the voice. It's one of the most viceless moving coil cartridges I've ever heard, and yet could never be accused of being bland. This is, to my ears at least, a very special moving coil cartridge, which when given a suitably capable turntable and tonearm shows just how far digital has to go before it even comes close to what analogue is capable of. Its beautifully honed design shows that the venerable LP is capable of stellar sound.



VERDICT ●●●●●

Surely one of the very best pickup cartridges yet made, this is a superlative performer in every respect.

LYRA TITAN I £2,895

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FOR

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SPECIFICATIONS

Cantilever: Diamond coated boron rod and natural diamond,

Stylus: Ogura line-contact (3 x 70 micrometers profile).

Internal impedance: 5.5 ohms

Output voltage: 0.5 mV (5.0cm/sec., zero to peak, 45 degrees)

Cartridge weight: 10.5 g

Compliance: Approx. 12 x 10⁻⁶ cm/dyne at 100Hz

Centreline through mounting holes to stylus tip: 9.5 mm

Recommended tracking force: 1.6 - 1.75 g

MEASURED PERFORMANCE

Frequency response of the Titan-i is impressively even all the way to 20kHz our analysis shows, a +2dB lift taking effect above 8kHz. Unlike the old Titan, there is no peaking above this frequency and this will avoid obvious sharpness and top end spit, whilst ensuring detail is still made obvious. Inner groove losses cause upper treble to roll down a little, the red trace in our graph showing this just makes response a little flatter - no bad thing.

Tracking was poor by modern standards, both at 300Hz where the Titan could only clear 45um peak amplitude, whilst even budget designs commonly manage double this. Increasing tracking force to 2gms got it through 60um, a worthwhile improvement. At 1kHz performance was again poor, the limit being just 15cms/sec, where rival MCs manage 25cms/sec. At 2gms it managed 18cms/sec - just. The Titan is not a good tracker and occasional mistracking may be heard in use, especially at the recommended lower VTF of 1.65gms.

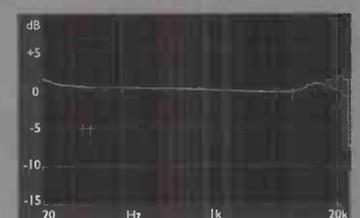
Distortion was low on lateral modulation, measuring just 0.5% at 45um, rising to a still low value of 2.5% on vertical modulation, both being second harmonic only and relatively innocuous subjectively. The vertical figure was helped by a Vertical Tracking

Angle of 24 degrees, close to the 22 degree ideal and somewhat more accurate than most rivals. Output was healthy enough at 0.6mV at 5cms/sec rms so preamp hiss will be inaudible.

The Titan measures well, with the exception of tracking ability, which was mediocre. Raising VTF a little from 1.75gms to 2gms helped to lessen this weakness. NK

Tracking force	1.75gms
Weight	10.5gms
Vertical tracking angle	24degrees
Frequency response	20Hz - 20kHz
Channel separation	30dB
Tracking ability (300Hz)	
lateral	45µm
vertical	45µm
lateral (1kHz)	15cms/sec.
Distortion (45µm)	
lateral	0.5%
vertical	2.5%
Output (5cms/sec rms)	0.6mV

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Mission 774S tonearm with damping trough. £179	Cambridge Audio CD5 CD player with remote. £49
Mission 775S turntable. Cut out for 774/SME. Boxed £349	Rotel RCD-970XB CD Exc condition remote £99
Sony CDP-911E CD player. Remote/book. Cost £300 £119	Meridian 200 CD Transport. Excellent condition. £149
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Technics SL-150 turntable. Cut out for SME3009 CG £99	Goldring 1022GX cartridge. MM. Little use. Boxed £99
Arcam DV78 DVD player. Manual/remote. Silver. £249	Thorens TD150. SME cut out. With lid. £99
SME 3009 Series II arm. Early split weight version. £349	Arcam Diva CD92 CD player. Silver. Good condition. £399
Audionote TTI turntable. Requires arm. Rega mount. £399	Denon DCD-620 CD player. Good condition. £159
Denon DCD-620 CD player. Good condition. £159	Sony MDSJ8920 SME disc player. Rec. Mint & Bxd. £129
STD 3055 with mini mount. Black finish. £129	Marantz CD73 CD player. © 1984. Nice condition. £275
Ariston RD180 turntable. Ready to fit SME tone arm £149	Thorens TD160B MK2. Black. SME cut out. £149
Nad 504 CD player. Exc condition. No display £49	Arcam Audio CD5. Black. Finish. Boxed/remote £159
Rotel RCD 965 BX CD player. Tweakers dream. £149	Rotel RCD 865 BX CD player. Superb condition. £99

SPEAKERS

Celestion SL1251 speakers. Piano black. Gold plated screws. Made as one off for managing director of Celestion £449	Kef 105.4 speakers. Super condition. 1 owner. £499
Celestion 100 speakers. Nice condition £299	Wharfedale Linton X2 speakers. Exc condition. boxed. £49
Quad ESL57 speakers. Black. OTA serviced. Ex con. £799	Kef Q35 floorstanders in black. Good condition. £125
Aeon Acoustics linear speakers. Ribbon speakers. £399	Celestion DL12 floor standing speakers £129
B&W DM2 Viki loudspeakers. Awesome sound. £175	new name/speakers etc. 12 months warranty. Awesome. £169
Pair Quad ESL63 (quad) speakers. Fully reconditioned with all new name/speakers etc. 12 months warranty. Awesome. £249	Wharfedale Diamond 9.1. Exc condition & boxed £129
Castle Seventies in excellent condition. £249	Shure M75 cartridge. Excellent condition. £169
Pair Quad ESL57 speakers. Fully reconditioned including 2 new Otec treble panels. Awesome sound & dynamics £1299	SME Fluid adaptor kit. Complete & boxed. £69
Quad ESL57 speakers. All fully serviced with full 3 months warranty. Hear what ESL75's should sound like. From Kef Cuda 7. Black finish. Boxed & mint. £49	Pioneer 3 piece speaker set. Brand new. Cost £200 £150
Celestion Little one speakers in white. Boxed. £99	Kef C20. Black finish. £59

OTHER ITEMS

Quad Afronomia sleeve for 33, FM3. Rare. £39	Nad 6050C cassette deck. Adjustable bias. £29.00
Revox A77. 3.75 and 7.5 IPS. 2 track. £149	Thorens TD126 MK2 electronic & Sme series 3 arm £449
HiQ balanced phone pre/lead amp. Awesome. £249	RCS-FF1 Cassette deck. Mint & boxed/instr. £29
Akai AF-33VL FM/AM stereo tuner. Mint & boxed £39	Akai CS-F11 Cassette deck. Mint & boxed/instr. £65.50
Pioneer CT-4600 Cassette deck. Mini & bxd/instr. £29	Sony ST-5370 FM RDS Tuner. Exc condition. £29
Kef T27 tweeters X.2. Good condition. £43	Kef 8200 units X.2. Good condition. £49
Kef B139 bass unit. Race track design. £35	Shure M75 cartridge. Excellent condition. £25
Lenk battery operated MC pre-amplifier. £59	SME Fluid adaptor kit. Complete & boxed. £69
Quad FM1 stereo tuner. Serviced by One Thing Audio and fitted with top quality stereo decoder. Good condition. £45	Sonic Link S-Gold mains cable 1.2M £45
Ortofon MCA-76 MC pre amplifier. Tatty condition. £49	Linn LP12 armboard for Linn arm. Exc condition. £20
Arcam Diva T61 tuner in black. AM, FM, RDS £29	Quad Multiplex FM decoder for FM1. Needs service £89
Rotel 180 stereo tuner. £299	Quad FM13 tuner in excellent condition. From... £99
Yamaha YSP 800 S.1 speakers with digital amps. £299	Quad mounted in box/cabinet. Nice original cond. £299
Revox 36 valve reel to reel player. 3.75 and 7.5 IPS. Needs to be fitted in box/cabinet. Nice original cond. £799	Pro-tone 0.22uf paper in oil capacitors. 500V. 10% £799
Pro-tone 0.1uf paper in oil capacitors. 500V. 10% £799	Marshall ECC83/12AX7 specially selected valves. From... £99
Top quality paper in oil capacitors 0.1 and 0.22uf 99.99% pure silver wire. 1.0mm. Price per metre. £6.00	Groove stands for ESL563 speakers £239
Purer stands for Quad ESL57 £239	Rotel RD360 tuner. Missing button £39
Mention remote for 206 series. Rare & good cond £159	Nakarachi CR1E cassette deck £129
Chord Chorus interconnect. 1.5M. Cost £300 £39	Nad 602 cassette deck. Boxed with instructions. £89
Denon TU260L stereo tuner £79	Nad 412 tuner. Mint/boxed/book/let/original receipt. £89
Nad 402 stereo tuner. Excellent cond. Great sound £95	Quad FM1 Valve tuners. Various prices from only £POA
Musical Fidelity T1 FM tuner. Award winner. £300	

QUAD ESL57 & ELS63 PANELS/SERVICING ETC

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Going For A Spin

By its very nature, the world of vinyl is supported by a gamut of turntable accessories, storage options and gizmos. Paul Rigby rounds up some of the best new ones on offer...

MOBILE FIDELITY ORIGINAL MASTER SLEEVES £19.95 (PACK OF 50)

The importance of a good quality inner sleeve is difficult to overstate. It seems such a simple change to make to any record but it's one that can



hold the balance to its future.

A paper inner sleeve is better than nothing, but does nothing to eradicate static which attracts dust and grime into the sleeve. Add that dust to the inherently harsh physical make-up of paper and you have an excellent, fine-grain, sandpaper constantly attacking your precious vinyl and increasing the chance that surface noise will become a permanent fixture to future replay! These Mobile Fidelity sleeves are made from soft plastic with a paper insert within one half to act as a stiffener. Because of their construction, they act as an anti-static agent and will not scratch the vinyl surface.

TIPTONIC STYLUS CLEANER £10.95

From time to time, the stylus on your turntable is going to become dirty. The causes are manifold but if your stylus has to plough through a dirty record or a basically clean record but one that's been left in a dusty room for a while then it will accumulate

dust and grime. Over time, other contaminants may begin to coat the fine stylus tip,



lowering its capacity to read all of the relevant groove information. Hence, frequent stylus tip examinations are recommended and, if dirty, attention from a good quality cleaner such as the TipTonic is recommended. Arriving with a firm brush – that type that ladies used to use on their eyelashes – the liquid is contained in a 15ml, ready dispenser. Brushing from the rear to the front in gentle sweeps, the liquid quickly dissolves any gunge that happens to be sticking to your stylus.

CLEAN-IT BLUE HORIZON £19.95

If there is one thing you can guarantee about the sockets on the back of your turntable, it's that they will collect dirt and muck over time impairing the quality of the contacts themselves. Every socket on the rear of your hi-fi is liable to electrical contaminant build-up that reduces the purity of the electrical contact which threatens to reduce the overall sound quality of your system. Arriving with an applicator brush and small cloth, the



Clean-IT system not only removes this harmful gunk but improves the connection between a plug and socket made from different metal types. In use, you 'paint' on the clear liquid and then rub with the cloth. I actually used up the cloth during my first run, there was so much dirt coming off both the sockets and cables. Reportedly, the 10ml bottle will last for around 100 applications. Highly recommended.

COVERS 33 7" STORAGE CASE £31.99

Long-term CD storage is pretty common, ranging from veneer-covered furniture to those ugly, skeletal, wire-frames while, for 12" LPs, I'm reduced to scouring office



catalogues for easily convertible book shelves. Storing 7" vinyl is more problematic, partly because of its size but also because of its sleeve fragility, which is easily squashed if not properly stored. This 7" storage box is a portable, 2-lane affair that allows you to pack in 200 singles. It even includes a detachable



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AWARDS 2009

PRODUCT OF THE YEAR

STEREO SPEAKERS & SUBWOOFERS

WHARFEDALE DIAMOND 10.1



DIAMOND 10 SERIES

For almost 30 years, Wharfedale's famous Diamond speakers have served as the classic entry point to true high-fidelity sound, their exceptional value for money earning dozens of awards around the globe. Now, with the introduction of the Diamond 10 Series, Wharfedale has again raised the bar for affordable, high-performance loudspeakers.

The latest evolution of this classic speaker range builds upon the success of its multi-award-winning predecessors with numerous enhancements, including a more rigid enclosure and a high-gloss, polymer-finished front baffle, giving greater support to the new, improved drive units. The result is a sound that's crisp, focused and spacious, effortlessly dynamic yet firmly in control. Add the visual appeal of elegantly curved cabinets, enhanced by a choice of six perfectly formed finishes, and it's clear: the new Diamond 10 Series is the sparkling jewel in Wharfedale's crown.

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Wharfedale

lid so it's ideal if you attend record fairs or want to take the box around to your friends for them to shuffle through. Once closed, the lid features two clasps that can each be locked with attendant keys while the whole thing can be easily carried via a strong handle. The box measures 42x 22.7 x 33cm. Internally, it spans 40 x 19.8 x 29.8cm.

AVID HIFI LEVEL 45 £40

I've seen good quality level gauge accessories from the likes of Clearaudio and 45 adaptors from Nagaoka and even, in the past, 180gm weights



– but I've never seen all three offered as a single tool. The Level 45, consisting of two bits of metal, arrives in a small, neat cardboard box. Inside is a basic, yet beautifully milled, 45 adaptor to enable you to play jukebox 45s as it serves as the stabilising spindle holder. Sitting next to it is a Precision Level - a bubble level with target-like measuring that easily handles all dimensions. The neat, unseen, third tool emerges when you place the 45 adaptor on the turntable spindle then place the Level on top. Combined, they weigh almost exactly 180gm – the weight of a quality LP. This means that you can also test the suspension on a suitable

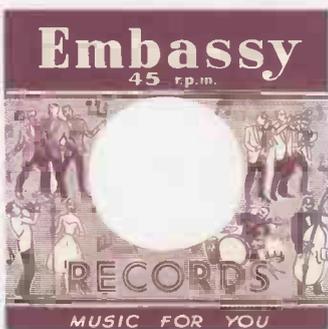
replacement duplicates spanning a wide range of classic and popular labels such as Embassy, Parlophone, HMV, Top Rank, Fontana, Oriole and many more. The sleeves, which are well printed, elevate any singles collection providing both form and context where they may have been little or none before. They also look great, restoring the 7" to its former glory. A brilliant idea that should be investigated by all collectors.

DECENT AUDIO ONE DECENT WALL SHELF SINGLE SHELF: £249, DOUBLE SHELF: £349

Especially useful if your hi-fi room is based upon a suspended wooden floor that causes the needle to bounce from its groove if you even dare to shift your weight in your chair. The One Decent Wall Shelf is based around a steel frame. Unlike



many other designs, however, no glass or MDF is used which some observers believe adversely affects the sound. Using acrylic instead, the shelf features a top isolation plinth, measuring 25mm thick, and decoupled from a lower shelf by specially selected cones or elastomer squares, both provided in the kit. The top shelf will carry up to 40kg when properly fixed to the wall, enough for virtually all turntables on the market. In use, the presentation appeared more focused and confident, while bass was more controlled, accompanied by an attendant reduction in bass bloom.



turntable. Simple yet stylish.

COVERS 33 REPRO SLEEVES 41P EACH

Have you ever bought a 7" single at a record fair or from a record or charity shop and, as you lift it from its storage shelf, the fragile paper cover almost comes away in your hands? Worse, many 7"s are bought in make-shift card sleeves or stuffed in a wildly inappropriate cover: a Motown single inserted within a Fontana sleeve, for example. Covers 33 has provided an ideal solution to those tatty covers by offering

POLARIS PLUS STYLUS ALIGNMENT GAUGE

STYLUS ALIGNMENT GAUGE

1. Place the gauge on the record groove. The stylus tip should be centered in the groove. The gauge will show the correct alignment.

2. Adjust the gauge until the stylus tip is centered in the groove. The gauge will show the correct alignment.

3. Once the gauge is centered, the stylus tip will be centered in the groove. The gauge will show the correct alignment.

4. The gauge will show the correct alignment. The stylus tip will be centered in the groove. The gauge will show the correct alignment.

POLARIS PLUS STYLUS GAUGE £6.50

Vinyl fans with a half-decent turntable have to be sure that all the components are set-up and working

POLARIS PLUS STYLUS ALIGNMENT GAUGE

STANDARD PATTERN

1. Place the gauge on the record groove. The stylus tip should be centered in the groove. The gauge will show the correct alignment.

2. Adjust the gauge until the stylus tip is centered in the groove. The gauge will show the correct alignment.

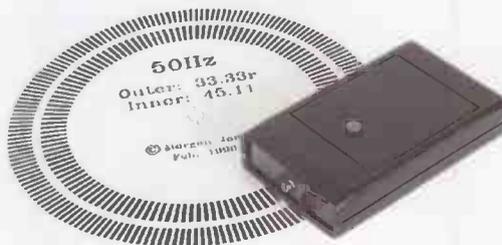
3. Once the gauge is centered, the stylus tip will be centered in the groove. The gauge will show the correct alignment.

4. The gauge will show the correct alignment. The stylus tip will be centered in the groove. The gauge will show the correct alignment.

as designed – otherwise a portion of that sound quality will be lost. For example, if the turntable's arm is not set up properly, you can introduce unnecessary distortion plus excessive stylus wear. This simple piece of formed card allows you to monitor that potential problem. Simply place one hole over the turntable spindle, lift the turntable arm (which has been 'zeroed' of tracking force and anti-skating) then point the arrow directly at the vertical point axis of the arm. Move the arm and cartridge until the stylus aligns to the appointed dot on the grid pattern. If the alignment is matched then you're sorted. If not, you will need to adjust your turntable arm's position. A quick and easy method of improving your vinyl sound quality.

THE ZAPPER £72

If you are concerned about the accuracy of the speed of your turntable or if you have a turntable that features a variable speed option, this little gizmo might just be what you need. Set for a highly accurate



50Hz source, the accessory consists of a stroboscope disc and a light source. The principle element is a black box with a single button on the top and a small red light positioned at the front – powered by two 'pencil' batteries. Press the button to emit a stream of light. In use, you place the paper disc over your turntable spindle and run the platter at the appointed speed – the disc features a strobe pattern for both 33 1/3RPM and 45RPM. All you need to do is point the Zapper at the strobe, press the button and monitor the accuracy from the illuminated strobe pattern. Straightforward but effective.

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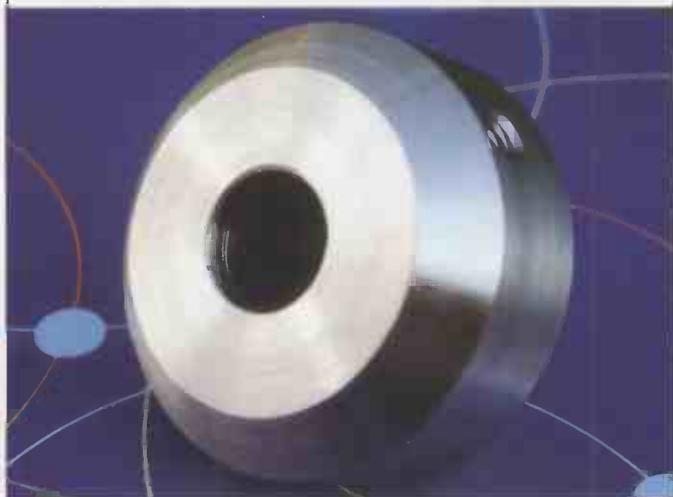
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HI-FI WORLD



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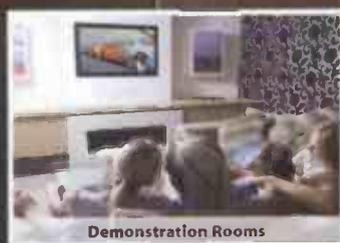
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LCD & PLASMA SCREENS



Philips 42PL9664 LCD TV

This new model features built-in Wi-Fi web access, full HD, 200Hz motion smoothing and with a cutting edge 1ms response time. Native contrast is 80,000:1, although the new Ambient Spectra 2 rear-projecting coloured LEDs are claimed to give a further 'perceived' improvement in contrast. And at only 49mm thick, the '9664 is easily wall-mountable.



Samsung 6000 • 7000 • 8000 Series
Samsung's 2009 range includes both full 1080p LCD/LED models including the award-winning UE46B8000.



Panasonic VIERA TX-L37510

Award-winning new 37" LCD TV. Other screen sizes and ranges are also available including Plasma, Freesat and WirelessHD models.



DLP PROJECTORS

Want a bigger picture? Then a full 1080p projector and screen could be the answer.



JVC DLA-HD350

This award-winning projector has to be seen to be believed.



Optima HD80 • HD82

These new full HD DLP projectors from Optima combine great performance with outstanding value for money.



BLU-RAY DISC PLAYERS

Panasonic DMP-BD60 & 80

These new players from Panasonic blend comprehensive features with top-drawer picture and sound quality.



Denon DVD-2500BT BLU-RAY TRANSPORT

For faithful transmission of Full HD video and HD audio signals bringing out the full quality of film.



Sony BDP-S360 • S760 • S5000ES

Award-winning players from Sony.



Pioneer BDP-320 • BDP-LX52

Enjoy Blu-ray disc as it should be: Pioneer's BD-Live players deliver high-end picture quality.



HOME CINEMA RECEIVERS

Denon AVR-1910

Denon's new AVR-1910 AV receiver delivers a hugely entertaining sound and represents outstanding value.



Sony STR-DA5400ES • STR-DH800

These two award-winning A/V receivers from Sony deliver exceptional performance. Pictured STR-DA5400ES.



Yamaha

Yamaha's new 2009 range includes five new AV receivers, a home cinema soundbar, and two TV stands with built-in surround sound.



Onkyo

Onkyo raises the bar once again in the competitive world of home cinema with its **TX-SR607** which features Dolby ProLogic IIz support.



Denon AVR-2310

This award-winning A/V receiver combines fine specification, solid build with breathtaking low-level dynamics and detail.



Pioneer SC-LX82

Bringing studio quality sound to your living room. Pioneer's goal is for you to experience film and music just as the creators intended.

HI-FI SEPARATES

Pro-Ject Genie MKIII

Replacing the Genie 2, the MKIII version includes a new motor, more stable motor base and a new tone arm with traditional anti-skate. Supplied with an OM3e Ortofon cartridge fitted, the Genie MKIII is available in Standard Black with White, Piano Black and Red finish options available at extra cost.



Marantz CD/PM6003

This new CD and amplifier pairing continues Marantz's tradition of building superb budget products.



Cyrus

Following the remarkable 'Servo Evolution' CD players, Cyrus has introduced a range of amplifiers featuring circuitry developed for its DAC XP. The **8XP d** and **Pre XP d** include digital inputs - ideal for playing music stored on your computer - while the entry model, **6XP**, is based on the 8XP but without the digital option. All also include two-zone multiroom capability.



The award-winning Servo Evolution CD players - **CD6 SE**, **CD8 SE** & **CDX t SE/DAC X**



Arcam FMJ Series

Combining sleek design, flexible connectivity and a level of reproduction far beyond that of budget separates.



Roksan Kandy K2

Roksan replaces its hugely successful Kandy series with the Kandy K2 amplifier and matching CD player.



Leema Antila II CD Player & Tucana II Amplifier

With stunning sound quality and captivating good looks the new Antila II CD player features unique MD2 active differential multi-DAC converter technology.

The dual mono designed Tucana II uses three heavy-duty toroidal power transformers, has a refined bi-polar output stage and is capable of swinging over forty five amps of current for precise control of the speakers.



HI-FI & HOME CINEMA SPEAKERS

Monitor Audio Silver RX6 AV12

Using techniques and materials from the Platinum and Gold ranges, the Silver RX series of slimline hi-fi and home cinema speakers are available in a choice of real wood veneers and high-gloss piano finishes to complement any room. Also Available: Radius R90HD10



Spendor A5 and A6

The A5 offers exceptional performance in relation to its compact dimensions. New drive units ensure clear and natural mid-range and beautifully open treble. The A6 utilises technology developed whilst developing the ST loudspeaker with its asymmetrically sculptured tweeter faceplate and refined 18cm bass/mid driver.



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Wharfedale Diamond 10.1
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KEF KHT3005SE
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Denon D-M37DAB
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Teac Reference 600
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Sony BDP-S360	£169	(SRP £199)
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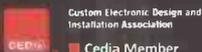
Denon D-M37DAB	£199	(SRP £229)
Panasonic SC-BT200	£479	(SRP £499)
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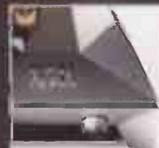
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NEXT MONTH

The first issue of the new decade is an appropriately special one, carrying the Hi-Fi World Awards Special in which you'll find all this past year's favourite digital and analogue source products, our best pre, power and integrated amplifiers, our top loudspeakers and most loved accessories. It's going to be an interesting read! In addition to this, we've got a host of other great products, including the Eminent Technology LFT-8B electrostatic loudspeakers, DCS's new Paganini upsampler and an in-depth valve rolling feature. Here's just some of what we hope to bring you:

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[pictured] NEAT ELITE SX LOUDSPEAKERS
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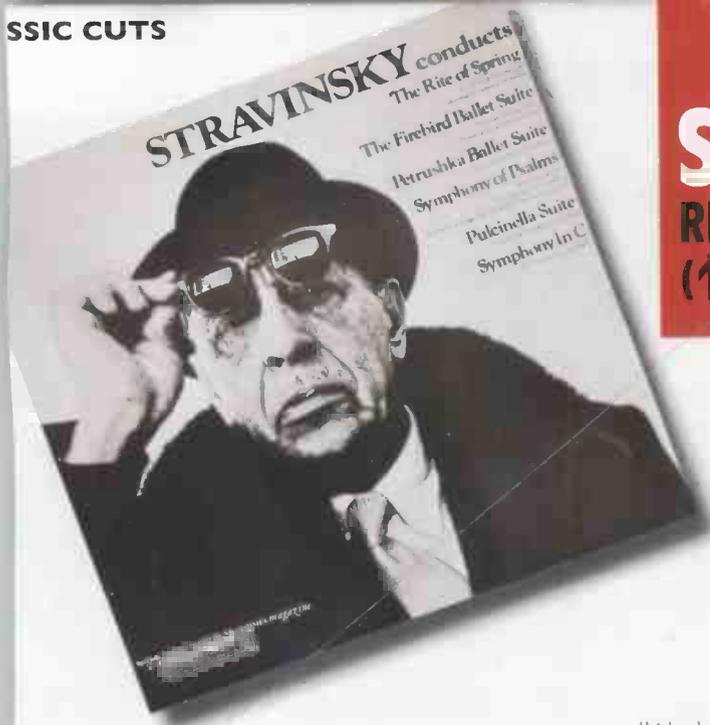
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STRAVINSKY

RITE OF SPRING

(1961, COLUMBIA MS-6319)

"this recording offers an historic insight into Stravinsky's conception of this seminal work..."

When the 'Rite of Spring' was first performed in Paris in May 1913, there were boos after the first few bars of the Bassoon solo, degenerating into public arguments in the subsequent bars and by the end of the work, there were fist fights in the isles – the police were called and Diaghilev, the Ballet company's promoter repeatedly turned the lights on and off in an attempt to restore order! Stravinsky left the theatre crying, and so the 20th Century's most controversial piece was born...

While this work changed the course of musical history, it took years for Stravinsky's language to achieve universal acceptance. It is now considered a classic. The work is about a sacrifice of a virgin in Pagan Russia; it's a ballet in two distinct parts, the first section being 'The Adoration of The Earth' and the second entitled 'The Sacrifice' where a young girl dances herself to death.

One of the reasons that the work inspired such anger, I believe, is the musical language of discord Stravinsky uses. There is virtually no use of the language of previous centuries (i.e. classical beauty and symmetry), but instead brutal harmonic clashes and driving rhythms in highly irregular sequences give the work a dazzling sense of timelessness (some of the tunes were supposedly from Lithuanian Folk Music).

The recording cut to LP here was made by the composer with the Columbia Symphony Orchestra in 1961. The sessions were not plain sailing. There were many corners

which Stravinsky couldn't precisely fix, and this was left to his sidekick Robert Craft to patch up later.

The striking thing about this recording at a technical level, is the openness of soundstage the listener experiences. Spatially, every instrument can be precisely located; there is a weight to the string sound that gives a depth of field not found on Rattle's EMI recording found on CD, made in 1989. The latter feels like listening through a tunnel in contrast of the openness of Stravinsky's interpretation. Although the recording is a tad dry, the sheer detail creates the force of over a hundred musicians onstage and brings the complexity of the score to life.

There is something else that makes this recording so extraordinary. It was conceived as a ballet, with a sense of continuous narrative, and I really sense in Stravinsky's hands, the drive to tell the story from the first note till the last chord. There are no 'quick wins', or sound bites found in other interpretations, just the inevitable momentum of the gruesome story...

Stravinsky was *not* considered a great conductor. There were people around in 1961 that had a greater command of conducting technique than he, but the sense of spring and rhythm he brings to this recording is exceptional. The ping-pong rhythms in the last section feel as springy as rubber, which creates the immense sense of excitement of the final dance.

There is also a sense in which

Stravinsky is not making points with the score in a way so many conductors do, he doesn't overplay the 'Rondes Printanières', but lets the music develop organically, which could be so easily vulgarised. In contrasting this with Rattle's recording made twenty eight years later on CD, the latter's dynamic range is not as good, the clarity of the score is wanting, and the rhythmic precision is sloppier. There is less sense of the ballet's story and the recording is altogether less involving.

The Columbia engineers have placed the listener in the first few rows of the hall, with some discrete spot-miking on the solo instruments to enhance the clarity of the musical line. In contrast, the Rattle recording has less difference in this respect, and the spotlight on individual contributions are less bright.

The Stravinsky recording is very much like a master tape, there has been precious little processing and the sound is detailed, honest and raw. The Rattle recording may have a more pleasing veneer, but some of the complexity of sound has been lost in the mastering process.

All in all then, this recording offers an historic insight into Stravinsky's conception of this seminal work, and is recorded with an integrity and truthfulness which make it truly a classic. Followers of classical music would do well to make a point of seeking out an original pressing of this on vinyl.

RT

USHER

DANCER mini small wonders



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DANCER mini two

2-way system
1.25" be dome tweeter
two 7" woofers
sensitivity: 90 dB @ 1 watt / 1m
nominal impedance: 4 ohms
frequency response @ -3dB: 28 Hz - 40k Hz
dimensions (w x d x h): 34 cm x 48 cm x 123 cm



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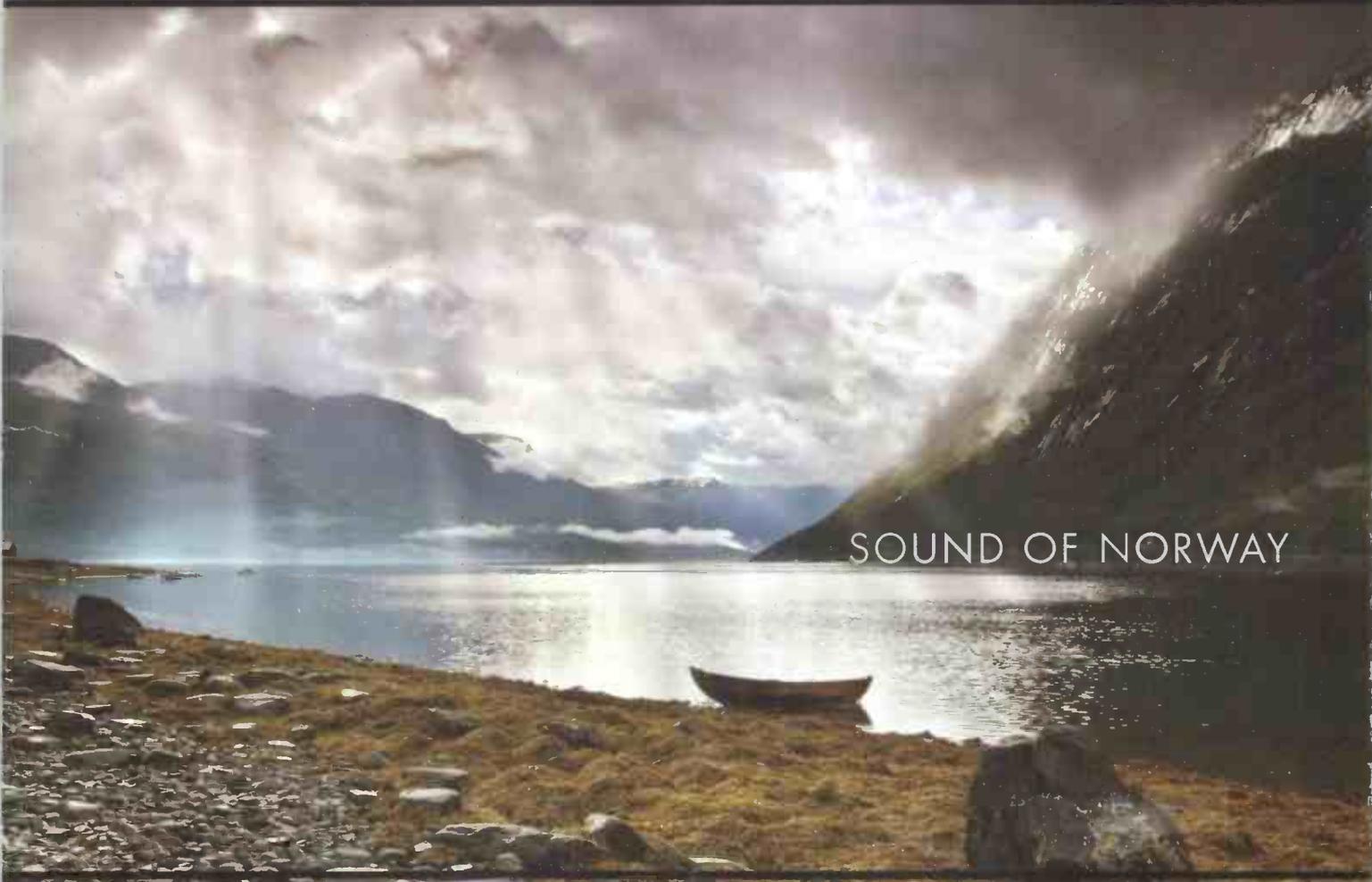
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David Price - HiFi World Magazine, June 2009



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