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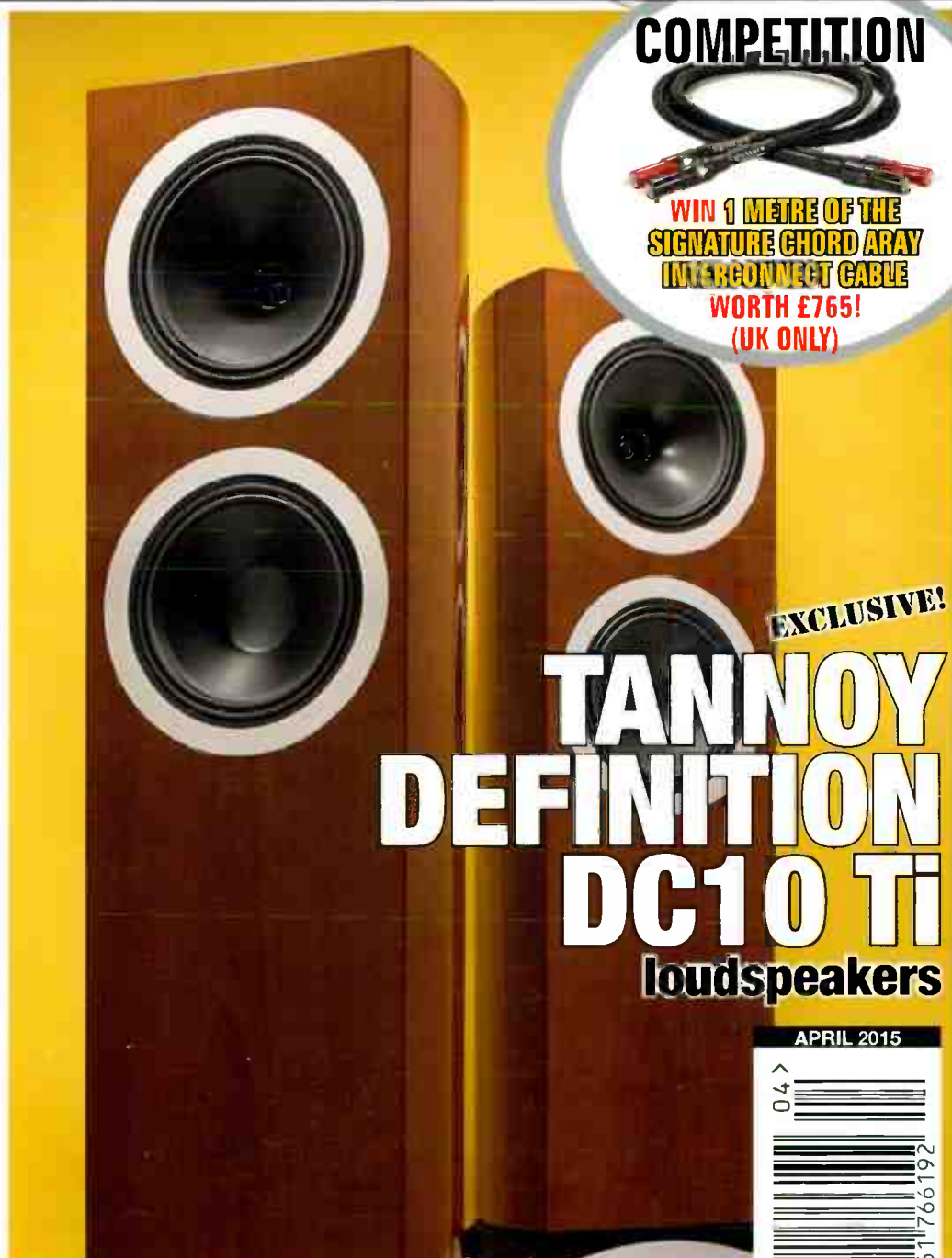


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Martin Pipe



Really big loudspeakers aren't so popular these days. Those massive broom cupboards of the 1970s – think Leak 2075s for example – would find few buyers now. Even back then they didn't sell in large numbers, being flagship models of their time built more as a statement of ability than a viable sales proposition. But they still impress us, old and young. There's nothing quite like walking into a room and being confronted by massive 2075s

– I know because I lived with a pair for some time, and their much improved replacements, the lovely 3090s.

Nowadays, big sound has to come from a compact cabinet styled to fit into a modern home. Tannoy's new Definition DC10 Ti loudspeaker has been carefully designed to squeeze into a decent sized living room, leave space for its inhabitants – and rattle the windows. It offers better quality than broom cupboards of yore, enjoying the benefits of computer-aided design and more sophisticated measurement techniques, driven by Tannoy's determination to stay at the forefront of this market. I hope you enjoy our review of the DC10 Ti on page 10.

Digital gets ever more complicated and this month we have two impressive examples of what I'll cheekily describe as digital "music centres". But these music centres are not like those gaudy contrivances of 1980s. The Naim UnitiLite and NovaFidelity (ex Cocktail Audio) X40 offer an almost bewildering array of features in highest quality digital; both aim to do it all – and they get close to achieving it. Heavens, the X40 even has a phono stage with digital RIAA equalisation. This means it does, in effect, have a digital phono stage onboard where the cartridge signal is pre-amplified, passed through an ADC to turn it to digital, then equalised in the digital domain. You can read about this deeply impressive ESS Sabre32 equipped device on page 18 and Naim's impressive UnitiLite on page 34.

Meanwhile, the Headroom Show – see page 22 – reminded us that a frighteningly large number of people nowadays have no interest in large loudspeakers or music centres of the digital kind, instead listening on headphones to their mobile phones, iPads or portables. But with balanced magnetic planar headphones available, driven by fully balanced Astell&Kern players, this parallel universe is getting ever more sophisticated.

Noel Keywood
Editor



hi-fi world

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verdicts

●●●●● OUTSTANDING
●●●● EXCELLENT
●●● GOOD
●● MIDDIOCRE
● POOR
£ VALUE

amongst the best
extremely capable
worth auditioning
unremarkable
flawed
keenly priced



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

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

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

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

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

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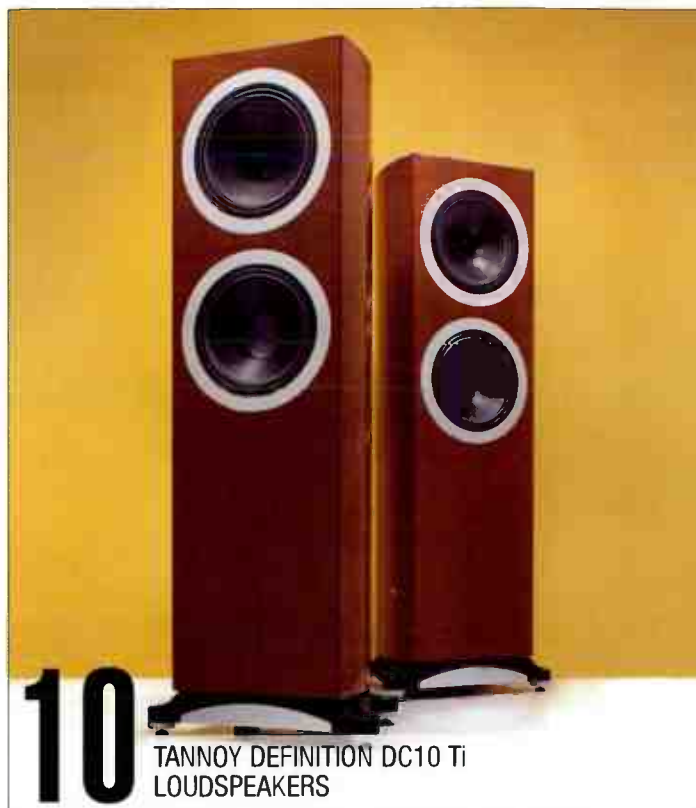
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Hugo, the DAC by which all others are judged

“Superb”

★★★★★

*What Hi-Fi Sound and Vision,
group test winner*

“A landmark digital product”

★★★★★

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Hi-Fi +

“Spectacular”

Ken Kessler, The Telegraph

“Breaks all records”

★★★★★

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“My reference DAC”

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“Incredible”

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LEEMA LIBRA

Leema Acoustics has launched the Libra DAC/preamp, a high-resolution digital hub. It offers high-resolution playback including: DSD 64, DSD 128, DXD and 384kHz PCM via USB (and Libra's 12S inputs). DSD64 is also supported via all S/PDIF inputs (coaxial and optical) and AES/EBU inputs.

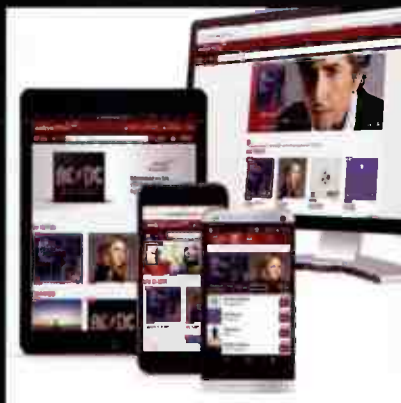
The Libra offers three coaxial and three optical inputs, capable of accepting high-resolution 24bit/192kHz audio, as well as including two 12S inputs via RJ45 connectors. Source components with AES/EBU outputs can also be connected via XLR

Leema's M1 asynchronous USB module provides computer audio replay from both Windows (the driver software is included), Macintosh and Linux machines.

There are three analogue inputs, configurable as unbalanced or fully balanced via XLR connectors. The entire signal path, both digital and analogue, is fully balanced from the digital data stream, to the balanced analogue outputs. Output is fixed or variable; there is an analogue volume control on-board.

For added flexibility, the Libra has an optional Bluetooth wireless interface, and for personal listening a headphone amplifier is also included. It is priced at £5,995.

For more information, call 01938 559 021 or click on www.leema-acoustics.com



ONKYO MUSIC

Onkyo has brought its music download service to the UK, Europe and US. Users can now access hundreds of thousands of songs in 24bit/44.1kHz up to 192kHz hi-res tracks, and millions of CD-quality 16bit FLAC.

The service can be accessed via www.onkyomusic.com, as well as through a custom built native apps for Android and iOS, which are in development. It will cover all musical genres from pop and soul to jazz and folk, with classical music a major focus. Tracks and albums will be sold in local currency – a hi-res album costing the equivalent of \$15- \$20 while individual tracks will be around \$3-\$4 per song.

Music purchased on the Onkyo Music platform will be stored in a cloud locker ready for download to multiple devices. Click on www.onkyo.co.uk for more information.

EXPOSURE'S NEW INTEGRATED

The new 3010S2-D is the fourth incarnation of Exposure's integrated amp. Like its predecessor, the new 3010S2-D comes with six line level inputs. However, one of these is now a direct AV input to enable integration within a surround sound system. There is now also the possibility to fit an optional MM or MC phonostage or a plug-in DAC board. The latter is capable of up to 24bit/192bit PCM and DSD 64 and comes with two inputs: USB and BNC, with auto-switching between them. A preamp output allows for tagging-on of a separate power amplifier, in case you want to bi-amp your system. Speaker terminals are doubled to allow bi-wiring.

High-quality capacitors are used in the signal path and the circuit topology has been mapped with a view to keeping signal and power supply paths short. Cascade circuitry is used for improved power supply immunity.

The preamplifier now sports a brand new circuit board with all discrete components rather than integrated circuits, while the power amp features a fast bipolar transistor output stage. A new power supply adds extra stages of regulation.

The Exposure 3010S2-D integrated amplifier is available in silver or black, priced at £1,700. Optional additions include: on-board MM phonostage, £240; on-board MC phonostage, £240 and on-board DAC, £325.

For more information, call 01273 423877 or click on www.exposurehifi.com.



FURUTECH GT40 UPGRADE

The GT40 Alpha can record and play back at a bit depth/sampling frequency of 24bit/192kHz. A discrete red 'clipping' light warns of digital recording overload and there is a three-position recording attenuation switch.

The system uses a 24bit/192kHz ADC for conversion of vinyl records, cassettes and reel to reel tapes into high resolution digital audio files. You don't need to worry about a phonostage: the GT40 Alpha has one, with switching between moving magnet (MM) and moving coil (MC). There is also a headphone amplifier with its own volume control. That very volume control also allows use as a multi-functional digital and analogue preamplifier that can be connected direct to a power amp or active speakers. The ADL GT40 Alpha is available now, priced at £395.

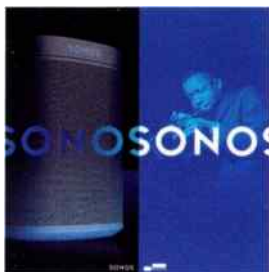
For more information, click on www.adl-av.com www.soundfoundations.co.uk or call 0118 981 4238.



SONOS PLAY:1 BLUE NOTE LIMITED EDITION

To commemorate seventy-five years and counting of Blue Note Records, Sonos has announced the PLAY:1 Blue Note Limited Edition. Crafted with a custom colour developed through hand-painting techniques and strategic use of robots, the speaker's finish features a vertical fade from dark navy to cerulean blue. The Blue Note PLAY:1 comes with the Blue Note on Sonos radio station built into the main menu in the Sonos app, powered by TuneIn. You can experience a year of Blue Note programming with three curated channels within the station. Listen to handpicked selections from the greats like Robert Glasper, Jose James, Terence Blanchard, Ambrose Akinmusire, Lionel Loueke and Don Was himself, who has curated 125 of his personal favourites. Sonos also brings together legendary Blue Note artists and those who have sampled them for mixes that celebrate the intersection of modern music and legendary jazz. You can also listen and learn about jazz and its evolution over more than seventy-five years as well as listen to the Born in Blue and Blue Note 101 channels on your Sonos. Price for this limited edition item is £220.

For more information, click on www.sonos.com/BlueNote.



AUDIOLAB CD TRANSPORT

Audiolab has announced the M-CDT, measuring 247mm across. Equipped with a slot-loading mechanism, the M-CDT has a digital decoder that feeds digital coax and optical outputs for maximum versatility. The Trigger In and Out links enable remote switching of auto power on/off in installation environments, as well as set-ups where the users stacks the new CD transport with other Audiolab LAB Series models.

The Audiolab M-CDT is available in a choice of silver (natural aluminium) or classic Audiolab black. Price is £399.

For more information, click on www.audiolab.co.uk.

SAMSUNG WAM!

Samsung has announced an expanded lineup of curved soundbars, utilising a proprietary 'Ring Radiator' technology which allows sound to flow in a 360-degree radius, complementing the company's new range of curved TVs. It will be released in two models: the stand-mounted WAM7500 and movable WAM6500. The latter arrives with a built-in battery. Prices are to be announced.

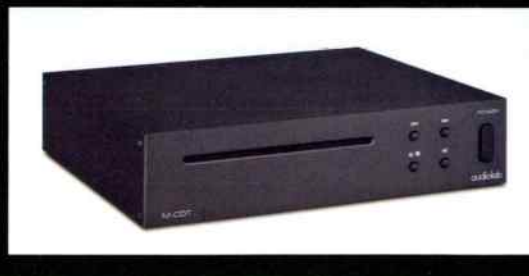
For further details click on www.samsung.com/uk/ces2015 or global.samsungtomorrow.com/CES2015



BASS CONNECT

Promising deep bass from a pocket-sized cuboid, this Bluetooth portable speaker works within a range of 10m and includes a battery that lasts up to five hours. Compact at 70 x 70 x 30mm, it includes a micro-USB port and a 3.5mm socket to connect to a source. Price is just £30.

For more information click on www.thehut.com



ROKSAN XERXES UPGRADE

Turntable specialist, Inspire, has announced the launch of an upgrade to the Roksan Xerxes turntable. Part of the upgrade is a two-tier plinth. The upper plinth is constructed of 25mm rigid Birch marine ply. The 25mm MDF base plus veneer arrives with Sorbo Pod bottom feet shock absorbers.

The top and bottom plinth system is presented with options to add leaf veneer in either Maple, Cherry, Walnut Light American Oak, Santos Rosewood and more.

For DIY audiophiles, the parts only can be supplied. During the rebuild process Inspire can also refit the original Xerxes parts or replace parts to order. Price is £595, a DIY, parts-only option is available for £495.

Click on inspirehifi.co.uk or call 01246 472222 for more information.



CYP

CYP, the AV switches and audio accessories outfit, has added to its range of Modular Matrices. Following on from the 3U 16x16 Modular Matrix Chassis, the 5U 32x32 can be fitted with any combination of up to four input modules and four output modules (each fitted with any combination of up to four input modules and four output modules (each with eight connections per board). Integrators can choose from a range of input boards that include HDMI, VGA and DVI, whilst output board selection includes HDBaseT (100m), HDBaseT (60m with PoC), HDMI and DVI. Also announced is the new PU-8H8HTPL-4K 8 x 8 HDBaseT LITE Matrix with PoC (Power over Cable), which supports the transmission of video (resolutions up to 4K, 2K Full HD) and multi-channel digital audio from eight HDMI sources to eight outputs over a single CAT5e/6/7 cable (up to 60m) for each output. For full 5-Play compatibility and LAN serving, the PU-8H8HTPL-4K is also available, increasing transmission distance up to 100m.

Next, a 4K2K 4 x 4 HDMI HDBaseT LITE Matrix over CAT5e/6/7, the PU-4H4HTPL-4K KIT supports the transmission of video (resolutions up to 4K2K and 4K UHD) and multi-channel digital audio from four HDMI sources to four HDBaseT outputs over a single CAT5e/6/7 cable (up to 60m) for each output.

For more information click on www.cypeurope.com or call 020 3137 9180.



NEW FROM SENNHEISER

Sennheiser has announced a range of new headphones and updated designs. The Momentum 2.0 series (£260) includes proprietary 18 Ohm Neodymium transducers with large diaphragms. Sliders are made of stainless steel with leather covering the soft, newly designed ear cushions.



The integrated in-line remote lets you control phone calls, music and volume. Furthermore, it supports Apple devices like iPod, iPhone and iPad as well as Android tablets and smartphones.

The Urbanite XL Wireless (£250) support Bluetooth and NFC. Use of the latest Bluetooth 4.0 standard enables multi-connectivity pairing up to eight different devices as well as simultaneous connection

to two devices. The design includes a touch control panel on the headphone: slide your finger to adjust the volume or tap to control music and calls.

Finally, the RS195 (£350) is a set of closed, circumaural wireless headphones with a range of up to 328ft/100m, plus selectable hearing boost presets and an additional noise suppression mode for clearer dialogues and improved speech intelligibility. A music listening mode is included. The headphones support analogue and digital audio inputs and allows toggling between the inputs.

For more information, click on en-uk.sennheiser.com.



CELSUS GRAMO ONE

The Gramo One is a new set of reference, open-back in-ear headphones. The proprietary 16mm Celsus Sound transducer has a 32 Ohm impedance with a 100dB sensitivity. The set arrives with three pairs of ear tips and a leather carry pouch while the cable length spans 1.2m. Price is \$250.

For more information click on celsus-sound.com.



THE VAMP

With The Vamp, any speaker old or new becomes a fully functioning portable Bluetooth speaker able to play music wirelessly from your smartphone, tablet or computer. This palm-sized box has over ten hours of rechargeable battery life and a magnet that fixes it securely to any speaker, old or new.

Music can be played from any device equipped with Bluetooth: your smartphone, iPad etc. There's a wireless range of up to 10m and Internet radio stations and services like Spotify, Deezer and Rdio are all fully compatible.

The Vamp is the brainchild of London-based designer Paul Cocksedge, who dreamt up the idea as a way of revitalising old analogue speakers that were fully functional.

The Vamp is available for order priced at £50 and three colours: red, white or black. Click on www.thevamp.co.uk for more details.

BALANCED MAINS FROM RUSS ANDREWS

Russ Andrews Accessories has introduced the New BMU3000 Balanced Mains Unit to provide 3kVA of clean power to hi-fi and home cinema systems.

The BMU3000 splits the 230V mains signal into two separate 115V supplies. One is carried on the live and the other on the neutral and as each is a different polarity (negative or positive) the noise on one is cancelled out by the noise on the other.

The unit is equipped with twin 1500V SuperSilent transformer technology, to provide the total 3kVA of power. Five Russ Andrews UltraSocket mains outlets on the rear of the unit enable connection of the hi-fi or home

cinema equipment directly to the unit – thereby acting as a mains extension as well as the balanced mains supply. Mains input is via a 16A IEC socket and is protected by use of a high quality two-pole (live and neutral) circuit breaker. Price is £3,599.

For more information click on www.russandrews.com or call Tel 01539 797300.



Tannoy Ti-me



Impeccable bass timing is a key feature of the new Tannoy Definition DC10 Ti. Noel Keywood admires its grip – and its power.

Big Tannoys are famous for their bass power and I've experienced this first hand on many occasions, most notably when reviewing the Yorkminsters, way back in our April 2006 issue. They shook our listening room in a way I had never heard – or felt – before. These very large 'speakers had the power and presence we all dream about – and everyone at Hi-Fi World was awestruck.

That was some time ago, in another day and another place. What hasn't changed is the ability of Tannoy's new Definition DC10 Tis

– reviewed here – to shake a room. But this is the loudspeaker Tannoy want us to be able to enjoy in our home, because it fits in, lacking the 1960s Tygan grille cloth and wardrobe proportions of the Yorkies.

Whilst the DC10 Ti is are big, they hover below being visually overpowering, standing just over a metre – 1176mm – high. Like all modern floorstanders – and unlike models in Tannoy's traditional Prestige range – their front baffle is relatively narrow at 434mm, so they don't intrude in the home. This also has the benefit of giving more solid, concise stereo images due to a lessening of diffraction effects across the baffle's surface.

To get the sort of bass power Tannoys are known for – and to come close to the mighty Yorkminster with its massive 12in Dual-Concentric driver, Tannoy have used two 10in drive units in the DC10 Ti, one above the other. This gives 40% more cone area than a 12in, I calculate, so although the DC10 Ti does not have huge cabinet volume, it still has prodigious cone area, only a little less than a big 15in. And this is where its bass power comes from. For big bass you just need to move air and Tannoy don't flinch at this challenge in the DC10 Ti. But for those who find it – or its price – a tad too large, there is a more compact DC8 Ti.

The cabinets of our off-the-shelf samples were finished in a lovely Cherry, with deep gloss lacquer applied. There are no seams or joints on display at front and all edges have a small chamfer to soften the lines. As is common nowadays, the 320mm deep cabinet curves inward to the rear to remove hard, boxy lines and also to lessen internal resonances, we are told.

Further thought has gone into the base and this was a lovely piece of work. Tannoy use machined MDF to get smooth curves that flow into the cabinet above, adding a metal stabilising weight to provide extra mass; at 43kgs the DC10 Ti is heavy. The floor spikes within this plinth can be conveniently adjusted from above using a hex key. Our speakers came with base fitted, spikes and locking nuts, but no hex key or floor protection cups, or alternatively hard-faced protective feet; at the price they should be in the box.

Tannoy claim the heavy base improves bass articulation and it is likely so because I have found that adding weighty silver-sand to a loudspeaker's cabinet chamber, when fitted, does obviously improve bass articulation as well as stereo image stability.



The rear carries two large ports and bi-wire connector panel, with earth terminal. We put a foam bung in the upper port for this shot.

Each 'speaker's rear connection panel carries sturdy bi-wire terminals, fitted with removable shorting links, and there is the usual Tannoy earth terminal to which I attach a conventional green earth wire that runs back to ground on an amplifier – meaning its casework, or ground terminal if there's a phono input.

The top drive unit of the DC10 Ti is a Dual-Concentric, where the tweeter (high frequency unit) fires

out through the centre of the bass cone. This seamlessly integrates treble with midrange output from the bigger surrounding cone. It makes for a very consistent sound, wherever you are seated, or even if standing in a room. Our measurements show, as usual, that the Dual-Concentric is ever so slightly smoother off-axis than on-axis, so the DC10 Ti is best pointed straight down a room and not toed in toward listeners. They have been balanced for this alignment too, running flat to 20kHz off-axis, but peaking slightly by a few dB above 10kHz on-axis.

The big cones have a smooth, satin black finish and are of "multi-fibre" construction Tannoy say. At the base of the horn lies a titanium dome tweeter that reaches down to 2kHz our impedance measurement shows. High purity Oxygen Free Copper (OFC) wiring is used in the crossover and it is Deep Cryogenically Treated to relieve stresses and improve low-level resolution. The bottom drive unit handles bass alone.

Finally, a word about the all-important rear ports on this loudspeaker. In reflex loudspeakers it is the ports that radiate deep bass, not the bass unit, so what they do is important. Traditionally, ports have been seen as narrow-tuned, anti-resonant systems and given little thought. This is the source of the "bouncy" undamped bass quality people complain about with reflex loudspeakers.

It is possible to flat-tune a port so it doesn't acoustically "bounce" by a variety of methods, and Tannoy have done this on the DC10 Ti, our port output measurement shows. You get a better bass tune, and less one-note bounce. However, subjectively, loudspeakers with flat-tuned ports have a drier sound, I find, with an apparently less enthusiastic dynamic. I can imagine some listeners may not hear this as a better thing – but it is!

That the loudspeaker is working better reflects back into the load the amplifier sees. So what is good for the loudspeaker is good for the driving amplifier too – and here the DC10 Ti excels. It will draw current (and power), that's true, and this is where its earth-shaking bass comes from, but modern amplifiers are designed to cope and the bass that comes out is of better quality.

The two ports total a lot of area and here we are again looking

Audio Cable Award Grand Slam

Products of the Year 2014:

Black Diamond Speaker Cable

Black Diamond USB

Blue USB

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HiFi World, Awards Edition Jan 2015



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at the same issue as cone area: the bigger the better for low distortion (smooth boundary air flow) and high acoustic power. Those two rear ports account for a lot on this 'speaker. But if they over-excite a room, causing it to boom, then foam bungs are supplied to lessen bass output.

I should say, however, that the DC10 Ti is purposed for large rooms that both need a lot of bass power and can handle it without booming. Small rooms are more resonant by nature, because of their lower air volume as well as higher frequency modes – and beware of this. I once tried Yorkminsters in my 17ft long lounge and their bass was lost; this combo just didn't work, even though my lounge is heavily bass damped by two settees plus armchair, and acoustically treated too; it still wasn't right.

The DC10 Tis will likely work best in rooms 18ft and longer. We ran them in a room 25ft long, 18ft wide with a 8ft-18ft sloping ceiling, of



The horn loaded tweeter, with pep-perpot waveguide, fires out through the centre of the bass/midrange cone.

AK120's digital output.

Hoping the DC10 Tis could move our 25ft long room with body-shaking subsonics I span Safri Duo's 'Samb Adagio' (CD) and this showed just how far Tannoy have gone in achieving peerless bass. As the deep synth enters after an extended keyboard solo I felt the bass as much as hearing it; there was a deep

(24/96) and it had perfectly judged power, sounding neither resonantly large, nor constricted. But boy did it sound powerful; it punched at me, Mike Tyson fashion.

Although the DC10 Tis go low with laconic ease, in our room bass was not inflated; no one would accuse them of being bass heavy I believe – and measurement showed they are accurate rather than emphasised.

As measurement suggested, there was a slight sheen to the sound that added to detail and insight, also to speed, but I prefer total neutrality, even if it is less immediately engaging. I reviewed the DC10 Tis as standard, but I did at the end connect a 0.3 Ohm resistor in place of the bi-wiring link to the tweeter to pull level down a bit – an easy mod to make.

The Tannoys sounded perfectly consistent wherever I sat, or even stood, a strength of the Dual-Concentric drive unit. The big cones put a dark sound into silences, and the speakers maintained composure even with volume turned right up, so Christine McVie's vocals in 'The Chain' stood well apart and were unaffected by the power of Mick Fleetwood's drum kit behind her. I listened to the 'speakers loud for the most part because their clean but well damped dynamics demanded this – and yes I did attract complaint from others in our concrete office building as walls shook. On this I do not exaggerate! To run the DC10 Tis at shattering level – up to 110dB on peaks – I had to play at the weekend, and they handled absurdly high volume with ease.

With our reviewer Rafael Todes playing Beethoven's Quartet in C Minor, Opus 18, No4, on violin (CD) the Tannoys projected the sound of the strings forcefully and in great

"As the deep synth enters after an extended keyboard solo I felt the bass as much as hearing it; there was a deep presence in the room that came from below – and it shook me."

volume 4800 cu ft. This is big enough to develop very low bass, right down to 20Hz, providing a loudspeaker can input enough acoustic power. Most domestic speakers cannot; they are not designed to do so. The DC10 Ti can – and did! But the corollary is that it may be too much for a smaller space, hence the DC8 Ti. Room size dominates loudspeaker performance.

SOUND QUALITY

As always the speakers were run in with pink noise, then bass heavy music from Angeliqe Kidjo and finally a Monitor Audio De-tox disc. I used the Sugden Class A FBA-800 power amplifier reviewed in this issue, which was an ideal match; the Tannoys fully exploit low power, high-quality amplifiers.

Sources were an Oppo BDP-105D spinning CD, and processing high-res digital from an Astell&Kern

presence in the room that came from below – and it shook me. Until now, sitting on a settee close to the room's end wall has not bolstered the bass of speakers under review, but with the DC10 Tis it did. Our room's lowest mode is 23Hz and this the Tannoys energised, something few speakers can manage; bass this low you feel rather than hear. It was a deeply impressive performance.

Because the DC10 Tis are well damped, the articulation Tannoy claim for this loudspeaker was obvious. Rather than an amorphous "bass sound", I was aware that a synth was being played: notes started and stopped snappily at identifiable moments and they even had timbral qualities to them. This is bass articulation and, by the nature of the beast, rare – yet impressive when heard. I could hear the quality of Mick Fleetwood's kick drum in 'The Chain'

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WHAT YOU FEEL
THEY DON'T SEE
WHAT YOU SEE
THEY DON'T HEAR
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detail. There was some slight sense of tubbiness to the violin's body that came from a small amount of cabinet whoomph but it didn't intrude and wasn't an issue I felt. There was a smidgen of hardness to the strings, but the detail was riveting. The Tannoys are forward and projective, of that there's no doubt, but that's also why they imaged so firmly.

CONCLUSION

After using the DC10 Tis for some time I felt they were well up amongst the best loudspeakers I have ever heard. They are not perfect, but there's no such thing as a perfect loudspeaker. They are wonderfully powerful, delivering this power with thunderous ease.

They also have fabulous bass of

JON MYLES SAYS:

The Tannoys are indeed big - and they sound it! But they are also an exceptional loudspeaker. Playing Lady GaGa's 'Monster' (24/96) at high volume and the bass literally hits you in the chest. It's not flabby or loose but simply solid - the way it should be.

That quality of low-end really does lay down a solid foundation for the higher frequencies and brings a real vividness to all types of music. Yes, they need a large room - but if you have the space there's very little to touch them in terms of outright musical enjoyment.

the best quality I have ever heard; they play a bass tune like no other. They sound as big as you'd hope - and as big as they look. They have a smooth yet expansive frequency range and they need little power; I never ran out with just 30 Watts from Sugden's FBA-800.

Couple all this with elegant appearance and great build quality

and there's little in the DC10 Ti not to like. This is a fabulous loudspeaker I would put it at the top of any audition list and both Jon Myles and I felt that it would be a good in-house reference loudspeaker for review purposes, because it is deadly accurate, deeply revealing and dynamically forceful, all of which is to say - fun.

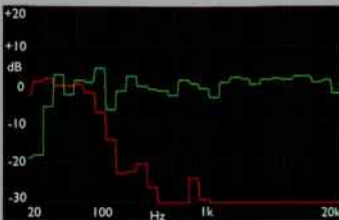
MEASURED PERFORMANCE

Tannoy's Definition DC10 Tis run virtually flat from 20kHz down to 40Hz with no obvious response trends over this wide range. However, the treble horn takes over at 1.5kHz (our impedance analysis shows this by the frequency of its peak), and you can see that this unit is around +1dB up overall on the bass/midrange drive unit, so the DC10 Ti will not sound warm; detail will be quite obvious and projection strong; there may be treble sheen.

There was a small amount of treble

FREQUENCY RESPONSE

Green - driver output
Red - port output



IMPEDANCE



peaking - a few dB - when measuring on-axis, but symmetric drive units are best listened to asymmetrically, or off-axis, where phase cancellations/reinforcements are minimal, and our measurement is the off-axis result. The speakers should be pointed straight down a room for this result, not toed in to point directly at listeners. Differences were quite small however, the dual-concentric design giving consistent results over a wide forward angle - up and down, side to side. So the DC10 Ti will sound consistent in use, to listeners seated or standing. They will also sound smooth and tonally accurate.

Bass output from both drive units was plentiful below 100Hz and the twin ports, which together have a relatively large radiating area and were -3dB at 80Hz in SPL terms (not acoustic power), extend output down to 20Hz, our red trace of port output shows.

The ports measure flat, meaning they are relatively untuned and apply broad acoustic damping to the drive units. This is a quite deliberate design feature of the DC10 Tis and means they will have even, well damped bass, not "bouncy bass". It doesn't eliminate room modes but it does lessen the possibility of serious resonant interaction between port and room. The DC10 Tis will develop

powerful subsonics in rooms large enough, meaning longer than 18ft. To avoid over-energising smaller rooms foam bungs can be used in the ports to reduce bass power.

Sensitivity was a massive 92dB sound pressure level from one nominal Watt (2.8V) of input, helped by low overall impedance of 5.4 Ohms (measured using pink noise), plus plentiful bass output. As a result the DC10 Tis, in spite of their size, need little power to go very loud, 40-60 Watts being enough; even 20 Watt Single-Ends would suit.

The impedance trace shows the speaker is effectively 4 Ohms below 200Hz and mainly resistive, due to broad damping around a port frequency of 32Hz. There is a lot of midband reactance at crossover, which isn't ideal and could be cured by Zobels across the drivers.

A measurement of decay over 200mS shows low coloration across the midrange and treble. The cabinet has some hangover, but about what is expected when a lot of bass power is being produced.

The DC10 Tis measure very well. They have better damped bass than earlier models, but still produce a lot of bass power - like most Tannoys. In spite of this, little amplifier power is needed. **NK**

TANNOY DEFINITION DC10 Ti £5999



OUTSTANDING - amongst the best

VERDICT

Massive bass power and great projection. Awesome - literally.

FOR

- deep subsonics
- tight bass control
- great projection

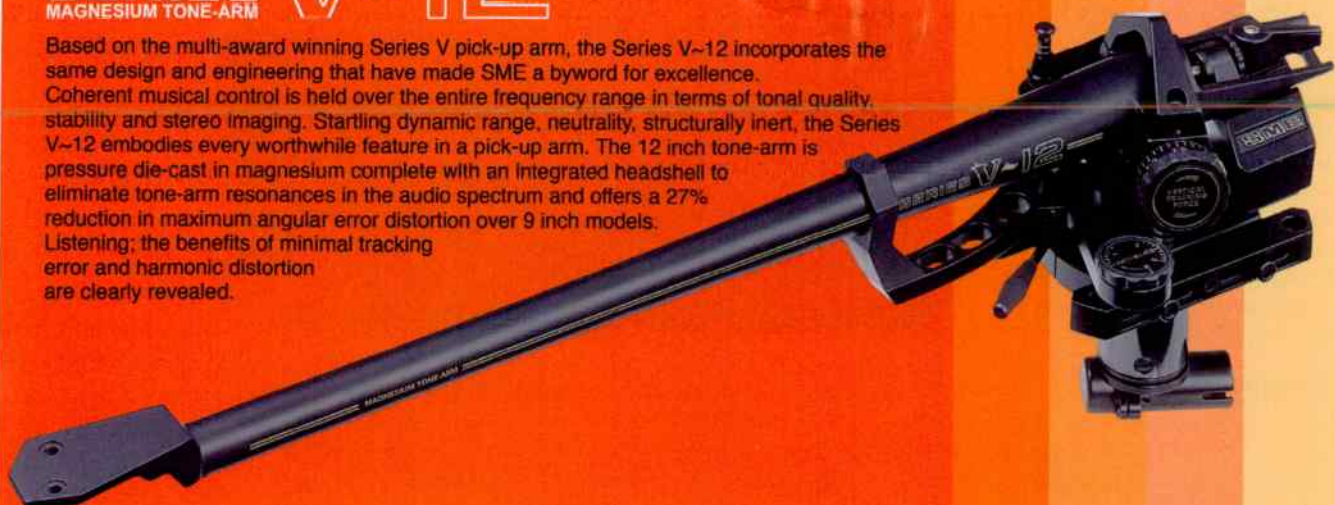
AGAINST

- need a big room
- no adjustment
- bright balance

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Check Out Your Room

Use an on-line calculator to sort out the bass performance of your room. It saves a lot of headache, says Noel Keywood.

We all want the sort of bass quality Tannoy's big DC10Ti loudspeakers offer, but exactly what you get is dominated by the acoustics of your room. Here's how to tell, without headache, what your room is capable of, and how to exploit it.

It's easiest by far if you use a room acoustics calculator to assess your room. There are lots of free ones on the internet, but most come buried in jargon and no end of technicalities – Google 'room mode calculator' and take a look.

Of them all, a reasonably straightforward one free of flim-flam is available at www.harman.com: Google 'room mode calculator Harman' to find it, and download the Excel programme by Dan Siefert and Allan Devantier, of the two calculators available. If you don't have Excel, download OpenOffice – it's free and works on Mac or PC.

Coming from the U.S. this calculator is in imperial measure only – feet and inches; you'll need an alternative for metric, of which there are many.

The nice thing about Harman's calculator is it's simple. Enter room dimensions and look at the Blue trace in the top LENGTH graph, the room's longest dimension that supports the lowest bass frequency. As downloaded it is set to a very long 24ft. At the left end of this graph, just below the attribution 'Dan Siefert' you will see 0ft, meaning one end of the room. Over at right you will see 24ft, the other end of the room. The blue line shows sound

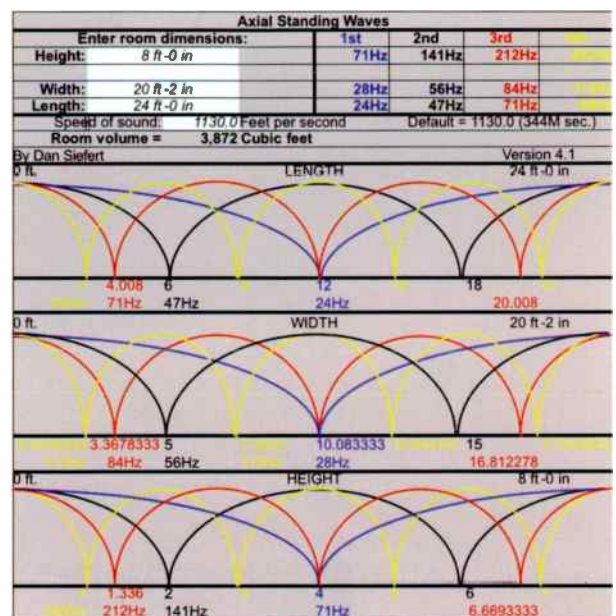
pressure level (volume): note that it is highest at either end of the room, and lowest at the centre, 12ft in. This means the room gets down to 24Hz – a very low bass frequency – and bass at this frequency is loudest when sitting against one wall, with the speakers at the other wall, firing down the length of the room.

There's a lot to understand here. This is a very big room, so it goes low. Sounds good, but you'll only hear/feel subsonics if you energise the room at this frequency and most recordings don't go so low; Dark Side of the Moon is one exception; the 'heartbeat' contains a lot of energy at 25Hz and would be thunderous in Harman's default room on this calculator. Otherwise this room would actually sound bass 'dry' even though it goes low.

Recording engineers usually ensure there's strong bass in the 30Hz-40Hz region that we perceive to be very low bass and most hi-fi loudspeakers get down to 40Hz – even large shelf/stand mounters. A 16ft long room will reach down to 35Hz and support this range of frequencies fully, although in real life it will also sound 'full' and a little 'boomy'.

To lower bass volume and lessen room-boom, move inward from the wall, or move the speakers inward from their wall: play bass heavy music and experiment. You'll get heaviest and boomiest bass sitting in the corner, by the way – try it.

Consider listening across the room, if you have a big room and want more obvious bass. Look at the blue line for WIDTH in the calculator, bearing in mind any frequency below



40Hz is subsonic, whilst audible bass lies in the region 40-100Hz.

To damp down a room's bass, get as many foam filled settees as possible – a three seater and two seater will work wonders. Or try corner traps: see StudioSpares.

Note that I am only talking bass here, not higher frequencies, and the fact that there are lateral and vertical pressure waves makes this a three-dimensional problem best analysed by computer and 3D maps, as demo'd by Cara (now unsupported). If you want to know more...much more... go to the Institute of Acoustics, who have a very attractive website full of Rock bands, whales and other acoustics experts.

It might all seem a little challenging, but Harman's calculator is simple and helpful if you want to know a little more about your room and getting good bass from it.

Enter room dimensions at top, in feet and inches only, and see instantly the lowest frequency fully supported, blue trace, in LENGTH graph.

See other modes in WIDTH and HEIGHT graphs. The three 1st frequencies, marked in blue, will dominate.

This calculator is simple and graphic. Try others for more complex views.

Super Nova!

NovaFidelity's X40 could just be the perfect front-end for your system, says Jon Myles.



Just a few months ago I took rather a shine to Cocktail Audio's X30 – a one box system combining hard disk storage with a UPnP computer connection, CD player and ripper, radio, and a 50 Watt Class D amplifier – all for just £799. To add to its abilities there was also the capability of digitising your LPs and saving them to the hard disk.

No, it wasn't perfect – but, as I said at the time, you'd be hard pressed to assemble a series of separates that came anywhere close to the X30's flexibility and sound quality at the price.

The model is still available and remains a bit of a bargain. But the engineers behind the concept haven't been resting on their laurels.

For now they've unveiled the X40 – which ups the ante in a number of significant ways. The company says it listened to feedback from its customers who asked for higher-end stance with the same

functionality of the X30.

So the X40 features CD playback/ripping/storage, UPnP streaming from computer, internet and FM radio, as well as USB, line level and phono inputs (all recordable to the hard disk).

It loses the amplifier section but gets an upgraded power supply and – crucially – utilises the highly-acclaimed ESS Sabre32 DAC which will handle PCM file sizes up to 32 bit/384kHz as well as DSD64/128 and DXD.

Oh, and the product is now branded as NovaFidelity (yep, just as written) – mainly to do with marketing reasons rather than any change in ownership.

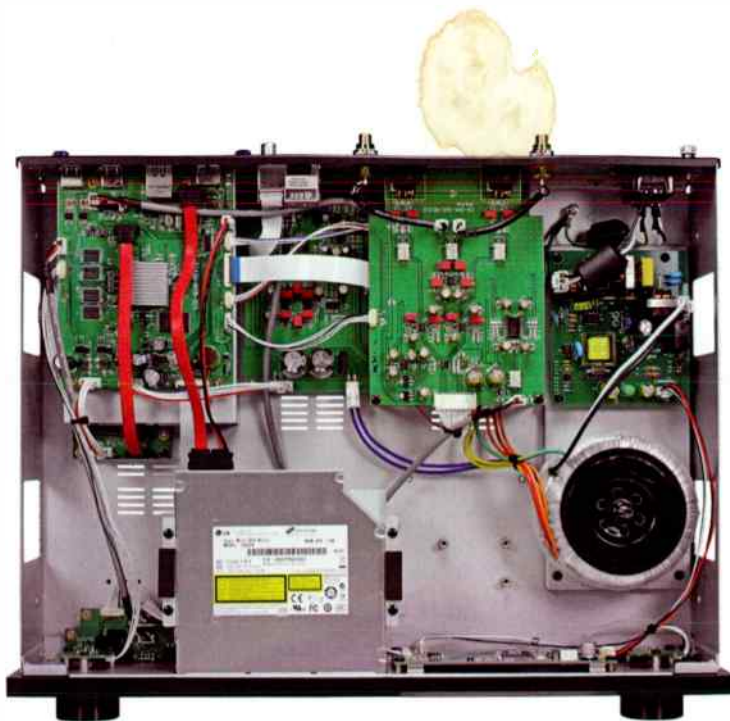
The X40 costs £1299 with 2Terabytes

of hard disk storage – but you can double that capacity for an extra £100 or specify more expensive SSD drives if preferred. It is around the size of a standard CD player, with a metal case and a 12mm thick aluminium front panel.

There you'll also find a slot-loading CD drive, TFT display panel, two rotary controls as well as headphone and USB drive sockets, plus an array of small push-button controllers which allow you to access the X40's various features.

Turn to the rear and the X40 is also handsomely equipped with both balanced and RCA analogue outputs, Toslink, Coaxial and AES/EBU digital outs, two USB host sockets for adding external storage plus a phono input (MM only) and an FM antenna socket.





The X40 has an upgraded power supply using a beefy toroidal transformer.

Connection to a network is via an Ethernet cable or – if required – an optional wireless adapter, while a remote control gives access to all the various features.

SET-UP AND OPERATION

Unpack the X40, put it in situ and operation is remarkably simple. The unit immediately locked on to our internet connection – giving access to web-based radio and meta-data when ripping CDs to the internal drive.

Slide in a silver disc, choose the ripping function from the front panel control and you immediately have the option to specify bit rate and file format. Ripping a standard CD in WAV took an average of 10 minutes – from inserting the disc, downloading album artwork and waiting for the entire operation to complete.

Once done, each album is displayed by its front cover which makes skipping through individual selections extremely easy. In addition, you can also create your own playlists.

The X40 will also discover UPnP storage devices on a network for 24-bit/192kHz streaming playback as well as importing similar file sizes from its USB sockets.

SOUND QUALITY

We've said it before but it's worth repeating – the ESS Sabre32 DAC is one of the best around and brings a real air of resolution and quality to the X40.

Listening to a ripped copy of Eleanor McEvoy's 'Yola' and the detail and atmosphere is exceptional.

Here the leading edges of the guitar work shine through, while you can hear the slight catches in Ms McEvoy's voice between vocal lines.

Switch to James Blake's 'Limit To Your Love' and the low-end

"loading a DSD download of the San Francisco Symphony's 'Mahler No 1' onto the hard disk and the atmosphere, sheer strength of the orchestra and overall musical punch is eerie."

power comes across with ample strength. This is via a Sugden Sapphire FBA-800A amplifier and Tannoy's new DC10 Ti loudspeakers (see reviews in this issue). That's a combined cost for loudspeakers and amplifier of over £10,000 – but the X40 doesn't come up short.

Indeed, it seems to revel in the combination. Loading a DSD download of the San Francisco Symphony's 'Mahler No 1' onto the hard disk and the atmosphere, sheer strength of the orchestra and overall musical punch is eerie.

Try something a little more

dense – such as the Jesus & Mary Chain's 'Psychocandy' (24/96) – and the X40 retains a sense of poise and detail that is admirable.

This album is a squall of sound – frightening feedback, deep bass and gloomy vocals – but the X40 manages to pick the various elements apart yet still convey it as a musical whole. It's an impressive performance.

Move on to recording from records to the hard disk and the MM input doesn't disappoint. Sample rate is 192kHz and the rips sound clean and clear. Clarity is good – although there isn't the outright definition you'll get from a well set-up turntable with moving coil cartridge.

But that's probably beside the point. The sheer convenience of being able to rip, store and access LPs on a unit such as this is an obvious benefit.

Listening to Kate Bush's '50 Words For Snow' taken from the LP and downloaded onto the hard disk shows a real presence to the piano with a timbral accuracy and life to the vocals.

If there's one criticism to be made, it's the fact that the X40 doesn't come with a dedicated smartphone/tablet app for easy



The TFT front panel display can show album artwork plus a variety of information on the track being played.

control. Instead there's a number of generic third-party iOS/Android apps as an alternative – but in practice

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"Powerful, detailed hi-fi sound via all inputs makes the Quad Vena a worthy winner"
Group Test Winner, Hi-Fi Choice (November 2014)



Quad celebrates 77 years of audio innovation with the launch of Vena, a compact integrated amplifier sporting a wide range of digital and analogue inputs, plus superior-quality wireless streaming over Bluetooth with aptX support. D/A conversion is handled by the same high-performance 24-bit/192kHz chipset used in the company's acclaimed Platinum CD players and, as one expects of Quad, the Class AB power amp section is of the highest quality. Vena is an exceptionally neat solution for superb sound from any source - from smartphones, tablets, PCs and Macs to traditional hi-fi separates. Vena is beautifully finished in Lancaster grey combined with a variety of high-gloss and wood veneer enclosures to complement your loudspeakers and living space.

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An optional wi-fi dongle (right) provides wireless connection if needed, while both balanced and unbalanced outputs are available.



NOEL SAYS -
The core value of this machine is its ESS Sabre32 DAC and resultant CD sound quality, which was excellent. All digital passes through the Sabre32 of course, so all benefits. Pity then that there was no Bluetooth to play music from mobile phone or portable. But it does have a super accurate digital phono stage - wow! NK

would certainly add to the value and in this day and age seems a strange omission.

That apart, though, the X40 is one of the most fully-featured, thoroughly musical and satisfying components out there at the moment.

CONCLUSION

The X30 impressed us – but the X40 takes things to another level. Chiefly this is down to an upgraded power supply and the use of the Sabre32 DAC – which brings a new level of resolution and clarity to the sound.

As a front end for a superb system there's little to match the X40. Hard disk storage, a decent MM

phono input, UPnP capability and an FM/ internet radio module are all on-board.

Also factor in the fact that you can store high-resolution tracks on the hard disk as well as DSD files and things look even more impressive.

Most importantly, though, it sounds superb and is easily capable of being matched with amplifiers and loudspeakers costing a lot more than its asking price. Which, in all, makes it a bit of a bargain.



An analogue input allows for the recording of LPs to the hard disk at 192kHz.

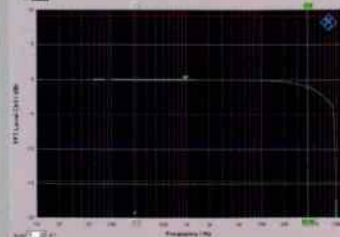
none of them worked perfectly and I invariably defaulted to the remote or front panel controls for both reliability and ease of use.

It's not a deal-breaker but it

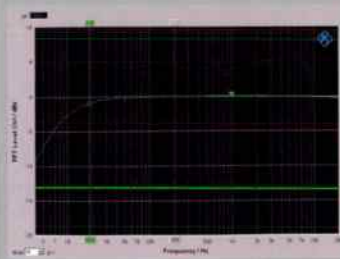
MEASURED PERFORMANCE

The S/PDIF digital audio electrical input accepted up to 24/192 PCM code, giving a flat audio response out to 20kHz through the analogue outputs, and a slow roll off thereafter up to the 96kHz sampling limit; the -1dB point was 41.3kHz.

FREQUENCY RESPONSE, 192k



PHONO RESPONSE



The S/PDIF optical input worked up to 176.4kHz sample rate, but not 192kHz – a disappointment. But the Sabre runs to 192kHz so the optical input receiver limits performance here.

Dynamic range of the Sabre32 measured a very high 120dB - impressive.

The phono stage runs through an ADC and back out through a DAC, from phono inputs to the analogue outputs, 1mV input giving 141/282mV respectively to the phono and XLR outputs, so this signal path has a gain of x141/x282 (43/49dB), as expected for MM preamps that typically have x100-x200 gain. Input overload was very low at 15mV, however; budget Ortofon cartridges like the 2M Red deliver 35mV on peaks, so occasional overload is possible, but for the most part 15mV will just do. Noise measured -69dB down, a low value below that of intrinsic MM cartridge (thermal) noise, and equalisation was superbly accurate – likely digital – complete with warp filter that gives -7dB attenuation at 5Hz; see our analysis. So the phono input is surprisingly neat in most areas, if

lacking overload headroom.

The VHF/FM tuner had perfectly flat frequency response to 13.5kHz, again appearing to have digitally applied 75µS de-emphasis it was so flat. A notch exists to remove pilot tone at 19kHz. Noise was that of a typical budget VHF/FM tuner, measuring -62dB at full quieting, a condition that existed with a weak 0.3mV from the aerial and above – a very good result. The IHF stereo sensitivity value measured 55µV, another good figure.

The ESS Sabre32 DAC gave very good results from the X40 as hoped; it has been well implemented and this product measured well all round as a result. NK

Frequency response (-1dB)	24/192	2Hz-41.3kHz
Distortion (24bit)	0dB	0.0009
	-60dB	0.02
Separation (1kHz)		110dB
Noise (IEC A)		-119dB
Dynamic range		120dB
Output (XLR/phono)		4.6/2.1V

NOVAFIDELITY X40
£1299 (WITH 2TB HARD DISK)



OUTSTANDING - amongst the best.

VALUE - keenly priced.

VERDICT

Exceptional-sounding CD ripper/storage system with MM input and internet/FM radio.

FOR

- ESS Sabre32 DAC
- Superb sound
- MM phono input
- Hard disk storage

AGAINST

- No dedicated app
- Nothing else at the price

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Headroom Show, Metropolis Studios

With headphones and portable players becoming ever more popular (don't mention Beats...) the new Headroom Show, held at Metropolis Studios in London, 30/31 Jan 2015, seemed like a good idea. Organised by retailer Unilet, this was a smallish event, constrained by the venue, but there was a good range of exhibitors all the same and some interesting new products.



A recent arrival is Quad's PA-One valve DAC/headphone amplifier. It accepts unbalanced and balanced analogue line inputs, and also USB, coax and optical S/PDIF digital inputs. Two sets of headphones can be driven and that is a lovely big volume and balance control on the front. Price around £1,200.

Importers Computers Unlimited were showing the new Audeze EL8 closed back planar magnetic headphones that, at around £600, is a considerable step down in price from other models. I was told much of the internal motor assembly was the same, so they could be good value.





Yamaha's rather gorgeous retro A-S3000 amplifier and CD-S3000 CD/SACD player / DAC graced the Yamaha stand, driving Yamaha headphones. Interesting how the crisp styling of Yamaha products has transcended time, unlike that of most rivals; these are classics.

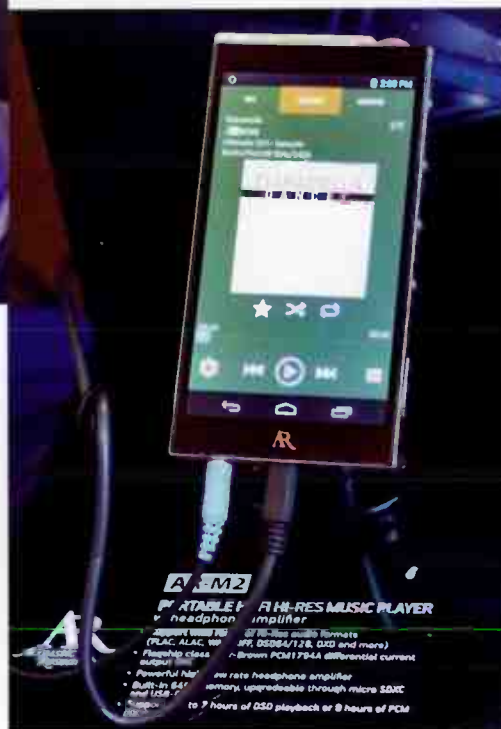
The new Astell&Kern AK100 MkII high resolution digital portable player is a tad bigger than the original. It now has a Crystal Semiconductor CS4398 DAC feeding a balanced output, through a 2.5mm 4-pole output jack. DSD can be played too. But price has risen to a hefty £750 or so.



PMC were showing a new near-field powered (active) studio monitor, the twotwo.5 priced at a lofty £3,300. It has balanced and unbalanced analogue inputs as well as an AES/EBU balanced digital input.



Here's a new bird, an Acoustic Research AR-M2 high-resolution digital portable player, replacement for the AR-M1 and not yet announced on their website. It plays Flac, Alac, Wav, AIFF, DSD64/128 and even DXD, through a Burr-Brown PCM1794A DAC. The screen looked clean and open. Price is expected to be around £800 when released this March.



Revolution XT



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Revolution XT lives up to its name, marking a major leap forward in loudspeaker design and the realisation of some of Tannoy's most radical and forward thinking technologies.

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Classy A



Sugden's Sapphire FBA-800 power amplifier harnesses Class A operation to make a sweet-sound, says Jon Myles.

It's big, it's Class A operation and it's a Sugden. Somehow those words go together like love and marriage or a horse and carriage.

It's what we expect. Not surprising really as the West Yorkshire company has built its reputation on tried and trusted designs, solid British engineering and

an admirable attention to detail.

They don't do frippery – nor do they bring out a product on a whim because it might be fashionable.

Hence the Sapphire series FBA-800 power amplifier. Yes, it's large – weighing in at 25kgs and measuring 206 x 430 x 460mm (H/W/D) - and despite those dimensions it's rated at just 40 Watts per channel into

an 8 Ohm load (our own Measured Performance returned a value of 32 Watts into 8 Ohms).

But those Watts are pure Class A – meaning the amplifier has to be large to dissipate the heat produced by running the four power transistors in each output stage in an always-on mode.

The advantage, of course, is that

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MC301



MC152



NEW

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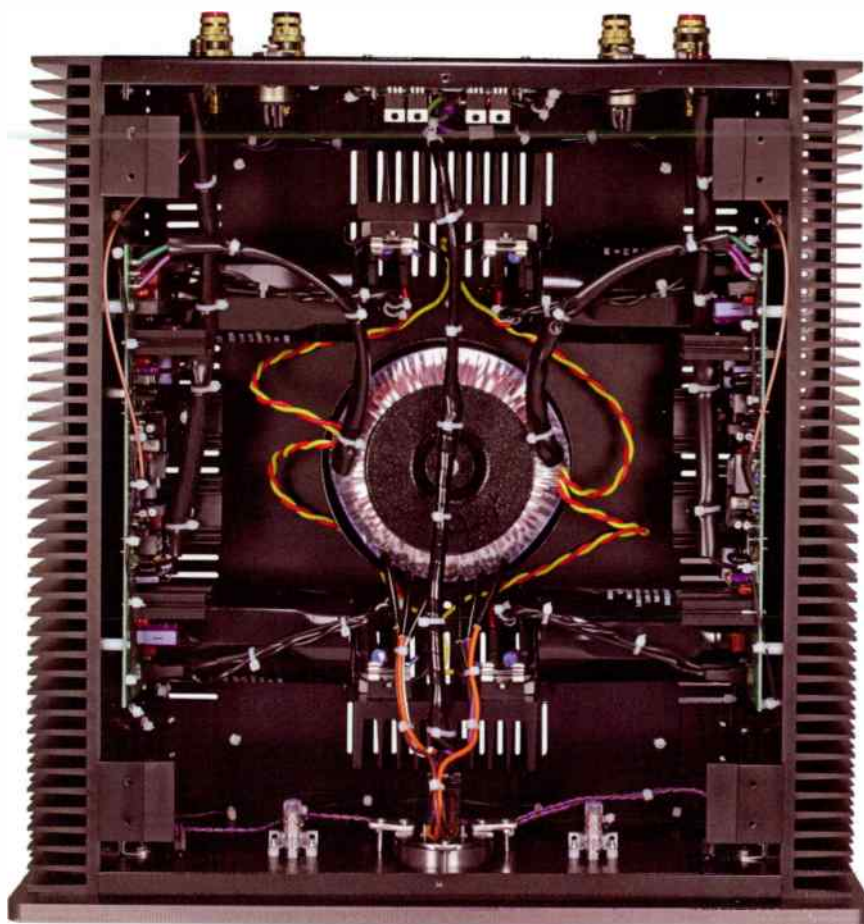
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Despite its relatively low power, the Sugden uses a substantial power supply to achieve its 30+ Watts of Class A operation. Large heatsinks are needed to dissipate the heat produced by Class A, whilst keeping temperature down. The amplifier is more efficient than standard Class A, being a circuit pioneered and developed by Sugden.

you avoid the crossover distortion inherent in most pull-push designs and so should reap the benefit of a more fluid mid-band and a rather sweeter sound than most transistor amplifiers manage to attain.

In terms of looks the FBA-800 is pure Sugden with a thick aluminium front panel, discrete blue LED indicator lights to show each channel is powered up and working, and a large on/off button on the fascia. The only other controls are two small buttons – one to switch between balanced and RCA phono inputs and the other to reduce the input sensitivity by -6dB for helping to match the unit to the pre-amplifier.

On the rear you have both balanced and unbalanced RCA inputs, the power socket and two pairs of sturdy loudspeaker binding posts.

Thermal grilles on the top plus hefty heatsinks at each side of the amplifier help cooling – but bear in mind the FBA-800 still runs relatively hot after a few hours of sustained use so needs adequate ventilation around it. You'll need a large hi-fi rack or be able to keep it well clear of obstructions to be safe.

SOUND QUALITY

There's an innate sense of rightness and hear-through clarity that makes the Sugden a joy to listen to.

I started off with CD through the rather special Oppo BDP-105D Blu-ray player plugged straight into the unbalanced inputs and fed into Tannoy Kensington GR Royal loudspeakers which, while large, do not need massive amounts of power.

Immediately music took on a rare sense of ambience and atmosphere that is the hallmark of Class A operation.

John Paul Jones's bass lines off 'Led Zeppelin IV' hit with tremendous impact – both tactile and fully-rounded. Higher up the registers Jimmy Page's guitar work was free of any smear or glaze while Robert Plant's vocals seemed to soar out of the loudspeakers.

Moving on to Ornette Coleman's 'Free Jazz' experimental album and the Sugden really showed its mettle. It's a tough, at times gruelling, album for many amplifiers with two jazz combos playing at the same time through the left and right channels but the FBA-800 made light work of it. I could easily make out individual

instruments – and the difference between Coleman's sax work and the bass clarinet of Eric Dolphy became easy to discern.

There's no smear or smudge here which means you are hearing right through recordings. It also means the Sugden can sound extremely fast when presented with some up-front material.

The Arctic Monkey's 'I Bet You Look Good On The Dancefloor' galloped along but never sounding hurried, forced or muddled despite the energy in the track.

A switch to Diana Krall also brought out another of the Sugden's really outstanding attributes – a midband and upper treble that is unerringly sweet and true. The catch in Krall's breath between vocal lines is captured with delicious delicacy yet real emotion – music as it should be heard.

That was only emphasised by a move to playing some higher-resolution music via NovaFidelity's X40 music server – this time connected via the balanced inputs.

Strikingly, the bass on Get The Blessing's 'OC/DC' (24/96) took on a more fulsome and palpable tone while



NOEL SAYS -
 This Sugden is medically pure in its sound – utterly precise and clear. It is also very solid in imaging, with more texture and insight than is common. With the big Tannoy DC10 Tis, it had tight and super clean bass. Truly – a reference sound I felt, a reviewer's delight and a simple but very 'right' product that demos the delights of Class A. Utterly superb.

Both balanced and unbalanced inputs are available, with front panel switching between them. Balanced input offers best quality. The rear panel also features sturdy gold-plated loudspeaker connections that accept 4mm plugs, spades or bare wires.

the saxophones had a greater edge and the kick-drum began to really hit me in the chest. Small improvements individually but taken together they made a real difference – showing just how open to higher-resolution files and cabling the Sugden is. Treat it well and it will respond in spades.

Ultimately, it has to be said, the FBA-800 doesn't have the grunt or outright drive of a Class A/B amplifier

such as the likes of a McIntosh MA800, a Naim SuperNait or Creek Evolution.

But that's not the point. The Sugden majors on other things – mainly a sweet mid and treble and lack of grain.

Match it with some large floorstanders such as the Tannoys I used and it will go plenty loud enough to fill a large room and, more

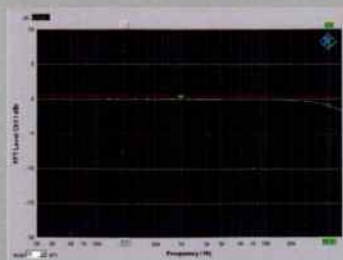
importantly, sound extremely sweet while doing so.

CONCLUSION

OK, it runs a little hot, demands a decent amount of space and isn't the most feature-packed piece of hi-fi on earth. But what it does do is get on with the job of being a superb power amplifier. If you love music, you'll adore the Sugden.

MEASURED PERFORMANCE

FREQUENCY RESPONSE



DISTORTION, 1W, 10kHz



Class A amplifiers produce less power than conventional ABs and this was the case with the FBA-800: it delivered just 32 Watts into 8 Ohms. This is no big amount by solid-state standards but it is still plenty enough to play loud, especially if sensitive floorstanding loudspeakers are used. Into 4 Ohms the Sugden delivers 42 Watts and since most loudspeakers are these days 6 Ohms, its real power output is somewhere between these values. The amplifier ran hot, if not very hot, and I believe this due to Sugden's use of unusual dynamic Class A circuitry that's more efficient than simpler basic forms.

Bandwidth reached 100kHz (-1dB) into 8 Ohms, falling a little to 55kHz into 4 Ohms. The Sugden has plenty of extension so it will not sound at all warm.

Distortion levels were vanishingly low – around 0.004% – in the midband and also very low at high frequencies since there is no crossover distortion.

We measured just 0.01% at 10kHz, 1 Watt, and this was mostly noise rather than distortion. Treble will sound pure, in typical Class A fashion.

Damping factor was on the low side at 20, likely due to an output network. However, Naim amplifiers come in at around 17 and this removes dryness from their bass.

Input sensitivity was a normal 800mV for full output, sufficient to be driven directly by silver disc players.

The FBA-800 measured well all round. It does not produce high power, so needs reasonably sensitive loudspeakers.

Power	32 Watts
Frequency response	4Hz-55kHz
Noise	-118dB
Distortion	0.01%
Sensitivity	0.8V
Damping factor	21

SUGDEN SAPHIRE FBA-800 £5495



OUTSTANDING - amongst the best.

VERDICT
 Sweet-sounding, truly musical Class A amplifier that is a joy to listen to.

FOR
 - sweet mid and treble
 - lack of transistor harshness
 - superb clarity

AGAINST
 - big
 - runs hot

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Little Gems



Once upon a time, Wharfedale ruled the roost when it came to diminutive small-budget speakers. Martin Pipe thinks it might again...

Around three and a half decades ago, the then British-owned speaker giant Wharfedale introduced its diminutive Diamonds. A small bass-reflex speaker with a chipboard cabinet had no right to sound that good. Sure, the Diamond lacked bass and clarity – but such shortcomings could be forgiven, because the Diamond was just so toe-tappingly musical! It wasn't uncommon to find them in a 'budget' system alongside a NAD 3020A and entry-spec Linn LP12. Such was the thinking of the time.

And they sold by the thousand. New versions – among them the Diamond II, Super Diamond and

Active Diamond – followed quicker than Duran Duran hit-singles. The 'Active' incorporated a 20W amp, which could be fed directly from line-level sources like Sony Walkmen and that era's yuppie toy – the personal CD player. Make no mistake, the Wharfedale Diamond is a truly iconic design – the speaker that launched many an interest in well-reproduced music.

I'll am looking at the 220, a £200 'step up' model. This is, allowing for inflation, roughly what you would have paid for an '80s Diamond – which shares the same basic two-driver-and-ported-cabinet configuration. But truth be told, you're getting a helluva lot more speaker for your money today. Instead of polypropylene, the Diamond 220's massively-magnetted 130mm bass-driver employs Kevlar as a cone

material; its structure has been engineered to minimise 'breakup'. The 25mm dome tweeter, meanwhile, is built into a recess shaped to aid treble dispersion. They're fed by a crossover that has been refined through careful listening.

This 5.3kg (per unit) budget package certainly manages to look expensive, with a glossy finish and grilles that fit over the individual drivers rather than the baffles. You can even bi-wire or bi-amp them, by removing the bus-bars that bridge their chunky input terminals – no cheap spring-clips here!

The 7-litre cabinet isn't just a looker, either. Instead of the original Diamond's chipboard, Wharfedale has plumped for a 'sandwich' of particleboard and MDF. It's a cost-effective version of the colouration-reducing 'Crystallam' cabinet material that the pricier Jade models are built of.

The cabinet's bass-reflex port

has received attention too. Instead of being on the front or rear, as with previous models, the tube terminates centrally in the base of the cabinet. The latter sits on an integrated plinth, a narrow gap separating the two; the slot port's airflow is thus effectively distributed around the speaker base. This arrangement, derived from the Jade research effort and known as a 'slot-loaded distributed port', aims to smooth the transition in air-pressure between the room and speaker-cabinet. Claimed benefits include a reduction of low-frequency distortion, improved efficiency and easier positioning.

SOUND QUALITY

Wharfedale recommend positioning the 220s no less than 20cm from the wall behind, and 70cm or more from your rooms's side-walls. A 'toe-in' of between 15 and 40 degrees towards the listening position is advised for the best stereo image; if my experiences are anything to go by, experimentation can pay dividends. In terms of height, Wharfedale suggests that the tweeters are at ear-level, listening distance for optimum results being between two and four metres. Those old Diamonds were sold as 'bookshelf' speakers; the 200s should, however, be positioned on rigid stands.

I partnered these speakers with a Marantz PM66SE KI (bi-wired with Sonic Link cabling), source duties being performed by a Cyrus Stream Xa streamer playing a variety of CD-sourced and HD tracks. This is in keeping with the philosophy that prevailed during the original Diamond's heyday – a classic upper-budget integrated amplifier and a top-notch source, albeit a digital one here. First up was a Radio 4 digital stream; speech is a good test of colouration. The 220s are free of the 'plumminess' that can affect some budget speakers, the all-important presence region sounding tonally-even here.

Royksopp's swansong album *The Inevitable End*, which brims with melancholy beauty, was then loaded. The treated vocal, layered electronics and drum-machine heartbeat of standout track 'Sordid Affair' contributed to a compelling if bittersweet listen. With these speakers the rhythm is given the insistence needed to move things forward, and you're given surprising insight into the makeup of those brooding synthesised

layers. Given their size, the 220s give the song's bassline a fair stab, but – understandably – they ultimately lack the weight and depth of larger enclosures.

This was also evident when spinning Iron Maiden's NWOBHM classic 'The Number of the Beast', although the searing guitar work and sheer energy of the title track, and the equally-famous 'Run To The Hills', were very much in evidence. Heavy-metal fans without much room will appreciate that, for small speakers, they can be wicked up high without obvious strain. Indeed, advances in technology have given them twice the 50W handling-capacity of the '80s originals. The album's comparative subtleties, notably the intro to 'Children of the Damned', are handled with equal dexterity. My real only criticism, lightness of bass apart, is that a slight 'boxiness' was imparted to the drums of this track.

Switching to a CD of Mozart's Horn Concertos (DG/Alessio Allegrini/Claudio Abbado/Orchestra Mozart) the 220s proved to be deft performers, with pace and drive. A worrying metallic 'buzz' that affected Signor Allegrini's horn on certain notes was traced to the removed

bi-wire links of one speaker rattling against each other - these were quickly moved out of the way! With hi-def material, such as a Linn 24-bit recording of Bach's 'Well-Tempered Clavier Book I: Prelude & Fugue No. 21 in B flat Major' the detail evident in John Butt's harpsichord playing transcends what is expected from a budget speaker.

CONCLUSION

By any standards, the Diamond 220s are musically-worthwhile speakers – and by budget standards, they're crackers. A believable stereo image can be projected, and as long as you don't need the deepest in bass will do justice to a well thought-out budget or lower-midrange audio system. If you do need bass but don't like prominent boxes (among them the bigger Diamonds), it may be worth considering using these speakers with an active subwoofer.



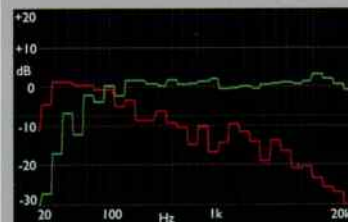
MEASURED PERFORMANCE

The Wharfedale Diamond 220 has a reasonably flat frequency response across the audio band, with no crossover dip around 3kHz, so detail delivery will be strong. Treble lifts slightly upward toward 10kHz, just enough to add a little light sheen to the sound, if not obvious spikiness or brightness I suspect.

Bass rolls away slowly below 100Hz, but there is useful forward output

FREQUENCY RESPONSE

Green - driver output
Red - port output



IMPEDANCE



from the bass driver down to 60Hz. A port firing out of the base of the cabinet, loaded by a large-area resistive slot port offers well damped and extended output down to 30Hz, so the 'speaker goes low, but it is all the same unlikely to deliver much bass power. Bass does look well damped, however, and is likely to be tuneful as a result. Use close to a wall is likely to be best.

Phase matching between the treble and bass/midrange unit was superb, so the 220s will sound consistent over a wide range of listening positions.

Sensitivity was reasonably healthy (as small speakers go) 86dB from one nominal Watt of input, so around 60 Watts will drive the 220s loud. Impedance measured 6 Ohms overall, our impedance curve showing a largely resistive characteristic right across the audio band. This also shows excellent port damping reflected back as almost a flat trace, meaning little reactance, in the bass region, easing amplifier power delivery.

The Diamond 220 measures very well in all areas. It will have a clear and concise sound with strong detailing. Bass will be very well damped but will likely need wall reinforcement. **NK**

**WHARFEDALE
DIAMOND 220
£200**



OUTSTANDING - amongst the best.

VALUE - keenly priced

VERDICT

A worthy continuation of the Diamond legacy.

FOR

- balanced and detailed sound
- bi-wireable
- superbly-built

AGAINST

- very lowest octaves not their forte

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Here's your chance to win a superb 1m long Chord Company Signature Tuned Aray signal cable, reviewed in our November 2014 issue. Read the review excerpt below and answer the questions.

"The most affordable of the three is the Chorus Reference priced at £350. This is a new design with a tri-conductor configuration using silver-plated oxygen free copper and insulated with PTFE. The conductors are arranged over a spiral and shielded with a 95% coverage woven

braid and heavy gauge foil. Chord's VEE 3 plugs are fitted, made with an ABS outer shell, silver plated contact areas and PTFE insulation around the central pin.

The £450 Anthem Reference interconnect uses heavy gauge, silver-plated oxygen-free copper connectors arranged in a repeating spiral and insulated with PTFE. The cables are then over-extruded with PVC to minimise mechanical noise. The shielding is provided by a dense braid and a heavy gauge foil over-wrap. VEE 3 plugs are fitted.

The most expansive cable in this review is the £765 Signature Tuned

ARAY interconnect. This replaces the Signature Plus in their range and is a new design made with high-quality silver-plated conductors and PTFE insulation and two layers of a high density silver braid for shielding. This is covered with a white PTFE outer extrusion. Chord's ultra low mass RCA plugs are fitted. The silver-plated pin is surrounded by PTFE insulation, as is the silver-plated return connector. This is covered with a machined acrylic plug casing."

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QUESTIONS

[1] The Chorus Reference is -

- [a] silver plated
- [b] gold plated
- [c] tinned
- [d] unplated

[2] The Anthem Reference is insulated with -

- [a] silk
- [b] PVC
- [c] PTFE
- [d] ceramic

[3] The Anthem Reference has -

- [a] mains plugs
- [b] ear plugs
- [c] no plugs
- [d] VEE 3 plugs

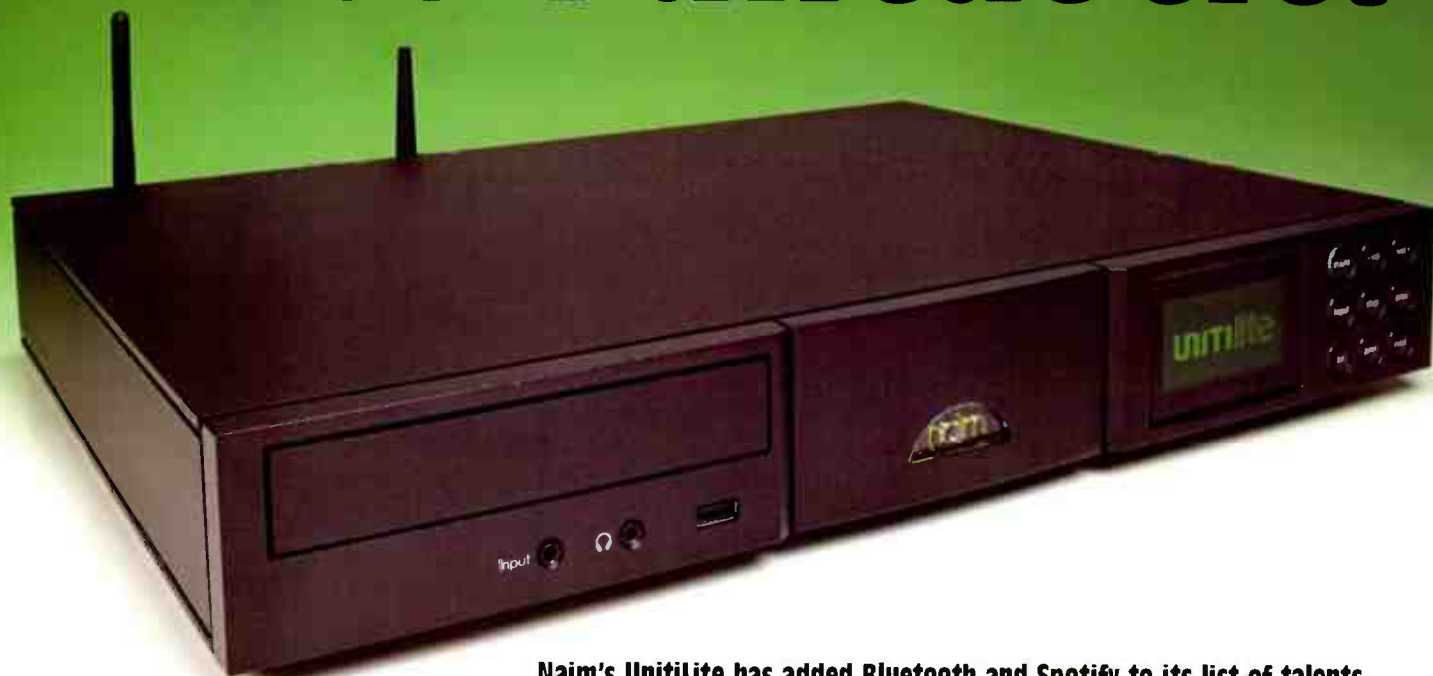
[4] The Signature Tuned Aray plug has a -

- [a] machined acrylic casing
- [b] machined metal casing
- [c] hevn stone casing
- [d] bubble gum casing

entries will be accepted on a postcard only

**JANUARY 2015 WINNER: QUAD VENA AMPLIFIER/DAC
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Lite Fantastic!



Naim's UnitiLite has added Bluetooth and Spotify to its list of talents – making it even more of a bargain, says Jon Myles.

It's fair to say that Naim's original Uniti was a groundbreaking product for them – introducing a whole new set of customers to the company's distinctive products. The one-box system featured high-resolution UPnP streaming, a CD player, internet, FM and DAB radio plus USB input, a 50 Watts per channel amplifier, headphone socket and connections for an iPod – all for less than £2000 at the time of launch.



Little wonder it proved a runaway success and was soon copied by rival hi-fi manufacturers with their own versions of the all-in-one system.

Since then, there have been a number of revisions and software upgrades and – inevitably – price increases, which mean the current Uniti 2 model now costs nearer to £3000 and boasts a beefier 70 Watts per channel amplifier.

But if that price is too steep for you, fear not – for Naim has an entry level model called UnitiLite with

much of the same functionality as its bigger brother, but costing a more wallet-friendly £1995.

And, as part of a recent upgrade, the UnitiLite now comes with built-in support for Spotify's streaming music service, as well as Bluetooth for sending music from portable devices or computers.

Unbox the Lite and it's noticeably slimmer than the original Uniti or the Uniti 2 but still comes in Naim's trademark black powder-coated metallic casework.

The space saving comes from Naim abandoning the use of its famous swing-out CD drawer for a more traditional slide-loading tray.

Much of the front panel is taken up by the large display panel, alongside nine control buttons that give access to the unit's basic functions. Beneath the CD draw sits the USB input, together with headphone and combined line-in/optical digital input sockets.

The rear panel is also tightly-packed, featuring a wired network input and a connection for the supplied wi-fi antenna, two optical and two electrical digital inputs, two analogue ins, and an F-type screw connection for an FM/DAB aerial.

There's also one of Naim's

favourite four-pin DIN sockets for preamp-level output should you want to connect an external power amplifier, alongside 4mm loudspeaker terminals.

Inside the box is a 50 Watts per channel amplifier with a sturdy linear power supply – and as well as CD playback, radio and the new Bluetooth and Spotify capability, the UnitiLite will stream music files of up to 32bit/192kHz.

Naim recommends a wired Ethernet connection for best performance – but I had no trouble streaming high-resolution files from a WD NAS drive situated in the same room.

A remote control is also provided, but I'd recommend downloading Naim's free dedicated control app for Apple iOS or Android devices. The app has been gradually polished and improved since it launched and is now one of the best out there. It selects inputs – allowing the creation and saving of playlists, storing radio presets and other features, such as the display of album artwork – and it also gives access to the on-line Rovi music database for album reviews, information on artists and suggestions for other music you may be interested in, based on what



Two aerials, no less, for Wi-fi and Bluetooth, attest to the UnitiLite's comms. skills. There is a network RJ45 socket, S/PDIF inputs, loudspeaker outputs and more, underscoring just how capable this Naim is.

you are playing at the time. It makes operating the UnitiLite extremely easy and intuitive, despite the range of features on offer.

SOUND QUALITY

It may be dubbed 'Lite' but there's nothing inconsequential about the Naim's sound.

In typical Naim fashion it has a solidity and pace that brings music alive, with powerful bass and a smooth, cluttered midband.

Playing The Pixies 'Wave Of Mutilation' best of CD collection, there was real snap and crackle to the music. Joey Santiago's guitar lines have a crisp leading edge, while Kim Deal's bass is firm and distinct. There's good separation between the instruments too – but the Naim never sounds clinical, instead staying

true to the rough spirit of the music.

The UnitiLite, though, really shines when streaming hi-res music – the extra detail on the likes of The Clash's 'Jimmy Jazz' 24/96 shining through with terrific air and atmosphere to the track.

There's perhaps not quite the overall detail of the more expensive Uniti 2 – a slight feeling the UnitiLite isn't exploring both ends of the frequency spectrum to the fullest extent, but it doesn't alter the verve it brings to the music.

Both Spotify and Bluetooth also worked seamlessly. Yes, the former's lower bit-rate is noticeable but not to the extent that the music becomes mere background noise. On the contrary, the UnitiLite is adept at grabbing hold of a song and bringing the best out of it. I had great fun

rifling through the service's millions of tracks – unearthing some long-forgotten gems while also discovering new favourites.

Bluetooth via an Apple iPhone 6 Plus was also crisp and clear. Yes, you'll notice some reduction in quality compared to high-resolution, but it's a convenient and useful addition for when you just want to turn on some music instantly.

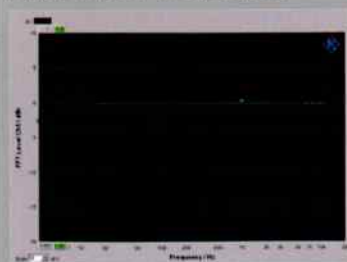
CONCLUSION

The UnitiLite is a talented box of tricks that gets on with the task of playing music with a refreshing verve and assurance – whether it be CD, high-resolution streaming or radio. Add in new Bluetooth and Spotify capability and it looks even more of a bargain. Connect up a decent pair of loudspeakers and away you go.

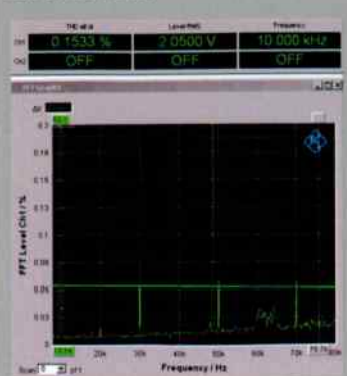
MEASURED PERFORMANCE

The UnitiLite amplifier produced a healthy 50 Watts into 8 Ohms under measurement, and 90 Watts into 4 Ohms, so it will go loud enough for most

FREQUENCY RESPONSE



DISTORTION



listeners. Frequency response was wide, with an upper -1dB limit of 30kHz. There was a small amount of crossover distortion, measuring 0.15%, with distortion rising at powers lower than 1 Watt - not ideal.

Analogue input sensitivity was extremely high at 140mV, so just about any input can be handled.

The S/PDIF digital audio electrical input (phono socket) accepted up to 24/192 PCM code, giving a flat audio response out to 20kHz – good.

The S/PDIF optical input worked up to 192kHz sample rate too - useful because it avoids a no-sound scenario with hi-res – very good.

Playback from memory stick exhibited the same mediocre dynamic range of 106dB as S/PDIF and also the same frequency response, as expected, reading up to 192kHz sample rate files. The UnitiLite's digital dynamic range isn't impressive.

The VHF/FM tuner measured flat to 10kHz and rolled away smoothly to a pilot tone notch at 19kHz. Noise was that of a typical budget VHF/FM tuner, measuring

-60dB at full quieting, achieved at 0.7mV or more from the aerial, a good result. The IHF stereo sensitivity value measured 60µV, another normal value. It's a good VHF/FM section.

The UnitiLite measured well. It doesn't excel: digital dynamic range was limited at 106dB from 24bit, little better than CD's 102dB – a disappointment. Otherwise, the figures are very respectable and in keeping with the price point of a product with so much packed in. NK

Power	55 Watts
Frequency response (-1dB)	5Hz-30kHz
Separation	95dB
Noise	-92dB
Distortion (1W, 10kHz)	0.15%
Input sensitivity	140mV

Digital S/PDIF	
Frequency response (-1dB)	24/192 5Hz-20kHz
Distortion (16/24bit)	
0dB	0.001/0.001
-60dB	0.29/0.17
Separation (1kHz)	110dB
Noise (IEC A)	-119dB
Dynamic range (24bit)	106dB

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LETTER OF THE MONTH PRIZE



KEF Q100 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 Q100 loudspeakers.

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

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

A pair of KEF Q100 loudspeakers are on their way to ANDY ALDRIDGE, Letter of the Month winner in our March 2015 issue.

Letter of the Month

HIGH RES HAPPINESS

I thought it might be of interest (and even help) to mention a few different things I have tried out recently using the Astell&Kern AK100 MkII portable digital player, FiiO X3 portable digital player and Oppo equipment. Kit list is the Oppo BDP-105D Blu-ray player, Oppo HA-1 headphone amp/DAC and AK100 MkII, all through an ATC SIA2-150 integrated amplifier and into ATC SCM20 loudspeakers (first generation passive model).

The Oppo HA-1 is used for inputs from the FiiO and AK and the BDP-105D for disc replay (SACD etc.). The BDP-105D is connected via XLR to the HA-1, output via RCA to the amplifier which doesn't have balanced inputs.

Headphones are Sennheiser HD650s with balanced connection to the HA-1. The cable was sourced from e-Bay, less than half the price of the OEM one, very well made and with real Sennheiser earpiece connectors. Other cables are all Audioquest.

For quick/general travel listening I use a pair of AKG452s – handy, decent and surprisingly effective with both portables, a very easy load, small and perfectly good enough for these duties. Here are my experiences with this equipment.

I was annoyed at the lack of a suitable 4 pole TRRS jack to XLR connector cable for the AK100 MkII. I bought one from a Japanese supplier on e-Bay for less than £25. I was only



"It goes without saying that the Sennheiser HD650 headphones are fantastic through the Oppo HA-1 dedicated headphone amplifier" says Simon Gregory.

interested in this to see if it would allow me to drive my Sennheiser HD650s via its balanced output (this means using the connector cable into the HD650 XLR socket). Do remember to switch to balanced in the AK menu though, if you do this. I didn't for ten very confusing minutes.

So would the Astell&Kern portable drive the HD650 headphones? Indeed it did, not to ear-shattering levels, but enough to make it a good listening experience. The FiiO X3 wouldn't touch them!

All of this was by way of an experiment, as HD650s are not really the thing for crowded public transport.. It goes without saying

that the HD650s are fantastic through the Oppo HA-1 dedicated headphone amplifier.

Having had something of a bake-



Sennheiser HD650 headphones, widely acknowledged as reference quality.

off between the two players I would still say that the FiiO X3 is a mightily impressive piece of kit for smaller budgets. The AK has it in terms of more space around the instruments and a greater sense of the surroundings/studio/place, but the FiiO is by no means disgraced here (think Bradford vs Chelsea for an analogy!).

What I have noticed, more than anything else, is that I have had to adjust my listening expectations dramatically. This is particularly noticeable with the volume setting, where one is not prepared for the huge dynamic swings that burst from the speakers: this is a real revelation (I leave a pre-set volume on the amp so I know roughly where flippin loud is).

My first few moments with these products were utterly confusing to say the least; I even had an irrational thought that I'd bought the wrong stuff altogether. Now I am getting used to hearing all sorts of things that really weren't there before (some very discrete cymbal work on a Keith Jarrett album struck me today, I'm sure I don't recall that) – off bog-standard CD to boot.

Having invested in some SACDs I have to admit that there are still some fantastic sounds to be had from those ornery silver critters after all: damn it Hi-Fi World, you really were spot-on!

For those teetering on the decision-precipice, take the plunge! I've certainly had my fair share of CD players and DACs, this Oppo player outperforms all of them by some considerable distance. Once again, HFW comes up trumps – say no more!

Having 'converted' to vinyl some years ago I can honestly say that this is the first time that the digital domain has really come close, perhaps on an even keel (I use a Michell Gyrodec).

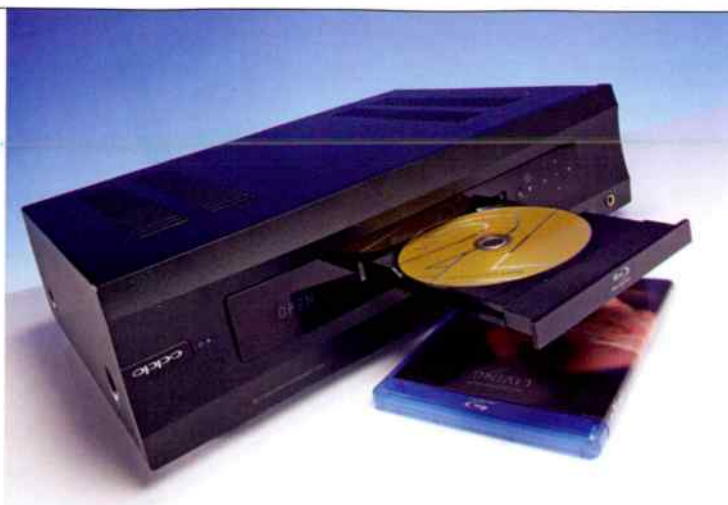
As a last comment, I found some Castle Durhams (Mk 1 version with rear reflex port). These were my very first real hi-fi speakers and it has been great to hear them again (on a smaller Quad-based system using the A&K). It's nice to feel that these little mahogany boxes have eventually found their way home again.

Keep up the good work

**Simon Gregory
Skipton**

Thanks for that Simon. I'm sure your findings will be interesting to all those thinking of playing high-resolution digital audio, through headphones as well as loudspeakers.

Your experiences exactly



Oppo's BDP-105D Blu-ray player uses an ESS Sabre32 DAC to get exceptional quality from all digital, including CD and SACD.

match ours: CD played through the BDP-105D is deeply impressive; how that Sabre DAC gets so much more out of CD I will never quite understand. I thought 16bit had given up all it had to give, but as you say, even ordinary CDs sound far better through the Oppo and – scarily – digital does start to approach analogue, in smoothness at least. I sat in front of the huge and deeply impressive Tannoy DC10 TIs reviewed in this issue, marvelling at just how wonderful even CD sounded from the Oppo BDP-105D player.

As you say the FiiO X3 player is by no means disgraced in what it can do at £160. This is a great entry-level portable, high-resolution digital player, well worth considering if you don't want to go Astell&Kern.

I winced when told at the Headroom Show (see our report) the price of the base level AK100 MkII had gone up yet again. It is now no less than \$899 in the iRiver online store I see, and around £799 from UK retailers. The AK100 MkII is far and away the best player, with more dynamic range than the Sony NWZ ZX-1, but you do have to pay for it.

Here's a little note-ette: Apple iPads swing over a 1V out at their headphone sockets and sound punchy. They will run 24bit digital at 48kHz sample rate maximum

and sound good with it, I have been sort-of-surprised to find. I put it like this because I never expected an iPad to have good sound quality; it isn't meant to be a hi-fi player. Yet Apple computer consistently take audio seriously, perhaps because Steve Jobs was into audio and left this as a legacy.

Your observations about hires quality neatly contradict what Spencer Kelly was saying about it, as Dave Tutt notes in the next letter.

NK

CLICK OFF

I was very interested in the letter of the month from Andy Aldridge. Much truth there I would think.

As an ex-BBC employee working in streaming media and the broadcasting of the original NewsLoops service, I can tell you that the BBC is full of AV digital equipment that by default is capable of



The little FiiO X3 portable, high-resolution digital player: "a mightily impressive piece of kit for smaller budgets" says Simon Gregory.

16 bit 48kHz. The vast number of TV audio feeds arrived in the room where my equipment was located as AES EBU, (CCIR recommendation 646) generally no better than 16 bit 48kHz, although the sub coding may have been set to 24bit.

Early equipment I used included Avid Pluto servers that had problems with 24 bit as the internal chip set was only able to run 20 bit, hence the odd clicks in the audio stream of the older NewsLoops service until the Omneon hardware was installed, which levelled the playing field again. This was 5-6 years ago at Television Centre so things have no doubt moved on... I hope!

Given that the average TV source might be only CD quality at the point where perhaps we would expect higher definition, we cannot expect the downstream services to be any better than this.

If the BBC is happy with this standard we really cannot expect an average reporter to express what we all know about the improvements of more bits and higher sampling rates. No matter what Mr Kelly looked at, if he doesn't have hi-fi ears and can only see it as a costly and wasteful use of storage space then he will only report his views!

The couple of times I chatted to Mr Kelly in the old days, the operation was no more than five people doing the entire show and usually only three. So if we are relying on the opinions of at most three people, about a subject of which only two may have been to see or hear the technology, we really cannot expect to have glowing praise for the quality, as the argument is somewhat one sided and full of considerations outside that of purely technical achievement.

I think the biggest issues with hi-res formats is that the consumer has CD or MP3, both of which they are totally happy with. There is also the issue that higher res has no strict standard, it being wide open to interpretation, with delivery solutions which do not engage with the average customer.

If the customer could select a 24 bit 96/192kHz download direct from the likes of Amazon for every track they sell, then perhaps there would be more take up and likewise more appreciation of the improvements – even if they still only play the files on a 'phone or media player and don't even own a proper hi-fi.

There is of course a level of bluff out there too. Take some so-called Hi-Def TV for example that to my eyes looks no better than old noisy 625 line analog! Hi Def original Star Trek is anything but!



Melco high-fidelity hard disk drive purposed for audio fulfils need for "plenty of hard disk storage", suggested by Dave Tutt.

Even though we may expect the BBC to expound the improvements available to the world of hi-fi we are bound to reach a point where no matter how good the technology, some reports will always be negative – be they from the BBC, internet, newspapers or magazines.

The expectations of Mr Average have generally been satisfied by the Red Book standard and things like 5.1 and 7.1 surround, and so long as the ground shakes when there is an explosion or the latest explicit lyrics are clear for all – including the neighbours – to hear, then they are happy.

Hi-res audio is therefore likely to remain a niche requirement for those with good ears, good hi-fi, slightly deeper pockets and plenty of hard disk storage. Comments from the BBC are but one angle and I am sure there will be many more from diverse sources! All the same, I have to say the few hi-res tracks I have heard I love. Lets have more!

Regards,

Dave Tutt

Chatham

Kent

www.tutt-technology.co.uk

TURNING RADIO DIGITAL

I liked Noel's intention to try out a Terratec Aureon ADC (letters, February), particularly as I want to use my Oppo BDP-105EU Blu-ray player as a preamp, but the Oppo has only digital inputs and I wish to use an analogue input for radio, a Rotel RT-12 which unfortunately has no digital outputs. A budget ADC is

what I need here.

Incidentally, there are other inexpensive ADCs - less than £50 - than the Terratec, for example the AU-D4: Analogue-to-Digital Audio Converter, from CYP Europe. Perhaps a comparative review of such ADCs would be in order.

Also, like many devices the AU-D4 is powered by the ubiquitous 'wall-wart': it may be worth reviewing alternative d.c. power supplies to these ADCs. I have found a third-party PSU a sonic improvement to the wall-wart supplied with the Firestone MASS preamp.

As to use of the Oppo BDP-105EU as a preamp, I'm concerned about the minimum load impedance its outputs can cope with: a 47k ohm load is recommended, but it is hard to believe that the Oppo is too feeble to work with a lower load impedance. Using the common rule-of-thumb, 20x the output impedance (which is 100 ohms in the case of the Oppo BDP-105EU), a 2k ohm load should be enough to avoid overload. I want to use a load impedance of about 6k ohms. Is that likely to be high enough to avoid overloading the Oppo output?

Regards

Jim Thorpe

Hi Jim. An output impedance of 100 Ohms is a common value and the usual multiplier is $\times 10$, giving a 1k Ohms (1000 Ohms) minimum load value. But I have a suspicion here that if a very high load value like 47k is recommended the reason is



"Rotel RT-12 tuner unfortunately has no digital outputs" says Jim Thorpe. "A budget ADC is needed".



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a low value d.c. blocking capacitor is in the output. If Oppo have used a small capacitor to fit onto a crowded printed circuit board, a typical value here being 0.1 μ F, then you do indeed need 47k Ohms to avoid bass roll off, caused by rising impedance of the capacitor with decreasing frequency. Your load impedance of 6k is sort-of-fine technically, meaning nothing is going to overheat or blow up, but you may find bass has become light or even gone missing. You can only listen and see.

I have here supposed there is an output blocking capacitor as a likely explanation for the very high quoted load value of 47k. However, nowadays there often is not, because they are big and expensive and line drive op-amps will usually have a minuscule d.c. offset that makes them arguably unneeded. Also, quality hi-fi amplifiers commonly have large input blocking capacitors, making them immune to d.c. on the inputs. If all this is the case then you won't lose bass at all, so again, best try it and see! NK

BALANCING A TURNTABLE

I'm writing in the hope that you can furnish me with a little information on the advantages of running in balanced mode from cartridge to pre-amp. I own an Ortofon Kontrapunkt B moving coil cartridge/SMEV arm that feeds a Music First Audio Classic pre-amp and this currently goes via RCAs and a Densen DP-Drive 04 phono stage.

The question that I would like to ask is would there be an advantage in running balanced throughout the signal path? To do this would involve changing the lead off the cartridge into a floating/balanced one, potentially then using a balanced step-up transformer such as the Music First Step-Up transformer, which in turn connects to a balanced RIAA phono stage such as a Leema, Aqvox or Origin Live and finally connecting to the Music First pre-amp.

I realise that one of the advantages of balanced operation is its ability to reject RF interference on longer lines, but none of these connections will be more than 1 metre. Would this be worth doing and if so, what transformer/phono stage would you recommend at around the £2000 budget for both?

Yours

John McCulloch

Hi John. I run a balanced line from my SME 312S because it sounds better, meaning cleaner and less fuzzy in timing. In this area it also eliminates hum as well as the commonly

quoted horror of radio pickup, which may or may not be a problem, depending upon the number, power and distance of transmitters around you. Once upon a time that meant your local radio or TV transmitter, that was usually very visible – a giant tower atop a hill, often with an intriguing name like North Hessary Torr. These days it is all a little more prosaic; most of my local transmitters are available in a drop-down list in front of me on my computer and are called something romantic like BTHub, or BT Wi-Fi-with-FON. You may well find a 1 metre unscreened cable quite good at picking these up, even if it is less good at detecting Radio 4 on Long Wave.

A balanced cable not only helps cancel interference it is also better screened and the signal return doesn't carry earth currents and other rubbish – a significant benefit when you are trying to get a few millionths of a volt into your preamp unmolested! In this respect there is little as raw and challenging in electronics today as dealing properly with the output of a moving coil cartridge.

SME make fully balanced cables terminated in 5 pin mini-DIN plugs, and Aqvox of Germany can supply such cables too. This company has always promoted the use of balanced working with pickup cartridges and I agree with them when they say it is amazing that



The AU-D4 ADC – Analogue to Digital Converter – from CYP Europe costs 5p less than £50!

fully floating, balanced, low voltage sources like this are not connected fully balanced to the preamplifier; it seems a natural and sensible way to arrange such a sensitive signal line.

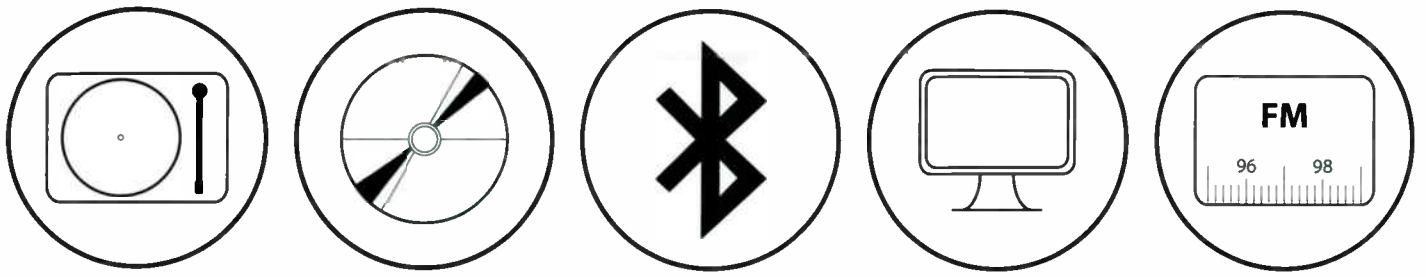
Also, because a moving coil pickup cartridge has a super low output impedance (it is a current source), to exploit its massive dynamic range (there is no thermal noise floor) it needs to feed a balanced input transformer with very low d.c. resistance windings, to minimise thermal noise and so maximise dynamic range. Low d.c. resistance means thick wire and a big transformer, which the Music First Audio is. This is the notionally ideal solution for an MC cartridge. However, modern low noise transistors/FETs are very, very quiet, and can be as quiet as a transformer, our measurements show.

All of which is to say that you are going down the right path in my view. You could use an Aqvox Phono 2 Ci MkII or Avid Pulsare II, neither of which need a transformer. We have measured both and they are superb. At €1298 the Aqvox is relatively affordable, Avid's unit costing £4300



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or so, but is more sophisticated.

The Music First Audio transformer is balanced, although it uses ground isolated unbalanced phono connectors so people don't have to change the arm's signal cable. This means you do get balanced working, providing neither screen is grounded inside the turntable to its metalwork. Otherwise, you don't. It's a fabulous device to listen to though, if expensive at £1900.

To kick off, I suggest you get a fully balanced cable, which will be screened, and an Aqvox – and see what you think. I feel confident the lack of hum and noise and the squeaky clean sound will be impressive. After that you are on the upgrade path and – at this level – discussions with the bank manager.

NK

ON THE ZODIAC

I am a relative newcomer to the hobby and thoroughly enjoy the mixture of technical, measurement and critical reviews in the magazine.

With your help my system has seen significant improvements of late, not least of which being the excellent Antelope Audio Zodiac Gold DAC which I won in the Hi-Fi World competition this summer.

It has easily displaced my earlier (budget) V-DAC, passive pre-amplifier (Creek OBH-22) and QED headphone amps. The review is very accurate and I am enjoying an open analogue sound with CD but can hear right into individual voices and instruments. A fantastic leg up the ladder towards high end! Please thank Antelope and all concerned for this unexpected windfall which is giving me so much pleasure!

I have been through my CD collection twice now and am hearing new things in the music every time I listen. I still have the pleasure of exploring high-definition files over USB at 24/192 kHz ahead of me and the world of headphones to play with.

The preamplifier in the Gold has the same neutral sound as the Creek, but the gain from the Gold allows me to play much louder into the Michell Alectos (repaired by Graham Fowler of Trichord).

At present I am using the stock (out of the box) digital optical cable between my Marantz CD 72 and the Zodiac Gold. The recommendation from Antelope is to use optical cables for the 16/44.1 kHz connection to CD players, but advice elsewhere is to use coax connections over optical? Could you recommend a suitable sub-£100 digital



The Aqvox Phono 2Ci MKII phono stage with balanced inputs and outputs, an inexpensive way to go balanced. It is very well made and adjustable.

cable to get me started with and a cost no object cable for me to save towards?

Should I be looking for a new CD transport or looking for a player for converted CD to 24 bit files? I quite liked the idea of SD Cards or a USB stick through the Aune player reviewed a while back and wondered if this (or something similar) would be a better match than the Marantz with the Gold to optimise the playback of CD material which makes up half my music collection?

Before the arrival of the new DAC I had set in motion the move from MM (Grado Prestige Gold) to a new (second hand!) MC cartridge (Ortofon Rondo Bronze) on the Technics SL-1200 Mk2 (with SDS platter etc, Jelco ST 250 arm) and have bought and boxed a pair of Sowter step-up transformers which I am using with my MM only Creek OB-8 SE phono stage to good effect. Brian Sowter is very knowledgeable and helpful and the step-up transformers work a treat.

I am very happy with the new analogue sound but would appreciate some advice from the team as to which phono stage would be a good future upgrade (to save towards) to match the quality of the recent improvements made to the digital side.

My record collection is a mix from three generations of music collectors and recent charity shop buys so is quite eclectic across Rock, World Music, Classical and Swing. I am also loving the new Beatles in Mono box set.

I would like something similar to the Creek in sound, (pacey and clear). Ideally MM only (kit, or new or second hand) with an optional mono switch and possibly different EQ curves to try. No preference between valves or transistors. Cost to match the quality of the Zodiac Gold.

My speakers are 1980s Japanese 3 ways Namcos with 10in paper bass drivers (think less bassy NS-1000s) mounted on Audiophile Base platforms. I use a Power Inspired mains conditioner. Regards

**Greg Tzemis,
Midlands UK**

Hi Greg, I think you need to look at phono stages from Avid and Icon Audio (valve) since they fulfil your wishes for MM and a Mono switch. NK

TECHNICS SL7/SL15

I'm not familiar with the Technics SL7 linear tracker praised by Martin Pipe in the December issue. But it reminded me the SL7 had two senior brothers,

The lovely Antelope Audio Zodiac Gold DAC that Greg Tzemis won in a Hi-Fi World competition.



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Icon Audio PS1 valve phono stage brings the valve sound to MM and MC cartridges and has a mono switch; note the MC input transformers for low noise. The Avid at right has a mono switch too.

the SL10 and SL15 and because a good friend used one for years I am familiar with the SL15. The topology of all the tables in this family is creative and brilliant, with the linear tracking arm in the hinged cover making for tables scarcely larger than LP covers. And the SL15 was a superior product built like the proverbial brick outhouse. The first time you picked it up there was a distinct danger of dropping it due to its surprising heft. The SL15 was built like its more famous cousin, the P10.

But perhaps more interesting even than the SL15 table was the cartridge it came with, the Technics EPC 100 MK4, arguably the greatest moving magnet pickup of all time and certainly one of the finest cartridges of any type. It was not sold separately in the USA and really never seemed to get its due anywhere because it was not from an exotic manufacturer such as Koetsu, but from one thought of more like Toyota – very good but never great and inspiring. Also, the EPC 100 Mk4 arrived at a time when moving coils had taken over the high-end world. Add to that it was not expensive enough to be thought of as great, wrong pedigree, wrong format and wrong price, three strikes before anyone ever even heard it.

But it sounded and measured like nothing else. It was sweet and mellow and super detailed and dynamic, all at the same time. It had the lowest tip mass, probably one of the two or three most important factors in cartridge design. It measured flat to 80 kHz and then it bumped up to a high point at 100 kHz before dropping again, making most moving coils look like they had a low pass filter on them. But it was revered by many of the great recording engineers of its time.

I used one of these cartridges for years until the suspension collapsed. Of course, Technics didn't support it much

past its production era so all I could do was dream old dreams for years. But fortunately I found a technician a couple of years ago who could repair it. And now its back on my VPI HW-19 Mk4 table with Fidelity Research FR64FX arm feeding an Avid phono stage and I am back in LP heaven again. If you see one for sale grab it. Just be aware that due to less coil windings than most moving magnets it only has 1.0 millivolt output. Of course, this is part of the reason for its ultra-wide bandwidth.

If you ever do more reviews and/or articles again on grand old audio heroes and can get your hands on an EPC 100Mk4, you owe to yourselves and to the audio world to do something on this super pickup. And not surprisingly there's lots of other forgotten Technics super audio gear out there like some of their tone arms that never really got their due because of the Toyota image of the company. Things like this never happen once by chance. They built some Ferraris at the same time they made Toyotas, only not in blazing Italian red, but in cooler colors too soon forgotten.

Allen Edelstein
New Jersey,
USA

Yep, I had one of those too and it was very, very good. I'll pass on saying it was better than modern MCs, the best of which are extraordinary. **NK**

TOUCH AND GO AUDIO

I would like to ask for some advice on how best to download my music collection of over 3000 CDs. Everything from rock to soul to jazz to blues to indie and more. I am not really that keen on just downloading the CDs onto iTunes, because if I lost my computer or it ever crashed I would lose all my music. Plus, more importantly, I do not really want to put my computer on to listen to music!

I listen to music a lot in the evenings so have my headphones on to enjoy it late at night, so whatever I do buy needs to be able to take headphone plugs!

I have seen a Brennan 7 which in some ways would do what I am aiming for, but I just look at that as a hard drive! But maybe that is all I need!

What I need to do is play my music and choose what I like to listen to (so need some kind of listing!) by remote, as I am going to have a spine and neck operation and be laid out for a number



Technics SL15 Direct Drive turntable, with short, parallel tracking arm in the lid holding a T4P mount plug-in cartridge. Almost as automated as a CD player.

Letters On-Line!

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



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

World Mail June 2011 issue

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



Apple's iPad delivers high volume and a punchy sound through its headphone output. It delivers three times more output than most portables, 1V against 0.3V.

of months! So hence why the remote and headphones also! So getting up and changing over CDs is just not going to be possible for a long period.

I would like your help in what is available in the hi fi market that would do the trick for me?

If you do not mind, I like to keep an open mind on price, I know what is right for me when I see it, if that makes sense. (£50 or a few thousand even maybe). I like to buy once and get it right, even if I have to save up for it, as in the past.

If you have any questions for me before you come back with an answer, please ask away.

Kind regards

Robin Hofer

Hi Robin. I think what you want is an iPad with a high-resolution music player on-board. See Amarra and Pure Music players. The headphone output of an iPad delivers a healthy 1V and sounds quite solid and punchy I have found - not bad at all. There are no end of external headphone amplifiers, however, as an alternative. I use a small USB powered Epiphany

E-Dac that works very well. You could also use a Furutech headphone amplifier. **NK**

WHISTLING IN WIMBLEDON

I have a high-pitched whistling sound coming out of my tweeters when using my hi-fi. I am using a Ming-Da MC368-BSE valve amp, a Technics Direct Drive deck and a Project valve pre-amp with a SME 3009 and Ortofon 2M Red cartridge. It also happens with the CD player. Could it be the valves picking up a signal via the power cords? I use gold phono plugs on all connections. Any idea what this could be? Answers greatly received. Just a note to ask if any of your readers have purchased the new Pink Floyd vinyl album as I have noticed a few clicks and pops and the record itself it not flat. Some of my 40-50 year old records play better than this!

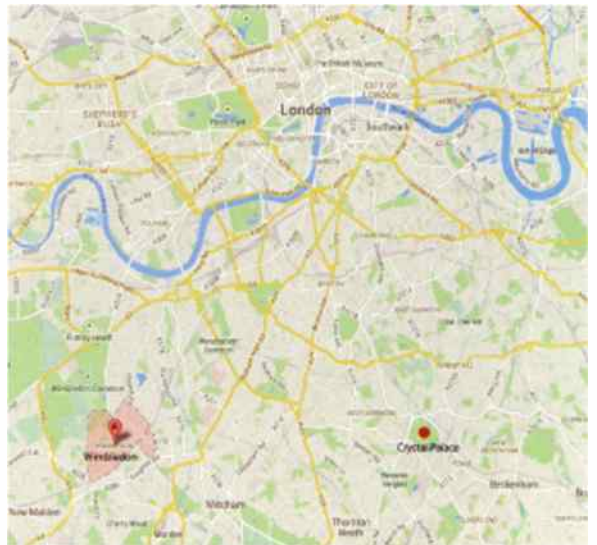
Thanks.

**Paul Hutchins
Wimbledon SW19**

Hi Paul. Sounds like your tweeters are suffering tinnitus. Have you given them a check up?

That was my first thought. My

second, perhaps more intelligent one (!) is that you are likely suffering from one of two problems: RF (radio) pickup in South London from the transmitters at Crystal Palace, just 4 miles away as the crow flies, or instability. Disconnect all sources from the amplifier and, if you can, insert phono blanking plugs that short the inputs to ground. If the whistling stops it is coming from the peripherals; if it continues it is the Pro-ject preamplifier or Ming-Da power amplifier that are producing the whistle. Disconnect the two and



Wimbledon is just four miles west of powerful TV and radio transmitters at Crystal Palace in London. Is radio (RF) pickup the cause of a whistle in Paul Hutchins hi-fi? Map courtesy of Google Maps.

see what happens. This process of elimination should identify the source of the whistling.

It is possible that the speaker cables are picking up RF and this is rectified internally at the first grid of your Ming-Da (via the feedback loop) because the valve is being driven into non-linearity (a standard mechanism used to frequency convert with valves, called super heterodyning).

To check for this, change the speaker cables, replacing them with wires as short as possible and preferably no more than one foot long (move speakers to amplifier). If the whistle stops, this is the cause and you'll need screened speaker cables from The Chord Company.

Both Ming-Da and Pro-ject (Henley Designs) in the UK are able to offer expert assistance, so do contact them if need be. I hope my advice gives you some idea of what could be happening and how to approach finding a cure for tinnitus in tweeters! **NK**

The tiny Epiphany E-DAC gives great headphone quality from a computer, via USB connection. It is powered from USB.



Triode power

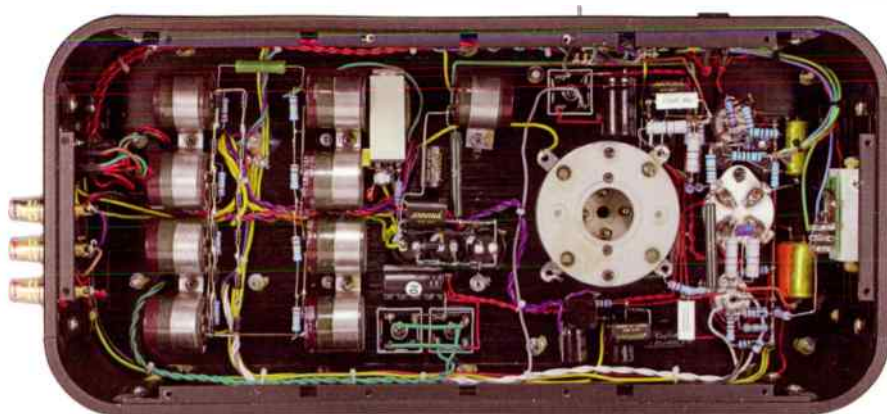


Ming-Da design a specialised Single-Ended Triode amplifier with oodles of power – well, by SET standards. Noel Keywood holds onto the settee.

Here's a new and unusual valve amplifier from Ming-Da, one that rings quite a few bells if you are a valve man. The Cavatina MC3008-A is

a single-ended triode amplifier (SET), a breed commonly felt to offer best sound quality. By their nature SETs are pure Class A; only one power output tube exists, so there's no crossover point between push-pull

pairs, and no crossover distortion. Yet almost magically, this SET doesn't produce a measly 9 Watts or so, like so many, but a healthy 40 Watts. This makes the new MC3008-A a power station by SET standards.



The amplifiers are hard wired in the traditional way. High quality audio components are used. The big white disc is the underside of the 805 socket.

In a nutshell then, Ming-Da's MC3008-A is an unusually powerful SET, an amplifier that should light up the face of any valve aficionado. And it had me a bit puzzled too, because I know little about the 805 triode transmitting tube it uses, never having encountered one in any hi-fi amplifier before. But then, I'd never come across the Russian GU81 transmitting tube either until Icon Audio sent us their MB81 amplifier recently, and let's not forget the funky 6C33C is also a transmitting tube.

To get a lot of power out of the big 805 tube it has to be driven into grid current, meaning a power valve must drive a power valve, so the MC3008-A also has a 300B triode on-board, acting as a driver valve - expensive. In front of that are ECC83 and ECC82 small-signal, double triodes providing amplification, so the power supply uses diode-bridge rectification. It's an unusual line up, the only expensive tube being the 300B.

As 40 Watts SET monoblocks the MC3008-As are relatively compact

and liftable. They measure 650mm deep, 360mm wide and 450mm high. Ours did not have an 805 with an anode top cap - potentially dangerous in the home. All the same, there is a protective cover around the tubes, that you can see in our pictures. Note that internet pictures show a Meixing variant fitted with an 805 having a white top cap, an amp that looks different in detail.

Weighing 29kgs each, these monoblocks are heavy, if not as heavy as some.

One strong man can lift one, but generally 29kgs/64lbs is considered a two-person lift for safety. Being relatively narrow and having a rocker-style power switch on the side, near the front, the Cavatinas are not so large or awkward as to be difficult to site. With a conventional sensitivity of 1V they need a preamp with gain to work with low level sources, but can be driven directly by silver disc players, all of which output 2V.

I drove our review samples direct from an Oppo BDP-105D Blu-ray player, using its on-board volume control. Sources were CD and high-resolution digital from an Astell&Kern AK I20 player connected digitally through an optical cable.

The Ming-Das are well made and smoothly finished. Meixing, the Chinese company that builds Ming-Da amps, wind their own transformers and even make their own chassis, being based just outside Zhuhai, southern China, across the

Pearl River delta from Hong Kong; I visited them a few years ago.

The output transformers are 8 Ohm, with a 4 Ohm tap. There is provision for occasional bias trimming but it is not the usual bias-balancing procedure of push-pulls. Requiring bottom cover removal



The rear carries a single phono socket input and an 8 Ohm output, with 4 Ohm tap, that uses strong gold plated binding posts.

this is for a skilled person only, since dangerous voltages are present and exposed. The front meter usefully shows output level, warning of overload; happily with the big Tannoys I never got close to this because they need little power to go very loud.

SOUND QUALITY

The amplifiers were run for 60 hours before serious listening, even though they had been run in before reaching





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The big output level meter on the front usefully warns of overload, but with 40 Watts available this is unlikely.

The mains switch is a rocker style, on the left panel, visible here.

us I believe. I only start critical listening after a 1 hour warm up, although 30 minutes is long enough. That the amplifiers have a low damping factor was obvious with the big Tannoy DC10 Ti loudspeakers; bass was a tad over-large. However, using one foam bung in the upper port of each loudspeaker neatly increased acoustic damping and restored balance; this worked a treat.

The MC3008-As were classically gentle and airy in their sound, and very pure. I loved the gently ethereal quality of Josefine Cronholm's voice singing 'In Your Wild Garden' (CD). The simple purity of these amplifiers made for a gentle and easy presentation, full of atmosphere. And it is this latter quality that marks out the Ming-Das over transistor amplifiers; gone is the dryness of solid-state, instead an atmospheric quality enters the acoustic picture. Solo trumpet sounded lushly sonorous and the plucked double bass was generously proportioned.

The amplifiers teased out the smoky quality of Mark Knopfler's voice singing 'Yon Two Crows' (24/96), the Gaelic backing of pipes and accordion standing nicely apart, each in their own acoustic space. Similarly, Christine McVie's vocals in Fleetwood Mac's 'You Make Loving Fun' (24/96) floated in a space just above the Tannoys, clearly outlined, but free of hardness. The Ming-Das have a lovely organic naturalness about them that makes listening easy.

Yet these amplifiers also have plenty of power. As the threat behind 'Mars: bringer of War' slowly built up the Ming-Das gave the orchestra a feeling of size and strength, as it progressively expanded out of our Tannoys and into the

listening room to envelop me. The sense of space and atmosphere these amplifiers impart, together with the generous low end power they have together serve to paint up mighty orchestral scale – impressive I felt.

There was also plenty of low end force in drums and bass within Skunk Anansie's 'Hedonism', Skin trilling in her nasal but plaintive manner at a well focussed spot

between the 'speakers.

CONCLUSION

The MC3008-As are a compelling proposition if you want the legendary quality of a Single-Ended Triode amplifier, or SET, plus some power to go with it. Having a smooth and spacious sound that's natural and organic, they successfully offer a great result from an unusual valve line up.

MEASURED PERFORMANCE

The Ming-Da MC3008-A delivered 40 Watts into 8 Ohms for 1% distortion, the needle of the front power meter moving just into the red conservatively at around 30 Watts.

Feeding a 4 Ohm load from the 4 Ohm tap gave slightly less power, 36 Watts at the 1% limit, so coupling

efficiency is less, if not by any great degree. The amplifier overloads very gently, like all valve amplifiers, so maximum power output is difficult to determine with precision.

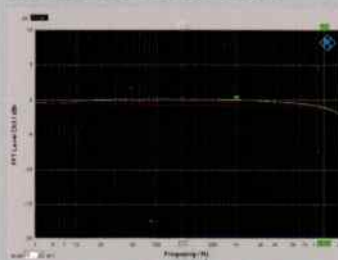
Distortion was low at small power outputs of around 1 Watt, just 0.07% in the midband and 0.13% at high frequencies (10kHz). Distortion rose steadily as power increased, however, reaching around 0.3% just below full output in the midband and a high 4% at 10kHz because full output wasn't easily achieved at this frequency.

Frequency response was wide from the full 8 Ohm winding, reaching a high value of 56kHz (-1dB) but from the 4 Ohm winding there was some treble roll off, bringing the upper -1dB limit down to 12kHz, so the 4 Ohm winding will have a softer sound.

Damping factor was quite high at 10; valve amplifiers like this usually manage around 2.

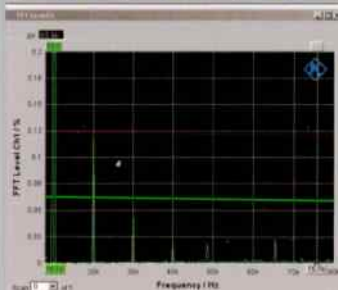
The MC8003-A measured well, having plenty of power for an SET. NK

FREQUENCY RESPONSE



DISTORTION, 1W, 10kHz

THD at 1W	Level	Frequency
0.1289 %	2.7825 V	10 000 kHz
OFF	OFF	OFF



Power	40 Watts
Frequency response	4Hz-60kHz
Noise	-87dB
Distortion	0.13%
Sensitivity	1.1V
Damping factor	10

MING-DA CAVATINA MC3008-A £4449 PR.

OUTSTANDING - amongst the best.

VERDICT
Open and spacious SET amplifier sound quality, combined with power, from compact and just-liftable monoblocks.

FOR
- SET sound quality
- plays loud
- compact dimensions

AGAINST
- switch-off clicks
- side mounted on/off switch
- need for adjustment

Ming-Da UK
www.mingda.co.uk

Blue stream

Bluesound may be a new name – but their CD ripping, storage and streaming system makes a lot of sense, finds Jon Myles.

Just 10 years ago the concept of wirelessly streaming music around the home while storing your entire CD collection on a unit no bigger than a desktop radio would have seemed the stuff of science fiction.

Not anymore. Not only is it commonplace but has become one of the biggest growth areas of the hi-fi market.

Sonos were arguably the first company to make the wireless streaming concept not only popular but admirably easy to operate. Now, though, no end of manufacturers are getting into the act – from established names to relatively new entrants.

In the latter category comes Bluesound – although its background belongs very much to the former. For the new venture comes from Canada's Lenbrook Group – which owns NAD and loudspeaker manufacturer PSB. It's drawn on some

of the engineering expertise in those two outfits to create Bluesound – which aims to make the storage and playback of music from CD quality upwards as easy as possible.

The ecosystem consists of the Node – a wireless streamer designed to plug into an existing hi-fi system – and, of more interest here, the Bluesound Vault and Povernode.

The £899 Vault, as its name suggests, is a CD ripper/storage/DAC/streaming player with 2TB of internal storage which can be used in your own system or – as Bluesound would hope – paired with the £599 Povernode amplifier/streamer for a complete system. Just add your chosen loudspeakers and you're away.

Both units are similar in design – an off-axis, cube-like form with an aluminium band running across the centre and a minimum of controls. Pick either up and the weight feels substantial for their size but the

plastic casing (either black or white) doesn't exactly scream high-end audio. They are, though, undeniably compact and lifestyle-looking.

Inside the Povernode is a NAD digital amplifier with a quoted power output of 50 Watts per channel into 4 Ohms, both using a 24/192 capable Cirrus DAC.

SET-UP AND USE

Getting the Povernode and Vault up and running is a relatively simple matter. Connect the power cords, attach an Ethernet cable to the Vault (wired operation only allowed – Bluesound says this is to ensure reliability) and then wait for both units to find the network.

After that, download the custom Bluesound app to your smartphone or tablet, (iOS, Android and even Kindle Fire), enter any network passwords needed and you're away.

Bluesound have obviously spent some time finessing the app





The Vault's connections include optical digital and analogue out, as well as a USB input and ethernet connection socket. The unit has to be hard-wired to the network to function, the manufacturers saying this improves stability.

because its interface and ease of operation is exceptional. Anyone who has used iTunes or other music cataloguing software will find their way around it in a few minutes.

The Vault will pull in any music it finds on the network, be it on connected computers or NAS drives, and display them in the local library.

After that you can choose a variety of options such as creating, tweaking or deleting playlists, combining music from all your sources, and even grouping all your Bluesound components together. That means there's the possibility of playing music in an individual room or throughout the house, depending on your individual set-up.

To rip a CD, simply slot it into the Vault and then wait. And wait. Bluesound says it uses a bit-perfect ripping process which involves a number of passes of the CD. And it does it so quietly I initially thought there was something wrong with the unit. But no; 15 minutes later the silver disc ejected and there on the app was the album in FLAC format with all the metadata as well as the front cover artwork. Two hours further on I had eight albums ripped to FLAC format and (as you'll see) it was worth the effort.

SOUND QUALITY

There are two essential elements here. The Vault worked seamlessly and is an extremely good ripper/

storage device. Indeed, it is probably one of the easiest you could use.

Pairing it with the Pownode and playing a ripped CD of New Order's 'Temptation' there was scale and separation. Indeed, the Pownode is no slouch in terms of gripping and driving loudspeakers.

Combine it with a set of standmounts such as the Wharfedale Diamond 220s reviewed elsewhere in this issue and you get an extremely musical presentation. There's an absolute synergy and one that works well.

The Pownode has a slight roll-off in the treble and doesn't dig tremendously deep in the bass but that suits the Wharfedales well.

Considering their various price points then, it's a good match. But there's a slight sheen and digital harshness to the Pownode that can grate at times. You'd never mistake the overall sound for the smoothness of, say, a Creek Evolution amplifier. Then again, it offers rather a lot for the price.

However, if you want an extremely good NAS drive/CD ripper and storage system that can stand alongside a better set-up, then the Vault may well be the thing for



The Bluesound Pownode's rear panel features loud-speaker binding posts, an ethernet connection, subwoofer-out plus a USB socket.

you.

It's extremely easy to operate, brings together all your stored music collections at the touch of a button (well, an app) and can easily be slotted into a rather expensive system.

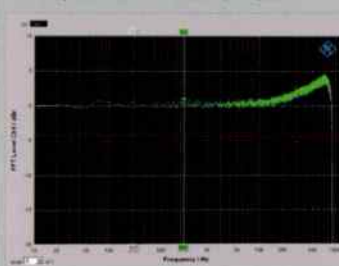
CONCLUSION

The Bluesound Vault is the star of the show here – but don't rule out the Pownode if you are looking for a fully-flexible system. The integration between components and intuitive app make it a powerful combination.

MEASURED PERFORMANCE

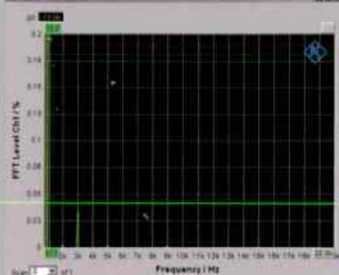
Like many budget digital systems the Bluesound was difficult to measure fully. Maximum output from a 0dB digital file was just 9V, at which point it appeared a protection circuit was intervening. This means we could measure no more

FREQUENCY RESPONSE



DISTORTION

THD @ 100%	Level (dB)	Frequency
0.0436 %	9.1870 V	996.97 Hz
OFF	OFF	OFF



than 20 Watts output into 4 Ohms with a full level digital signal at full volume. The Bluesound may well give more on short term musical peaks but we did not test for this. The claimed output is 50 Watts.

Distortion at full level was very low from 1 Watt up to 20 Watts, into 4 Ohms, measuring just 0.04% - as our analysis shows. This is very good as budget Class D goes. However, the system was unable to resolve a -60dB signal, a common problem with budget DACs where noise swamps low level signals. This prevented us measuring dynamic range, but it is no better than 60dB - a common weakness with budget digital.

Frequency response with 192kHz sample rate PCM extended right out to 96kHz our analysis shows, but with high frequency lift of +4dB at 70kHz – not ideal.

The Bluesound's amplifier is no powerhouse and for high volume is best used with large-ish bookshelf speakers of reasonably high sensitivity. Don't expect deep insight from digital, but at least it plays 192kHz sample rate digital, where higher priced products often fall silent.

NK

BLUESOUND VAULT £899, POWNODE £599, NODE £399



EXCELLENT - extremely capable

VERDICT

A superbly integrated streaming system and CD ripper/storage device with a great control app.

FOR

- large storage
- intuitive control
- seamless integration

AGAINST

- plastic build quality
- amplifier could be better

Bluesound
www.bluesound.com

This is a comprehensive directory of Hi-Fi Dealers throughout the UK and Ireland.

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Like a Glove

GloveAudio's A1 is a clever way of getting improved performance from Astell&Kern's already outstanding portable digital players. Noel Keywood is impressed.

GloveAudio's A1 offers Astell&Kern AK100/120 portable player owners an interesting way to upgrade. It is a dock, in effect with a better DAC than that of the standard player, offering more volume and a balanced headphone output too. Just plug in your Astell&Kern and off you go for better sound quality. That's the proposition.

Because the AK100 and AK120 were very high quality players in the first place, you might – like me – have

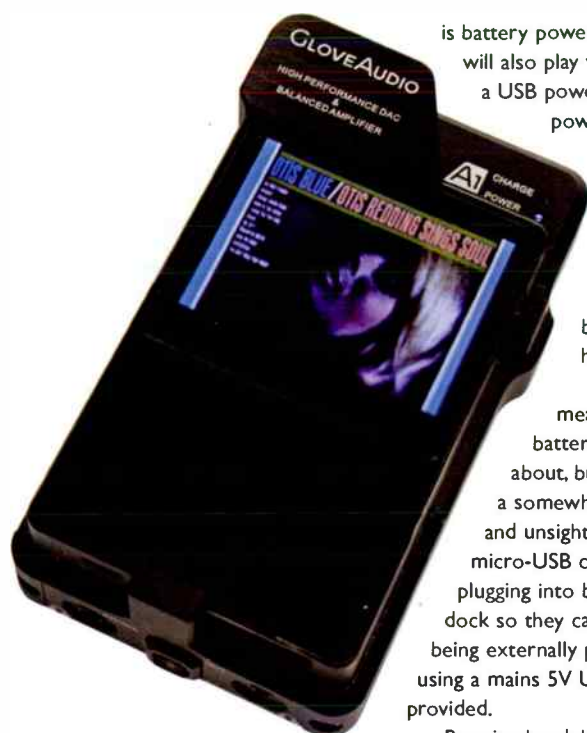
cause to doubt this. But what lies behind the A1 is a plausible route to upgrade: Centrance have taken the latest DAC from ESS of California, a low power version of the Sabre32 with headphone amplifier on-board – and this bypasses the internal Wolfson or Cirrus Logic DAC of the Astell&Kerns.

I was fascinated; I have an AK100 and 120, love the sound of the Sabre32 DAC series and believe in fully-balanced working, so this looked like a product made for me.

Out of the box comes a solid

all-metal cradle to house the player. Ours was proportioned for the small AK100, not the wider AK120 so this review is about differences between AK100 and the A1. The cradle comes with two stands on which it can be mounted upright, using screws and hex key supplied.

The AK100 slides into place snugly, engaging with a fixed 3.5mm headphone jack plug that serves to pick up the optical digital S/PDIF output that lurks within the headphone socket. Getting the player to mate needed a firm push. This



A screw-on foot locks the Astell&Kern player – an AK100 here – in place. There is digital control of volume, with 32bit resolution, that is part of the ESS Sabre low power chip.

process worried me a little initially, since the 3.5mm headphone jack plug is hardly substantial and I've snapped a 2.5mm like a matchstick in the past when trying to wire it up, so using a slim 3.5mm diameter jack plug as a structurally loaded item wouldn't be my choice; a jumper lead would be more durable I suspect. And there's no alternative digital input should this plug fail.

Of key importance here is that the optical input receiver of the GloveAudio AI works up to 192kHz sample rate; so many optical links still do not, instead producing an unwelcome silence with 192kHz sampled material. OK, it can be down-sampled to 96kHz with little degradation by XLD and such like, but what a faff.

The digital signal is passed through the DAC and its associated headphone amplifier section and, since all ESS 9018 variants deliver a balanced output, I can safely assume that what is probably the new ESS 9018Q2C chip in this product does so too, since circuitry is usually shared.

Power consumption of this chip is lowered to prolong battery life in portable products and indeed the AI

is battery powered, although it will also play whilst attached to a USB power supply. A small power switch sits on the top panel and two blue lights show Charge or On state; battery life is quoted as better than 10 hours.

That does mean you have two batteries to worry about, but supplied is a somewhat awkward and unsightly USB to two micro-USB cables, the latter plugging into both player and dock so they can run whilst being externally powered/charged using a mains 5V USB power supply provided.

Running headphones from balanced amplifiers, through balanced cables – an option on offer with the AI – is suddenly a new fad in the headphone community it seems. It's



At left is a standard 3.5mm three-pole headphone jack socket, and at right a 2.5mm four-pole balanced jack, that offers best quality but is difficult to use. At centre is the Kobiconn output, a U.S. camera connector.

a good idea technically and sonically, but at present few connectors for this purpose are available. I would favour balanced mini-XLR, but they are too big. Astell&Kern have taken to using 2.5mm 4-pole jacks, but they are too small. Larger 3.5mm 4-poles make more sense but they can be shorted if a 3-pole plug is inserted – not good if the drive amp has a very low output impedance.

To solve this difficulty GloveAudio have used two, alternative output connectors, a 2.5mm 4-pole jack that I used because I have a suitable jack wired to feed my Oppo PM-1 headphones a balanced signal, and a socket that

is new to me, a Kobiconn. This is a peculiar, square-profile 4-pole socket (from U.S. company Mouser Electronics) whose plug looks easier to solder than a 2.5mm jack plug, which I found almost impossible to work with. But you'll not commonly find either in the UK, and – worse – no plug nor adaptor lead came with the AI, which was no help at all.

That leaves purchasers to use the conventional 3.5mm 3-pole stereo jack output, which is not in keeping with the intent of achieving maximum quality from the unit; the balanced output has 2dB more dynamic range than the unbalanced output our measurements showed.

I find this peculiarly negligent but Astell&Kern were equally negligent with their AK240 which suffered the same problem. It renders the full 4.7V balanced output unavailable; 3.5mm jack users get 6dB less output and 2dB less dynamic range.

SOUND QUALITY

Any reservations I had about this product flew out of the window

pretty damn fast when I connected up my Oppo PM-1 magnetic planar headphones to the 2.5mm 4-pole balanced output and pressed Play. Whoa! I was suddenly in the studio with Otis Redding singing 'Shake' (24/192), Muscle Shoals horns blaring out at right with their wonderful timing (could those guys play). The overall presentation was just as we find it with other Sabre32 based products: full bodied, dimensionally deep, almost warm in balance due to silky smooth treble. The drum kit had force and impact and this is Sabre32-like. Otis's fluid delivery, his work at the microphone, was deliciously conveyed.

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At top lies a power on/off button and micro-USB socket, to charge the internal battery.

"triangle strikes were gorgeously sonorous and the slow kick drum beat hard against my ear drums"

OK, this is a transcription from an old 1960s analogue tape, no less, but Otis was a major star recording in well equipped studios at this point in his career and the AK100 working through the GloveAudio A1 took me right in there; it was like being transported back in time.

The Oppos are very mild up top by headphone standards, where peaky treble is common, and at times I wondered about how soft the whole presentation was, but then some do complain the Sabre32 lacks bite; its just the way things are with this DAC; you don't get edgy digital. With Roberta Flack's 'Killing Me Softly' (24/96) triangle strikes were gorgeously sonorous and the slow kick drum beat hard against my ear drums.

I got a lighter balance from my Philips Fidelio X1s plugged into the 3.5mm unbalanced stereo jack output, with less forceful bass, but much of the difference was down to the phones; the Philips cannot be adapted to balanced connection due to the signal lead being terminated in one earpiece only, through a 3-pole stereo jack. As a result images of the singers in the Creole Choir singing 'Marasa Elu' were positionally a bit mellifluous against those from the Oppo running balanced and this is almost certainly due to unbalanced

working.

Similarly The King's Consort choir singing 'Jerusalem' stretched in a wide, ethereal arc over my head, well beyond my ears, as a church organ delivered cranium-moving lows to bring weight to the performance. The A1 delivered all this with smooth ease and plenty of volume to spare, although lack of a volume readout was disappointing.

CONCLUSION

The GloveAudio A1 was a neat little dock with a great sound. Our measurements confirm it does indeed improve on an Astell&Kern's internal DAC and also meets our previous Sabre32 measurements, as well as those from ESS.

It also sounds lovely and has volume to spare. If you want battery power and portability, as well as balanced output then the A1 is a great choice.

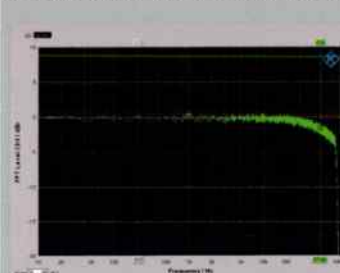
Just be aware that many headphones cannot be wired to run balanced, and even with those that can, connection to the A1 is through a very difficult to obtain (and solder) plug.

MEASURED PERFORMANCE

This external DAC for the AK100 works up to 192kHz sample rate, through the digital optical connection, our analysis shows. Although the -1dB point is 57kHz output rolls away to 96kHz, the theoretical half sample rate limit.

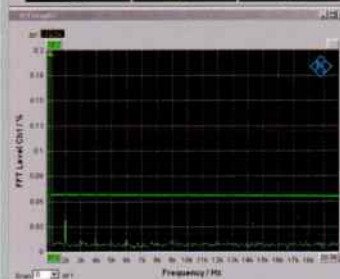
Full output through the normal 3.5mm stereo jack socket measured 2.3V, an increase on the AK100's 1.5V

FREQUENCY RESPONSE 192K



DISTORTION, -60dB, 24bit

THD	Level (dB)	Frequency
0.0733 %	2.3417 mV	996.97 Hz
OFF	OFF	OFF



so the A1 offers an increase in volume of +3.7dB. Output from the balanced 2.5mm 4-pole connector measured 3.3V so even more volume is available here. This is more than enough to drive insensitive 'phones very loud.

Distortion at -60dB was reasonably low at 0.07% with 24bit resolution, but this is not too different from the performance of the original Wolfson DAC on-board and it is some way off other ESS Sabre DACs that get down to 0.02% under these conditions. However, the A1 still returned a very high EIAJ Dynamic Range value of 120dB and this is no less than 10dB more than that of the AK100 itself, if 4dB below top Sabre DACs in stereo mode.

The Glove Audio A1 measured well. It's internal low power Sabre DAC isn't quite up to performance from the full monty ESS 9018, but it improves on the AK100 as claimed. NK

Frequency response (-1dB)

24/192	2Hz-57kHz
Distortion (24bit)	
0dB	0.001
-60dB	0.07
Separation (1kHz)	108dB
Noise (IEC A)	-118dB
Dynamic range	120dB
Output (bal/unbal)	3.2/2.3V

GLOVEAUDIO A1

£495



EXCELLENT - extremely capable.

VERDICT

Great sound quality from small, battery powered Astell&Kern dock fitted with ESS Sabre32 DAC.

FOR

- high volume
- balanced output
- great sound quality

AGAINST

- no balanced plugs/cables supplied
- no volume readout
- no alternative digital input

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Black Magic

Jon Myles tries out three loudspeaker cables from British manufacturer Black Rhodium.

Black Rhodium has forged a well-deserved reputation for making quality loudspeaker cables since its foundation by Graham Nalty in 2002.

As the name suggests, the company makes extensive use of rhodium plating for its connectors and also pays particular attention to insulation materials and minimising the deleterious effects of vibration within its cables.

Indeed, we were so impressed with the Black Rhodium Twist cable we made it our Loudspeaker Cable of the Year for 2012.

No wonder, then, that when the company announced a new range of leads we were keen to try them out.

The three cables on test are the Iris, Samba VS-1 and the high-end Solo DCT++CS which features deep cryogenic treatment of the conductors that is said to increase the depth, clarity and timing of the music.

All the cables were supplied in three-metre lengths and thoroughly run-in before testing. Source components consisted of a NovaFidelity music server/streamer and an Oppo BDP-105D Blu-ray player while amplification came from a Naim SuperNait, Creek Evolution 100A and a Sugden Sapphire FBA-800 power amplifier.

Music used included Jacques Brel's 'Infinement' collection, Pierre Bensusan's 'Altiplanos', Saint Etienne's 'London Conversations' and TV On The Radio's 'Seeds'.

IRIS

The Iris combines the technical construction of Black Rhodium's



successful Samba and Twirl cables – where the conductors are continuously twisted along their length to help reject RFI and EMI distortion – with a new thicker black outer braid.

Silver-plated copper is used for signal duties while rhodium-plated connectors complete the package.

The 1.2mm thick silicon rubber insulation gives the cable a substantial feel – and the good impression continues when pressed into use. This is a very open and natural cable which sounds exceptionally crisp with a seeming absence of any background.

Portrayal of Jacques Brel's distinctive voice was rich and resonant while the electronic beats of Saint Etienne's 'He's On The Phone' had plenty of bounce and detail to them. Plugged into the Creek Evolution they ideally suited the amplifiers essentially smooth

and refined nature – never sounding aggressive but still having enough edge to make music exciting.

All in all an excellent cable which would suit a number of systems.

SAMBA VS-1

Another take on the successful Samba cable, the VS-1 uses the same 19 strands of 13-gauge silver-plated copper conductors insulated in thick silicone rubber and terminated with Graham Nalty's Legacy GN-1 rhodium-plated banana plugs. The VS-1 in the name relates to a vibration stabilising device in the shape of a hefty machined metal weight clamped halfway along each cable.

Again the leads are gently twisted together to ward off RFI/EMI, while positive and negative signal flows are connected in opposite directions which Black Rhodium claims helps lower the noise floor.

IRIS
£375



EXCELLENT - extremely capable

VALUE - keenly priced

VERDICT

A well-balanced cable with an open, natural sound.

FOR

- clean and open
- good construction
- strong bass

AGAINST

- lacks the outright clarity of the more expensive cables

Whatever effect the vibration stabilizing is having, the Samba VS-1 is a step up from the Iris. It retains the same essentially open nature but adds an extra element of sparkle to the top end. The leading edges of the notes on Pierre Bensusan's exquisite guitar playing have real presence and bite while the music is laid out in a wide and expansive soundstage.

Bass control is also excellent, the funky beats of TV On The Radio's 'Seeds' going cavernously low. These cables seemed to help the relatively low-powered Class A Sugden amplifier, keep a tight grip on the loudspeakers' bass drivers so there was real punch to the music.

The VS-1 also excels in instrumental separation, meaning complex music never sounded cluttered or blurred. At £599 for a terminated 3-metre pair the Samba would make an excellent cable upgrade to many a decent system – especially for those looking for a detailed, open sound without losing any rhythmical flow.



SOLO DCT++CS

The most expensive of the three cables on test, the Solo again features Black Rhodium's continuously-twisted construction but features deep cryogenic treatment for the conductors which is said to alter the molecular structure of the cable to improve uniformity. Additionally the cable undergoes Black Rhodium's 'Crystal Sound' process which they

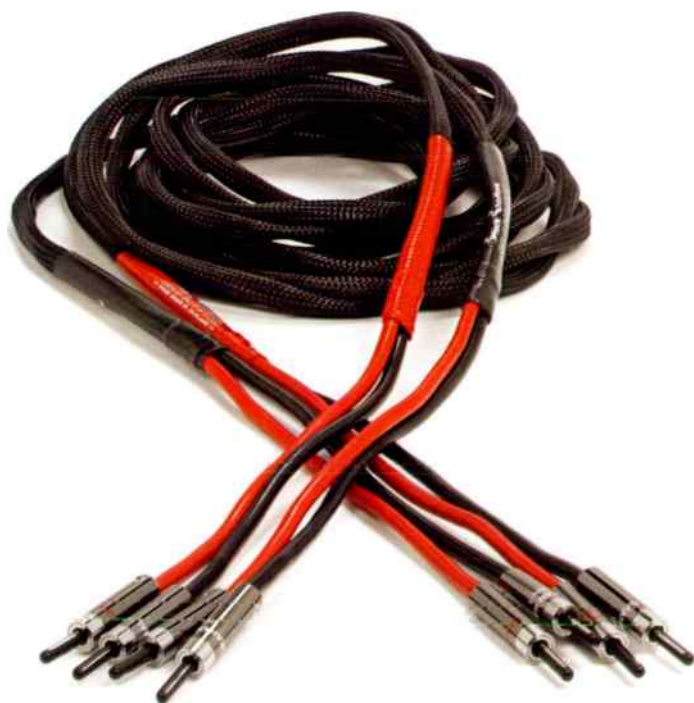
say refocuses the outer skin of the conductor where the majority of the signal travels to produce improvements in bass control and clarity.

What you get in reality is a seeming lowering of the noise floor which brings an added vibrancy to everything from female vocals to synthesisers. Sarah Cracknell's voice on 'Hobart Paving' has tremendous presence and pitch-perfect phrasing. This cable really projects music well into the room with greater height and depth to the sonic images.

It also gave a wider, more expansive element to the orchestral backing on Jacques Brel's 'Jackie'. Midband detail is brought excellently out of the mix to give a hear-through quality to whatever you are playing while bass is well-controlled with admirable slam. Pair this cable with a decent amplifier and you are in for a treat.

CONCLUSION

These are three excellent loudspeaker cables from Black Rhodium. Of the three the Samba VS-1 probably offers the best value – but if you can stretch to it the Solo offers just a little bit more clarity and top-end sparkle. Having said that, anyone looking for a cost-effective upgrade for their present system would not be disappointed by the Iris. So take your pick – they all come highly recommended.



SAMBA VS-1
£599



OUTSTANDING - amongst the best

VALUE - keenly priced

VERDICT

A superb cable with deep bass, great instrumental separation and top-end sparkle. Highly recommended.

FOR

- excellent instrumental separation
- sparkling top end
- vibration damping system

AGAINST

- nothing at the price

SOLO DCT++
£900



OUTSTANDING - amongst the best

VERDICT

Builds on the Samba's strengths but with even greater clarity and detail. Ideal for a high-end system.

FOR

- superbly open
- detailed and powerful
- great with complex music

AGAINST

- not cheap

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Noel Keywood

I scratch my head over the LP. Has any technology ever become redundant and then magically revived? Will we abandon the motor car and go back to the horse? Throw away the mobile phone and go back to something connected to a cable from the street? Perhaps cut our link to mains electricity and use paraffin for heat and light? Er, no. But the LP seems to be different.

Against other technologies that have come and gone for good, the slow but steady return of the LP looks to be a decidedly unusual occurrence, one for which there's no precedent, other than the cloth cap perhaps, which seems to be trendy again, and the vintage motorbike which is uber cool.

As we've all heard that the LP is making a comeback many times before – a hope powered by wishful audiophiles methinks – I've tended to pay little attention to this; time will tell I thought.

Well, time does appear to be telling me that my scepticism was unfounded: the LP really is making a comeback. And it isn't the UK and US sales figures we published last month that have made this plain to me, so much as the fact that HMV's flagship store on London's Oxford Street has opened up an entire floor to stock LP again. Yes, racks of vinyl are back, for our delectation!

Will I be going down there on Saturday to thumb through said racks of LPs, perhaps to buy something that catches my eye? My head currently says "probably not", but then I am wavering over that too.

There is something compelling about a big box set, especially when it is a re-master on Quix SP-V, a 200gm pressing as flat as a pancake and solid feeling in the hand. These clunk down firmly onto the rubber mat of my Garrard 401, rather than

spinning around flimsily on a dished centre label like so many LPs of yore, and they give great sound quality. They are exciting to buy and listen to.

Whilst my interest is in sound quality, perhaps at the same time I don't realise that the cover of the LP also plays a part in drawing me in. Because it seems to draw in others and this is helping its revival.

Urban Outfitters put a small record store, complete with coffee machine, in a prominent position just behind the front entrance of their Oxford Street store a few years ago – and it is still there.

Yep, I thought it wouldn't last, but interest in vinyl is more durable than I imagined and Urban Outfitters is a clothes shop for the young – under-30s, even under-20s. So there is a new wave of young buyers interested in vinyl and my 15 year old son tells me it is the lovely covers that attract attention and make it look so cool.

He still thinks my Garrard is powered by steam and was originally developed to whisk eggs, which is fine by me as I don't want him demoing its antique abilities to his mates.

So the issue of sound quality may be a non-issue to many people interested in the LP, the customers of Urban Outfitters. But it doesn't necessarily matter.

All this goes to show that the LP appeals to us on many levels and its coffee table covers are an important attraction.

This suggests downloads have no future at all, but the real world appears to be moving into a multi-format universe where, typically, downloads go onto the phone or iPad, or in my case onto an Astell&Kern AKI20 portable, whilst LPs are for the well-upholstered lounge.

CDs, Blu-rays and DVDs are

more durable and perfectly good enough for most users, especially in a rough-and-tumble lounge where – lest we forget – a stylus lasts five minutes. But the LP has it, when it comes to tactile experience, as well as visual appeal.

Would those punk graphics of "Never Mind the Bollocks, Here's the Sex Pistols" ever have leapt out at us from a small, cheap plastic CD case; I doubt it.

The LP is big enough to be bold with visuals like this to make them stick in our memory. So that's why we went down to Virgin or HMV on Saturday to leaf through racks of LPs; they have butterfly attraction!

Some in the music business understand this. A studio near our offices specialises in LP cover art work and is regularly visited by a famous band member who insists on over-seeing their cover art.

I know because I had to ask who owned the Bentley with a number plate MUSIC. I got the full story, but was asked to keep quiet about the owner.

So those famous LP covers we have seen and loved over the years weren't produced by accident; some talented artists lay behind them: can you remember the covers of Roger Dean?

The electric fence around my Garrard reminds me that LP still has weaknesses: the weak stylus assembly will forever be archaic in a demanding modern world where products are expected to be durable; there's a dichotomy between those who are attracted to LP and those able to use it!

But not everyone cares: the covers alone mean it looks good on the coffee table and this is good enough for a lot of buyers it seems. It's enough to make anyone scratch their head about what's going on with LP. ●

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HI-FI World

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Information

Developer	audio web publishing ltd
Category	Entertainment
Updated	6 Dec 2014
Version	1.0
Size	9.0 MB
Rating	Rated 4+
Family Sharing	Yes
Compatibility	Requires iOS 5.0 or later. Compatible with iPhone, iPad, and iPod touch. This app is optimized for iPhone 5
Languages	English

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"Industrial music has always been more than just music"



Paul Rigby

It was the famed group Throbbing Gristle that introduced the term 'Industrial Music' into the music firmament via their own Industrial Records label (which released LPs by outfits such as Clock DVA, Cabaret Voltaire and Monte Cazazza).

When you link a band with the industrial tag, you think you know what you are getting. Lots of portentous, foreboding vocals and/or clanking, metallic noises, heavy bass beats and very scary arrangements. But that's not always the case. Industrial is more than that.

It's dangerous to group the diverse musical directions seen from these like-minded groups under a single heading but at least the industrial music term serves as a useful direction or general guide for the listener, a handy tag to label a hotch-potch of underground and 'out there' musical artists. Despite most Throbbing Gristle contemporaries disliking the name, the eighties bands and solo performers were only too happy to utilise the then newly established genre title.

In fact, industrial music has always been more than just music. It also encompasses multi-media creations – video, photography and the written word are very important – as well as discussions of non-musical philosophies such as the debate on access to information, the control of information by others, censorship and so on.

These philosophies were represented and realised during the late-seventies and the early eighties with the rise of the fanzine via cheap printing methods and the creation and publication of self-produced music via cassette tape. Both media types would play a large part in the popularisation of industrial music.

Despite the underground nature of the industrial scene, the cassette

allowed musicians (mostly those private individuals who had no experience of live musical presentation) not only to produce music in their own way, at their own pace and to their own standards, but also to define goals other than fame or money. Hence, the artists involved set-up communicative links between themselves, increasing co-operation and producing an encouraging environment in which to make the transition from consumer to creator.

Such cassette tape bands often remained incredibly obscure, yet generated loyal and often fanatical fans. The underground, almost mystical nature of the bands concerned, gave each an innate sense of 'cool'. What could be better, in the company of your peers, than to name-drop half a dozen bands of your acquaintance.

The broad nature of the genre was epitomised by The Death And Beauty Foundation (DBF), founded at London's Royal College of Art in 1982. Initially a performance/action group who were influenced by outfits such as Coil and Ake, often producing musique concrète-style mosaics of synth noises, voices and loops. Thus, they were not classically 'industrial' but their confrontational style was welcomed by the scene. The band would slim down to a duo and be renamed, Silverstar Amoeba, creating cassette-only albums that were limited to a grand total of...two. Yet they would support iconic outfits such as Psychic TV and Einsturzende Neubauten.

Funeral Danceparty released their debut album in 1980 which, according to the media at the time, saw inspirations from the likes of Faust and The Residents. The band used familiar organic instruments but combined that lot with found sounds, noise and tape loops. Despite lots of verbal support, the money wasn't available to enter a studio and record

a 'proper' LP.

You can contrast the above with Robert Haigh's output from the mid-eighties whose piano pieces were both fragile and melancholy, sweet and heart-wrenching. Enough indeed to draw a tear or two or, at the very least, to fix you still to your chair and transport you to a state of deep contemplation. Yet, Haigh's experimental works are just that, they are exploratory sequences.

Even artists who would explore more mainstream trends as their 'day job' began to see the artistic pureness and expressive freedom of an industrial musical direction. People such as Chris Connelly showed that he had a darker side away from his regular jobs as members of bands such as Fini Tribe and Ministry. In fact, that solo output was more in line with the likes of Current 93, Nurse With Wound and Coil. His solo work shows that even slightly more mainstream artists can dabble in the dark arts.

As you can see, by this tiny sampling of industrial bands, industrial is actually a very loose musical genre indeed.

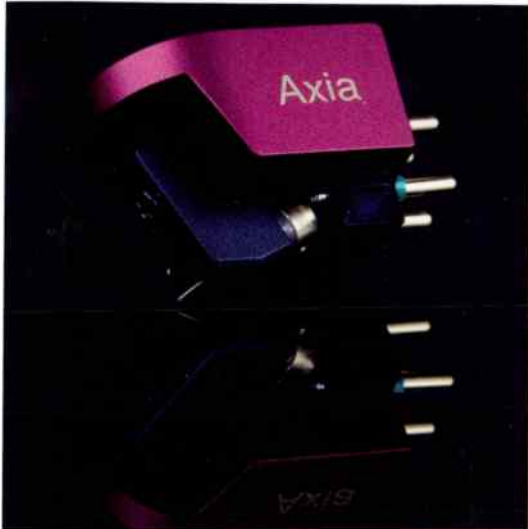
If you want to know more then I can direct you towards a new box set that will provide an ideal genre overview. This subculture of the industrial scene has not only been celebrated but also collected by German audiophile label, Vinyl On Demand (www.vinyl-on-demand.com) with its new, magnificent, box set 'VOD-Records Presents 80's Industrial & Avantgarde'. It's an enormous great thing packing, within a very sturdy, pizza-style box, thirteen LPs and including bands such as The Death & Beauty Foundation, Silverstar Amoeba, Counter Dance, Vox Populi, Funeral Danceparty, K2, Robert Haigh and Blockader/Chris Connelly.

For more musical thoughts, check out my website, www.theaudiophileman.com. ●

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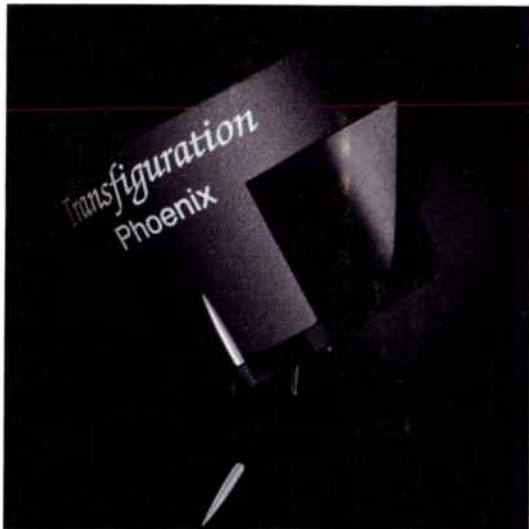
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'Outstanding' rating



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Jason Kennedy, *HiFi+* November 2014



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Michael Fremer, *Stereophile* October 2014.

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Steve Harris, *HiFi News* November 2014
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"The overall trend is a rise in streaming services and digital downloads"



Jon Myles

Just how much longer will physical media remain the dominant method of domestic music replay? No, it's not a hypothetical question – more a reflection on how consumption patterns are changing faster than probably most people have realised.

Yes, much has been made recently of how new music industry figures show sales of vinyl have actually increased recently for the first time in years. But they still just account for 2.4 per cent of total album sales in the UK.

Dig down through the various figures a little deeper and it's clear the overall trend is an inexorable rise in the use of streaming services and digital downloads stored on hard disks.

Recording industry trade body the IFPI estimates income from music subscription services such as Deezer and Spotify are growing at an annual rate of more than 50 per cent with some 450 licensed services across the world generating more than \$1.25 billion in revenues.

This comes at a time when sales of physical formats have fallen by as much as 11.7 per cent in major markets including the UK, North America, Germany and Italy – mainly due to the decline in sales of CDs.

There's little to suggest those sales trajectories are likely to change over the coming few years as more and more people turn to storing music on NAS drives or desktop computers or, more increasingly, simply give up on the actual physical ownership of music in favour of paying a monthly fee for access to a library of more content than they could reasonably consume in a lifetime of listening.

Even high-end companies such as Linn, Naim and Meridian have responded – adding streaming

services such as Spotify and Tidal to their products.

They're not doing this on a whim (after all, they have to pay licence fees and sign-up to often tightly-drawn contracts to bolt-on these features) but more a reflection of the fact that they can see the direction the market is heading.

Ultimately, it means there's a whole generation of music lovers growing up now to whom the very thought of going into the likes of HMV to actually purchase a CD or LP is a completely alien concept. Indeed, a good proportion of them have probably never even seen an HMV store, such is the once-giant chain's diminished presence on our High Streets. At one time I could walk to two of their branches from my home. Now the nearest record shop is a good 45 minutes' drive away. Even that is closing shortly to be replaced by a mobile 'phone shop where, yep, you'll be able to buy products you can stream music to.

And, of course, there's also a financial element to all this – and one the music industry is very much in favour of.

After all, having millions of people worldwide pay a monthly subscription to access music they never actually own is a much better financial model than trying to flog a new band to consumers who may only buy a handful of CDs ever year.

Indeed, according to the Wall Street Journal, at least one major US record company already makes more money on average per year from paying customers of streaming services than it does from consumers who buy downloads or CDs.

According to the financial newspaper's data, the average 'premium' subscriber to a streaming service was worth around \$16 a year to the company compared to just

\$14 for the buyer of downloads or physical media.

And as more and more people sign-up for streaming services, that disparity will only grow larger due to the inherent economics of the streaming model (once a certain level of subscribers is reached each additional customer adds a relatively marginal extra cost compared to the profit generated).

Bear in mind too, that as the subscription music model becomes more and more powerful there's a real chance this could be the only channel on which some artists decide to release their music.

Fanciful? Not really. Apple's iTunes already has a number of tracks that are available exclusively through the on-line store and, while these are obviously downloadable, it doesn't take too great a leap of the imagination to see something similar being offered by Spotify if the right financial terms are offered to the artist or record label.

Arguing as to whether this is a good or a bad thing is perhaps beyond the point at this stage – it's happening in one form or another and we'll just have to get used to it.

Part of me, however, feels a slight sense of unease that in future decades the concept of the physical ownership of a piece of music could be a thing of the past and instead our enjoyment of the medium will be dependent on the payment of a monthly subscription.

Not that I don't enjoy the freedom of choice that the likes of Spotify, Deezer, Tidal and all their rivals bring – but the thought of having to pay a never-ending subscription fee seems a step too far.

After all, at least with a CD or LP you have the chance to keep it for life – and the joy of rifling through record racks at your local music emporium. ●

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"thanks to the resurgence of vinyl the appeal of crate-digging is widening"



Martin Pipe

Who hasn't indulged in the noble art of what is called 'crate-digging'? The term was originally applied to DJs and hip-hop musicians who spent much of their spare time thumbing their way through racks of long-forgotten vinyl at second-hand record stores in their search for obscure songs. The more obscure, the greater the kudos among their peers.

But thanks to the steady resurgence of vinyl, the appeal of crate-digging is widening. The term is now applied to record-collectors generally. And it's no longer confined to just the old-style 'physical' record stores. A personal pleasure is looking through piles of vinyl at car-boot sales. Other sources include record fairs, small ads and Audiojumble-type events. The last (February) Tonbridge one saw a massive increase in vinyl vendors.

If you're in London, you have the Music and Video Exchange (www.mgshops.com). In the late 1980s and early 1990s, I was a frequent visitor to its Notting Hill branch. I have a hunch that a sizeable proportion of its vinyl came (or at least used to!) from London radio stations. Today, you'll also find Music and Video Exchanges in Soho, Greenwich and – for more northerly music lovers – Birmingham.

The unpredictability of crate-digging is itself a draw, a far cry from the bland corporate consumerism of on-line music retailing. For me, not knowing what you're going to come across is one of its key pleasures. Among all the Jason Donovan, Bros and Kylie albums in stacks at car-boot sales, you can usually find large slabs of classic rock, heavy metal, country, indie, hip-hop and dance/soul.

Classical LPs, certainly ones that

cover the most popular works, are also common sights on the second-hand scene. I've also come across some obscurities, ranging from a Triumph Stag dealer-demonstration record to some wonderful East European prog.

Much of my record collection has been haphazardly built up in this way. I was also lucky enough to snap up much vinyl (and the gear to play it on) for next to nothing when most punters were moving to the 'superior' sound of CD.

Unfortunately, there's no guarantee that what you buy is playable. Carefully take a record out of its sleeve and it may be pristine with no scratches or dust but that's not to say its grooves haven't been ploughed at five grams or so by the ceramic cartridge of a cheap record player or music centre.

A worn LP usually sounds terrible on a decent turntable/arm/cartridge combination; to play them on my Technics SL-1210 I have an old Shure cart, mounted in a standard SME headshell. This is equipped with a spherical stylus that tracks at three grams or so.

Removable headshells may be frowned on by the purists, but here their main practical benefit is put to good use. Courtesy of temporary 'table' downgrading, those maltreated records actually sound better! If you have a decent vinyl system that you don't want to mess around with, I would recommend getting hold of another turntable specifically for trying unfamiliar records.

Old Japanese decks from the '70s and '80s are ideal for this sort of thing – they're not expensive, either. You can even use the supplied cart, which for budget decks was usually a cheap MM affair with spherical stylus.

You'll almost certainly need another deck if you want to try playing the fragile shellac discs that

are still regular sights at boot sales, not least because the 78rpm speeds most played at are seldom specified on more modern gear.

An exception is the Goldring GL-series range of idler-driven 'tables', with the tapered motor shafts that allowed them to be continuously-adjusted from less than 16rpm to over 80rpm. Some DJ decks of relatively-recent heritage (I have a Kam DDX3000) will run at 78rpm; their speed can also be varied.

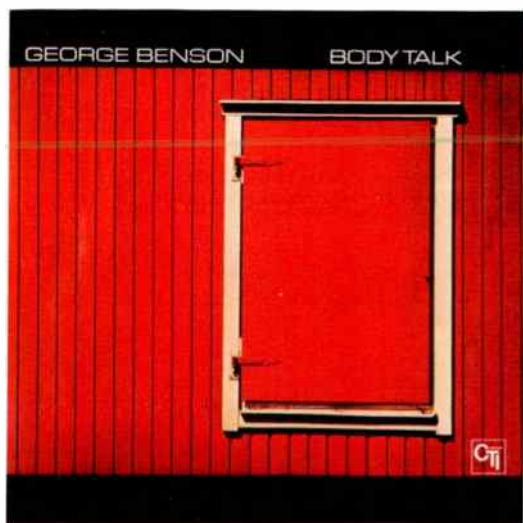
78rpm discs require specialist styli – and they don't use the RIAA equalisation curve. To play them with my Kam deck, I feed the Shure cart into the mike inputs of an old Technics cassette deck, the output of which feeds my system via a graphic equaliser.

Much music from the 78rpm era has been re-released for LP or CD, electronic trickery being employed to doctor the sound where necessary. Some rock and roll spanned the period when 78s were giving way to 45s. There's still plenty of sadly-forgotten music (among them the dance-bands of the '30s and '40s) that is only available in the original format.

But even if the music is available in a more modern format, wouldn't it be nice to hear the music as it was originally-released – warts and all? For this reason, the true purists are inclined to play them on beautiful sideboard-sized art-deco valve radiograms or acoustic wind-up gramophones.

Radiograms, and the vintage 'playing desks' intended to plug into a contemporary wireless set's 'gram' inputs, had 'electric' pickups. To these were fitted longer-lasting needles. Referred to as 'long playing needles', that aren't commonly available.

Occasionally, you'll find them on eBay – but make sure that they're not used. The packets should still be sealed if you want to be sure. ●



GEORGE BENSON

Body Talk
Speakers Corner

I wonder if George Benson ever gets his proper due in terms of what he has achieved in the history of music. The fact that he is one of the greatest guitarists in jazz history should be, you might say, achievement enough. Thing is, though, Benson doesn't stop there. He is also one of the most versatile musicians that I've ever seen or heard. And that's why I ask the question because critics hate this sort of thing. It sends them into all kinds of a tizzy because they can't nail the man into a convenient pigeon hole and so they often dismiss George Benson with a few grandiose yet confused words before moving on.

Benson is a man who easily plays and excels in the fields of swing to bop to R&B to pop, offering a beautiful rounded tone within each.

The logic behind each of his arrangements, for example, is

supreme and he swings his music wherever he may be, entertaining and hooking any listener who cocks an ear.

This album is a case in point. Released in 1973, initially on the CTI label and with an eye and ear on what was happening on the soul charts, Benson decided to move his career from a jazz-centric phase towards R&B, with added James Brown-like touches. In fact Brown's own Pee Wee Ellis turns up as a big band arranger on three tracks.

The six songs on this album are populated mostly with Benson originals, yet some might wonder at the backing band of Jack DeJohnette, Ron Carter, electric pianist Harold Mabern, and percussionist Mobutu plus Earl Klugh but they only allow Benson to flirt with jazz moments that offer a sparkling fusion of sounds on this excellent release.

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Elwood: It's a hundred and six miles to Chicago, we've got a full tank of gas, half a pack of cigarettes, it's dark and we're wearing sunglasses. Jake: Hit it.

As we know, they'll never get caught. They're on a mission from God.

'The Blues Brothers' was a funny, funky, slightly bizarre film that quickly rose toward cult status along with its superb soundtrack that owed more to R&B than it ever did to blues per se. Oh, and it has sparked a host of fancy dress outfits.

When the published music relating to this film is discussed, everyone tends to think of that soundtrack, released in 1980, featuring legendary names such as Aretha Franklin, James Brown, Cab Calloway and Ray Charles. There was, however, an earlier record, released in 1978, featuring some

superb songs, backed by a host of top backing musicians with a John Belushi (Joliet Jake Blues) lead vocal and additional lead vocals plus harmonic via Dan Ackroyd (Elwood Blues). The backing band includes the talents of Donald "Duck" Dunn and Steve Cropper from Booker T. & the M.G.'s, Grammy-award winning drummer Matt Murphy as well as Blood, Sweat & Tears sax player Lou Marini.

The album itself sparked two hit singles in 'Rubber Biscuit' and 'Soul Man' and was highly entertaining despite the serious, critical, chin scratchers pointing wagging fingers at Belushi's voice. That, of course, is not the point of this album. The point of this album is the sincere nature of the approach and the delivery. Apart from that, you've also got yourself a rather tasty selection of playing from a top-notch band. This edition is limited, numbered and on coloured vinyl.

This album was originally released in 1973 and it's interesting to see where Clapton was at this point in his career. Once the star of the blues rock combo Cream, Clapton had gone solo and released his first, self-titled, album during mid-1970. He was at the top of his game and was widely recognised as one of the best rock guitarists of his generation.

That said, his solo status had been subsumed rather. Clapton, before that album has been released, retreated behind the Derek & the Dominos monicker, releasing 'Layla and Other Assorted Love Songs'. From that point, Clapton was inactive. Why? Drugs. He was struggling with heroin.

It wasn't until 1973 that he was enticed to emerge from his cave by The Who's Pete Townshend.

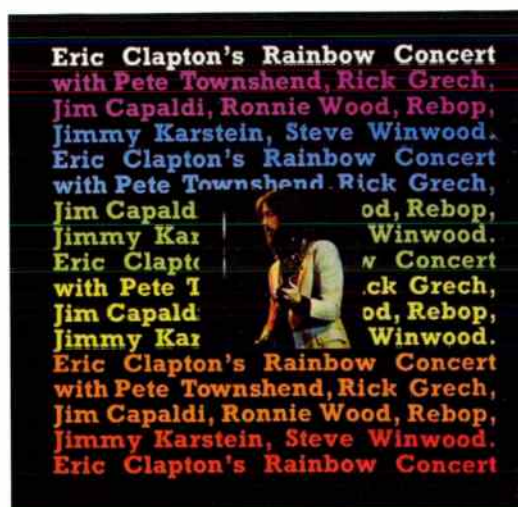
The idea was to appear in a one-off show (there were, in the end, two

shows) at the Rainbow Theatre in London on January 13, 1973.

Townshend would organise an all-star band to back him, including ex-Traffic man Steve Winwood (who stole the show with some sparkling lead vocals), Rick Grech (Traffic and Blind Faith), the then Faces guitarist, Ronnie Wood, ex-Traffic man Jim Capaldi and drummer Jim Kirstein (Taj Mahal, J.J. Cale et al) and Rebop, a percussionist who had worked with Traffic and krautrock pioneers, Can.

The album showed that the reclusive Clapton could still play, and that was welcome news. Not the greatest live album you will ever hear but certainly an important historical document of a time and place in Clapton's career while completist fans of the other players will certainly be interested in grabbing it.

Nicely remastered by Audio Fidelity who maintain their high audiophile standards on this 180gm, virgin vinyl edition.



ERIC CLAPTON

**Rainbow Concert
Audio Fidelity**

Wow! I never expected to see this release, not in a million years, but now that it has arrived, it will be warmly greeted by many a fan of early electronica synth bands.

The band itself was formed in 1977 by Stephen Singleton, Mark White and David Sydenham and were seen as one of the most important groups to emerge from Sheffield at that time. The others were the first incarnation of The Human League (and before that The Future), Clock DVA and Cabaret Voltaire.

Has the penny dropped yet? Vice Versa would later move on from the more, shall we say, hardcore synth noises, employ Martin Fry as their lead singer and rename themselves as the rather more commercial outfit ABC.

For a joyous two years, though, Vice Versa were on the edge, relevant, innovative and touring with major

outfits such as Wire while creating their own record label in Neutron Records. Their music was raw, spare, stripped of any excessive frippery and with a recognisably new wave-esque, slightly robotic vocal delivery.

Vice Versa produced several significant pieces of music which have been collected in this magnificent 4LP box set with the assistance of Stephen Singleton and Mark White. The content of the box is a pure delight. Featuring a 40-page, LP-sized history of Vice Versa and Neutron Records including unpublished photographs and art, a metal enamel badge, four full-colour printed inner sleeves and a paper kit synth called 'newsoc78' which you can assemble with scissors and glue!

All original recordings from 1978 to 1980 are included over four 12" slabs and a bonus 7" single. That means that you also get thirty previously unreleased track versions and three previously unreleased ditties.



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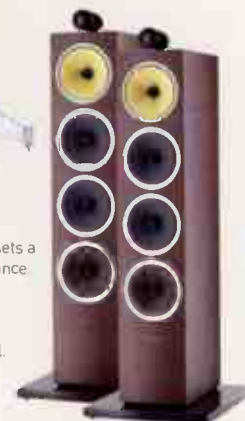
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vinyl section

contents

APRIL 2015

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VPI NOMAD TURNTABLE 82

Paul Rigby takes VPI's new entry-level turntable for a spin.

MUSIC FIRST AUDIO REFERENCE MM PHONO STAGE 86

Music First's two-box phono stage impresses Paul Rigby.

THE VINYL FACTORY 91

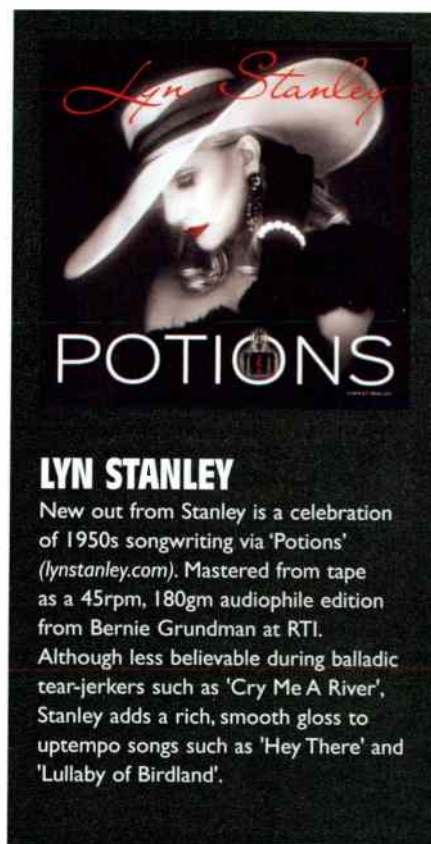
Paul Rigby takes a look at the burgeoning Vinyl Factory operation.

news

SPEAKERS CORNER

A lively trio from the German audiophile outfit Speakers Corner (www.speakerscornerrecords.com) begins with Johnny Cash's 'Orange Blossom Special' (1965). Well conceived, it is notable for three Dylan covers when Dylan was just beginning to be covered by other artists ('It Ain't Me Babe', 'Don't Think Twice, It's All Right' and 'Mama, You've Been On My Mind' which Dylan hadn't even released when this version appeared).

Also look out for Santana's 'Borboletta' (1974) in which the band seemed to be coasting and Blue Öyster Cult's 'Secret Treaties', the band's classic release. Expansive and lush.



LYN STANLEY

New out from Stanley is a celebration of 1950s songwriting via 'Potions' (lynstanley.com). Mastered from tape as a 45rpm, 180gm audiophile edition from Bernie Grundman at RTI. Although less believable during balladic tear-jerkers such as 'Cry Me A River', Stanley adds a rich, smooth gloss to uptempo songs such as 'Hey There' and 'Lullaby of Birdland'.



BLUE ÖYSTER CULT SECRET TREATIES



PIXIE LOTS

Fans of The Pixies need to grab 'Doolittle 25: B-Sides, Peel Sessions & Demos' (4AD, www.4ad.com) a superb double album, that expands on the older release. The Peel Sessions come from 1988 and 1989 while half of the tracks are released for the first time. A download card is included, offering access to all LP tracks plus four more bonus tracks.

KING STRINGS

From Sundazed (www.sundazed.com), 'King Strings: King-Federal-Deluxe Guitar Grooves, 1949-1962' a well-mastered mono compilation that selects lively and rocking instrumental guitar tracks from the King catalogue and features the likes of Freddy King, Jimmy Nolan, Texas Slim, Roy Gaines, Johnny Otis and Bill Doggett. Ideal for guitar fans.





SIREENA

Two from Sireena (www.shackmedia.de), this interesting German label includes the artist Nattfrost's 12th album 'Homeland', mixing orchestral electronic music and vintage electronica to give a decidedly Tangerine Dream flavour to the LP.

Also look out for The Ramones' 'Live At German Television', from 13 September 1978 at the TV studios of Radio Bremen, the band's first European appearance. Twenty-five songs were performed in under fifty minutes. The package includes encores and a DVD with an additional fourteen minutes of coverage.

LOTS OF MOV

My goodness, Music On Vinyl (www.musiconvinyl.com) have been busy this month. We start with punk and 'Singles Going Steady' from The Buzzcocks. Last released in 1979 it includes their singles from 1977-1979 on the A-side with the B-sides on...the B-side.

Two LPs have been released featuring the horn-driven funk-rock band Tower Of Power from the seventies. 'Bump City' (1972) was their second release but the first to make an impact, a much better release over their debut. Their self-titled third album (1973) found Lenny Williams as lead vocalist with 'So Very Hard To Go' becoming their biggest hit to date.

Animals fans need to look at the 3LP set 'The Complete Animals' which includes the complete sessions that The Animals recorded with producer Mickie Most in 1964 and 1965. The 40 songs capture the band at their peak.

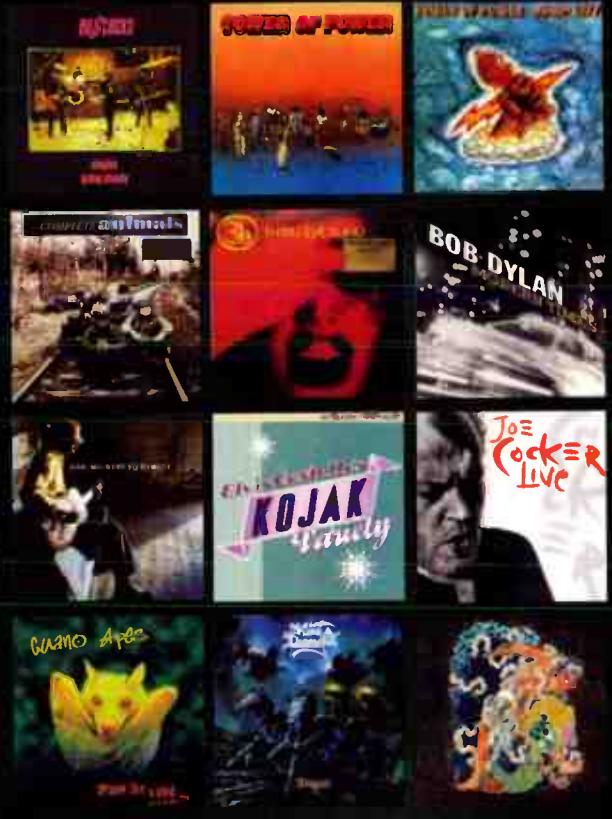
Continuing the classic rock theme, Ten Years After's 'Watt' (1970) suffered from too much touring before it was created, hence the Isle Of Wight live cut.

Third Eye Blind's self-titled debut (1997) is a post-grunge, hook-laden, immediate yet also simplistic album. Still, it's mostly pleasurable.

Onto Bob Dylan and his 2006 album, 'Modern Times' that manages to mix the raw and the chaotic with songs that feature both enigmatic but also amusing lyrics. This is an album that gives you a view on everything from love to death. Convincing.

Keb' Mo's 'Keep It Simple' (2004) shows how he is less a hard docker blues man - craggy and hoarse and hurting - but a blues popularist. This is not a bad thing. The man provides a sort of pop-infused Americana of blues. Includes that guitar with an easy delivery.

Also look out for Elvis Costello's 'Kojak Variety', a 1995 covers album, Joe Cocker's 'Live' (1990) is a double album with two studio bonus tracks, 'Proud Like A God' is the debut album of German Alternative Rock band Guano Apes (1997), King Diamond's 'Abigail' a masterpiece from 1987 and heavy metal's greatest concept album and, finally, DJ Krush's 'The Message of the Krush' is a splintered, sampled beats double album from 2002.



...AND FINALLY

Junkboy's 'Sovereign Sky' (*Enraptured; enraptured-records.com*) offers gentle, rather inoffensive pastoral rock/pop featuring complex vocal harmonies.

Moving to The Scenes and 'Beige' (Sound Of Finland; www.softmusic.fi) who offer art pop/rock with melodic songs tinged with symphonic climaxes. They flatter to deceive which results in beige music.

Trans-Siberian Orchestra's (Audio Fidelity; <http://www.audiofidelity.net>) 'The Christmas Attic' (1998), their second LP wasn't quite as focused but did offer steady arrangements and better quality songs.

Finally Royal Blood's self-titled album (Black Mammoth) offers a White Stripes-like punch with and intense, Muse-like delivery. Full throttle rock.





One Stop Deck

Arriving with an arm and cartridge plus phono and headphone amplifiers, VPI's Nomad is a value-for-money package for playing vinyl, says Paul Rigby.

“We created the Nomad right after we released our \$30,000 turntable, the Classic Direct. We got a bit of, ‘Ah, there you go, VPI doesn’t care about us entry-level people any more.’ Also if we did make a \$1,000 turntable there was a thought that it might dilute the brand. But we

thought...lifestyle. The Nomad is for the person who wants that audiophile experience but who can’t afford the phono amp and the headphone amp and everything else and who also wants to fit it into a small apartment”.

This, according to Mat Weisfeld, is why the VPI Nomad turntable exists, to exploit the lifestyle sector and to take advantage of the current vinyl vogue: yes, vinyl is rather

fashionable at the moment. Designed by himself alongside his father and VPI co-founder Harry Weisfeld, the Nomad is a direct descendent from the company’s Traveler, “The Nomad is more what I envisioned for the Traveler (U.S. spelling). The latter was supposed be our entry level design but it was too complicated and wasn’t entry-level enough. It was over-engineered for a turntable in that price range. I’m glad things



The built-in phono amplifier means that the Nomad can be connected directly to a pre-amp or integrated amplifier.

happened the way they did because I learnt a lot from it".

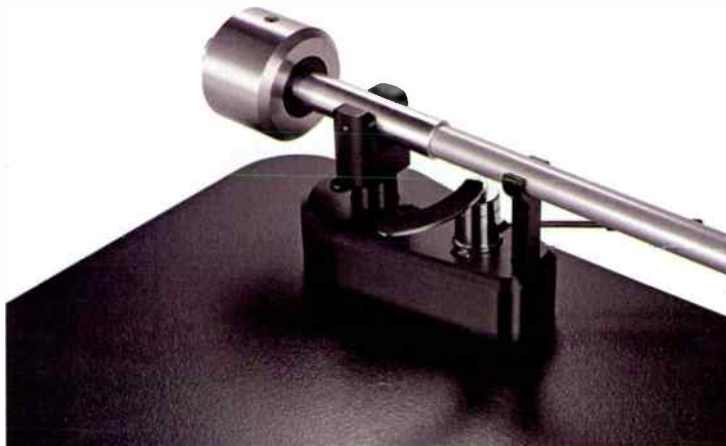
The resultant, belt-driven Nomad (spanning 470x109x343mm and weighing 5.9kg) is a 'value for money' package that includes a VPI 10" arm, an Ortofon 2M Red cartridge, a built-in non-removable and non-defeatable phono amplifier and headphone amplifier. All constructed within a single, elegant chassis. The company is considering making the phono amp defeatable and removable in future iterations.

During the running-in process, I did notice a certain amount of mechanical noise from the pulley/motor but that didn't concern Weisfeld.

"At this price range, there is detectable noise but there is less concern about that than, for example, if this deck were in the \$4,000 price range. We do use shielding and dampening materials to help to

reduce noise migration, though" he said.

The plinth and platter are made from a strengthened MDF composite, which is fitted with a Hurst motor, the same type as used in the Scout turntable.



VPI supply a straight-armed, 10" arm with the turntable.

"The original bearing was going to be plastic because we were going to include a pair of Grado headphones" said Weisfeld. "But then we thought, 'What the hell are we doing? We're a turntable company. Everyone has headphones and they'll probably give the headphones away anyway. I'd rather remove those and use the budget for something else. That meant that we swapped the plastic bearing to an aluminium bearing similar to the Scout Jr. It helps with the speed stability".

The 10" arm, meanwhile, aids tracking error reduction, although the company has found packing it a bit of trial. Future Nomads may revert to a 9" version.

"The current model is a tough gimbaled yoke arm made from aluminium with a hard Delrin plastic bearing. The Ortofon 2M Red is pre-installed with no set-up. We were looking at the Grado Gold but there was potential hum from the Grado: not good for an introductory customer" said Weisfeld.

The bespoke phono amp is geared towards Moving Magnet only and is loaded specifically for the Ortofon 2M series in general but the Red specifically,

"It has the perfect synergy for it. Although, a recommended upgrade would be an Ortofon Black stylus with a Red body (costing around £380), to keep costs down. If you did put a Grado Gold on there, then it would still sound good but wouldn't be as jiving as the Ortofon".

To create the phono and headphone amps, VPI looked towards the electronics suppliers who helped to create the company's turntable motor speed controller, the SDS. Was

VPI concerned about the headphone amplifier's performance?

"A little bit" confirmed Weisfeld, "but I didn't want the headphone industry to think that we were coming after them. I said, 'Let's make sure that it delivers the sound that we want but if it isn't up to the same level as the big hitters in the industry then that'll be fine too.' Originally, I didn't want to make it, but price was a problem. The other issue was the internal fit. So we looked at Schiit, PS Audio and others but we had to do our own to keep in budget".

In terms of connections, the rear of the deck features RCA connectors for direct connection into a pre- or integrated amp and a grounding connector and socket for the external power supply, a wall-wart.



The minimal set-up demands that you only need to add the arm's counter weight. After that, you're good to go.

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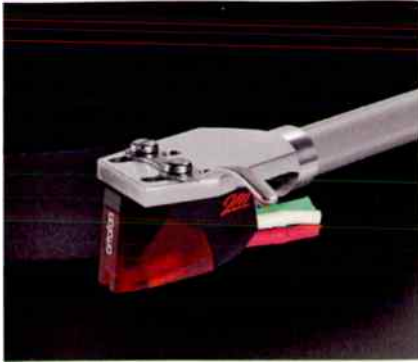
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The Nomad's built-in phono amp is tweaked to match the Ortofon 2M Red, MM cartridge.

The top-mounted push power button sits adjacent to the motor flywheel while speed changes demand that the belt be moved to a new pulley.

Set-up normally requires the simple addition of the arm's counterweight, aided via a pre-marked point on the arm. Our tests showed that the supplied Ortofon 2M Red suffered from stylus misalignment, however, so Henley Designs (www.henleydesigns.co.uk) kindly supplied a replacement.

IN USE

Reviewing the Nomad turntable is not straightforward. You cannot just compare this £999 package with another turntable of a similar value and see who wins the head-to-head. The Nomad is, I repeat, an all-in-one, one-stop package not a turntable in isolation.

Because it arrives with a headphone stage, it doesn't even require a pair of speakers. Hence, my initial aim, to compare it with my superbly engineered Michell TecnoDec was flawed.

The Michell costs around £900 including arm only. Similarly equipped to the Nomad, the Michell would cost considerably more than that.

As such, sporting a newly fitted 2M Red cartridge, the TecnoDec was, unsurprisingly, sonically superior, even coupled with a basic Cambridge 540P MM-only phono amp (now replaced with the 551P at £70), providing more finesse in the airy upper mids, a complex soundstage and tight bass. Instead, I turned to the Rega RP3 for a more sensible comparison.

SOUND QUALITY

The Nomad's built-in phono amp did require more gain than the reference Cambridge 540P phono amp to reach appreciable volume levels.

Beginning with the prog rock

track of Yes 'Yours In No Disgrace', despite a lack of extension in both the midrange and treble areas, compared to the RP3, the Nomad had great pace and animation, providing a real party atmosphere and fully embracing the rock dynamics.

The soundstage was a little constrained, with reduced air and space, yet the vivacity of the Nomad was obvious. The VPI design offered a rollicking bass guitar, driving the track forwards, backed with a forceful suite of meaty percussion.

Moving to Holst's 'Saturn - the Bringer of Old Age', via Karajan, while the overly controlled soundstage restricted the emotive string section somewhat, when heard alongside the RP3, the strong and powerful brass parts of this track were both impressive and predatory in their presentation, providing a true wallop that pinned me to my chair.

Turning to the built-in headphone stage that offered superior gain to the phono amp, I did notice some slight noise during higher volumes, especially during the quiet periods of classical pieces but nothing too disturbing and certainly nothing during rock music tracks.

Sonically, although lacking in finesse and depth, the headphone

stage was lively with good instrumental separation and plenty of energy during the Yes track. Upper mids and treble were not particularly extended but the headphone stage remained a 'fun' listen.

That conclusion was also reached during the dynamic flavours of Holst's classical piece which, despite a lack of maturity and clarity within the upper mids, provided an overall sense of musicality.

CONCLUSION

The turntable does suffer from relative restrictions in both upper mids and treble but I suspect that the featured phono amp is to blame here.

VPI's wish to make this unit removable and defeatable is a wise move. Nevertheless, aimed principally at the lifestyle market, the Nomad package remains excellent value for money in terms of its facilities and its plug-and-go set-up.

Ideal as an introductory, headphone-based, vinyl system, the Nomad is sonically fun to listen to, providing plenty of joie de vivre that will delight many vinyl fans.

SYSTEM USED

Rega RP3
Michell TecnoDec
Ortofon 2M Red
Cambridge Audio 540P phono amplifier
Sennheiser HD650 headphones
Aesthetix Calypso pre-amp
Icon Audio MB 845 Mk.II monoblocks
Quad ESL-57 speakers with One Thing mods
Atlas/Avid SCI cabling

MEASURED PERFORMANCE

The Nomad was speed accurate and relatively speed stable as belt drives go, with less wander and resultant wow than most. As a result it will have a sense of stable pitch, although our analysis shows there were some higher

frequency wow components, likely from the pulley or motor.

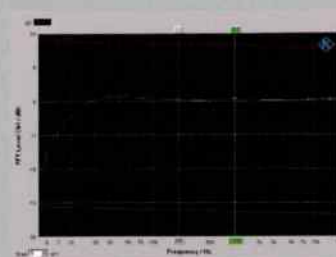
VPI fit an RIAA equalised phono preamplifier with a modest gain of x54 (x100 is common), 34dB, that feeds the rear phono outputs, for connection to an amplifier's Line input. Equalisation was accurate enough, but there's +1dB bass boost from a warp filter our analysis shows. The Ortofon 2M Red fitted lacked upper treble, however, likely due to stylus misalignment - unlike other 2M Reds we have measured.

The headphone output offered more gain (x169, 45dB) and more output (9V max) and volume control too, so appears to go through another circuit path.

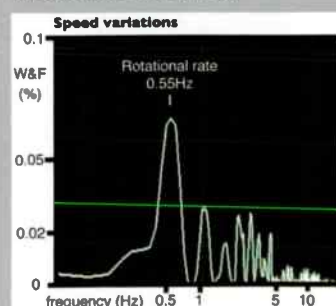
The Nomad is a good starter deck. Ours had a mediocre 2M Red fitted, a not-so-good sample that if replaced would improve its sound. Also, unamplified/equalised outputs would be useful to allow upgrade. **NK**

Speed error	+0.1%
Wow	0.15%
Flutter	0.06%
Total W&F weighted	0.1%

PHONO EQUALISATION



WOW AND FLUTTER



VPI NOMAD TURNTABLE £999



EXCELLENT - extremely capable.

VALUE - keenly priced.

VERDICT

Offers a wealth of facilities and a plug-and-go set-up routine that makes this design an ideal one for the beginner.

FOR

- musicality
- value for money
- plug-and-go

AGAINST

- phono amp

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A product of Music First Audio's Jonathan Billington and Longdog Audio's Nick Gorham, Paul Rigby reviews the Music First Audio's Reference Moving Magnet Phono Amplifier.

First Things First

In the same way that the integrated amplifier was conceptually divided into a pre-amp and monoblock power amps to minimise noise and improve sound, Music First and Longdog have produced a phono amp consisting of an MM-supporting

phono amp, a separate power supply and, to enable Moving Coil use, the option to buy the already established Music First Moving Coil Cartridge Step-Up unit. Billington adopted a football metaphor to emphasise his view of the final layout. "You want the world's best defence, midfield and

attackers. You won't find one player who is brilliant at all three roles. You perfect each part of the system and the system is the perfect team".

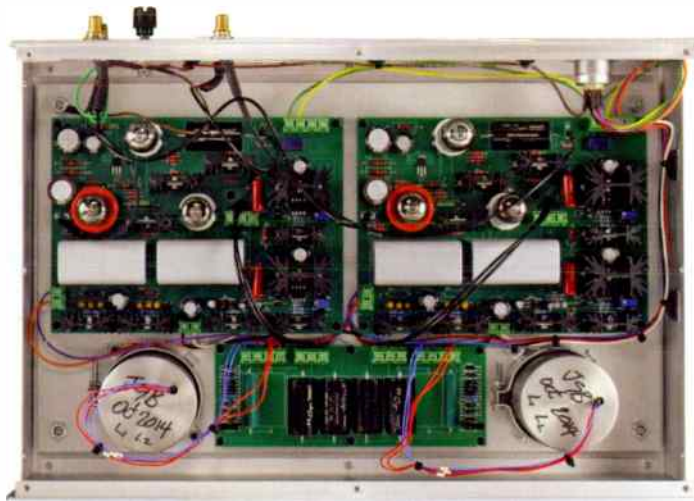
For the new, dual-box phono amp, the Music First and Longdog managers combined a new RIAA module, combining Music First Audio

inductors and new electronics from Longdog, "My part includes two wire-wound inductors, large and small" said Billington. "For the latter, I've used an air core inductor. Many inductors need a ferrite or metal core. I managed to squeeze enough turns of copper wire onto a bobbin to achieve the value needed without the use of a metal core. This has the advantage of leaving the value completely constant independent of frequency, giving a non-coloured output".

A blend of solid state and valves, the dual mono design utilises, for each channel, the d3a pentode, 5687 dual triode and 6072a dual triode valves, "So that, combined with nice resistors (Takman and Charcroft) and top quality capacitors (Mundorf and SCR) and the metalwork company that Music First use to provide non-ferrous casework, gave us the final phono stage" added Gorham.

Controls are simple. A front-mounted power button triggers a thirty-second calibration routine. Around the back are the usual RCA inputs to take an MM signal, a grounding post plus a pair of RCA outputs while an umbilical 16-pin cable connects the power supply to the phono amp. The power supply accepts an IEC power cable.

Initially, I connected the Music



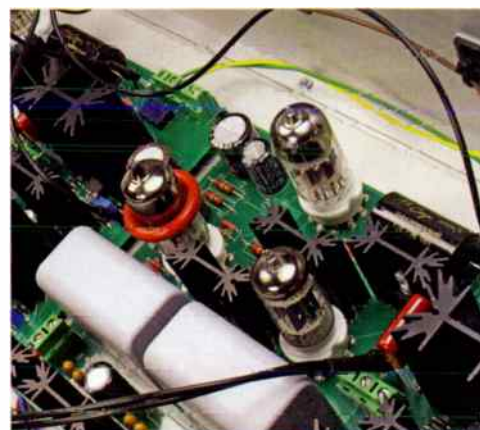
The new phono amplifier utilises Music First's new RIAA module.

First Step-Up unit to my reference Icon Audio PS3 valve phono amp, before adding the new, two box, phono amp.

SOUND QUALITY

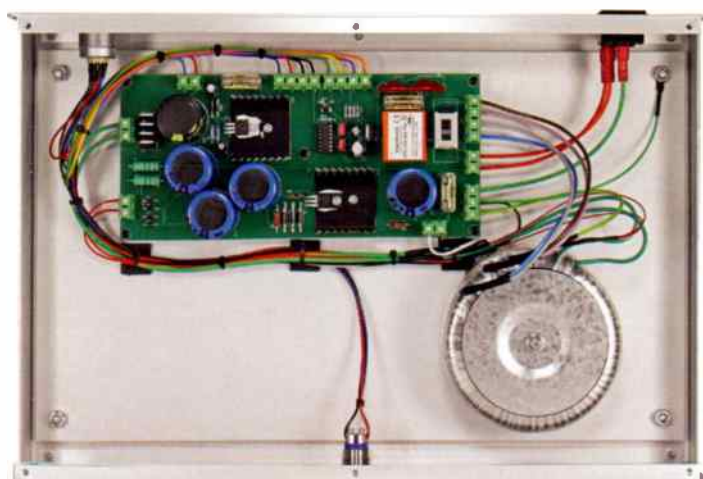
I began by testing the MM side of the new Music First Reference Phono Amp, plugging in an Ortofon 2M Black, the best MM cartridge on the market, and comparing that with the MM stage of my Icon Audio PS3 valve phono amp, spinning the prog rock track, Yes 'Yours Is No Disgrace', from the early seventies.

I was initially impressed by the tremendous gain. In fact, I had



Featured valves include the d3a pentode, 5687 dual triode and 6072a dual triode.

"a highly attractive presentation providing both clarity and transparency that frees up a wealth of detail"



The power supply is linear, not switch-mode, and uses a big toroidal mains transformer and sophisticated regulation.

to knock my pre-amp down a full ten notches to match the previous volume, such was the jump. Sonically, the vocal harmonies were both clean and emotively fascinating. There was a lot going on in the upper mids. Steve Howe is known for his guitar complexities but the Music First managed to untangle them, laying them bare while percussive rim shots were dry and crisp. Within the broadened and epic soundstage, bass was rather more in your face, hefty and punchy. Notable was the jazz-like drumming of Bill Bruford whose convoluted yet delicate drum style was easily articulated by the Music First.

Despite the impressive Moving Magnet performance, you wouldn't buy this expensive system just to play this rather noisy cartridge technology with its limited dynamic range. So I connected the Music First MC Step-Up (you can use Step-Ups from other manufacturers, though) and replaced the 2M Black with my Benz Glider and played Holst's Planets, via

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Jeff Dorgay, *Tone Audio Magazine*, January 2013



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World Radio History

Karajan, and 'Saturn - the Bringer of Old Age', an ideal track to highlight dynamic contrasts. Playback removed noise, producing a quieter backdrop to the low key introduction.

Adding the new Reference Phono Amp, though, the performance really began. Introductory cellos found a new portentous threat in the lower registers, giving an impressive bass weight full of potential power, while an early string sweep offered a radiant array of violins.

As the first crescendo built, the Music First enabled the music to describe both a softness in terms of the strings, draped over a fist of steel offered by the brass. A most difficult combination to pull off but performed here with aplomb. It wasn't until we arrived at the second, magnificent, crescendo, that the Music First pulled out all of the stops. Largely free of distortion, the resident upper mid bloom on the muscular brass was gone to reveal the grandeur of the Berliner Philharmoniker in all its might.

CONCLUSION

As part of an MC step-up, three box, system, the new Music First Reference Phono Amplifier offers a



The separate power supply, at top, helps to reduce noise.

highly attractive presentation providing both clarity and transparency that frees up a wealth of detail. It's a top quality specialist combo, if a somewhat expensive one.

REFERENCE SYSTEM

- Avid Acutus/SME IV/Benz Glider
- Icon PS3 Phono amplifier
- Aesthetix Calypso pre-amp
- Quad ESL-57 One Thing modified speakers
- Tellurium Q cables

MEASURED PERFORMANCE

Frequency response of the Music First Audio Reference MM phono stage measured flat from 20Hz to 20kHz within 1dB limits, our analysis showing just the very slightest lift at high frequencies attributable to variance in the 75µS time constant. Both channels were identical in their RIAA equalisation. There is some slow roll off in gain below 40Hz and a useful if not large -5dB warp suppression at 5Hz.

Gain was high at x290 (49dB),

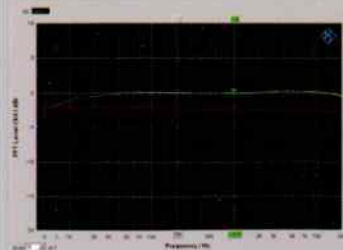
plenty enough to drive most amplifiers. With an Ortofon 2M Red that can deliver 35mV maximum, output from the phono stage will be a massive 10V. With a typical 3mV music output the amp will deliver 1V - enough to fully drive most power amps, so a Music First Audio magnetic preamp set to zero gain will be a good match.

Distortion was very low at around 0.1% second harmonic, our analysis showing distortion at 10mV input. Channel separation was very high at 104dB, an excellent value.

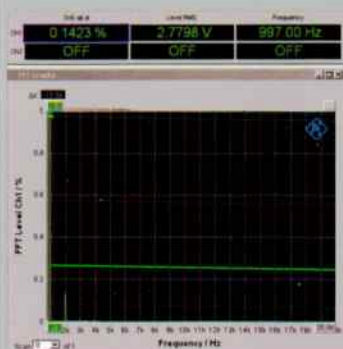
Equivalent input noise (output noise divided by gain) was a relatively low expected 0.2µV, but input noise on MM is always swamped by thermal noise from an MM cartridge, proportional to its DCR. This limits MM dynamic range and is why MCs sound 'deeper' and are preferred for high-quality work.

The Music First Audio Reference MM phono stage measured very well. Excellence here cannot overcome the dynamic range limitation of MMs, but it will make the most of high-quality MMs like Ortofon's 2M Black. This stage is, however, purposed for use with an MC transformer connected as a separate item. **NK**

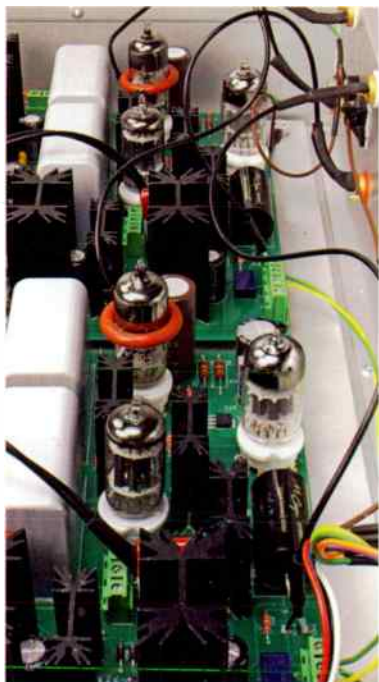
FREQUENCY RESPONSE



DISTORTION



Frequency response	20Hz-32kHz
Separation	104dB
Noise (e.i.n.)	0.2µV
Distortion	0.14%
Gain	x290 (49dB)
Overload	100mV in/28V out



Instead of the usual ferrite or metal cores, the Music First inductors are air cored.

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VERDICT

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FOR

- smooth and detailed sound
- clarity
- low distortion

AGAINST

- price
- no mono/stereo switch

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The Vinyl Factory

London-based record label, The Vinyl Factory, has two unique projects underway. Paul Rigby looks at newly pressed vinyl from a shipping container plus a new, multi-format album: each track, a different format.

Specialist vinyl label, Vinyl Factory, is having a busy time of it. In conjunction with London Sinfonietta and the White Cube gallery, the company is backing a new exhibition by the artist, Christian Marclay. It is open now and will run until 12th April 2015.

The large scale exhibition takes over the spaces of White Cube Bermondsey in a variety of ways, including Christian's collaboration with The Vinyl Factory who will take up residence in one of the galleries to press records, but not in the standard fashion. Live recordings of

already featured similar pressing techniques before from Third Man Records (owned by White Stripes' man, Jack White) and the classical label Berliner Meister Schallplatten. The notion of a mobile pressing plant is a new twist, though.

Next? Creative director, music producer and artist Trevor Jackson will release **FORMAT**, a collection of unreleased music and a celebration of music as a physical object. Released on vinyl and as a digital download by The Vinyl Factory, **FORMAT**, Jackson's first album in fourteen years will also be available as a collectible set of twelve limited-edition formats, each

custom finished with packaging design by the artist. It charts the legacy of the music format, in an uncompromising way.

For the super limited-edition release of **FORMAT**, each of the 12 tracks will

be presented on a different format designed by Jackson and produced by The Vinyl Factory. Including 12", 10" and 7" vinyl, CD, Mini CD, Cassette, USB, VHS, Mini Disc, DAT, 8-track and Reel-to-Reel, each collection of music will pay homage to released formats over the decades and celebrate the artistry, design and individual experience of playing each. Prices are yet to be announced.

Jackson is a man whose fingerprints are all over underground and mainstream culture, not only as a DJ, producer and label impresario but also as a designer, artist, filmmaker and curator who has featured in exhibitions at the ICA, Barbican and Guggenheim.

new music will be composed for the exhibition by a variety of high profile composers and musicians invited to take part by Christian and then performed in the gallery spaces by the London Sinfonietta every weekend. First up is David Toop and John Butcher and London Sinfonietta. Others will follow.

The performances will be recorded on the world's first mobile vinyl manufacturing press, housed in a shipping container in the gallery. Visitors will have the opportunity of seeing the process of recording, pressing and manufacturing vinyl close-up, with the chance to buy a limited edition record 'hot' off the press for £25. Hi-Fi World has



Marclay's vinyl is created using the world's first mobile vinyl pressing plant...situated in a shipping container.



The pressing machine is sturdy, to resist high pressure needed to form the heated vinyl against the stampers.

For more information, click on www.thevinylfactory.com.



All twelve formats from the **FORMAT** album via Trevor Jackson.



Copies of Christian Marclay's records, his music is cut straight to vinyl.

A grand day out



Martin Pipe ventures once again to Kent for the bi-annual Audiojumble

to come up trumps. And still there's more; food is served in the hall, if you don't want to dine in one of Tonbridge High Street's many fineries (the Oriental Buffet Club is particularly recommended). There's also the prospect of conversing with like-minded people, exchanging ideas, tips and other pleasantries even if you're not buying or selling – although the chance of going home empty-handed is minimal! No wonder people come here from Europe, Asia and North America...

According to organiser John Howes, February 8th's Audiojumble was one of the most successful to date – to the extent that stands were set up on the stage of the second hall. Indeed there were 148 vendors in all, attending to many hundreds of visitors. Some of this demand can be laid at the door of increased interest in all things vinyl – record sellers were in greater abundance than they were in October. LP lovers of all ages were seen rooting through various second-hand £1 'bargain bins' (some interesting music on offer, but check the condition!) or checking out the latest audiophile pressings.

There was also a range of demonstrations, among them the

hand-crafted Transcription Audio single-ended triode amps and i-Fi's range of small-but-beautiful products. Oh, and the Audio Gold donation box (an old JRI49 speaker, given a new lease of life) raised nearly £300 for the Argos Hill Windmill Trust charity. In return, donors could help themselves to something from the 'junk pile' – like a tatty but working Aiwa cassette deck, or a fairly-recent budget Cambridge CD player with a faulty MDA chip.

These increasingly popular events are held on two Sundays a year in the Tonbridge Angel Centre, which is easily accessible from the Kent stretch of the M25 motorway that runs around London. There's a lot to see here and while some of the more esoteric hardware can fetch hundreds or even thousands of pounds, there are still many bargains to be had – especially if you're handy with a soldering iron or a good haggler. It's the sheer variety that appeals – we're talking reel-to-reel tape and cassettes, amplifiers both valve and solid-state, turntables and CD players, speakers of all shapes and sizes, test gear, components, wireless sets and music of all formats.

Whether you want 8-track cartfuls of classic rock for that vintage vehicle you're restoring, tape to feed that reel-to-reel or a 180g pressing of a recent album to play on your ageless turntable, you're likely



Here is the very first Minidisc portable - Sony's MZ1, circa 1992. Although future models were smaller and sounded better, the reality of random-access digital recording in your pocket must have been very enticing at the time. This one, as can be seen, was in mint condition and according to the seller was still working. He was asking £25 - a fair price for a piece of history.

The next Audiojumble takes place on Sunday 4th October 2015. www.audiojumble.co.uk

*Words: Martin Pipe
Pictures: Martin Pipe and Adrian Caspersz*

Efficient horn speakers like these sizeable Beauhorn B2.2s are a good match for low-powered valve amplification. The distinctive look of the Beauhorns is not, however, to everyone's taste! Originally, they sold for £4k - these ones were being offered for only £650 but it should be noted that the drive units had been removed.



It may be getting on for thirty years old now, but there are still those who sing the praises of Pioneer's 'no-compromise' PD-01 CD player



– complete with luxurious wooden side-panels. Thanks to its optical and coaxial digital audio outputs, though, the 'reference' PD-91's massively-built CD transport can instead feed a modern DAC. This mint £395 specimen is in full working order and comes with its original carton and accessories.

Described by no less an authority than Radio Bygones as the 'ultimate' British valve-tester the V.C.M. 163 'valve characteristic meter' could be used to display electrode currents and mutual conductance simultaneously. A series of controls, working enabled the V.C.M. to be configured to handle many different valves. This one was going for £1,100.



Being offered for £80 was this unusual Akai GX1900 in excellent condition. It's a combined cassette deck and quarter-track reel-to-reel, enabling you to dub between the two in 'real time'. Akai's brilliant long-wearing GX head technology was used, albeit only in the cassette section.



The lack of noise reduction would have alas exacerbated cassette's limitations relative to open-reel - especially if the latter was being run at the GX1900's top speed of 19cm/s.

One of the best analogue tuners of recent years, the MD-90 from Magnum Dynalab was



engineered to extract the maximum information from a FM broadcast. Like the Japanese classics of yesteryear, it offers features like switchable IF bandwidth and multipath metering. Like these vintage models, the MD-90 is all-analogue 'old-school' inside – although the digital frequency display nods to a later time. These £1,300 tuners are rare second-hand buys; this one was being pitched for £850.

Record shops, hi-fi retailers and serious vinyl-junkies need a record cleaner to keep their records in good condition. The American-made VPI HW16 shown here – a vacuum-and-fluid design – is still in production after over 30 years! A new one sells for £650; this specimen could have been yours for £500.

You could be forgiven for thinking that, back in the '60s and '70s, SME had the tonearm market to itself. And yes, it did command the lion's share. But there were some other players – among them (George) Hadcock, whose firm made this GH228 in the late 1970s. This nicely-engineered unipivot design was on sale for £35.



Vintage 'NOS' (new old stock) valves can attract what the layman would consider to be silly prices. The £100 being asked for this original Mullard EL34 powerpentode would, after all, buy a new budget integrated amplifier. It's not even one of a matched pair! But those who love the valve sound and seek authenticity will go out of their way to pay good money for 'bottles' that haven't been made for decades – and are thus, by definition, a commodity of increasing rarity.



In this issue, I review the latest incarnation of Wharfedale's Diamond speakers - and very good they are too! Indeed, the Diamonds are among the most popular budget speakers ever created. The glossily-finished 220s I reviewed sell for £200, and are completely unrecognisable from the earlier models like the ones shown here. These Eighties models sold for a mere fiver!



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Made in the late 1920s by the British Polyphon Company, this Dulcetto acoustic gramophone would have been used to play the era's 78rpm shellac records. A lever varied the speed of the Garrard clockwork motor that directly drives the platter. Well-preserved units like this sell for £100 or thereabouts.



Diverse Vinyl has been a long-term supporter of the show. Among its treasures is this limited-edition Lynyrd Skynyrd box set. Lovers of this classic Southern rock act would have appreciated the set's seven 180g LPs - five studio albums spanning 'Pronounced...' to 'Street Survivors', plus the 'One More From the Road' live double. A lot of quality listening for £79 - and the original sleeve work too!



Turntables intended for building into radio studios were built like tanks. Only well-funded broadcasters (like the BBC) with lots of listeners would have been able to afford a machine like the direct-driven EMT 948. The electronics in the base contain, amongst other things, the speed-control circuitry and phono stages.



This specimen had been restored and was supplied with 33/45 and 78 heads; thus the £2k price tag.

The Musical Fidelity A1008 Pro here is based around a top-loading Philips 'CD Pro 2' transport, recognised by many to be one of the best ever made. Proprietary signal processing, followed by conversion to analogue at 24-bit/192kHz and a choice of two independent outputs - one solid-state, the other valved - make the 2007 player a tempting buy. This maverick originally sold for a lot more than the £800 demanded here!



Here we have a Pioneer SA9800, typical of the 'muscle-amps'



being sold by Japanese firms in the late 1970s. Brushed aluminum, fluorescent metering and all the features you could possibly want (including a decent MM/MC phono stage). Despite their fine performance, Japanese equipment ended up being rejected by many purists. But they're now winning new fans - and attracting high prices. This shining example was on offer for £450.

It looks like a teenager's disc-spinner - but this one could record too! The Pye Record Maker wasn't a domestic cutting lathe, though.



You swapped out the cartridge for a special head that recorded on magnetic discs. This Record Maker was in excellent condition and was accompanied by all accessories, including the two heads and a microphone. Collectors appreciated that £40 was a good price to pay.

Selling for 48,000 yen on its Japanese launch in 1968, the three-way Yamaha NS-20 is famous for its unusual 'NS' (Natural Sound) woofer - which can be seen in the photo. This has a flat Styrofoam diaphragm rather than the paper cone of a typical drive unit of that era. The NS20's design was inspired by Yamaha's musical instruments, and performed better than other Japanese speakers of the time. The £700 being asked for this pair reflects their scarcity in the UK.



Originally sold as a high-end tape deck for quadraphonic use, the two-speed A3340S became vastly better-known as a semi-professional recording tool courtesy of the 'simul-sync' feature that allowed a 'one-man-band' to build up a track. This example was ex-Thames TV and in excellent condition (that dust-cover is rare!). With a box of 10.5in. tapes (one of which was intriguingly-labelled 'Margaret Thatcher Interview'), £300 was the asking price.



NEXT MONTH MAY 2015 ISSUE

ARCAM CDS27 CD/SACD PLAYER

Arcam have long made top quality CD players and next month we review their latest. The new CDS27 plays more than just CD however, it also plays SACD and files on your computer, over a network. Will it play DSD? And just how good is its Burr Brown DAC? Find out in our May 2015 issue.



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...and much more.

This is a selection of what we hope to bring you, not a complete list. We regret that due to a wide range of issues, such as failure under review, we cannot guarantee that all products listed above will appear.

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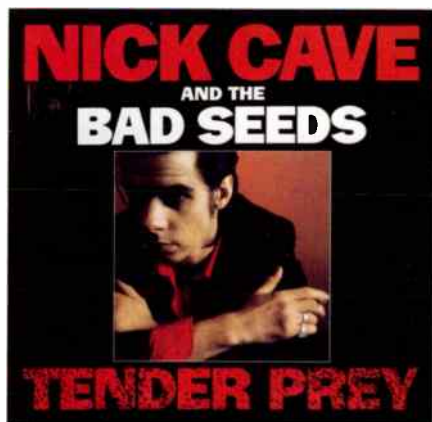
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NICK CAVE AND THE BAD SEEDS

TENDER PREY

MUTE

1988



"With Tender Prey Cave produced an album that encompasses the word powerful"

Arising from the ashes of goth rock pioneers The Birthday Party (who ended operations in 1983), Nick Cave constructed a sort of super-group comprising former Birthday Party guitarist Mick Harvey on drums, ex-Magazine bassist Barry Adamson and Einstürzende Neubauten guitarist Blixa Bargeld. The Bad Seeds in harness, Cave proceeded to write a host of songs featuring heavyweight subjects such as death and love, religion and violence with side glances towards the broad expanse of America. To do this, Nick Cave roped in a wealth of genres to achieve his aims that included rock and blues, post-punk and even some gospel. Taking a narrative approach to his songs with added myth-making, the typical Cave song is a dark one, often gloomy while his low, distinctive baritone voice adds to the portent.

With 'Tender Prey', Cave added a couple of bodies to the band: guitarist/keyboardist Roland Wolf and Cramps/Gun Club veteran Kid Congo Powers on guitar and produced an album that encompasses the word 'powerful'.

"I just saw it as being a record of total chaos and, in a way, it was quite a surprise that it was accepted and considered to be one of our best records" said Cave at the time of release.

It was also new and by no means a rehash of previous works. The tone was even darker yet fantastic in approach with the downright chilling 'The Mercy Seat' - which focused upon a prisoner facing execution as he draws parallels with the electric chair and the throne of God. It's gut-wrenching stuff, especially as Cave himself is in total control with a command of the song that is often inspiring in its delivery. There's a righteous fear in his delivery.

'Deanna', however, takes a different tack by changing the pace to a garage rock-style rave.

The echoes within 'City of Refuge' relate a classic blues track in benign yet rough terms while the gentler drama of 'Sugar Sugar Sugar' retains the energy. The gloomy piano ballad is back with songs like 'Watching Alice' and 'Mercy'.

Talking about the record's creation, Cave stated that "What's motivated me for a long time - I'm not sure if it motivates me now

- is a desperate desire to rectify the artistic mistakes that I made before. With each album that we've put out, I've been in the unfortunate position of not really being able to accept them as good enough. So I've had to go and make another one to fix up. I could never really hold up a record and be proud of it. And I think, in a way, that kind of negative approach to things is possibly what's kept the standard of our records quite high. Most of our records have a basic concept of some sort behind them - which usually arises towards the end of recording. But the common thread running through 'Tender Prey' seems to be its diversity".

The album was recorded in eight different studios, which was a puzzler for many fans. According to Cave, though "That was a lot to do with the way we were working, which was perhaps disrespectful to the people in the studio and the studio itself. So we kept having to move from one to another. It was also recorded in three different countries (West Germany, England and Australia) and, for that reason, it was hard to get a pointed idea on things. But once a record's been made," he concluded, "it tends to be put on the shelf and we start on something else. And I really don't have much to say about it once it's done".

This album is actually part of a vast Cave reissue project which has been instigated by BMG, who purchased the Cave catalogue from Mute.

Reissued, for the first time, on 180gm vinyl, each of the re-released albums have been remastered under the watching eye of former Bad Seed Mick Harvey, while all of the artwork retains the original design, including the inner sleeves.

There are fourteen classics in the campaign that began 'From Her To Eternity' (1984), 'The Firstborn Is Dead' (1985), 'Your Funeral...My Trial' (1986), 'Nocturama' (2003), 'Abattoir Blues/The Lyre Of Orpheus' (2004), 'Dig, Lazarus, Dig!!!' (2008) plus the 'Kicking Against The Pricks' (1986) an album of covers. Now watch out for 'Tender Prey', 'The Good Son' (1990), 'Henry's Dream' (1992), 'Let Love In' (1994), 'Murder Ballads' (1996), 'The Boatman's Call' (1997) and 'No More Shall We Part' (2001).

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