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Welcome

www.hifichoice.co.uk Issue No. **376** October 2013

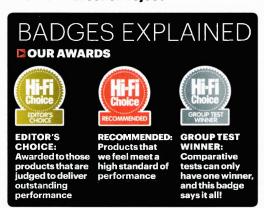


Dynaudio Xeo 5 wireless loudspeaker

Musicreviews



The Alan Parsons Project





Long before I encountered music on vinyl or CD there was always a radio playing at home. It was the first thing to be switched on in the morning – even before the kettle – and filled the house with the sound of breakfast show hosts Noel Edmonds (Radio 1) or Terry Wogan (Radio 2) – we were regular station hoppers in

our house - playing the music of the time and their gentle chatter slowly coaxed us into the start of the day.

Little has changed today apart from the presenters and the variety of stations I listen too, and turning the radio on is still very much part of my early morning ritual. I have a Denon TU-260LII analogue radio tuner still going strong, which plays continuously in the background throughout the day on my office hi-fi system where I jump between Radios 2 and 4 as well as the occasional hop over to Radio Oxford, while a kitchen portable DAB radio plays mostly Radio 6 Music.

With radio listener numbers up, it seems there are plenty who share my love and will want to read our feature starting on p40 charting the changes to the way we listen and the future of the FM airwaves. In conjunction with the feature, our group test looks at six hi-fi tuners for the very best FM reception. The threat of FM broadcast switch-off may be looming large and manufacturers might be making fewer models, but there are still plenty of reasons to bag yourself a solid FM tuner.

Finally, the *Hi-Fi Choice* Writing Competition has closed. We've been overwhelmed with entries to our post bag and want to thank you for your enthusiastic responses. We're not able to reply to individual entries, but the best reviews will be published over the next few issues.

Lee Dunkley Editor



HADLOW HOUSE, 9 HIGH STREET, GREEN STREET GREEN, ORPINGTON, KENT BR6 6BG

Hi-FiChoice, Control of the control

hifichoice.co.uk Issue No. 376 October 2013

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Audiofile: Marantz Melody systems



Music reviews: Sly and the Family Stone



"It likes to call a spade a spade even though it's not from Yorkshire"

Jason Kennedy: ATC CDA2 CD player, DAC and preamp p52

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Never miss an issue - turn to p20 for our latest subs offer

Audio THE LATEST INDUSTRY NEWS ...

Melody makers

Marantz is 60 years old this year and is celebrating with the launch of two new versions of its all-in-one wireless music systems...







PRICE: £399-£499 AVAILABLE: NOW CONTACT: 02890 279830 WEB: MARANTZ.CO.UK

CONNECTING A HI-FI product to a home network remains one of the biggest challenges for many music fans wanting to unleash their libraries, whether they are stored on a hard drive or accessed from cloud-based services using a portable device. Hi-fi makers are queuing up with models offering straightforward connection, and the two new Marantz Melody all-in-one systems promise to make home network connectivity and streaming as simple as possible. Both the £499 Melody Media

M-CR610 and £399 Melody Stream

M-CR510 (above) can access a home network connected via wired Ethernet or over wi-fi with the push of a single button for the most convenient Wi-fi Sharing or Wi-fi Protected Setup (WPS) is catered for, it continues.

The two compact systems follow previous Melody models and offer the flexibility to stream music libraries from a computer or directly access online music services, while the 112mm-high Melody Media also incorporates a CD player and FM/ DAB+ tuners.

Both models can access hundreds of internet radio stations via vTuner and online music services from the likes of Spotify and last.fm. Music stored on a computer or NAS (Network Attached Storage) along with support for AirPlay to directly stream music from iTunes and iDevices is all controlled via the freely downloadable Marantz Remote app, available on iOS and

Android devices.
Wired connectivity for external input sources comes in the form of a digital optical input to connect a TV or set-top box, plus there are front





COMMENT

IF YOU'RE APPY AND YOU KNOW IT

Over the years, the way we consume music has changed dramatically. From the first vinyl album back in 1931 (Beethoven's Fifth Symphony by the Philadelphia Symphony Orchestra) to the debut CD long player (Billy Joel's 52nd Street in 1982) and the introduction of the download-only single (David Bowie's Telling Lies in 1996), we're accustomed to purchasing music in a variety of ways. So what's the latest innovation to the way we consume music? If Lady Gaga is to be believed, it's the album as an app for mobile or tablet

Gaga – who famously likes to think that she's constantly pushing boundaries and innovating her music – has been causing a stir of late by drip feeding a series of surreal details about her next album onto the internet. ARTPOP, as it is called (see what she's done there – it's pop, but arty), will be released as an app that will partner each tune with some form of visual content. Or, as Gaga modestly puts it, it'll be: "a reverse Warholian expedition".

As is so often the case, she is not the pioneer in this area and is merely treading in a more showy look at me' way where others have done so before her. The first album as app release was, of course, Bjork's Biophilia (2011). With more creativity, originality and single mindedness in her little finger than Gaga could ever hope to come close to, the Icelandic songstress spent three years creating an app featuring stunning-looking content partnered with Sir David Attenborough providing a commentary ("You're on the brink of a revolution that will reunite humans with nature through new technological innovations"), alongside ways to make your own music and explore sound text and visuals. While it can be argued that this is all smoke and mirrors, Bjork can be applauded for her endeavour as the music that accompanies the app is genuinely beautiful and quite unlike anything else (apart from other Bjork releases). And, at the end of the day, that's what counts. It's all very well trying to be an innovator in how you give your music to the world, but in years to come it's the tunes that people will remember and nothing else.



Peachtree Audio launches hybrid integrated with DAC and headphone amp

PRICE: FROM £849 AVAILABLE: NOW CONTACT: 01825 750858 WEB: PEACHTREEAUDIOCOUK

US MANUFACTURER PEACHTREE Audio has introduced the decco65 integrated amplifier. The hybrid tube pre amp and Class D power amplifier design claims 65W per channel into 8ohms – 95W per channel into 4ohms – and combines low distortion, high bandwidth and energy efficiency, says the maker. The headphone output runs through the tube stage, and the 24-bit/192kHz Asynchronous USB input provides digital-to-analogue conversion courtesy of an ESS Sabre DAC, which the maker claims has been isolated to prevent electrical noise from entering the circuitry. Additional inputs include 1x optical and 2x coaxial digital inputs as well as an analogue stereo input and a stereo pre output for connection to and from external components.

Distributed in the UK by Anthem AV Solutions, the decco65 is available in a gloss black finish, costing £849, and rosewood and cherry finishes, costing £899. Bespoke colour options and finishes are available on request.



Q Acoustics goes wireless

PRICE: FROM £399 AVAILABLE: NOW CONTACT: 01279 501111 WEB: QACOUSTICS.CO.UK

Following the demand for wire-free speaker systems and the growing desire to link with music services accessed on portable devices, British loudspeaker company Q Acoustics announces the launch of its Q-BT3 Bluetooth streaming wireless speaker system. Available in three colour finishes called Juice

Red, Urban White and Jet Black, the active speaker system claims a 50W per channel built-in amplifier equipped with a Bluetooth v4.0 wireless receiver with apt-X capability for improved sound quality from compatible streaming devices, such as the latest smartphone or tablets. Additionally,



there is a single optical input, two analogue inputs - via 3.5mm mini jack and stereo analogue RCAs and a separate subwoofer output. Both the 240mm-high, active right and passive left speaker models utilise a 25mm silk dome tweeter and 100mm coated paper cone midrange/bass drivers. As Alex Munro, channel director with special responsibility for Q Acoustics stated: "The new Q-BT3 isn't a jazzed up iPod dock or modified table radio in disguise The Q-TB3 looks and sounds like a pair of genuine, superior-quality hi-fi loudspeakers, for the very obvious and simple reason; that's precisely what they are!

"Connect it to the audio output from your television or set-top box and the Q-BT3 comfortably outperforms typical soundbars. For movie lovers who feel the need to feel the Earth move, there's a separate output to connect your subwoofer", he continued.

The Q-BT3 active speakers are on sale now costing £399 per pair and the complete package comes with a small remote control.

IN BRIEF

EXPOSURE PHONO STAGE



Exposure Electronics unveils its all-new phono stage built around interchangeable plug-in circuit boards specifically tailored to either Moving Magnet or Moving Coil cartridges. Available in black or anodised silver finishes, the UK-designed and built 3010S2 phono stage claims advanced technology, featuring what it calls a "referencestandard, dual-regulated power supply optimised for the different sections of the circuit, and a fully configurable input to ensure that the cartridge loading and gain is optimally set".

The Exposure 3010S2 phono stage is available now costing £900.

Moving Magnet and Moving Coil plug-in boards cost £220 each.

Panasonic











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Performa3 speakers

Revel launches nine-strong line up

PRICE: £850-£4,750 **AVAILABLE:** NOW **CONTACT:** 01423 358846 **WEB:** KARMA-AV.CO.UK

THE PERFORMA3 SPEAKER series from Revel has nine models in its range to cater for hi-fi and home cinema enthusiasts alike. Available in high-gloss, real wood and painted finishes, the maker tells us that the curved cabinets employ proprietary drivers throughout including lin aluminium dome tweeters and cone drivers for midrange and low-frequency duties.

All models are fitted with gold-plated binding posts, and certain models allow for high-frequency fine tuning, while a boundary control enables a speaker to be tailored to individual room acoustics and placement positions. The models of most interest to readers here are likely to be the F208 and F206 three-way floorstanders, priced at £4,750 and £3,300 respectively, and the M106 and M105 two-way standmounts priced at £1,900 and £1,400.



IN BRIEF

MERLIN CABLES MAINS BLOCKS



With a number of components being added to our hi-fi systems, making use of a mains distribution block is an inevitability. Making sure you choose a good quality one with appropriate levels of filtering for your particular set up is very important, and, with this in mind, British manufacturer Merlin has announced two new distribution blocks.

First up, the £50 Tarantula is a six-way RF and MF-filtered mains distribution block wired with very low resistance, high-purity copper wire, suited to audio-visual and computer audio systems, says the maker.

The Black Widow is an unfiltered six-way mains distribution block suited to high-quality hi-fi use, with high-purity copper wiring for a good quality supply that makes it superior to the brass bars found on most cheap mains blocks, says the maker. A display indicates the output voltage and current. It costs £80.

Clearaudio DC turntable

PRICE: £2,495 AVAILABLE: NOW CONTACT: 01276 501392 WEB: SOUNDFOWNDATIONS.CO.UK

Sound Fowndations, the recently appointed UK distributor for Clearaudio, announces the introduction of the Performance DC turntable to the German brand's range. As the name suggests, the Performance DC incorporates a DC motor, which the distributor claims is a high-torque, smooth and quiet model. It's fitted to the chassis in an anti-resonance mounting and is a similar design to

that used in the maker's Ovation.

and Innovation series of turntables. It promises fine speed stability to drive the aluminium sub platter via a flat belt. The 4mm-thick black platter rests on the patented ceramic magnet bearing that means it effectively floats on air, helping to reduce friction, wear and noise, the maker tells us

The Performance DC package is fitted with a Clearaudio Clarify tonearm featuring woven carbon fibre body and is fully adjustable to

provide fine tuning of azimuth, anti skating and cartridge tracking weight. It is fitted with a Clearaudio Virtuoso v2 MM cartridge.

The Performance DC chassis is made from highly compressed wood fibre sandwiched between two aluminium outer layers, which the maker says effectively deadens any resonances. It's available with a five-year guarantee in black or silver outer layer finishes. See our full review next issue.









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

Jeff Dorgay, Tone Audio Magazine, January 2013



"Oozes quality in both construction and sound"

Paul Rigby, Hi Fi World, March 2013



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Progressive Audio, 2 Maryland Court, Rainham, Kent. Tel: 01634 389004

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BALANCED XLR OUTPUTS TOROIDAL LINEAR POWER SUPPLY











For movie enthusiasts, audiophiles and those who take their entertainment very seriously.

Meridian DAC

British hi-fi maker introduces affordable Director DAC

PRICE: £449 AVAILABLE: NOW WEB: MERIDIAN-AUDIO.COM

HUNTINGDON BASED HI-FI manufacturer, Merdian, announces the introduction of its Director digital-to-analogue convertor. Merdian Audio is better known as a high-end hi-fi manufacturer, and the built-in Britain Director DAC features technology that is drawn from Meridian's well regarded up-market Reference 800 Series

The simple DAC solution forms the ideal add-on for network players, video streamers and music servers, bringing Meridian performance to other audio products, the maker claims. The elliptical-shaped, anodised aluminium chassis design features a range of useful connectivity options including three digital inputs. The asynchronous USB input connects the Director DAC to a computer and there's a 3.5mm hybrid input socket for S/PDIF digital signals, either coaxial (via a 3.5mm mono jack) or optical (via a Mini-Toslink connector). Two adaptors are included – one allows standard coaxial S/PDIF phono cables to be used with the Director,



while the other allows standard Toslink optical cables to be used. There is also a set of stereo analogue outputs.

With support for 24-bit/192kHz formats, the Director also incorporates Meridian Resolution Enhancement technologies, including Meridian Upsampling and the Apodising filter. Power comes via the USB input, either direct from a computer or via the bundled power supply.

IN BRIEF

BELLES PREAMP

e US amplifier brand, Belles, has introduced its first digital preamplifier. The A10 joins the Reference range of models and supersedes the A28 preamp with a slimmer all-new design. The solid-state A10 represents a turning point for the amplifier manufacturer, and is the result of 12 months' of development coming to fruition, the maker explains.

A two-box unit, the A10 Pre amplifier/DAC/phono stage is powered by an outboard supply that delivers a 12V DC supply to the main preamplifier unit. Alongside the five stereo analogue inputs (one of which utilises balanced XLRs) and the dual MM and MC phono stage, the A10 has both coaxial S/PDIF and USB digital inputs. The DAC stage utilises the well known Wolfson Microelectronics WM8740 chipset. Available now, costing £3.695

NUNUDISTRIBUTION.CO.UK

ICON AUDIO KT150 UPGRADE

With the arrival of the bigger and more powerful KT150 tube from Tung-Sol, Icon Audio has announced a series of upgrades to its Stereo 60 MkIIIm integrated amplifier, Stereo 60P MkIIIm power amplifier, and the MB30SE, MB90 MkIIm and MB150 monoblocks, all now available fitted with KT150 valves. Prices for new amplifier models fitted with KT150 tubes range from £2,100 to £3,700 and are available immediately.

The new tube is also available for selected previous Icon Audio KT120/KT88 amplifier designs. Contact Icon Audio for more info.

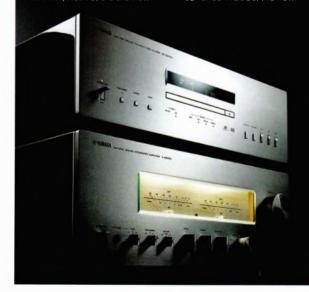
ICONAUDIO.COM



New Yamaha flagships

PRICE: £3,500 & £4,000 AVAILABLE: NOW CONTACT: 0844 8111116 WEB: UK.YAMAHA.COM

It has been a good few years since Yamaha launched any new hi-fi flagship models, but we can at last bring you news of two new models heading up its hi-fi range. The CD-S3000 (£3,500) and A-S3000 (£4,000) are the new heavyweights of the Japanese maker's hi-fi line-up, with the promise of a more affordable series of components being added to the range at a later date. Replacing the 2000-series launched in 2008, the new

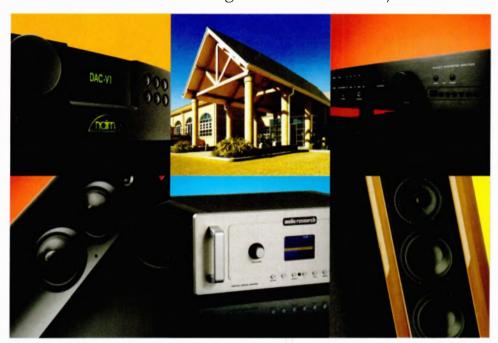


flagship components feature a screw-free, retro style outer chassis design, which reflects beauty as well as quality, the maker says. The internal chassis design is similarly well thought through and features shortened wire lengths and screw connection terminals to improve signal paths, which the maker claims helps to reduce signal losses over connections made using traditional solder.

The CD-S3000 is based around a CD/SACD transport and features a USB DAC with ultra low jitter circuitry and 24-bit/192kHz asynchronous and DSD format compatibility. The A-S3000 is rated at a dynamic power output of 2x 120W into 8ohms. With five gold-plated stereo analogue (including phono) as well as balanced inputs, the A-S3000 is capable of handling plenty of analogue sources. Both models are available in either silver or piano black finishes.

Hi-Fi Show preview

Discover the cream of the high-end audio industry



THE UK'S ONLY high-end audio show is gathering momentum with the cognoscenti of the international hi-fi world planning a series of exclusive presentations, unmissable listening demonstrations and thrilling Q&As.

The 13 Windsor and Wessex suites will be given over to exciting closed-door demos with individual opening times staggered throughout the day so that visitors can plan their own schedule of experiences. The biggest decision you'll have to make is deciding where to begin!

The Sandringham suites will play host to a series of stunning open-door demos where you can get first-hand experience of the latest in computer-based audio, take part in a special comparative cable listening session and enjoy the very best in private listening, thanks to our unique 'Headphone Haven', organised by the HighEndWorkshop.

Naturally, your favourite contributors from *Hi-Fi Choice* and our sister title *Hi-Fi News* will also be on hand to complete the day.

Hi-Fi Show highlights

On demonstration throughout the event will be the new DSX1000 Reference-level streamer, a Hi-Fi News Outstanding Product, which will be playing a number of recordings in both standard and high-definition. Chord Electronics latest product, the CodeX streamer, will be unveiled for the first time. This advanced new player is one of very few in the world to offer DSD 128 and 384kHz PCM file playback over USB and will be making its show debut

In addition to CD-based sources, Chord Electronics' world-renowned bespoke FPGA DACs, including the QBD76 HDSD and the QuteHD, are also expected to be on demonstration and a suitably high-end complement of amplification will be supporting the source components.

John Franks and his engineering team will be on hand to answer questions on a number of topics from streaming to highperformance digital decoding Additionally, world-renowned mastering engineer Crispin Murray will host a fascinating seminar on the process of vinyl cutting and mastering, while Irish singer/songwriter Eleanor McEvoy will be playing a 30-minute set and answering audience questions about her career in music.





BOOK YOUR TICKETS NOW!

The long wait is finally over and we're happy to announce that tickets are now on sale for the UK's premier high-end audio event - The Hi-Fi Show at the Beaumont Estate, Old Windsor on Friday 25th and Saturday 26th October 2013.

We have a fixed visitor allocation for this event and, once fully booked, sadly, no tickets will be available on the day, so you'll need to get cracking to ensure that you don't miss out. Tickets cost £20, or £15 for subscribers. Please call 02476 322234 now to avoid disappointment and see hifinews.co.uk/show for more details. We look forward to seeing you there!

TWO DAYS OF UK EXCLUSIVES

A host of UK firsts will be debuted at the Show. Absolute Sounds in its first appearance at a UK event in several years will be unveiling the Constellation Performance range with Magico loudspeakers, the Tech DAS Air Force One turntable, D'Agostino Momentum pre and power amps, plus the new Devialet ADH amplifier range.

TAD will be showing its Evolution One, Reference One and CR-1 loudspeakers with C2000 DAC, C600 preamp and M600 monoblocks. Kog Audio will present the stylish Estelon loudspeakers together with a new Vitus CD player/DAC and amplifiers, while Symmetry will feature no fewer than five new products from Ayre, the revised Brinkmann Balance turntable and the new Etna MC from Lyra.

Focal loudspeakers will partner with Naim Audio to create a system of 'breath-taking' dynamics. See the website for more details.

HIFINEWS.CO.UK/SHOW

RCCK STEADY...



rell, creator of so many firsts, can be credited with the concept of the true high-end integrated amp.

Its KAV-300i revolutionised the way audiophiles treated a single-chassis solution to their amplification needs. The secret? Incorporating all of Krell's expertise in a no-compromise, yet compact enclosure.

The S-550i respects this long-standing tradition, building on the acclaimed S-300i and upping the power to a massive 275W per channel. With balanced and single-ended operation, an iPod dock and circuit details derived from the flagship Phantom, the S-550i is pure Krell. And that means power, musical authority and the ability to, well, rock. Hard.



absolute sounds Itd.

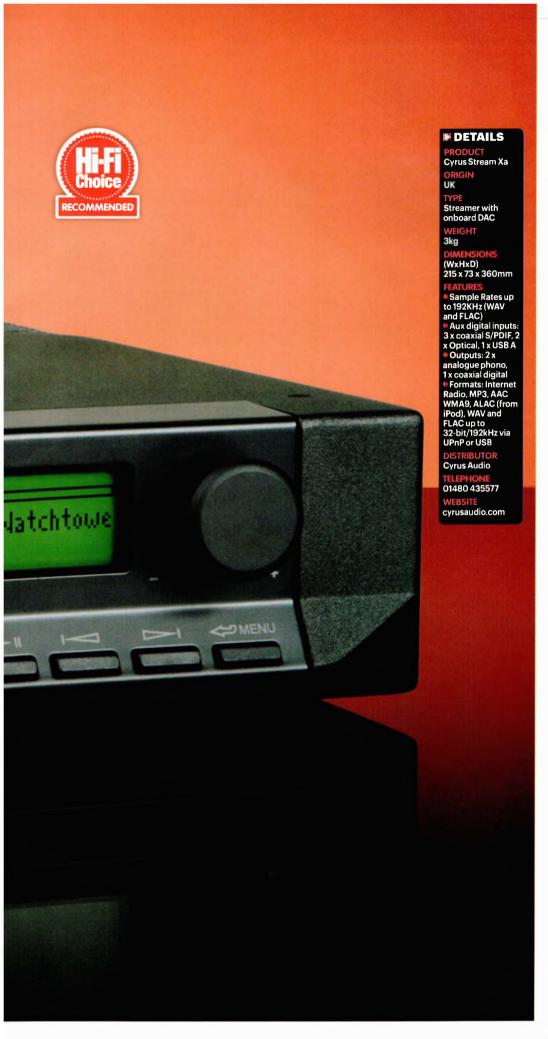
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Xmarksthespot

Patrick Cleasby dares to stream as he reacquaints himself with Cyrus via its latest streaming component, the Stream Xa





e have arrived at a point in the move towards networked music where we are no longer simply astounded by what streamers can do - 24/192-capable models are becoming the prevalent playback platform for every manufacturer, in much the same way as CD transports have been for the last 30 years. Aside from a few small differences in usability and features, what really differentiates one company's streamer from another's is the comparative sound quality and measurements the classic basis of hi-fi reviewing since time immemorial.

One company that has successfully negotiated the move from CD to music streaming, without leaving the silver disc spinners aside just yet, is Cyrus. Some 30 years on it is still putting out rugged and reliable designs in streamers, CD players and amplification.

The Stream Xa will have a familiar shape and spec to those who know the Cyrus streaming range. It has taken the concept of its existing digital transport, the Stream X2 and added a DAC stage, using its not

Makes CD material sound nearly as good as high-res music does

inconsiderable expertise in this area. In common with many other similar products, this enables Cyrus to add multiple digital inputs to let the customer take advantage of those converters – you get five digital connections, three on coax and two optical, and a rear-mounted USB with 'Made for iPod/iPhone' accreditation. You also get TuneIn internet radio options.

Additionally there's Cyrus' n-remote – a little separate package of the n-remote and its convenient mains/mini USB-aspirated cradle charger comes tucked into one end of the outer carton alongside the standard Cyrus 30th Anniversary box.

The Stream Xa is bundled with an Ethernet cable, an emissionsuppressant ferrite to go with it, a pair of phonos, and the necessary antenna for wi-fi usage.

I elect to install the Stream Xa in my Ethernet-aspirated area – the Cyrus-recommended network connection method – and as we are here to examine the new 'a' for analogue functionality it's hooked up via those analogue outs. Cyrus



recommends having an Ethernet switch between the streamer and the router, and I have been looking for an excuse to set up like that for some time, having previously only had a single cable through the wall to where the noisy servers live. Finally, my YouView box and streamers can have their own cabling!

Shortly after its initialisation routine the Stream Xa is able to see my various shares and libraries and, of course, it is perfectly possible to navigate them using the front panel rotary/select knob and the chunky

Playback leaves you sitting with a big dumb grin on your face

transport controls along the front edge, but in reality you are hardly ever going to use them.

Personally I would normally go straight for Cadence on iPad control, which is robust, quick and reliable, but I feel duty bound to assay the joys of n-remote. It is a comprehensive, attractive and clever device, with its album art display and IR learning capability, but I don't find it to be the most intuitive unit around. Even for its dedicated Cyrus RF usage you have to go through a pairing routine with the streamer - then, if you want to use both Cadence and n-remote you have to disconnect one or the other as appropriate. Worse, the streamer denies the attempt of the handheld remote to reconnect - the kind of shenanigans that can be enormously irritating. All things considered, I would happily forgo the n-remote option if there were a £200 off' reward for doing so, as there is for other components in the family. However, I am sure for those with homogenous Cyrus systems, who are really the primary intended

beneficiaries of n-remote convenience, one will definitely be a worthwhile add-on.

Sound quality

So once we are all set up to go, I can dive into the many treasures of my digital collections. As ever, I find the own-brand streaming server of the Synology DS413 raid where my hi-res collection resides to be a straightforward joy to use. Unfortunately I can't persuade the instance of Logitech Media Server on there to offer up the availability of the somewhat flaky LMS UPnP plugin, so there is no current basis for quality comparisons on that platform. On the ONAP TS-469 which houses my 16/44.1 FLAC collection - LMS can be bullied into doing this (until it gets upset) and I find this to be a far preferable experience to the use of Twonky on there, with its propensity to forget track orders and less preferable sound quality. I have yet to brave the newish own-brand ONAP solution, but I will shortly be adding that to my armoury.

The immediate finding when listening to the QNAP material from LMS is that the Stream Xa is a stunningly solid performer on standard CD material. You know that feeling of disappointment you get when you step down from your



Faithful sound is what counts here, and in my recent discussions with dealers I have found that beyond the Linn and MF heads, there is a fairly even two-horse race between the familiar English thoroughbreds of Cyrus and Naim. If a punter doesn't like the Naim sound, they will be pulled towards the Cyrus pole and vice versa. The feeling is that the Naim approach is that little bit more in your face, and that of the Cyrus is qualitatively different and for me it's the sympathetic treatment of the bass in those thrilling 16/44.1 renditions that really makes the difference.

> There's a quartz silver finish if the black isn't to your liking

latest hi-res acquisition to listen to some good old 16/44.1? Well you're much less likely to get that with the Cyrus Stream Xa.

I have recently become aware of the existence of Manu Katche's latest, eponymous ECM album in 24-96 from Qobuz, so am eager to try it out. An initial demo of the 16/44.1 version provides a very intriguing listen. All of the detail in his playing and the richness of the horns of his sidemen is present and correct, making the whole extremely involving – this is going to be pretty hard to beat.

But if it is possible to easily discern between the different resolutions in which the digital versions of an album are offered, it really should be possible with a dedicated streaming device such as this one. The real tester is less the ensemble pieces than the closing, solo piano of Dusk On Carnon. While the tonality of the CD version is rich enough, the real instrument in a room feel is even more lifelike in the high-res version. There is not much pedal sustain on it until the final ridiculously long decaying reverb, and in 24/96 this just has so much more presence as it fades out.

One can make the gap narrower by trying to work out if the web-bought 24/44.1 of an album is really worth it over the dithered-down CD version. A good example is the thick production and treated vocals of *Earthly Pleasures* from Villagers' *Awayland* album. The Stream Xa makes light work of presenting the complex aural picture from the CD replica of the master, but the master quality 24/44.1 (again from Qobuz) enables it to render even more detail, making the listen all the more enjoyable and lifelike once again.

I am prompted to visit some other CD resolution classics I have recently listened to in the same setting, and this reinforces the impression that the Stream Xa is masterful with CDoriginated material. First up is



IN SIGHT 1 Custom toroidal transformer 2 Analogue power supply 3 Network modules 4 Dedicated n-remote antenna 5 Change pointer to PSX-R socket 6 SMPSU transformer and filtering stages

ON TEST

There are two sides to the Stream Xa's technical performance depending on whether you choose the conventional S/PDIF, USB or networked digital inputs. All three eventually feed through to the same DAC and analogue output stage where the 2.05V output (from a low 46ohm source impedance), 105dB A-wtd S/N ratio and low 0.0005-0.0011% distortion (20Hz-20kHz, 0dBFs) remain exactly the same.

All inputs service media up to 192kHz (and up to 32-bit floating-point WAV files via the network), yielding frequency responses up to +0.2dB/20kHz with 44.1/48kHz media, -1dB/45kHz with 96kHz media and a gentle roll-off thereafter to -9.5dB/90kHz with 192kHz files. Stereo separation is superb at >110dB, channel balance good to 0.04dB and low-level resolution to ±0.2dB over a full 100dB dynamic range.

What separates S/PDIF from the network performance, however, is the marked difference in jitter. Via S/PDIF we see the inherent level of (DAC) jitter at -350psec, higher than average, but not debilitatingly so. Unfortunately, and as we've seen with the last three Cyrus streamers tested here, the same cannot be said for the network connection whose cloud of low-rate jitter amounts to -4670psec with typically audible effect. PM

Madonna's brother-in-law and now sought-after producer in the T-Bone Burnett model, Joe Henry, with his Civilians album from a few years ago. Having seen the band live I know that the human pulse of Jay Bellerose's bass drum should be massive, ramshackle and diffuse, and so it proves on Parker's Mood. This is one of those albums that is so musical that a playback this sonically great has you sitting through it with a big dumb grin on your face. The same result is obtained from giving the late lamented Grant McLennan an outing with Cattle And Cane and Quiet Heart from their respective original Go-betweens album masters. Great intricate recordings with the sensitive and delicate vocal and rhythmic backing parts displayed in a throbbing musical weave of layers - the rendition definitely surpasses my recent streaming experiences of them.

The only disconcerting factor was a hi-res to 16/44.1 comparison which did not come out in the fatter codec's favour – some of the percussion effects on Alt-J's 'An Awesome Wave' seemed to image more clearly from the CD originated

tracks over the usually superior 24/96 version. This could be attributed to the jitter findings mentioned in *On Test* above.

Conclusion

Of all the streamer attributes I look for, that of making CD material sound nearly as good as high-resolution music is the convincer. The Stream Xa has this ability in spades, so what more could you ask for in getting the most out of your CD investment? While your hi-res bill might be rising, we all need to make the best of what we've got.



Q&A Peter Bartlett Cyrus technical director



PC: Did market research indicate that there was a demand for a Stream Xa as well as the pure transport Stream X?

PB: Predictably our largest group of customers was for the Stream X initially, adding streaming to an existing DAC-equipped system. However, not everyone has a separate DAC or a modern amp with a DAC on-board like a Cyrus amp does. Stream Xa is, therefore, a bit of a surprise customer group to me because I never realised how many folk retain non-digital audio systems and would like to add streaming.

What Cyrus specificity is there about the design around the converters and their implementation that you feel gives you a performance edge?

To me the application or topology of the DAC is crucial. It's not the technical stuff, but the way the IC can be made to sound in any given topology. The choice in the Stream Xa is more about the circuit development than the IC used. Both must be good, but never use a chip because it says 32 on the top! In fact, the best-sounding IC for the Stream Xa is a 24-bit device that we can make sing sweetly in this particular platform.

24-192 streamers are currently where it's at – what do you feel will constitute the next step up in this area? Do you think there is any need for any higher (or DSD-type) resolutions?

Romantically I sit on the open format and free-to-all bench as this encourages the spirit of the internet, as invented in England. We also must have quality to drive aspiration and counter mass-market focused bean counters. Therefore, higher 32-bit studio resolution should be available, at a small premium, for hi-fi owners and low-res files for the phone and tablet brigade.

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on the analogue airms

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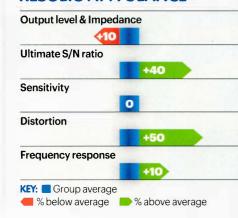
This month's tuner group is supported by rigorous listening tests, backed up with objective lab testing

TUNER GROUP TEST

THIS MONTH'S TUNER TESTING was done over a protracted period of time, giving the chance to get an excellent sense of the sound of all six units in the group across a wide variety of programme material, and from a number of different stations. Listening to radio off-air, it is, of course, impossible to choose specific pieces of music, nor is it possible to control the equipment and/or signal processing used prior to the signal being broadcast. So this approach gave each product a proper chance to show its true colours. The variability of sound quality, not just across networks, but even on the same station at difference times, underlined the need for an extended audition.

An accurate assessment of sound quality can only be made when a tuner has a decent signal going to it, so a quality roof-mounted FM antenna was used. The pieces of 'wet string' supplied as 'get-you-going' aerials with all the tuners here simply are not sufficient to accurately gauge performance - even if several tuners tested managed surprisingly low background noise levels using them. As our measurements show, the signal strength meters fitted to some tuners proved variable, some giving a misleading account of the signal going in. Subjective listening tests over a period of several days confirmed the lab testing in this respect.

RESULTS AT A GLANCE



OUTPUT LEVEL & IMPEDANCE

This is an illustration of the FM tuner's maximum output level and its ability to deliver this level at all frequencies through long cables and into all amplifiers.

ULTIMATE SIGNAL-TO-NOISE RATIO

This is the tuner's maximum practical A-weighted Signal-to-Noise (S/N) ratio with an idealised FM input at a high 80dB (10mV RF at 75% modulation).

This is the minimum RF level required to achieve a 50dB stereo FM S/N ratio from the tuner.

This value is a measure of the FM distortion trend from 20Hz-15kHz (60dB or 1mV RF at 75% modulation).

FREQUENCY RESPONSE

This is a measure of the 'flatness' of the tuner's FM frequency response from 20Hz (low bass) to 15kHz (high treble) - the practical limit before the pilot filter kicks-in.



REFERENCE SYSTEM

Amplifier:

Creek Destiny 2

Loudspeakers:

Spendor SA1

Cables:

Chord Company

Equipment supports:

Quadraspire

□ RADIO SOURCES













OUR GROUP TESTS and In-depth Review are subject to exhaustive lab testing by Paul Miller using the QC Suite **Functional Testing Station (left).**

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We don't publish pages of graphs, but we do understand the importance of transparency. So, readers may view full QC Suite test reports for our key reviews by clicking on the red download button on our website. www.hifichoice.co.uk

The Legacy Lives On 0: Sansui Sound thinking.

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Grouptest

TUNERS £300-£650

FM radio stars

With streaming playing a greater role in our radio listening habits, what of the FM tuner? Only a few now survive, says **David Price**

RECEIVED WISDOM HAS it that FM is on the way out, thanks to the new-fangled Digital Radio system, which is slowly taking over and will eventually see analogue radio consigned to the big scrapheap in the sky. But the reality of the situation is a little different. It's true that DAB is getting more popular – albeit not as quickly as its fans once predicted – and it's certainly true that FM is dwindling. But there's little if any causal relationship between the two, rather we have a third factor at play here – internet streaming.

Internet radio is one of the joys of having a permanently connected internet device – be it a PC, Mac, iDevice or smartphone. Radio rather suits this medium, giving better sound than AM analogue or DAB, and better reception than any previous old school wireless device – providing, of course, that you've got a decent wi-fi router nearby.

So, where does that leave the humble FM tuner? Well, they are still capable of great sound quality, and arguably better than either DAB or internet radio, both of which use codecs (ie MP2 and AAC) that reduce the amount of data.

By contrast, with a good signal from a decent aerial, very high fidelity is possible from analogue – live Radio 3 concert broadcasts can sound simply amazing.

Ironically though, while the government has no plans to switch off analogue radio broadcasts, hi-fi manufacturers are quietly replacing FM tuners with streaming media

They still sound great, arguably better than either DAB or internet radio

players that offer internat radio access. The six FM tuners on test here are pretty much the only models on the market from well-known hi-fi brands. Some other FM models are still in production, but these are not so widely available. Last year's tuner group test had a feeling that we were tuning in to the 'last chance saloon' for FM tuners; but this year two of the same models continue – one at reduced price – joined by several newer models. So it seems there is still life in the much-loved format...

ON TEST



FMJT32 £600 p27

It's been around for over five years now, but it doesn't show its age. Its clean styling, superb build and wide range of facilities are all as impressive now as they were in 2008. The FMJ T32 remains a formidable contender

Audiolab 8200T £500 p29

A dose rival to the Arcam, this is another hybrid FM/AM/DAB tuner with a welter of facilities, fine build and the promise of great sound. But it costs £100 less, putting the 8200T in a particularly strong position

Exposure 2010S2 £650 p31

Some tuners come loaded with gadgets, and others are the Exposure! This is a minimalist, stripped-down machine that has no DAB, no AM and a very simplistic display Does this make for great sonics?

Myryad Z230 £595 n33

A highly respected brand with a particularly good name for tuners; Myryad won last year's tuner supertest. This is one of the few new models around, and offers the promise of superb sound

Sansui WLD+201L £350 p35

The one model that goes beyond this test's remit, offering full streaming capability and DAB reception, too Can this jack of all trades compete in general terms with the other bespoke radio tuners here?

Yamaha T-D500 £300 p37

Is this Yamaha's last analogue hi-fit tuner? It comes from a long line of fine receivers from a company that was once highly respected for them. The feature-packed T-D500 seems great value, but how does it sound?





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Arcam **FMJ T32** £600



If you're looking for a do-it-all tuner that comes up trumps, the breed doesn't get much better than this

PRODUCT
Arcam FMJ T32
ORIGIN
UK
TYPE
Tuner

WEIGHT 5.3kg

(WxHxD) 430 x 85 x 290mm

- FM RDS, AM, DABiPod integration
- Optical and coaxial digital outputs
 VFL display
- DISTRIBUTOR Arcam

TELEPHONE 01223 203200

WEBSITE arcam.co.uk

ack in the days when this writer was still in flared trousers, the (then) Amplification and

Recording Company of Cambridge launched its first tuner – the T60. Unlike many receivers of the day, it was a swish and sophisticated affair, and this T32 is no different. It might be a few years old now, but it gives absolutely nothing away to any of the other tuners in this group in terms of facilities, build or ergonomics. It is, quite simply, a very classy device and one that is a joy to use. The quality of finish is the best here and that's with some seriously stiff competition.

Kitted out with AM, FM and DAB, it's a hybrid tuner in the old sense of the word - inasmuch as it doesn't have streaming, unlike the Sansui on page 35. It has a good-sized, crisp-looking green filtered vacuum fluorescent display and a large tuning knob with a lovely action, somewhat reminiscent of the classic Japanese tuners of the seventies. There's nothing old hat about its internals, though. Inside the acoustically damped steel casework, you'll find a good-quality Wolfson 8740 DAC chip is fitted for DAB duties and there's a large toroidal transformer for audiophile bragging rights. DAB and AM/FM sections are separate, and two pairs of RCA phono output sockets complete the picture.

The remote control is excellent, and will even control an iDevice through Arcam's special interface. Custom

installers will like the full duplex RS232 control port, too.

Sound quality

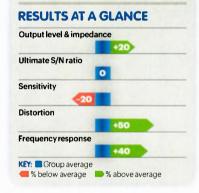
It's always nice to be reminded just how fine FM can sound, and the Arcam duly obliges. Madonna's Crazy For You isn't a famously well recorded eighties pop ditty, but the FMJ T32 makes it - and the rest of Heart FM's evening programming - sound highly agreeable. Most impressive is its stage depth, which falls back surprisingly far considering this radio station isn't well known for its audiophile credentials. The sequenced bassline proves to be the most powerful here and is also immaculately timed, giving a real feeling of movement to the song. Fast forward a few minutes, and Bruno Mars' When I Was Your Man is a sterling test - he can sound anaemic and screechy via lesser hardware, but the Arcam captures his reedy tones, and the emotion they contain, really rather well. I'm not a fan frankly, but still I find myself pulled into the music - which is very rich and involving. This is a great recommendation for any tuner; to get you into stuff you wouldn't otherwise want to listen to

Darting over to night-time BBC Radio 2, and things sweeten up still further; the plinky-plonky eighties digital keyboard sound of Janet Jackson's *Let's Wait Awhile* is brightly lit and crisp, but doesn't have me cowering behind the sofa, and La Jackson's voice is delicately carried

ON TEST

Signal strength meters are less common these days but Arcam still provides this feature on its T32, a 10-step bar graph ranging from just 9dB μ to 35dB μ (2.8 μ V to 56 μ V at 60% modulation). The T32 drops out of muting at 27.5dB μ , about halfway along the scale, achieving a stereo S/N ratio of 36dB. At higher modulation and signal levels the T32's ultimate A-wtd S/N ratio caps out at a respectable 69dB where the tuner's maximum output also reaches a high 1.42V.

Distortion is also impressively low at -0.1% through the midrange beyond which there's barely any increase to 0.13% right up to the effective cut-off point at 15kHz. Without doubt, the T32 is one of the 'cleanest' of the tuners here and although there's a slight shelving of high treble (-0.45dB/10kHz), its stereo FM response is otherwise very flat and well extended into the low bass. Stereo separation is good to 52dB, midband. **PM**



and surprisingly beguiling. With a decent-sounding station, the Arcam even begins to recreate a threedimensional sound stage and locate instruments in the mix as precisely as you'd expect from a good CD player. Once again, this is miles ahead of its DAB performance, which is decent, but hamstrung by the format itself. The Arcam is capable of great insight; a BBC Radio 3 announcer's voice is rendered in a highly realistic way, and a Radio 4 Saturday afternoon play is as spacious as you can expect this side of a Magnum Dynalab at several times the price. Overall, an excellent, composed and mature performance right across the board •



Hi-FiiChoice

OUR VERDICT



LIKE: Polished, threedimensional sound; great build and excellent features

DISLIKE: Fascia looks a little busy; nothing else at this price!

WE SAY: Premium quality tuner that makes radio a joy

OVERALL



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C-4.1









C-1.1

D-I

C-1.1 D-1



Audiolab **8200T £500**



This brand punches above its weight in the sub-£1,000 sector, and its recently introduced tuner is no exception

PRODUCT
Audiolab 8200T
ORIGIN
UK/China
TYPE
Tuner
WEIGHT
5.2kg
DIMENSIONS
(WXHXD)
445 x 74 x 335mm
FEATURES
• FM, AM, DAB
• Optical and coaxial digital outputs
• LED display

• RDS FM

DISTRIBUTOR
IAG
TELEPHONE
01480 447700
WEBSITE
audiolab.co.uk

ating back to the early eighties, Audiolab's brand proposition was always a little different to the likes of the stripped-down, minimalist Exposures of this world. Even then, its products were bristling with facilities, and not silly ones either, but useful real-world features that made the user experience all the nicer. Nothing has changed 30 years later and the 8200T offers precisely this. It boasts AM, FM and DAB, and the idea is to deliver these as effortlessly as possible – a task at which the Audiolab excels.

The large tuner knob plays a useful part in this, not quite as nice as the Arcam, but still light years ahead of the fiddly buttons of the Exposure. The LED display is also lovely, easy to read from a distance, but not glare inducing and has a handy signal strength read out. The minor switchgear feels good and is duplicated on the remote control. Round the back there are digital outs for the DAB section, although this isn't relevant to this test. Overall build and finish are to very high standards, with particular praise due to the sleek brushed aluminium fascia. The pressed-steel casework is very good too, but just a touch more resonant than the more expensive Arcam. Operationally, as well as being very swish to use, this tuner proves adept at picking up weak signals with the supplied 'wet string' aerial, but of course like all the others here, should be used with a better quality twig!

Sound quality

Here's a really good across-the-board tuner that makes a great case for investing more than the cost of the already decent £300 Yamaha, for example. Spending the extra £200 buys you a wealth of extra detail, insight and depth. Rather than appearing on a two-dimensional plane, you now find that in BBC Radio 4 plays, for example, some voices and sound effects hang back or sit wide stage left or right. Likewise, on Radio 3, live classical concerts fill the room with sound, the 8200T giving a convincing recorded acoustic something that can't be said for many CD players! Schumann's Paradise and the Peri has wonderful air and space, and is very well defined. Noise is pleasingly low, with none of the hiss of the Sansui for example, and this tuner is able to draw the listener in and keep him or her there. The Arcam and Myrvad are even better in this respect, both having a slightly more fulsome sound - by contrast the Audiolab is a little tonally 'dry', lacking the richness of the best of the rest. You'd never say it is thin and reedy like the Sansui, but it doesn't quite muster the full flavour of the recording.

Still, this suits the 'festival of compression' that is Heart FM. With everything sounding like it has gone through a sort of musical sausage grinder, the delicacies of Freeez's *AEIOU* aren't there to be heard anyway, so the Audiolab just gets on

TO SOFT THE SET OF THE

ON TEST

Audiolab's 8-step FM signal strength meter spans a useful $3dB_{\mu}$ - $44dB_{\mu}$ range with the second-to-last segment $(40dB_{\mu})$ delivering a respectable A-wtd S/N ratio of 50dB. The 8200T's separate FM stage is refreshingly sensitive with its stereo muting threshold set to $26dB_{\mu}$ or 20μ V RF (about halfway along the indicator), but there's still a worthwhile improvement in noise performance with higher signal strengths where the A-wtd S/N ratio approaches 63dB at a moderate 60% FM $(60dB_{\mu}$ or 1mV RF). Best performance occurs at >70dB_ μ where the A-wtd S/N ratio achieves close to 70dB.

Audiolab's 60dB pilot and subcarrier filtering is not aggressive, so the frequency response shows a very smooth treble roll-off amounting to -1.5dB/10kHz and -3dB/15kHz. THD, principally 3rd harmonic, is highest at -0.6% through bass frequencies and lowest at -0.2% through the presence band. **PM**

Output level & impedance In the second output level & impedance Outp

with the job of pushing it out in a pleasantly musical, propulsive way. Lower frequencies, although not quite up to the Myryad or Arcam standards, are still strong and punchy, and the nice tight rhythm of the bass synth makes for a snappy, foot-tapping rendition. The result is a wellbalanced, but sharply etched tuner that works nicely with a wide range of material and gives a clean, detailed and matter-of-fact presentation of whatever you care to throw at it. It straddles the bridge between budget and high-end audiophile tuners extremely well, and its wide range of facilities makes it about as much as many will ever need •

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Exposure **2010S2** £650

Some manufacturers offer tuners in their range to make up the numbers, others don't. What of this, then?

PRODUCT Exposure 2010S2

ORIGIN UK

TYPE

Tuner

5kg

DIMENSIONS (WxHxD) 440 x 90 x 300mm

FEATURE

- FM onlyBrushed alloy fascia
- Signal strength indicator
- VF display
 DISTRIBUTOR

Exposure

O1273 423877
WEBSITE
exposurehifi.com

xposure is another name that harks back to the past, this time the early eighties. It made a great reputation for itself with excellent, expensive pre and power amplifiers - stripped down and devoid of almost all facilities. That theme continues to this day, but where do hi-fi tuners sit in Exposure's affections? This 2010S2 radio rounds off the company's contemporary and very good entry-level range. Like most here, it's available in a choice of black or silver finishes, and follows the formula of a fairly thin case, topped off with a brushed alloy fascia.

It's decently finished, but struggles against the super standard set by the Arcam: even the Yamaha feels classier. No prizes for ease of use either - the Exposure uses eighties-style up/down tuning buttons, rather than a nice rotary knob. Still, most will use the presets, I guess. The display isn't exactly lavish either - a blue fluorescent affair that could have come from a tuner two or three decades ago. It does have a handy percentage signal strength read out, but you'll have to fiddle with the menu button to get it. But such austerity all fits in with the minimalist theme - this is an FM tuner that doesn't even have RDS on FM, let alone AM or DAB! In some ways that's good, as the designer can better optimise it for good sound. You don't even get a piece of 'wet-string' to use as an antenna - such is the paireddown nature of the package!

Sound quality

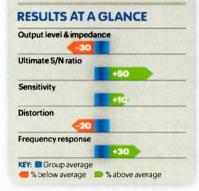
The Exposure's sonic character is far more lavish than its looks! As it transpires, this tuner impresses with its subtlety and fine detail and shows a nice, smooth tonal balance with plenty of space to the recorded acoustic. Tuning in to Classic FM, Prelude from JS Bach's Prelude and Fugue No. 1 is a pleasure to listen to. There is a gentle grace to the way the 2010S2 makes music; it isn't showy or overly impressive, but rather sucks you into the recording and keeps you there in a beguiling way. I find it quite like the Myryad in this respect, and quite a contrast to the measured, analytical sounding Audiolab or the big, wide Yamaha with its slightly processed feel. The Arcam gives a larger, richer and more 'hi-fi' sound, but impressively the Exposure is just as much fun – maybe even more – to

Move a little uptempo to the strains of night-time BBC Radio 2, and Omar's There's Nothing Like This continues the laid-back, gently detailed theme. This tuner isn't quite show-stopping in its sound, but it is nevertheless very pleasant to sit in front of. Tonally, it's nicely rounded, without perhaps the brightness of the Audiolab, Yamaha or Sansui, although the bass isn't as visceral as the Myryad or Arcam. The midband is really good; vocals are even without a hint of nasality, and there's very little tendency for it to harden up even on loud, heavily compressed programme

ON TEST

Specilications for the 2010S2 typer are almost nonexistent, but it has much to shout about. Burled in the menu is a very useful signal level display that reads '100' with a massive 80dB₂. RF input (100% modulation) where the maximum analogue output is just 540mV, but the ultimate A-wtd S/N ratio is the best in our test at a huge 74.5dB. Clearly, the 2010S2's RF front-end is not crushed, but over-modulated inputs. THD is low at 0.12%.

The display reads '56' at 41.5dB_M where the 2010S2 achieves a creditable 50dB stereo A-wtd S/N ratio, only fractionally behind the Audiolab 8200T, and shows '33' as the tuner comes out of muting in Antenna mode (around 45dB_M in cable mode), equivalent to just 28dB_M (25, V RF) at 60% modulation. The FM response shows a +0.5dB boost through the presence band, rolling gently away to -1dB/10kHz and -4dB/18kHz, but stereo separation is poor at just 20dB **PM**



material. On speech, courtesy of the Beeb's Today programme on Radio 4, voices have a natural texture to them. with just the slightest hint of upper midband sparkle to remind us we're not listening to a £2,000 model. The Archers is a real treat, allowing this tuner to show off its impressive stereo width and depth; I discover that the Exposure is able to hang stereo images forward or behind the plane of the speakers with great ease - in marked contrast to some others here. which seems perhaps a little too close to mono for comfort. Overall then, it's certainly a most pleasant listening companion, without quite ever being the star of the show •



Choice OUR VERDICT SOUND QUALITY LIKE: Smooth, open, **** spacious sound **DISLIKE:** Fiddly tuning VALUE FOR MONEY buttons; mediocre *** display; limited facilities WE SAY: Charming **BUILD QUALITY** sounding tuner, but $\star\star\star\star$ it faces some pretty stiff price competition FEATURES ***





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www.gullifordhifi.co.uk



Myryad **Z230 £595**



The latest in a long line of fine-sounding hi-fi radios, this new tuner has a lot to live up to, so how does it fare?

PRODUCT
Myryad Z230
OPIGIN

ORIGIN UK TYPE

Tuner

4.7kg

DIMENSIONS
(WxHxD)

436 x 78 x 300mm

- •FM RDS
- 29 presetsMyryad My-Link
- Wyryad My-Li
 VFL display

DISTRIBUTOR Armour Home Electronics

TELEPHONE 01279 501111

myryad.co.uk

yryad is something of a 'sleeper' in tuner circles –

unlike NAD, Creek or Arcam, it hasn't got a name that automatically trips off the tongue when the subject of radio is broached. But then every time we review Myryad tuners, they do extremely well – such as the Z132, which won last year's group test. Like that very machine, this is an FM-only

design, devoid of fripperies, gadgets or clever technology; so much so that it could have come straight out of 1993. RDS is the fanciest thing on it, and even this isn't exactly lavishly done – the blue display doesn't allow for extensive Radio Text, even if it is generous enough to tell you the name

of the station you're listening to.

The Z230 is nicer looking than last year's Z132, but still has a whiff of eighties 'cottage industry' about it; it's these minimal facilities, sombre display and the black steel casework that does it. It's not bad, but the outer shell is resonant and the finish is very utilitarian; you get the impression it's been done to stop the metal rusting rather than for any aesthetic reasons! The fascia layout isn't great, and tuning is a chore with no knob to twiddle, but at least it's simple. The Z230 does have a certain purposefulness to it, in its 'eighties black' finish, which FM purists dismayed by the move to digital may really appreciate. Still, this tuner is nothing without serious sonics, so how does it sound?

Sound quality

In two words, very good! Actually, make that one word; excellent. Here's a tuner that's purposed for squeezing music from the airwaves, and that's what it does with glee. It's not the most sensitive here, so dispensing with the 'wet string' aerial and going for a good one is essential, but this done the tuner opens up like a picture book, revealing the music in all its glory. Daft Punk's Get Lucky on Radio 1 is great fun, despite the genetic modification the Beeb seems to do to its signal before broadcast. Here the Myryad is as open and effortless as a £1,000 CD player, spooling the music from the transmitter with nonchalant ease, but enjoying itself along the way, too. Bass is strong, fast and tuneful; midband is very spacious and detailed, yet smooth and sweet; treble is fast and atmospheric. The tuner simply seems to dissolve itself away, letting the music come through in a natural and unfussed way. It highlights just how processed the Yamaha sounds, for example, when even the Audiolab and Arcam don't quite spell it out so clearly.

A Classic FM broadcast of Bach's Fifth Brandenburg Concerto shows the Z230 to be just as effective with better quality source material off air. The soundstage is excellent, underlining FM's ability to work in three dimensions better than any other tuners. Within it, there is a wealth of detail; a bold and powerful bass reinforces the music's sense of

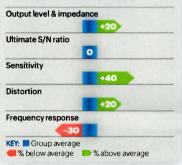
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ON TEST

Judging by the test data obtained here, the Z230 clearly bears more than a passing technical resemblance to Myryad's older Z132 model. The Z230 has a slightly higher 1.65V analogue output capability, but the 2250hm source impedance is identical just as the FM frequency response shows the same aggressive 19kHz pilot filtering (-60dB) preceded by -3dB dip at 15kHz and -0.5dB 'peak' at 17kHz. Distortion still hovers between 0.1-0.45% and stereo separation is a good 30dB+ from 20Hz-15kHz.

The new Z230 is slightly less sensitive than the Z132, however, breaking out of muting at 28dB μ (25 μ V RF) and achieving a 50dB A-wtd S/N ratio at 40.5dB μ , about 5dB behind the Z132. The ultimate S/N ratio is also slightly lower at 68.5dB, despite the higher peak analogue output, but you'll still enjoy a creditable 65dB+ with a practical 60dB μ (1mV RF) from a good FM antenna. **PM**

RESULTS AT A GLANCE



occasion without overshadowing the proceedings across the midband, which is rendered with great delicacy. Ditto on BBC Radio 4's PM programme, where presenter Eddie Mair comes over in an extremely natural, unforced way. Again, there's nothing like hearing a human voice for assessing a hi-fi component, and his is reproduced with a richness that simply isn't apparent on any of the other contenders in this month's round up. The great thing about this Myryad tuner is that it is a forensic instrument that scythes right through everything, yet it doesn't broadcast this fact - as it's so smooth and relaxed, too. Lovely! •

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY

XXXX

VALUE FOR MONEY

XXXX

BUILD QUALITY

XXX

FEATURES

LIKE: Wonderfully detailed; natural, spacious sound

DISLIKE: Lack of features; prosaic styling

WE SAY: Great sonics, but little else makes this the purist's choice

★★★↓ OVERALL







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Sansui **WLD+201L £350**

This flexible budget tuner offers streaming and DAB, but can it deliver the FM goods as well?

PRODUCT
Sansui WLD+201L

ORIGIN UK/China

Tuner WEIGHT 4.5kg

DIMENSIONS (WxHxD) 430 x 90 x 284mm

FEATUR

- FM RDS, DAB
 Wireless
 streaming
 Optical and
 coaxial digital
 outputs
- ●LC display

 DISTRIBUTOR

 Henley Designs

TELEPHONE 0845 6435064

sansui.co.uk

producer of

nother brand with a great pedigree stretching back nearly 50 years, Sansui was recently 'reborn' as a

producer of cheerful entry-level separates, offering value for money above all else. And you can't argue with that, as this black box has an internet streamer and a DAB radio built in, along with an RDS FM radio. It is reasonably well turned out, but still can't hold a candle to the exquisite (at the price) finish of the similarly priced Yamaha. The inverse-video backlit LC display isn't as nice to look at, and the controls feel cheap by comparison.

FM tuning isn't possible using the large knob (oddly marked 'control'); vou're limited to up and down buttons - like the Exposure - which isn't the nicest or most intuitive way to use a radio. The process is further frustrated by the fact it keeps pulling in stations that it can't play; the auto-search stops and locks on, but the electronics mute because there's too much noise. This makes a good aerial mandatory, but if you've got enough money for one of these you're likely not using a budget tuner such as this! Still, once used to its operational issues, it becomes easier to live with - but there is none of the nice, tactile feel of using the Yamaha, let alone pricier units like the Audiolab. In trying to please everyone with its wide range of features, the Sansui doesn't do the FM side of things much justice at all.

Sound quality

Sonically the least impressive in the group, you soon get the impression that the streaming and DAB functionality come at a price - one that is extracted from the FM performance. It's not terrible, it's just that the similarly priced Yamaha is so much better that - if you're an FM fan - the difference in sound will soon make your mind up for you. For example, the ever upbeat Heart FM sounds a little coarse and vague. True, this isn't exactly an audiophile network, but the Sansui doesn't try to eke out what sonic riches it has. Things are decidedly shouty, hard across the upper midband and very two dimensional on Chaka Khan's I Feel For You. Things don't get any better when moving to BBC Radio 2 either, which is a little smoother and more musically satisfying, but again feels closer to a car radio than a hi-fi tuner. Vocals are reedy and flat, and seem processed and artificial with Macklemore and Ryan Lewis' I Can't Change. It isn't especially unpleasant, it's just you find yourself thinking about switching the telly on instead.

If the music has a propulsive beat, the Sansui can work with it – it makes heavily compressed, punchy pop like Toni Braxton's *Breathe Again* seem fairly enjoyable, but soon you'll be yearning for a more transparent and open sound, such as that provided by any of the other models on test here. On speech it isn't much better either; the BBC's *World at One* is listenable,

ON TEST

Sansui's WLD+201L breaks out of muting at a very low $20\text{dB}\mu$ (just $10\mu\text{V}$ RF) and requires just $22\text{dB}\mu$ to achieve a usable 30dB A-wtd S/N ratio (the so-called 'quieting sensitivity'). Nevertheless, while the WLD+201L's FM frontend is very sensitive it still requires a strong RF input to achieve a decently wide FM S/N ratio – $48\text{dB}\mu$ for 50dB while $60\text{dB}\mu$ (or 1mV RF, the level from a good FM antenna) delivers just 54dB. With a fully optimised RF input, the ultimate S/N ratio is just 61.5dB – the lowest here and about 6-8dB behind any good budget tuner.

As with other combined DAB/FM frontends, the audio signal is digitised (usually at 32kHz), allowing for a brickwall cut-off before the 19kHz pilot (-107dB) and a response that drops away beyond 15kHz (-5.2dB). Distortion is moderate at 0.45% and largely odd-order in nature, but falls away at HF due to the limited bandwidth. **PM**

RESULTS AT A GLANCE Output level & impedance O Ultimate S/N ratio -80 Sensitivity -10 Distortion Frequency response -20 KEY: © Group average % below average % above average

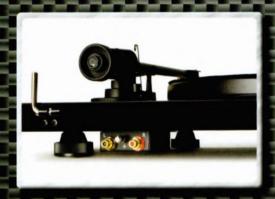
but voices sound rather artificial and hazily distant. Even with a decent aerial attached, you are also aware that the Sansui is the noisiest tuner here by far; one never seems to be able to escape a slight background hiss, and with the supplied indoor wire aerial it is easier to switch to mono; it has trouble pulling in stations that even the Yamaha can grab without too much fuss. In hi-fi terms then, this is a pretty poor showing; it's okay for casual listening if you've got a good aerial, but you really wouldn't want to sit down and listen to analogue radio all evening in earnest. A jack of several trades, but not a master of FM •



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Yamaha **T-D500** £300

A no-frills hi-fi radio receiver with a fine finish, decent engineering and a nice price. What's not to like?

PRODUCT
Yamaha T-D500
ORIGIN
Japan/China
TYPE
Tuner
WEIGHT
3.3kg
DIMENSIONS
(WXHXD)
435 x 87 x 306mm
FEATURES

• FM RDS, AM, DAB
• Optical and coaxial digital outputs
utputs
• Fluorescent display
• Autostore

Yamaha

uk.yamaha.com

ack in the mid seventies, shortly before Arcam launched its first T60 tuner, Yamaha's flagship CT-7000 wowed the world with its amazing FM sound quality. Since then, the company has been well respected for doing fine hi-fi tuners; the glory of the '7000 may be long gone, but the company's good name remains. This T-D500 is a very different thing though - 40 years later, it costs a fraction of the price of Yamaha's classic and sports DAB, DAB+, FM and AM. The analogue section is synthesiser-tuned, has 40 presets and the FM part has RDS. Basically, it's a do-it-all design, at a low price.

All Yamahas feel lovely to use – even the budget ones – and the T-D500 isn't any different. It has a very neat two-line, 16-character display, a swish brushed aluminium fascia and very responsive switchgear. A handy autotune feature will fill the presets with stations, if you can't be bothered to do it yourself. A small remote control is supplied, which duplicates all the features. At just 3.3kg, the unit seems a little flimsy - and the thin pressed steel is far more resonant than, say, the Arcam. But in defence of the T-D500, it still feels very impressively finished at the price, and in these days of chip-based designs there's little need for much more weight. The tuner works reasonably well from its supplied 'wet string' indoor antenna, but only really

quietens down with a proper aerial, so buyers should always factor this in.

Sound quality

Here's a budget tuner that doesn't sound like one. It's not as good as most others here either, but it's not far off several far more expensive models, and gives a clean, crisp, open and expansive sound. It works nicely with simple pop on commercial stations; Emeli Sandé on Heart FM is certainly bright and upfront, but doesn't grate and bounces along very satisfyingly. Contrast this to the somewhat sterile, stand-offish sound from DAB and for proper music listening you'd choose FM any day. The piano has a nice tone, with a reasonable amount of body, and her voice doesn't disappoint - it can sound brittle on some cheaper tuners, but not here. Strings are nicely smooth and lacking in edge; indeed this tuner's greatest crimes are a rather two-dimensional stereo image that tends to hang around the plane of the speakers, plus a slight lack of bass punch.

Moving over to Radio Two, and Heatwave's Always and Forever is nicer still; cymbals are crisp and extended with a decently delicate feel. Vocals are actually quite creamy, and the tuner is well able to signpost the sweetness of this classic seventies recording. Again, strings soar and the drums have a nicely tight and dynamic feeling to them. Whereas some budget tuners can make this

ON TEST

In practice the Yamaha T-D500 is about as sensitive as the Myryad and Exposure models, dropping out of mute in 'auto stereo' mode at $29dB_{\mu}$ ($28\mu V$ RF) where it achieves a S/N ratio of 33dB (3dB better than the requirements of the standard quieting sensitivity test). Relative to its maximum 1.47V analogue output, the tuner's ultimate S/N ratio is an acceptable 67dB, but even with a reasonable 60% modulation this still requires a very hefty and quite unlikely $75dB_{\mu}$ (5.6mV RF) input.

The tuner's maximum analogue output is a substantial 1.48V, but the source impedance is the highest of the bunch here at 950ohm. The stereo FM response shows the familiar presence dip (larger than usual here at -2.2dB) and pre-filter peak at 12kHz prior to the digitised cut-off at 16kHz, but the subjective emphasis will be from 100Hz-2kHz. THD is 0.3-0.6%, 20Hz-15kHz. **PM**

RESULTS AT A GLANCE Output level & impedance 10 Ultimate S/N ratio Sensitivity -30 Distortion Frequency response -50 KEY: Group average % below average % below average % above average

track sound quite processed, the Yamaha doesn't.

Zipping up the dial to Radio 4, and *The World Tonight* is an airy affair, nicely delicate and detailed – vocal tone is generally natural, with no sibilance, although compared with the Arcam and Myryad there is just a trace of nasality and an obvious lack of bass.

Overall then, a fine performance at the price. Unlike some budget hi-fi radios, it's not too flawed and doesn't draw attention to its failings. The result is a beautifully finished, easy to use device with a nicely listenable sound; not the last word in sonics, but it's surprisingly good for the money •



Choice **OUR VERDICT** SOUND QUALITY LIKE: Crisp, musical *** sound: fine build: feature count VALUE FOR MONEY **DISLIKE:** Lacks bass **** weight and stage **BUILD QUALITY WE SAY:** Fine budget $\star\star\star\star$ tuner, that's more sophisticated than FEATURES expected **** OVERALL

Group test verdict

He's taken in all the charms that the FM dial has to offer and gathered his thoughts, so now it's over to **David Price** for the scores on the doors

AN INTERESTING GROUP this,

and it teaches us one thing above all others – don't think that extra functionality comes for free. The Sansui is a very decent streamer at its price point and does DAB in a prosaic way, but it sort of forgets about FM. Sadly, it comes last.

The good news is that it was the only poor-sounding device here. I'd expect less from the Yamaha than I actually get; despite coming fifth it turns in a great showing for a budget box, giving an enjoyable, listenable and detailed sound – although it does feel a little processed.

The Exposure gets fourth place. Again, this proves a fine-sounding device, and many – especially Exposure system owners – will not want for more. I like its paired-down purposefulness, but many will want at least RDS on FM, and possibly AM, so I can see it's not for all.

This is where it starts to get tricky; all three top tuners are excellent in their own way, and the question is – what's your priority? If it's a very wide range of facilities, excellent build and a strong, detailed sound, then the Audiolab is your man.

Arguably the best made here, it is a

pleasure to use and massively flexible; the downside is the sound isn't quite as mellifluous and 'romantic' as the top two.

The Myryad gets runner up this time; it is – in its way – the best sounding tuner of the group. It just edges this, by a whisker, having a wonderfully 'natural' feel, albeit not the strongest bass around. Sonically it's a cracker then, but the user interface and feature set are only so-so; if you only want great sounding FM and don't fiddle around with the radio too much, then this is your tuner, however.



The Arcam's excellent range of abilities means it is the better package. It has a bigger, punchier and ballsier sound on FM, with loads of grip and scale. It is sensitive, quiet and stable. It's a great bit of kit and just about pips the superb sounding Myryad to the winning post.



TRY WITH THESE

INTEGRATED AMPLIFIER: Arcam FM J-A19 E650

The recently released mid-price integrated wowed us with its rich engrossing sound. It makes listening a pleasure, even if it's not the most transparent around. It's also a perfect visual match for Arcam's FMJ T32.





INTEGRATED AMPLIFIER: Creek Evolution 50A £700

One of our favourite affordable integrated amplifiers, the Creek has a wonderfully open and musical sound one that's far better than the price suggests. It would prove an excellent partner for any of the tuners here, especially the warmer sounding ones.

INTEGRATED AMPLIFIER: Exposure 3010S2 £1,350

This crisply styled one-box integrated puts out a serious amount of power and sports a stripped-down feature set. Its sound quality is so good that it won July's integrated amp Group Test, so it's an ideal match for Exposure's own 2010S tuner.



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MUSIC STREAMER

The RT-12 is an FM and DAB+ preset radio tuner and much more besides. By incorporating network capabilities, the RT-12 can access thousands of internet radio broadcasts and play audio files stored on UPnP servers such as Windows computers.

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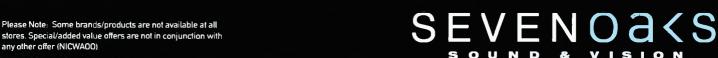
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Radio times

David Price charts Britain's love affair with radio and explains how and why times are changing

e love radio, simply because it revolutionised our lives. Indeed, it's a tribute to the deep, irrevocable imprint it made on the twentieth century that no one can now imagine life without it. "Radio was like the internet is now," says hi-fi designer Michael Creek, "for many years it was the only way to listen to what was going on in other parts of the world." The technology connected people over vast distances and transformed the way humans went about their daily lives. From the moment Guglielmo Marconi made the first successful radio transmission in 1895, he set in chain a sequence of events that - some 110 years later - has got us to where we are today. It made possible a level of communication the like of which had previously been unknown.

In the UK, the story effectively started on 14th November, 1922 at London's Marconi House, when a number of radio set manufacturers came together to form the British Broadcasting Company. It played a pioneering role in this nation's radio development, but from an early age found itself the subject of close political interest. The government decided that advertising would lower standards, and awarded it a Royal Charter with the right to raise a

licence fee instead. The British Broadcasting Corporation was founded on 1st January, 1927, and things were never the same again.

The golden age

By 1930, the nation had taken radio to its bosom – half of all British homes had a radio licence. Despite the onslaught of TV, radio had carved out a niche for itself – for entertainment, news and music programming. It played a key role in the morale of the nation through World War II, and went on to catalyse a boom in popular music – from forties swing to fifties rock 'n' roll, and beyond. Still, the size and price of radio sets meant it was very much a home-based leisure pursuit – at least until the arrival of the transistor.

Although Sony didn't invent the 'transistor radio' per se, it was the first to make it affordable and convenient. In his fascinating autobiography *Made in Japan*, Akio Morita details how he managed to get the product off the ground. "I knew we needed a weapon to break through to the US market, and it had to be something different, something that nobody else was making", he wrote. In 1955 his new radio – small enough to fit in a jacket pocket and powered by a small battery – changed the way people used the

medium, and where. The cultural impact of portable radio was immense, and it surely went on to make the pop explosion possible, kickstarting that frenetic activity in popular culture that people now call 'the sixties'.

Meanwhile, Britain began investing in the new FM technology, starting a roll-out of transmitters countrywide; the first of which was in Wrotham in 1955. By the end of the sixties, it was possible to get superb quality sound almost everywhere in the UK, and audiophiles took advantage of this fact. The technical quality of BBC FM broadcasts of the time was excellent, and this proved popular with listeners seeking a wide variety of programme material. "In the midseventies, I managed to borrow a decent FM radio and the sound quality just made me want more," remembers Michael Creek.

Radio booms

The format truly came of age in 1971, when stereo arrived. Radio 3 got it first, then Radio 2 in 1972 and Radio 4 in 1973. In 1974, there was reputedly even a quadraphonic broadcast at midnight, with Radio 4 carrying the front left and right and Radio 3 simultaneously broadcasting the rear channels! Around that time, Britain's first commercial radio station, LBC, started broadcasting in 1973. And this sparked a frenzy of competition, and the once near-empty FM waveband began to fill up. Most independents were music-based, and added to BBC Radios 2, 3 and 4 on FM, plus BBC local radio. Radio disc jockeys were national celebrities, and never before had there been such variety of programming.

The generation of hi-fi tuners that accompanied them were all-analogue, yet technically sophisticated and beautifully engineered; they're still in demand today. Manufacturers from Bang and Olufsen and Naim to Pioneer and Yamaha made their names as purveyors of superb-sounding, and expensive, units. Sony's flagship ST-5900 even had Dolby FM - what turned out to be a stillborn noise reduction system borrowed from tape applications! "In the seventies, there was a golden age when all the stations transmitted in FM stereo in very high quality. And by 1975 to 1976, RCA was making tuner circuit that were as good as it was going to get for a very long time," says Creek. In other words, just as the broadcast quality reached a new high, a new wave of superb FM tuners arrived.





Arcam's DT-81 was typical of DAB tuners on sale a decade ago, expensive but sonically so-so

While the sound quality barely - if at all improved, eighties FM tuners moved over to digital synthesiser tuning, giving a more stable station lock and the facility to preset a wide number of stations. This was essential in an increasingly crowded FM waveband, with commercial radio pulling in large sums of advertising revenue, and made the radio listening experience more user-friendly. Soon after, in the early nineties, Radio Data System arrived to give FM radio a great boost; station names were now displayed, Radio Text was possible and the tuners could search for the same stations on different frequencies; fantastic for car radios in poor reception areas. FM had finally come of age.

Living by numbers

The forward march of technology saw the advent of Digital Audio Broadcasting in the late nineties. The aim was to give a CD-like radio listening experience, which meant instant access to a wide range of stations, without the need to 'tune' the radio. Full station name and text was offered, along with quiet, "hiss-free CD quality digital sound". On the face of it, it was another radio milestone, but technical issues meant the promise wasn't properly delivered.

First, the codec used to carry the digital audio was MP2, a relatively crude compression system even at the time, and not best suited to the low bitrates used. As more stations came on stream, these were dropped further, showing the sonic limitations all the more. DAB, or 'Digital Radio' as it was termed, offered a wider frequency response than FM (20Hz-20kHz, as opposed to 30-15kHz), but the data compressed music signals gave a sterile and two-dimensional sound. "I was prejudiced, in the sense that I hadn't heard it, but had already made up my mind up about it because it was such a compressed format," remembers Mike Creek. Also, the transmission system was less than robust, and this meant lots of dropouts in areas any distance from transmitters.

By 2005, DAB had made it down to small table radios, and there was a wide variety of hi-fi tuners, too. Although take-up was predicted to be fast, many radio listeners resisted due to the high price, poor reception in many areas and so-so sound. Also, many just didn't see the need to change from what was perfectly serviceable FM and AM

analogue. The British government didn't see it like this though, and in 2009 delivered its Digital Britain white paper, which declared that "the biggest barrier to radio's digital future is a lack of clarity and commitment to the DAB platform". It went on to state that the government would commit upwards of £200 million to its "vision", which was "the delivery of a Digital Radio Upgrade programme by the end of 2015".

This wasn't in itself surprising, as the government has historically committed lots of money to radio upgrades, but what was shocking to many was that the upgrade would be implemented on a single date, "announced at least two years in advance",

It is safe to say that analogue is likely to have a far longer life than was recently feared

and on this date "all services carried on the national and local DAB multiplexes will cease broadcasting on analogue". Curiously, the idea was that all MW radio would go to DAB or 'ultra local' FM, and all current FM would migrate to DAB. This would happen, said the government document, when 50% of all listening is digital, and when national DAB coverage is comparable with FM coverage, and DAB reaches 90% of the population and all major roads.

Currently, only some of the criteria have been met. National DAB now does indeed cover over 90% of our populated areas; John Cresswell, ceo of broadcasting and communications infrastructure company Arqiva recently confirmed that DAB digital radio coverage of both national and local stations continues to expand and that regulator Ofcom has completed the plan for building out DAB coverage to FM equivalence. But in terms of DAB radio listening, the latest June 2013 RAJAR figures tell us that although over 90% of the UK population listens to radio each week, with over 22 hours on average of listening, only 36.8% is on any digital platform. Just 23.9% listen via DAB, with 11.3% done via internet and digital television.

The Digital Britain white paper had a fascinating graphic; a chart showing the projected organic growth" of DAB, and what

THE TECHNOLOGY

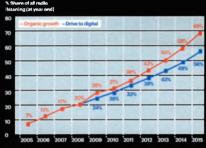
Amplitude modulation (where the level of the signal is made proportional to the sound amplitude captured by the microphone, and the transmitted frequency remains unchanged) was historically the prevalent consumer radio broadcasting standard. It generally runs the 150-1500kHz frequencies (as MW and LW), and travels far from the transmitter. However, it easily picks up static and has a limited audio bandwidth.

FM radio, pioneered by Edwin Howard Armstrong, uses the 'very high frequency' part of the radio spectrum; usually this is 87.5 to 108MHz, although the Soviet Union (as was) and Japan have used bands of 65-74MHz and 76-90MHz respectively. By comparison, FM radio stretches from 30Hz to 15kHz, has decent stereo separation and can deliver impressively low noise if done well.

DAB uses a wide-bandwidth broadcast technology and typically spectra have been allocated for it in Band III (174–240MHz) and L band (1452–1492MHz), although the scheme allows for operation almost anywhere above 30MHz. It crams a lot of radio content into a relatively small spectrum, using a physical layer, an audio layer and a data link layer. Standard DAB (as seen in the UK) uses the MPEG-1 Audio Layer 2 audio codec (also known as MP2), whereas the new DAB+ system uses the newer AAC+ compression system, which gives superior sound and uses less space. It also has better Reed-Solomon error correction, making for much more reliable reception.

THE DRIVE FOR DAB





When the digital switchover was finally completed and terrestrial analogue television became digital TV in the UK, it followed a long campaign explaining how the process would work, what the reasons for doing it were and what would be offered as a replacement. Freeview had been well established and offered dramatically wider choice, and arguably better picture quality, too. DAB radio, however, hasn't had it anywhere near as easy; the existing analogue FM system works very well for most people, and has even offered radio text for the past decade and a half. DAB sounds conspicuously worse than FM, and doesn't necessarily provide a better choice of stations. Moreover, the same 'extra' stations available on DAB are also easily accessible online or via digital TV.

Back in 2009, at a time when the government believed that DAB was the inevitable next step in Britain's radio broadcasting history, its Digital Britain white paper made what turned out to be wildly optimistic predictions about the uptake of DAB, and argued that the government could play a role in speeding it still further. In a phrase befitting the political satire The Thick Of It, it proposed a Drive to Digital, which would see the BBC heavily promoting the format, propagandising about its alleged benefits. As it happened, the Beeb opted to promote digital radio as a whole, rather than just DAB, and its digital listening is indeed increasing quickly - driven by the Radioplayer via smartphones and internet radio in general. The chart above shows the two proposed DAB take up rates, with and without the Drive to Digital.

FEATURE RADIO



it would be if there was a "drive to digital". In 2013, the organic figure was anticipated to be a 43% share of total digital listening, whereas with the government's propaganda machine behind it was expected to be 50%. As both are so far off the real figure, it rather makes a mockery of those 2009 predictions. Still, one hurdle that was thought to make the switchover unworkable is beginning to be surmounted – one of the major drags on

It played a key role in the morale of the nation and went on to catalyse a boom in popular music

DAB was its lack of presence in cars. In June 2011, just 12.1% of new cars had it, whereas it is now nearly 40%. Progress then is decidedly patchy, and the government certainly isn't where it expected to be for the 2015 analogue switch-off date to be realistic.

Recognising this, two years ago the coalition government appeared to row back on the date, with Communications minister Ed Vaizey appearing to quietly slip the programme into neutral, prompting William Rogers, the chief executive of local radio operator UKRD Group, to remark that, "There isn't a cat in hell's chance of (switchover) being in 2015. That date is dead in the water, and we all need to wake up to that fact".

Island in the streams

As it turns out, overall radio listening figures are relatively flat year-on-year at the moment, but an ever-larger percentage of this is done via smartphones and tablets, while DAB listening is creeping up very slowly. Data suggests that rather than DAB replacing analogue radio – if and when it happens – it will be streamed media that finally puts the nail in the coffin. Of course, the rate at which this happens will be down to the cost and availability of broadband internet. Currently it's pretty healthy – in

2012, 76% of adults had either fixed or mobile access [source: Ofcom], with 13% being the latter. With 33.1 million fixed landlines in the UK and 82.7 million mobile subscriptions, there's plenty of capacity to stream ever more radio.

Ironically, while FM radio fans have lived in fear of the much vaunted switch-off for the past five years or so, it is unlikely to be government action that does for the FM tuner. In truth, it is the free market itself that may deliver its last rites. In the hi-fi domain. music streamer (with built-in internet radio) sales rose 37% last year, and household saturation of connected devices (such as digital streaming TVs, Blu-rays and games consoles) is climbing rapidly. Currently around 12%, streaming TVs are expected to be in 30% of global households by 2016. Clearly then, digital radio does not need DAB if it is to grow. At the same time, more and more hi-fi hardware manufacturers are ceasing production of tuners – or replacing them with streamers with tuners built-in. "Once you've got internet, why bother with DAB? It makes terrestrial radios virtually useless but for anything other than mobile applications", argues Mike Creek.

Future sounds

For a while there has been a degree of uncertainty about the government's plans for digital, as 'Digital Britain' first set a clear roadmap, and then the new government appeared to row back on it. However, recently Ed Vaizey met with radio broadcasters at a 'Go Digital' reception in the House of Commons and confirmed that the British Government will announce its decision on a future radio switchover at the end of this year. The Digital Radio Action plan, which includes agreeing a coverage plan for building DAB coverage to match FM, a strategic marketing and communications plan and the development of a digital radio 'kite mark scheme', will be clarified. Helen Boaden, Director of BBC Radio, recently welcomed the government commitment to a decision on radio

DID YOU KNOW...

- A radio variant of the Dolby Noise Reduction system was developed in the seventies. It was similar to the Dolby B technology seen on tape recorders, but used a modified 25µs pre-emphasis time constant and a frequency selective companding arrangement.
- Although traditionally associated with FM radio, there's no reason why stereo cannot be broadcast on AM, too. The first ever two-channel broadcast was in 1924 in New Haven, Connecticut; by 1980 the US had selected the Magnavox system; in 1992 Japan got the C-QUAM standard for its AM stereo.
- Since the mid-eighties, all BBC analogue broadcasts have had a digital component to them. All the transmission lines from the studio or outside broadcast lines to the transmitter are digitised, and the original system used just an 11-bit word length.
- Nowadays in the United Kingdom, the pattern of radio listening varies according to region. BBC Radio 2 is the most popular radio service in the UK, but in London Radio 4 ranks as the favourite. Those aged 45 years old and over are more likely to listen to the radio than any other demographic, especially men and especially those in C2DE economic groups.
- The last patent restricting the use of DAB ran out in January 2013, and so a broadcast specialist in Brighton decided to make his own DAB multiplex, using an old 2GHz Pentium PC running a Software Defined Radio stack to generate the DAB signal. Could this be the start of DAB pirate radio?

switchover this year and said that this would provide welcome certainty for the industry.

Conceived in the eighties, launched in the nineties and superseded in the noughties, Digital Audio Broadcasting is the last of Britain's state-sponsored broadcasting platforms. By 2014 we will know its fate whether the government has lost interest in it - in the light of the rapid march of internet streaming - or wishes to update it to DAB+ for better sound and reception - or simply wants to press on with the current plans for roll out, and the accompanying analogue switch off. It is hard to predict the position the government will take on DAB, but it is safe to say that analogue is likely to have a far longer life than was recently feared. So buy that FM tuner while you can, and you'll likely be able to enjoy it for many years yet! •





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Less is so much more

Serious hi-fi sound without the stacks of separates? **Andrew Simpson** puts Dynaudio's Xeo tech to the test

ith over 30 years' experience in the speaker-building business spread across domestic, pro and car audio, Dynaudio isn't afraid of taking its hi-fi knowhow to different markets. Xeo is the Danish company's answer to the growing demand for hi-end digital audio from minimal components, which draws on its expertise for making more traditional, passively driven speakers.

The Xeo range essentially adds active operation, fed by a wireless music signal, to selected models from

It's playing digital audio that the Xeo package really seems to excel at

its Excite line-up. The Xeo 5 is based around the soon to be released X34 floorstander (priced under £2k) so what you get is an internally braced, rear-ported cabinet made from 18mm MDF with a 25mm front baffle. You also get Dyn's trademark built-in plinth and in place of spikes, four flat, circular feet, which extend the speaker's footprint and aid stability.

The Xeo 5 uses the same driver complement as its X34 cousin in a two-way configuration, so two 5in long-throw woofers using Dynaudio's proprietary magnesium silicate polymer ('MSP') mid/bass cones work in parallel, while a 27mm soft dome tweeter is on treble duty.

This is all fairly standard stuff, but what gives the Xeo 5 its raison d'être is a 50W digital amplifier tucked away in its base. Of course, being active means the Xeo 5 isn't truly wireless, as the need for speaker cabling is replaced with the need for a mains lead. What the Xeo concept really waves au revoir to is multiple boxes in the replay chain, which are

minimised thanks to its nifty transmitter and remote combo.

Its tiny transmitter acts as a kind of portable preamp, sending audio from its four inputs wirelessly to the speakers' inbuilt amps, which is then controlled by the remote control. All audio is sent digitally at a maximum of 16-bit/48kHz, so higher-res material is downsampled and analogue is converted to digital within the transmitter, before being beamed over. You can either power the pocket-sized transmitter with its supplied transformer, or via USB when being fed from a PC/Mac – hence its portability.

Looking to save some space? The Xeo could hold the answer



DETAILS

PRODUCT
Dynaudio Xeo 5
ORIGIN

TYPE
Active floorstanding

loudspeaker WEIGHT 16.7kg

DIMENSIONS (WxHxD) 170 x 922 x 275mm

FEATURES

• Internal 50W

- digital amps
 5in mid/bass
 driver
- 1in tweeter • Claimed frequency range: 36Hz-22kHz

(+/-3dB)

DISTRIBUTOR

Dynaudio UK

TELEPHONE

01353 721089 WEBSITE dynaudio.com The transmitter also boasts a frequency switching option, to avoid interference with other devices on the same 2.4GHz band. Each speaker can be assigned to left/right/mono duties via a rear panel switch, to identify them within a larger surround sound setup. The transmitter claims a range of up to 100m and each speaker can be set to 'room 1/2/3' via another rear panel button, so you can run three separate Xeo speaker installations in the same house from a single remote and transmitter.

With their chamfered edges and full length grilles, the Dynaudios cut an elegant, unimposing figure. Setup is nice and easy. Each Xeo 5 has its own power switch and the remote brings them out of standby mode, (indicated by a red LED on each speaker's front baffle and the transmitter). The LEDs flash red/blue before locking on to a signal which then renders them a solid blue.

Sound quality

Fresh out of the box the Dynaudios sound a little uptight, which a few days of heavy use soon puts pay to and the resulting sound is a calmer, more even affair.

After experimenting with listening positions in my 4 x 5m room, the Xeos offer the best combination of soundstage depth and central imaging placed 1m in from the side walls, 60cm away from the rear wall and firing down the room's long axis. Unlike Dynaudios of old, the Xeos don't need acres of space around them to really sing, and their bass response tolerates closer positioning to a rear wall before you're reaching for the supplied bungs.

The Xeo's treble is smooth enough for the speakers to be toed-in a few degrees to help focus vocals, without making them sound harsh or emphasising sibilance.

Connecting the Xeo 5 transmitter via USB to my laptop running JRiver, Grant-Lee Phillip's See America at 16-bit/44.1kHz gets my attention. The lush slow strums of his guitar stretch across the soundstage and the Dynaudios lavish each simple guitar stroke with clarity and rich texture.

Given their relatively narrow profile and their woofers' modest size, I'm surprised by the Xeo's power to fill the soundstage and drive my room with convincing authority. Yet, unlike many floorstanders that attempt to punch above their weight and size by being overly 'shouty' or emphasising bass presence (to mask a lack of bass detail), the Dyn's mature personality has an even presentation that doesn't





Q&A Roland HoffmannDynaudio Product Manager



AS: Why has Dynaudio launched this range of wireless speakers?

RH: We see two shifts in today's audio market. Firstly consumers are purchasing and storing more music on their computers, which is thankfully driving audio quality up rather than down. Only a few years ago, computer audio was synonymous with compressed music files and was regarded as 'bad', while separate hi-fi components were seen as 'good'. Today, however, the quality of a computer-based audio system challenges even the best hi-fi separates system. Secondly we are seeing a shift towards simplified technology from fewer components that don't compromise audio performance. Our Xeo range meets both of these demands.

Were there any design and/or performance compromises you had to make in order to produce the Xeo range?

Designing the crossover in the digital domain and matching the amplifier to the loudspeaker actually extended the performance limits and helped us to get the best from our own woofers and tweeters. It's not only the wireless feature that makes Xeo special, it's actually a fantastic digital active speaker on its own.

What technology is the Xeo digital amplifier based on?

We use digital pulse-width modulation (PWM) amplifier modules from Texas Instruments (TI), which acquired its knowledge in highquality audio amplification from Toccata, the developers behind the great TacT/Lyngdorf digital amps. TI miniaturised and perfected the original PWM amplification design into a relatively small chip and with PWM, there is no real D/A 'converter' in the way anymore. Instead the received PCM signal is re-shaped into digital PWM, then powered and (almost) directly drives the woofers and tweeters.

We use a high-power version of this amplifier chip in each single speaker, which is probably considered unnecessary from the chip designer's point of view but not from ours!





Quality active hi-fi speakers have long been the preserve of brandslike ATC Linn. Naim. Meridian and PMC but it's the Xeo's price that sets them apart. Even Adam Audio's Pencil Mk3 floorstanders - which come close in spec with PWM amps and similar driver line-up, cost north of £4k. I'd expect the Adams to sound more detailed and also more forward.

Looking at this in a different way, if you like the Xeo 5, but don't want to be limited to 16-bit/48kHz or its inbuilt amps, buy Dyn's Excite X34 and budget for a space saving solution like Naim's UnitiLite (£1,650), which adds a CD player, hi-res streamer and 50W amp in one box.

overly favour one particular area of their sound.

But do they stir the emotions? Playing Bjork's Medulla through the Xeos exposes the passion behind the performance. On the Desired Constellations track, the Icelandic songstress's vocal gymnastics can sometimes pummel your senses until her voice's tenderness is lost. Via the Dynaudios, however, Bjork's voice is controlled and given the space and freedom to swing from intimate to majestic when the moment takes her, and I'm filled with anticipation as she draws breath, ready to sing her next lyric. Despite the Xeo's volume level operating across a claimed 51 steps. I find myself searching for ideal levels between the steps, and I'd welcome slighter increments of adjustment.

Stretching the Xeo's further with a 24/96 FLAC file of Eroica Quartet's Mendelssohn Octet Op.20 highlights how these speakers can go up a gear when asked, despite their 16/48 limit on paper. Although I'm not getting the full 96kHz version at the speakers (as JRiver recognises the transmitter's 48kHz limit and adjusts its outgoing sample rate to match), it's hard to tell from the refined sound emanating

from the drivers. The Quartet's multi-layered strings are still a delight to hear, full of detail and genuine depth. Perhaps they don't make this track come across as smooth and organic as I know the 96kHz version can sound, but what the Xeos do reveal is how close 44.1/48kHz can get to the higher sample rate numbers when the quality of the recording is top notch in the first place.

As the Dynaudio package purports itself to be a space-saving integrated amp alternative, it seems only fitting to test its mettle with a medley of sources, and sending vinyl over the airwaves is a fascinating exercise in marrying traditional hi-fi with modern convenience.

Pumping The Doors' *LA Woman* from my Primare R32 phono stage in to the transmitter reveals how the Dynaudios aren't afraid of making music from any source, although the vinyl version sounds less enthusiastic and lifelike compared with its CD-ripped alternative. While analogue inputs are certainly a worthy inclusion, sound wise it's playing digital audio that the Xeo package really excels at.

Conclusion

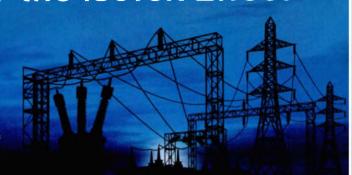
The Xeo 5 is an innovative speaker/amp combo that offers music lovers a balanced, real hi-fi sound from a fuss-free platform. These floorstanders are blessed with a smooth, expansive sound, especially in the bass regions, and their even tonality ensures a very easy to live with presentation.

If it matters less to you that your system plays hi-res music at its native resolution right through the replay chain, and you want a simple package that makes music sound good without the hassle, cost and space needed for a separate amp, DAC and reams of speaker cable, the Dynaudios could be just what the doctor ordered •



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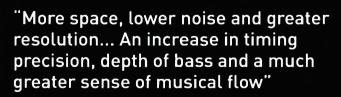
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Essential Listening

Pro-Ject continues its efforts to rule the roost of affordable turntables. **Ed Selley** discovers how the Essential II fares

t has been over a decade since Pro-Ject launched the original Debut turntable that caught the timing of the vinyl resurgence pretty much perfectly and became something of a sales phenomenon. In the ensuing decade, the Debut range has grown in size and complexity and as such prices have increased. Pro-Ject launched the Genie to fill the gap, but this too has seen some price rises and the lack of dust cover put some customers off. The latest model to fulfil the role of Pro-Ject's entry level turntable is the Essential that

has recently been updated to the new Essential II model seen here. Unlike the more radical looking Genie, the Essential II is much more in the style of the Debut range in that it is a full plinth turntable with a perspex lid.

At the same time, however, there have been a number of changes made to get the Essential down to under £200. The metal and acrylic platters of the Debut range have given way to an MDF one and unlike the Debut, there is no sub platter. The belt acts directly on the outside of the main platter and is rather longer than the Debut one. The motor is similar to the

DETAILS

PRODUCT
Pro-Ject Essential II

ORIGIN Austria/Czech Republic

TYPE Turntable WEIGHT

4kg

(WxHxD) 420 x 112 x 330mm

- FEATURES ● 33 and 45 rpm
- Dust cover
 8.6in aluminium
- 8.6in aluminium
 tonearm
 Ortofon OM5e MM
 cartridge supplied

Henley Designs
TELEPHONE

01235 511166 WEBSITE

WEBSITE henleydesigns.co.uk Debut models, but the position has moved to the outer edge of the plinth to allow it to act on the platter. The power supply is mounted on the underside of the plinth and uses a wall wart style mains. A version of the Essential II is also available with a phono stage and USB output built into the deck further reducing the need to choose ancillaries for it.

The Debut range has moved to using the same carbon fibre arms as most other Pro-Ject decks, but the Essential is fitted with a metal design that looks closely related to the one used on older Debut models and seems to be different from the unipivot type used on the original version of the Essential. Although, it doesn't look as smart as the Carbon models, it feels substantial enough. Like many Pro-Ject models, it comes with an Ortofon OM5 cartridge ready fitted and uses an external antiskating weight on a fishing line, which looks a little inelegant but works well. A welcome feature retained from the Debut series is the impressively good quality lead out cable that puts some more expensive rivals to shame.

The Essential II is reasonably well built given the asking price. The bearing for the platter is extremely



Also available in white, £209, and black, £199 simple, but works well and the arm feels smooth across the full radius of movement. The drive to keep the price down has had some effects, though. The red finish of the plinth is extremely consistent, but the curious matt effect is rather less pleasing than the gloss on the Debut's (in many ways, the black and white finishes look rather better) and although the MDF platter seems to be well balanced, it also doesn't look or feel especially elegant. The feet on the Essential II have been designed to give a degree of isolation but there will be limits to this and the Pro-Ject doesn't feel quite as well isolated as, for example, a Rega RP1, which is also an unsuspended deck.

The good news is that the Essential II is still one of the simplest turntables on the market to set up and should not prove a challenge even to a complete novice. The packaging is extremely logical and every single component needed to get the Essential II up and running is included in the box. Place the plinth on a level surface, drop the platter into place, fit the belt (which is really the only remotely tricky part of the entire process and best approached by those with three hands) and ensure the tonearm has the counterweight and anti-skate fitted and you are good to go. I suspect that there are some network streamers that are more involved to setup than this.

Sound quality

With the Essential II connected to an Avid Pellar phono stage, Naim Supernait integrated amp and Neat Momentum 4i speakers, the results are an interesting mix of the expected and the more unusual. The Essential II maintains the basic 'house sound' of the more affordable Pro-Jects. The presentation is open and impressively airy and with the kitschy, but well recorded *Time Loves a Hero* by Little

Feat, the Essential captures the punch and attack of the performance and gives it plenty of space to breathe. There is an impressive sense of timing and poise to the way the Essential goes about making music that gives it a sense of effortlessness compared with digital anywhere near the price.

The tonality is pretty good, too. The Pro-Ject sounds natural enough with most instruments and is actively good with piano and brass, but I did find that strings and vocals can take on a slightly thin and nasal quality on occasions that is less satisfying. In fairness to the Pro-Ject, the Ortofon OM5 has to take some of the responsibility here and there are justified limits to what a cartridge this affordable can achieve and for the most part, the results are more than satisfactory.

A likeable piece of equipment, capable of punching well above its weight

The bass response is also pretty good and the Pro-ject manages to avoid bloat or overhang with low notes and generally reveals an impressive amount of fine detail while it does so. Compared with more expensive turntables, there is no escaping the fact that the Pro-Ject won't plumb the same depths as demonstrated with the mighty kick drum in the live performance of Fink's Sort of Revolution, where the impact to the chest that the same collection of electronics can achieve with some turntables is absent.

The biggest issue for the Essential is that the best performance is predicated on achieving a level of isolation that is likely to add substantially to the overall cost of the turntable. Placed on the top shelf of a

Soundstyle equipment rack with the partnering electronics beneath, there is a sense that the performance is affected by the activity from the surroundings and the Essential shows a slight vulnerability to footfall as well. When I place the Pro-Ject on an Avid Platform, these symptoms are markedly reduced and performance takes a meaningful step forward.

This is all well and good, but the Avid is more expensive than the Essential, which rather undermines the idea of a budget turntable. Although there are less expensive options available, all of them start to push the price required to get the Essential II working at the level it can perform towards that of the more capable Debut series - which I haven't found to be as seriously affected in isolation terms. If you are able to knock up the time-honoured solution of two paving slabs separated by an inner tube, you might be able to keep the costs down.

Conclusion

Taken at face value, the Essential II is a good performer and is able to do justice to vinyl at a relatively affordable price point. It manages to sound entertaining and musical across a wide variety of genres and it is easy to set up and get going. The problem for the Essential II is that although the Debut family is more expensive, I do feel that it represents better value for money. It is less demanding of good isolation and its finish and appearance is less utilitarian than the Essential II's is. It also offers rather greater scope for upgrades. The Essential II is a likeable piece of equipment, though, and is capable of punching well above its weight. If your budget won't stretch to some of the other Pro-Jects. and you are prepared to be creative about how you isolate it, the Essential II is a very strong design •







Supply and demand

30 years after the birth of CD ATC has launched its first player, **Jason Kennedy** discovers if the wait has been worth it

hen I asked ATC founder Billy Woodman why he has waited 30 years to produce the company's first CD player he explained that it's a case of demand. His customers, especially in the Far East are still keen on the silver disc and want a player that lives up to ATC's reputation for building solid, long-lasting and revealing products. Apparently the company has inherited swathes of Quad's market since it was bought by Chinese-owned IAG, and you can see why. ATC still makes everything at its facility in Gloucestershire and it eschews gimmickry in favour of solid engineering practice, that and an in-depth knowledge of how

recordings are made. A very good proportion of its business is in professional audio, as Billy illustrates with his most enthusiastic response to my questions in the Q&A (overleaf).

The CDA2 is not merely a CD player, it is also an analogue and digital preamplifier with an onboard DAC that can be used to convert signals from sources with an S/PDIF output. The eschewing of new-fangled technologies means that the CDA2 is devoid of a USB input, which is a pity but something that will apparently be put right in future versions. It's not a complete commercial disaster because if you want to play from a computer there are plenty of good USB to S/PDIF converters around for

ORIGIN
UK
TYPE
CD player/DAC/
preamplifier
WEIGHT
6kg
DIMENSIONS
(WXHXD)
450 x 95 x 320mm
FEATURES
• Supported sample
rates: 44.1kHz,
48kHz, 88.2kHz,
96kHz, 192kHz
• 2x RCA line inputs
• 2x optical/coaxial
digital inputs
• Rear mounted,
full-size headphone
output
DISTRIBUTOR
ATC Loudspeaker

DETAILS

ATC CDA2

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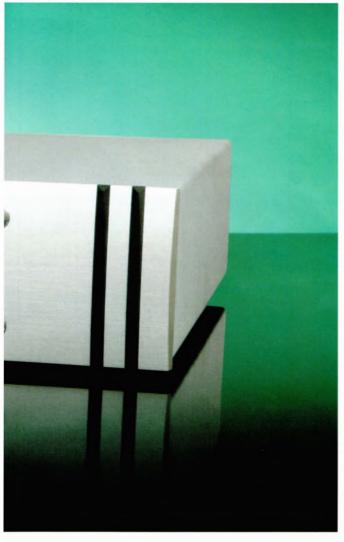
WEBSITE atcloudspeakers.

reasonable prices and by the sounds of things most of ATC's customers are not this way inclined anyway. But ATC is clearly aware of the popularity of this connection because it is included in the SIACD, a one-box CD player and amplifier launched at the same time as the CDA2. The SIACD is, however, a completely new, ground up product whereas the CDA2 is based on the CA2 preamplifier, which it closely resembles in appearance and in terms of its design on the analogue side. For instance, it has single-ended and fully balanced outputs the latter capable of producing up to 15V and able to drive very long cable runs. This will appeal to owners of ATC, or anyone else's, active monitors who want a preamp by the listening seat. Who wouldn't want such a thing? Even with full remote control it's nice to be able to have the system at your elbow where you can change CDs with ease.

The back panel sports two analogue inputs, a minijack and 'two' digital inputs split into Toslink or coaxial types, there is also a headphone output – seems like an odd place to put one, but at least it's available.

ATC doesn't specify a great deal about the CD player or digital section save that the latter has a Wolfson DAC that supports most of the sample rates up to 192kHz, 176.4kHz being left out. The warranty on the majority of

52



oes is es.

Eiect button

aside, this is a

box of tricks

well-designed

the CDA2 is six years, but this does not cover the CD mechanism, as is usually the case with such devices.

Construction is solid and not unattractive thanks to a half-inch thick aluminium front panel that's machined with black styling bars inlaid on either side. The volume control could be more ergonomic, however, its attractive domed shape leaving little but the indicator to get a grasp on. The remote handset lets the side down somewhat, it takes quite a bit of staring at to find next and last track buttons – this at least is partly because it uses words rather than symbols for this action – but it sticks to symbols for fast forward and

backwards. I also search for an eject button in vain as the only one is on the player, underneath the disc drawer with the other transport controls, which are hidden when the drawer is open! An inconvenient but all too common state of affairs that requires the drawer to be nudged closed, which may not help its chances of long-term reliability. The handset does have track access buttons and direct input access for all but the digital inputs, which you have to scroll through with the general input button. This is the same handset that ATC supplies with the CA2 preamp, which has no digital inputs.

Set up is very straight forward if you are familiar with preamps or DACs. Just connect the power amp or active speakers to the outputs and hook up any analogue or digital sources to the appropriate inputs. Although the spec states that it has two digital inputs, in fact it has two optical and two coaxial, which can be separately accessed, so in practice there are four.

Sound quality

I kick off by using the CDA2 as a CD player and preamp via Valvet A3.5 monoblocks and PMC Fact.8 speakers and discover just why ATC has so many jazz and classical fans. The CD is Shostakovich's Gacfly (National Symphony Orchestra of Ukraine/ Kuchar), a recent purchase that is still not very familiar, but one that the CDA2 reveals to be an excellent recording. The dynamics in particular are laid out in stark relief and prompt several semi expletives of surprise. This player is clearly extremely adept at revealing the contrasts and energy of an orchestra and might well lead those who have yet to discover the power of classical music to become more acquainted with it.

Getting back to more familiar material in the form of louche jazzer John Lurie's *Legendary Marvin Pontiac* makes it clear that the ATC can deliver real solidity in the bottom end and very strong presence from vocals. It also reveals a slight brashness from certain instruments, especially at higher frequencies. This is a very matter of fact, fat free disc spinner and does nothing to smooth over the shortcomings of a recording. Put another way it's starkly revealing. There is little in the way of finessing going on as you might find with valve

You can appreciate the attack of the instruments and the glory of the music

products and quite a few high-end transistor ones to boot. ATC's take is very much like that found in the studio, the ones where it makes acoustic recordings that is – let as much through as possible. This works like a dream when the recording is clean and preferably devoid of digital processing and the like, but can be a much less comfortable experience with music that has been produced to have a certain sound through less explicit equipment.

Timing-wise it's even handed, not as quick as the best, but by no means lazy, again it adds very little and all that you can hear by comparison with more transparent kit is a slight sense of the electronic. I use it as an analogue preamp and contrast it with a Townshend Allegri, which reveals greater image focus, slightly more tonal contrast and better definition of leading edges. But bear in mind that the Allegri is passive and nearly as expensive as the ATC, but has no DAC nor CD player onboard.

As a DAC with a Naim UnitiServe providing the signal you immediately hear the gravitas that the CDA2's unrestricted bottom end delivers



Q&ABilly Woodman

ATC founder and managing director



JK: Why have you waited until CD's 30th anniversary and the apparent autumn of its life to release your first player?

BW: ATC has a significant customer base with large CD collections, mainly classical and jazz, to whom this product is directed. We also offer RIAA equalisation in our preamps for those still using vinyl.

Have you found a transport mechanism offering the longevity ATC products are renowned for?

The market for transports available to small manufactures is very limited and to my knowledge everyone buys from the same sources. We will, of course, provide the best possible service should a transport ever fail in the field.

Why no USB input when it's the latest must-have feature and there's one on the SIACD?

The CDA2 has two digital inputs, but no USB. It is our intention to incorporate a USB, as per the SIACD, on the first upgrade or mk2 version of the CDA2.

The CDA2 looks like a CA2 preamp with a CD player and DAC built in, is that the case?

Yes.

Why is the headphone output on the rear panel?

Good point. We'll look at moving to the front panel on the first upgrade.

Have you been doing anything interesting in the pro world of late?

A new auditorium at Stanford University, The Bing Auditorium, was completed in January with the electro-acoustics (sound reinforcement) designed and supplied by ATC based on the products we design for recording studios. We are in the manufacturing stage of an electro-acoustic system for the new auditorium for the Shanghai Symphony also designed by ATC and we are also currently submitting preliminary designs for two further performance auditoria, one in Germany and one in Korea.



alongside the unerringly warts and all midband. This sounds a bit hard edged with Samuel Yirga's Ethiopian jazz when instruments like the vibes come to the fore, but you always know plenty about the character of the instruments in the mix, which makes me think it's the recording not the converter that is the limitation. Beethoven's *Late String Quartets* (Alban Berg Quartett) on the other hand plays right into its hands and sounds totally real. Where there are

This is a very matter of fact disc spinner. Put another way it's starkly revealing

no hard edges in the recording, just the rich tonality of instruments, the music comes to life and you can forget about its method of delivery. This DAC clearly likes to call a spade a spade even though it doesn't hail from Yorkshire. Essentially it is uncompromising, which means that you can appreciate the attack and decay of the instruments as well as the power and the glory of the music, complete with all its subtleties and shifts in mood. You can also hear the shuffling and page turning even though it doesn't strike me as the quietest piece of electronics ever to have graced the system.

There are times when it seems a shade on the dry side, that would explain the forwardness of some recordings, but my comparison with the Allegri doesn't really back this up. It's certainly dryer than some preamps, but its excellent resolution

of dynamics and tonal variety seems to suggest that there is plenty of colour available.

Conclusion

The ATC CDA2 is a lot of very solid British audio for the money, as the How It Compares box (left) reveals no-one else builds a product like this, on this island for the price. This is partly because it's a rare breed, but largely because ATC has always had a knack for putting together excellent value products. The remote handset leaves a little to be desired and is pug ugly, but the CDA2 itself is superbly crafted and should last a lifetime, CD mechanism allowing. It also sounds superb, not the most pacey, it has to be said, but if your tastes include acoustic music – be it classical, jazz or world - it delivers a revealing and engaging result that you will have little difficulty appreciating. With a pair of ATC active speakers such as the mighty SCM150ASLs on the end, it punches well above its weight, USB input or not! •



Resolution Audio's Cantata Music Centre. has all the features of the CDA2 plus USB input and the ability to stream via UPnP. It's beautiful and costs three times as much. so it's not a practical competitor, Naim's UnitiLite (£1,650) is also an integrated amp that eschews USB. It has a network streamer, however, and rather a good one at that. The Cambridge Audio 851C (£1,195) is a CD player with a digital preamplifier that has USB as well as AES/EBU inputs. I had hoped to find a transport and DAC/pre combo in the Cyrus range for a similar price, but its current DAC/preamps alone start at more than the ATC.





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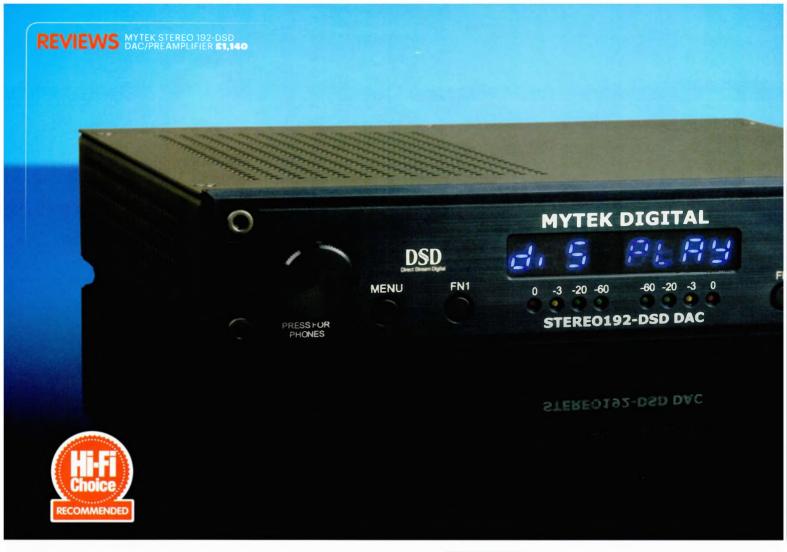
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Cloney Audio

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Flicks

Bangor, 0289 146 1415, sales@flicks.ie, flicks.ie



How pro can you go?

It's interesting when 'pro' audio gear comes over to the hi-fi market, as Mytek's Stereo 192-DSD DAC shows, says **David Price**

find the fall and rise of the humble digital-to-analogue convertor fascinating. We had a whole raft of them back in the late eighties – remember the Arcam Black Boxes and the Audio Alchemy Digital Decoding Engine? Sony and Teac made some amazing high-end ones, then Pink Triangle woo'd the world with the Da Capo, bringing HDCD to the masses. Then suddenly, it all ground to a halt. Bizarrely, by the middle of the last decade it was practically impossible to find any such devices.

Then, slowly but surely the breed began to reappear at the end of the last decade, and it didn't come from established manufacturers making new ones. Rather, studio DACs such as the Benchmark began to 'diffuse' through that semi-permeable membrane that separates 'consumer' hi-fi and 'pro' audio. Often the twain don't meet, but there was strong grass-roots demand for such things, spurred on by the need to improve the sound coming from cheapo DVD players, streamers and Sky boxes. And so what once went round, came round again!

The Mytek Stereo192-DSD before you is the latest such 'crossover' product. It is – for better or for worse – a 'pro' product, inasmuch as it's plug-ugly, a pain to use and is

DETAILS

Mytek Stereo

192-DSD ORIGIN USA

DAC/preamplifier

WEIGHT 2.7kg

DIMENSIONS (WxHxD) 216 x 44 x 216mm

210 % 44 % 210

•16/44 to 24/192

PCM, DSD
• ESS Sabre 32
DAC chip

Balanced XLR outputs
 LED numeric

display

DISTRIBUTOR
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TELEPHONE 07908 056978

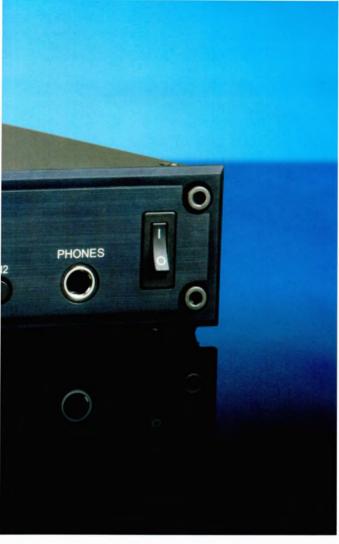
WEBSITE mains-cables-r-us. co.uk/

bristling with features, many of which aren't very useful or could have been implemented in a much easier way. But still, that's how those Metallica T-shirt wearing, badass studio boys justify their existence isn't it? Knob twiddling should never be made easy, whatever next?

The headline feature of this DAC is its Direct Stream Digital playback capability, and while it is nice to have, I would suggest that for the moment at least, it is not mission-critical, as the number of music files that come in this form can currently be counted on the fingers of one hand. Basically, it's a niche audiophile preoccupation – and that's as if 'audiophile' wasn't already that precise same thing!

There's a modest range of DSD tracks to download online (see Blue Coast Records, audiogate. bluecoastrecords.com, for example), but so far the sort of content available will hold little allure for many. I do hope this situation changes, but for now I'd say the real news is how the Mytek works in PCM mode.

This DAC's studio credentials show as soon as you unpack it, and it becomes obvious that it is less consumer-focused than many rivals, being a somewhat oddly styled and fussy-looking, half-size box whose navigation is fiddly by the standards of other products at the price. It features a rotary knob that works as a



d The looks might not suit all tastes, but the Mytek has to be heard to be believed

volume control, source selector and menu scroller. It has a smallish, bright blue LED display, underneath which are old-school level LEDs that can be turned on or off in the settings menu – admittedly, I do like this feature!

Other configurable things include 192kHz upsampling on or off, volume control on or off (and there's a choice of analogue or digital volume control path), volume trim, sync mode as well as adjustable PCM and DSD digital filters.

All well and good, but because what is basically a simple, old-fashioned digital display is used, it's hard to read what setting is active – it really needs a proper OLED alphanumeric

affair a la the Audiolab M-DAC. This would also have to have a full display of digital word length and sampling rate; only the latter is currently displayed, and this is a pain for computer users who often never quite know what's what! In Mytek's defence, there is a downloadable Mytek Stereo192-DSD computer control panel available; this shows input, sample rate, sync source, and playback status. Also, the company says that a future revision of the DAC will get this feature.

The case for a decent display is further strengthened by the massive range of inputs it has - Toslink, coaxial, Firewire, USB1, USB 2, AES/ EBU, and even analogue. These are all located on the well-made, robust rear panel. Inside the unit, the ever-popular ESS Sabre 9016 DAC chip is used – which runs at up to 24/192 PCM from all inputs except USB 1, plus DSD on PCM (DoP) and DSD native files from a computer via USB 2. A large (for the size of the box) toroidal power transformer is fitted, and good-quality passive componentry is in evidence on the cleanly laid out circuitboard. Wiring is decent quality, too, and neatly done. Overall casing quality is impressive at the price, but still Audiolab's M-DAC at half the cost shows the way in its build and finish.

Sound quality

Despite the choice of whizz-bang file formats, most will use the Mytek at 16/44 resolution, most of the time, so that's where I start. The DAC needs a good few hours to warm through (and this done the unit runs quite hot), and only then does it begin to sing. It has a big, strong, powerful, upfront sort of sound; it isn't something you'd ever call euphonic or romantic. Freeez's *Mariposa* showcases this perfectly – a powerful slice of early eighties

jazz-funk, the Mytek really gets into the swing of things, giving a thumping rendition of a song that's normally a bit more laid back. I am particularly impressed with its dynamics; it seems very good at highlighting the bass player's accenting, for example, and makes all the musicians sound like they are trying harder. Piano tone is good too, the DAC capturing the instrument's shimmering harmonics better than most.

A very revealing device, and surely one of the very best at its price

Tonally, the Stereo192 feels as if all the level controls have been notched up a touch! There's a strong, punchy bass, a fresh and upfront midband and a well lit - but not harsh - treble. It's a very 'clubbable' sort of sound, everyone will take an instant like to it. 4hero's Give In pounds out of the speakers with confidence, guts and brio; the Mytek shows its instinctive grip, setting a big, spacious groove inside while lots of detail sparkles out. There's none of the upper midband hardness of some designs, giving a purity to Darien Brockington's vocals and the lovely brass work set behind him. Yet still this DAC works hard at capturing the transient speed of the music, and syncopating everything together skillfully. If there's any criticism of its 16-bit sound, it's just that some might find it a bit too 'crisp'; it's not especially backward in coming forward, and certain folk will want a more relaxing listen.

Of course, moving to higher resolution files, via a MacBook Pro, USB cable and Audirvana Plus, sees the Mytek smoothing out, sweeting



Q&A

Michal Jurewicz

Mytek founder & principal designer



DP: Where is Mytek from, and where is the kit made?

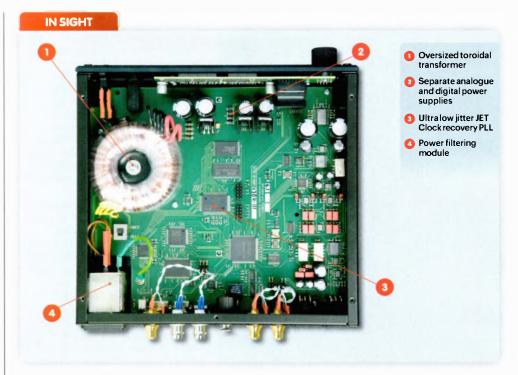
MJ: Founded in 1992, it's a professional audio manufacturer founded by me. I'm a Polishgraduated electronics engineer who started his professional career as technical engineer at The Hit Factory Recording Studios in New York in 1989. Up until 1999, Mytek products were manufactured in the US. In 2000, Mytek's sister manufacturing company was established in Warsaw and now employs 20 people. Such an arrangement helped Mytek to compete with products made in Asia while maintaining high standards of quality and production control. Manufacturing in Poland also offers convenient and economical products in the EU, together with quick and effective customer service for the EU.

Who designs Mytek products?

I head a team of engineers; over the past 20 years I have built over 20 models of various analogue-to-digital and digital-to-analogue converters for professional use. Typically three-to-four prototype hardware revisions are built and corrected before the product is deemed perfect for release. I also collaborate with major mastering and recording engineers in New York and ask them to try the DAC, listen and provide feedback.

Why does the DAC offer Direct Stream Digital, given there are currently so few DSD files around?

Mytek wants to promote DSD because we consider it the best sounding standardised digital audio format. The guest for the best sounding conversion is the foundation of the company. It was a hunch during the initial development of the Stereo 192-DSD DAC, that DSD downloads would begin to gain prominence now that SACD has more or less left the stage. Audiophiles still value SACD, and DSD is considered to be the digital format of the superior quality. With increased internet bandwidth, more record companies selling online, and - at the time - only one other DAC able to play DSD, Mytek saw an opportunity to capitalise on a confluence of events.



HOW IT COMPARES

Audiolab's M-DAC is a serious competitor. Like the Mytek, it uses ESS DAC chips, but has bespoke digital filtering with a wider range of options. Like the Mytek it has a volume control, with the option to act as a digital preamp, and likewise also sports level meters - although these are part of a fluorescent display, which is vastly better overall than the Mytek. Sonically, the Audiolab is a little smoother and softer sounding, with a little more 'fuzz' across the midband, although it's still not that far behind, and it can be usefullyimproved with aftermarket power supplies. Still, the Mytek is cleaner, faster and punchier - and that's a great accolade.

up and calming down a tad. That extra digital data irons out the slightly 'rough and ready' feel of 16-bit, and you get a more nuanced presentation. A 24/48 rendering of 10cc's joyful Things We Do for Love shows an altogether more subtle side of this DAC; it steps back a few paces, puts down its Espresso Martini and sips a calming camomile tea instead. The soundstage widens and deepens; the latter is encouraging, as off CD it can be a tad too two dimensional. The music seems to flow better. sound less mechanical, and reveal the lovely filigree treble detail that the DAC is capable of.

The pattern continues with the 24/192 REM song, *Texarkana*, which is open, spacious and three dimensional, letting you hear individual elements of the mix play separately, and together, with ease.

DSD sound is superb, too; Alex de Grassi's The Water Garden has a glass-clear sound, one that is startlingly open and expansive, along with a satisfyingly unforced quality that isn't so obvious via PCM. It shows just how fast and incisive the Mytek can be, making my favourite sub-£1,000 DAC - Audiolab's M-DAC (see the *How it Compares* box out) - seem rather muddled and opaque in comparison. Other 24-bit PCM files. from Herbie Hancock's Rock It to Depeche Mode's Enjoy the Silence confirm that this is indeed a very revealing device, and surely one of the very best at its price in this important respect.

Conclusion

A superb performer for only a little over £1,000, Mytek's Stereo 192-DSD has an ultra clean, well-etched, powerful and dynamic sound that many will absolutely adore. Indeed, in the sound-per-pound stakes, it's an extremely persuasive package.

However, it does come over as a bit too 'pro audio' for some tastes - it isn't quite as gentle, beguiling and rounded as some humble hi-fi folk will like, more Gordon Ramsey than Stephen Fry, so to speak! Also, we non-professionals will find its user interface harder to like than studio types, and not every hi-fi widow will appreciate something looking like the telephone repair man's diagnostic scanner sitting in her front room next to the lace curtains. Overall then, it's a great bit of kit – but not for all, which means you should try before buying, if you possibly can •



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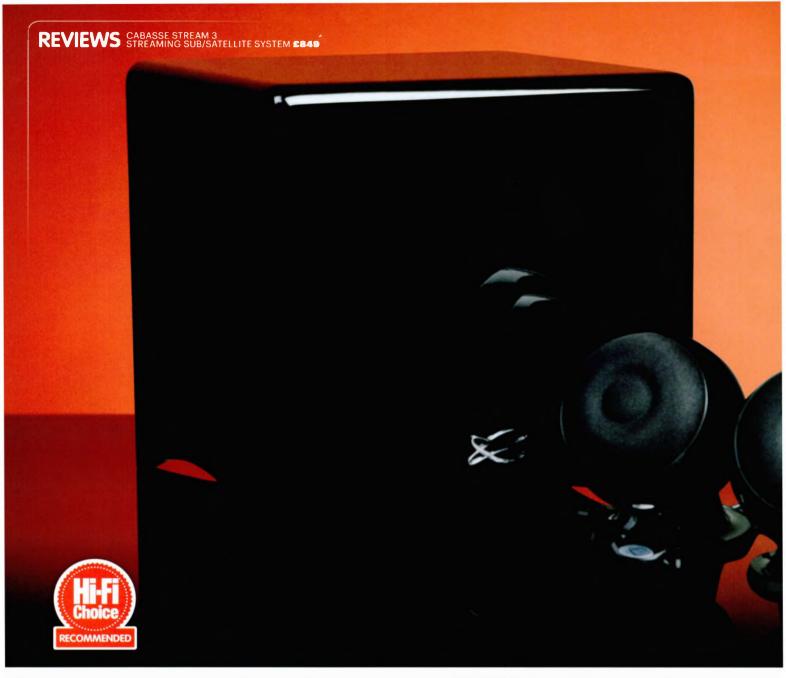
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A certain *j*e ne sais quoi

Patrick Cleasby lets the francophile in him come out as he auditions Cabasse's new streaming sub/satellite system, the Stream 3

hink of a French speaker manufacturer and the word Focal springs to mind, and while it does well in its export territories, at home in France it is Cabasse that rules the market. Indeed when I lived there some 20 years ago the name was so prevalent at one time I thought it was another word for speaker.

A family firm of long standing, Cabasse appears to be making the same push for foreign recognition as Focal now, and this system, the Stream 3 created some stir when it was launched at CES this year.

The aspect of the system which is consistent with Cabasse's history and the rest of its enormous range is the point source/coaxial driver design of

DETAILS

PRODUCT Cabasse Stream 3

ORIGIN France

Streaming sub/ satellite system

WEIGHT 1.3kg (Satellites)

9.3kg (Sub) DIMENSIONS

130mm diameter (Satellites) (WxHxD) 33 x 33 x 35mm (Sub)

FEATURES

 Amplification and bandwidth: 20W, 150-22,000Hz (Sat) • Amplification and 29-1,500Hz (Sub)

+33 298 058870

WEBSITE cabasse.com/uk

the satellite speakers, while the headline feature is the incorporation of a music streaming 'brain' into the swish satellite unit. The appeal is a very compact front speaker footprint, coupled with the convenience of being able to place the brain/sub elsewhere in the room. Thus it naturally suggests itself as a stereo accompaniment to your televisual pleasure, (and as a wife mollifying setup). At the loftier ends of its range, the Cabasse streaming units can service 24-192 material - at this more lifestyle level playback bandwidth tops out at 24-96, so the intention is clearly not a purely AV one - the system is designed to bring out the best in your music too, and is voiced in common with the rest of the Cabasse range.

The Stream 3 arrives in a relatively sizable package to accommodate the expected foot-cubed, piano black sub unit, which has an attractively deep and lustrous finish (white is also available). Only the complexity of the



A superb option for rooms where limited space is a problem

rear panel belies the exciting Lego set construction you're going to have to do to get it working. The satellites have an impressive heft to them and siting options are varied. For the old school TV brigade they are magnetically shielded. Stands of a slightly more plasticky feel are supplied, along with wall fixing options and the speakers attach to the stands magnetically, with a very solid feel. Both the sub and the speakers bear the ornate Cabasse insignia and the overall feel is pretty luxe, at least until you get to the puck remote while nicely rounded, it is also light and plasticky and could easily get lost, causing potential problems of which more later.

Hooking the system up is an interesting task that requires some planning, according to the possible sub locations in the room. Thankfully I am adequately provided for with the standard cabling that comes with the system – by necessity I require the sub halfway down the right side of the

room, and the overall stretch permitted is about 4.5 metres, which works out all right. As these are not generic cables, longer rooms will require discussion with Cabasse. If you wish to avail yourself of the digital or analogue inputs for the likes of a set top box there is also a more standard optical digital cable and some analogue interconnects supplied - with more substantial lengths to allow for the same run as the bespoke cables. I connect a Sky HD box using it. Obviously the sub unit requires an IEC power lead to be plugged into a socket in its vicinity. The speaker runs

You won't believe just how well the Stream 3 can deliver intense, thick bass

are supplied as a pair joined together by the custom sub end connection, with similar individual plugs at the satellite end. The other vital long run is to get the IR remote sensor to the 'receiving' end (in my case, and probably commonly, under the TV).

As we are in network territory, the other thing you need to decide is whether the geography is set for Ethernet connection wherever the sub ends up. As I would only have been running a cable from an Airport Express anyway, I elect to sample the wireless operation.

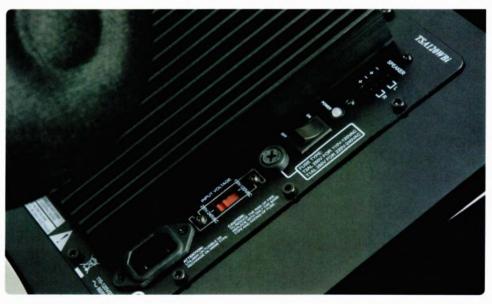
The challenge this gives you is how to get a system with no display (other than the multi-coloured and blinking light signifiers you get from the remote eye, and the LEDs on the back of the sub unit) on the wireless network. This issue is dealt with much like you

would when configuring an Airport Express – first you connect to the device's own wireless network, then through a browser you tell it to connect to your own network. In practice this works well, particularly when using the iPad version of the free Cabasse Stream control app, which has a wizard-based walkthrough approach to the task.

The app is appealing, having a tabbed approach to displaying your music sources, including those residing on the iDevice. I just wish it encompassed the power on/off and source switching options from that puck remote. You can also Bluetooth directly to the Stream 3 from your Mac, with detailed instructions in the full manual, should you really wish to eschew the more guaranteed full res streams of the wi-fi option. Internet radio is also available, using vTuner.

Sound quality

It is immediately apparent that the coaxial driver satellite speaker design brings the audible delicacy and precision one has come to expect from exactingly engineered point source speakers. With the initial hookup for television the rendition of voices is shockingly full and lifelike. Do you have Woody Allen's voice as nerdishly high and nebbishy in your minds' eye? The recent Omnibus documentary reveals that it can actually have a sonorous depth to it in ordinary conversation. Similarly the Ashes test commentaries are given depth by the Stream 3's presentation. It may not satisfy the demanding action movie types, but it works well for TV use and can be fed with either Dolby Digital, or PCM - from the Sky box the Dolby sounds a little weedy



Q&AChristophe Cabasse Cabasse international sales and marketing director



PC: The Stream 3 is packed with a lot of technology at a competitive price. How do you do it?

CC: The Cabasse DNA is not made of loudspeaker genes alone, as the company has been designing and producing electronics since the fifties, from valve preamps, power amps and filters to four-way digital processors. We thus pay great attention to the details that will make an electronic component sound great together with a speaker. This is why the electronics of the Stream 3 are not a compilation of marketing-oriented specs, but actually a well balanced cocktail.

With Stream 3, we propose a combination of mechanical and electronic solutions with what we believe to be an unrivalled sonic quality and reliability at the given price point.

Great to see 802.11n on a device, allowing solid hi-res streaming over wi-fi. Will you be looking to add 802.11ac at the right time?

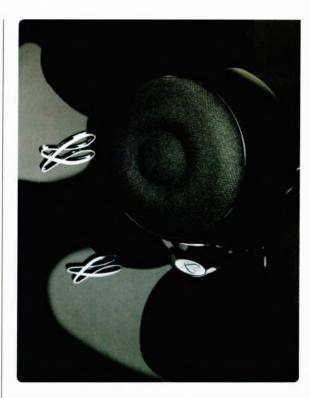
Our R&D team is already looking at this technology, but the right time for its introduction in our products is not determined yet, some features have to be upgraded to meet our audio requirements.

What converters are you using in the Stream 3?

Stream 3 is fitted with the Wolfson WM8524, a high-performance DAC with a very good 10 dB SNR. It's a very solid solution – able to deal with 192kHz sample rates – that we use only up to 96kHz for solid and balanced performance.

With more music being made available at 24-192 will that resolution be brought to the lower end of the range, too?

It will when the solution will be solid enough, streaming included.



The lustrous gloss finish is also available in white

HOW IT COMPARES

Much as the audiole quality of the speaker design is a joy to listen to, it is difficult to believe the sound is 'all there', particularly compared to other streamers with the benefit of full-range speakers and dedicated amplification.

But as the likely application is for limited space situations, some compromise has to be made and with that in mind the Stream 3 is easy to recommend. The discontinued Epoz Aktimate Maxis is similar streaming-wise, but with the passage of a few years since it debuted, the Cabasse has a higher-specced streaming brain, genuinely capable of hi-res up to 24/96, soon to be remedied by Aktimate Blue.

compared with what it outputs as PCM, although this is obviously programme material-dependent.

The result is just as shockingly good once you switch to music playback, if you can figure out how to – my main problem with the whole system is that with the lack of significant visual feedback you can feel a bit lost trying to 'tab' through the input settings using the remote. I would feel greatly reassured against both losing the remote, and in knowing 'where' I am in my operations if the customary unit channel switching could be added to the otherwise useful Cabasse Stream iPhone/iPad control app. It's supposed to be there – but I can't find it!

Back to the music, the real trick with these systems, as explained in the manual, is to start with the bass crossover on the sub in the middle and then tailor it by ear using known material, so that it coheres with the satellites and doesn't sound overblown. Get it right and the bass genuinely starts to feel non-directional. Music is also streamed very reliably over wi-fi – no doubt due to the sensible provision of 802.11n wi-fi in these Airport Extreme enabled times. I feel no need to switch to the option of wired ethernet.

The real joy of the Stream 3 is when you throw it some dense and complex high resolution, like Nine Inch Nails new, free, 24-96 single *Came Back Haunted*. You won't believe how well the Stream 3 can deliver that intense, thick bass alongside the intricate,

off-beat percussion pattern. You can clearly make out Trent's involved layering of the music, and his usual forceful vocal.

As Cabasse is renowned for its classical focus I also sampled my new 24/88.2 Bach Saint John's Passion from Qobuz and the results are similarly stunning. There are such dynamics in both the performance and the recording that this high-res version deserves a refined playback, and the imaging of the speakers gives you the ability to clearly separate the parts in the Chorals.

Finally, if it can cut the high-res the Stream 3 ought to make easy meat of CD resolution material. Keeping it French I listen to the stunning vocal of Jacques Brel's *Ne Me Quitte Pas* from the compressed *Infiniment*

The satellites have an impressive heft to them and siting options are varied

compilation and the fantastic ability of the Cabasses with voices, even when over-cooked, is remarkable once again.

Conclusion

I am taken aback by how great a sub/ satellite combination sounds, and it is pleasing that the phone/tablet control system for the UPnP renderer aspect is individual, but relatively intuitive. My only frustration is the lose-ability of that puck remote, and the fact that its channel selection function is not replicated in the remote application like it is in say Naim's n-Stream app. A bit more development and this could be a very satisfying prospect indeed, with usability to match its exemplary sonics. If it drops off the wi-fi though, you and/or the wife might need some techy guidance to get it back! ●



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Towering infernos

Six grand is a lot of money for a speaker, says **David Price**, but T+A's Criterion TCD 210 S makes music on a massive scale

t's not easy designing a £6K speaker, not least because there are quite a few very good ones already on sale, offering a wide variety of characters. So where does the T+A TCD 210 S fit in, in the great scheme of things? It is large, heavy and transmission line-loaded, claiming high sound levels and a very wide (25Hz to 35kHz) bandwidth sound, from thunderous low bass to bat-bothering treble. Quoted sensitivity is 88dB/1W/1m, which is so-so for a big box (many rivals go

An engrossing sound, that is both epic in scale and highly expressive

considerably louder for the same amount of power), but you can still get away with an enthusiastic 50W amplifier. Anything less won't stretch these large power towers.

Although not radically different, the 210 is certainly a little unusual inasmuch as it features the aforementioned transmission line-loaded bass units (two of them), plus twin midrange drivers in a D'Appolito configuration. A T+A Waveguide tweeter takes care of the high frequencies all by itself. Transmission line-loading is a long, specially shaped 'organ pipe' inside the speaker cabinet; it uses a tube-like resonant cavity of a specific length to 'load' the bass driver inside the cabinet in such a way to minimise its acoustical impedance.

These loudspeakers are complex inside, which goes some way to explaining their vast weight. There's an inner casing, which is slotted and bonded under pressure with air-tight chambers for the midrange drivers and tweeter. The pressure chamber

sits right behind the bass units, which are coupled to a long transmission line tube, designed to provide an optimum damping effect. All inner case components are manufactured from different thicknesses of MDF and particle board to minimise resonances, and these are bonded to the 30mm-thick external side panels. Overall finish is superlative, which isn't entirely unexpected for T+A.

The drivers haven't exactly been overlooked either. The woofers, and twin 220mm long-travel bass units, tuned to the transmission line cause most of the vibrations! For modern floorstanders, these are large bass cones, and run in tandem as they can shift almost as much air as your average wardrobe-sized seventies speaker. The cones have stiffening ribs with well-damped surrounds and the drivers have diecast aluminium baskets and massive magnets. They are claimed to give bass as low as 25Hz.

The two 170mm midrange drivers work from 200 to 2,000Hz, and sit above and below the tweeter; the use of this configuration with the tweeter

DETAILS

PRODUCT T+A Criterion TCD 210 S

ORIGIN Germany

TYPE Loudspeaker

WEIGHT 47kg

DIMENSIONS (WxHxD) 1,220 x 300 x 440mm

FEATI IRES

D'Appolito
treble/mid driver
arrangement
2x 220mm
bass drivers
2x 170mm
mid drivers

• 1x 25mm tweeter DISTRIBUTOR

DISTRIBUTOR Avoke

TELEPHONE 07876 246956 WEBSITE ta-hifi.com in the middle is supposed to improve radiation and phase characteristics. Dubbed 'Greycone', the material is air-dried wood fibre and graphite, which is said to produce a stable, well-damped cone. This is slotted and sealed with a special adhesive to further stiffen it, and there's a machined aluminium phase plug. The matching Waveguide tweeter is designed for an even dispersion pattern from 2kHz upwards; it sports a 25mm woven dome - said to be smoother sounding than metal types. The three-way crossover is claimed to use "the best available components". Build and finish is superb.

Being so big – in my largish listening room, this seemed only one size down from a wardrobe - the 210 could present some people with problems setting up. You need them sitting in (at least) an equilateral triangle with either one at least 2m away. This is what T+A specifies as the minimum distance, and I'd suggest at least 50cm on top of that if possible. The pair needs to be a good metre away from the rear wall, too, if not the company says you'll start getting bass reinforcement; 3dB close up to the back wall and 6dB if in corners. Properly placed, the 210 gives an even sound, but despite the handbook's advice you might want to remove the fitted metal grilles; they resonate far too much.

Sound quality

Any 120cm tall floorstander should be pumping out a powerful, large scale sound that extends from the low bass register to the high treble in an even way – and that is precisely what you get with the T+A. The Criterion 210 sounds like it looks, which is to say sophisticated and commanding, and this goes for any type of music

The 30mm-thick external side panels are hand assembled in Germany



Q&AJochen Fabricius T+A speaker designer



DP: Why does the speaker use transmission line-loading?

JF: If done right, TLs have some advantages compared with bass reflex-loaded speakers. Both reduce excursion and damp the speaker resonance, but TLs provide this over a much higher bandwidth, while maintaining a softer roll-off, which puts its bass response near that of a closed cabinet.

Why did you decide to use treated fabric in the tweeter?

Metal dome tweeters usually have a huge resonance, which must be damped by a so-called diffuser plate right in front of the dome. This distorts the wavefront of the speaker and, therefore, the waveguide won't work as good as it does with a soft dome. We use a copper cap on the pole piece to extend high-frequency response and reduce distortion, and ferrofluid in the air gap to improve power handling.

Can you explain what materials are used in the drivers?

The midrange units have an improved formulation of our Greycone seen in the previous Criterion line. The cone is made from air-dried wood fibres mixed with graphite particles, and it is sliced and glued together in a quasi-random manne to prevent resonances and cone break up. And there's more copper in the magnet system, reducing flux-modulation and, therefore, distortion. The bass units use a slightly different version of the same material with more graphite and an embossed structure.

Why is it that a D'Appolito arrangement is used?

It reduces floor and ceiling reflections in the midrange. In combination with the waveguide tweeter this gives a well-behaved dispersion pattern in the vertical and horizontal direction, which is beneficial to both precision of detail and spaciousness. Besides this, it gives a virtual point source, and improves power handling. The combination of a waveguide tweeter together with D'Appolito arrangement is quite unique to our knowledge.



As we've come to expect from T+A, every detail of the Criterion is a work of beauty

HOW IT COMPARES

The 210 Sfaces a wide range of competition that does some things a lot better than, and others a lot worse. Quad's £5.500 ESL-2805 has a wider and more spacious sound with almost supernatural levels of detail, but lacks the sheer bass extension and grunt of the T+A. The same can be said for the £6.500 MartinLogan Ethos. which is altogether more transparent and natural sounding than the T+A, and has decent bass extension too: still. it goes nowhere near as loud and isn't as wideband. Spendor's £7.000 ST is far more of a direct rival, with a big full range sound, but is a little more couth and genteel, lacking guts but adding grace.

you care to play on it. Drop Donald Byrd's Streetlady onto the turntable, and you hear an unusually large and widescreen presentation of this classic BlueNote jazz/funk waxing. Bass is solid and meaty, although it sounds completely different to many other loudspeakers, as there's no obvious 'sweet spot' hanging around 100Hz, to give the middle notes on a bass guitar extra boost. Rather, this speaker is very even down below, and lets you follow the bassline without accenting any particular area of the fretboard. At first it sounds just a little underwhelming, but it has a couthness that many conventionally ported speakers lack. It goes down amazingly low, yet is fast and supple and strong – just as it should be.

I'm happy to hear that the Criterion makes a pretty suave move from low to mid; like its low bass, there's a smoothness and an evenness to it, which shows excellent breeding. The midband is wide and open, and tonally quite smooth. On the Donald Byrd track, I love the delicate flute work; this isn't an easy instrument to render smoothly, but these speakers don't fail. At the same time, snare drums have great bite, and guitars come over with great speed and dexterity. The result is an extremely engaging and enjoyable listen.

Tonally the 210 S has a bright and spry presentation, remaining couth and composed. It doesn't bark out at the listener, etching the music on your

forehead, but it's an extremely detailed and revealing device. For example, Scritti Politti's *Perfect Way* is a bright slice of eighties pop, one with lots of rhythmic stops and starts that are always good at tripping up a big speaker such as this. Yet the T+A handles the song really rather well, making clear its superb bass from the very beginning. As the bass synth noodles up and down the scale, the 210 handles it manfully, pile-driving out large swathes of subsonics without breaking into a sweat. Still,

Overall finish is superlative, which isn't entirely unexpected for T+A

the bass never overpowers the midband, which is a veritable battlefield of percussion and synthesised arpeggios; again it remains smooth and composed, yet it's able to convey the track's powerful dynamic accenting in its entirety. The result is an engrossing sound, that is epic in scale and highly expressive, but still coherent and believable.

Conclusion

Big and powerful with sledgehammer bass, the T+A TCD 210 S is an accomplished all rounder with a sophisticated, yet involving sound. Everything is delivered with ease, but you never forget there's an iron fist underneath that velvet glove. It's a very well balanced big box, so much so that it seems less susceptible to changes of music than many - lots of high end speakers sing with classical for example, but bore with rock. The only criticisms is that in trying to be all things to all men, it isn't quite the best at anything. Rather, it scores very highly across a wide range of virtues - and is duly recommended for precisely this reason •





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YOUR LETTERS & QUESTIONS ANSWERED

THIS MONTH



ED SELLEY

EXPERTISE: REVIEWER
For the best part of 10 years,
Ed was developing and
supporting products from
some of the biggest names in
audio. He enjoys blogging
about his favourite tunes, too.



PATRICK CLEASBY

EXPERTISE: TECH GEEK
Patrick works in a high level
technical support role in the
broadcast industry, when not
fiddling with his networked
music collection and a rapidly
expanding shelf of vinyl LPs.



ANDREW SIMPSON

EXPERTISE: REVIEWER
Andrew's been passionate
about hi-fi since he was a wee
nipper. When not obsessing
over his next upgrade, he can
usually be found under the
bonnet of his '73 MG Midget.



DAVID PRICE

EXPERTISE: REVIEWER
DP has spent much longer
than he'd care to admit
buying and upgrading his
own hi-fi system, not to
mention reviewing thousands
of separates over the years.

Emailusat

letters@hifichoice.co.uk

or write to:

Hi-Fi Choice Letters, AV Tech Media Ltd, Hadlow House, 9 High Street, Green Street Green, Orpington, Kent, BR6 6BG

Your letters

may be edited before publication and we cannot enter into personal correspondence

▶ Planet Earth

As a recent convert to your magazine after reading one of your rivals for years, I read Mr Westley's letter (Issue 374) with interest. I am currently thinking of purchasing an Audiolab 8200CDQ/8200P power amp combination in the next couple of months. Alas, my loudspeaker budget can only stretch to £1,000. Can you recommend a decent floorstanding speaker within that budget?

I am currently looking at Monitor Audio Silver RX6, **Mordaunt Short Aviano 6** and Tannoy DC6T SE (based on reviews and looks at the moment). My musical tastes range from opera, classical, rock, but most importantly 30-plus years of Duran Duran, so they need to do John Taylor's basslines justice! Any help you can give me will be very much appreciated, along with a promise that if my letter is printed I will become a lifelong reader.

Steven Batty

DP: Hello Steven – yes I know, it's pretty hard to admit you're a Duranie, isn't it? I am too, one of the band's few male fans, who loved them for their swooping synths and great tunes. Wasn't eighties music so epic, and such fun? There we go, I've come out now and suddenly life feels just that little bit better!

But I digress, onto the more important question of how best to play the 'Birmingham Beatles', as I call them. Personally, I'd go for the Monitor Audio RX6 if you want a tight, taut, punchy, solid 'rock' sound with a nice wide bandwidth. As budget floorstanders go, they're very good indeed and are pretty hard to beat; you'll find the Tannoys slightly wider and more expansive sounding, but they're less able at the frequency extremes in my view. One leftfield alternative is the Q Acoustics 2050i, which is several hundred pounds cheaper but has a slightly bigger, more 'out of the box' sound than the Monitor Audios, but with better bass than the Tannoys. They're also very efficient, so will go loud for those late night 'new romantic' reunions. The downside is that

the Monitor Audios are more delicate and detailed. Of course, if you can you should go and audition them for yourself – but you'd better hurry because there's a new moon on Monday!

PC: In a previous life DP told me it was just about acceptable to write a Duran Duran singles box set review, but he would draw the line with extreme prejudice if I showed any Spandau Ballet inclinations. 'Nuff said. (Although I recently bought original LP and CD masters of *Journeys To Glory* – oops).

DP: Quite right too! We'll let Patrick off the Spands' first

album – it was cool and they were still *bona fide* New Romantics back then!

ES: Get a room, you two! While I'm not such a stand-up fan of Duran Duran (*Planet Earth* was pretty cool though), I'd plump for the Tannoy over the Monitor

I'm looking for a floorstander to listen to Duran Duran on...

Audio, but that is a personal preference down to the focus and soundstage they can generate – a good hour in a demo room would probably establish your preference.

AS: Is there something I should know? I've been really impressed with some of the Scandinavian speakers hitting our shores in recent years, and if you can, I'd suggest also adding Dali's Ikon 6 MK II to you shortlist. Although it's whisker under your budget, you get a lot of speaker for your hard earned and this model includes Dali's notorious (I'll stop now) hybrid dome/ribbon tweeter module, which should really bring the dynamism of your music to life, although its twin 6.5in bass drivers need plenty of room to breathe. Audiovector's X3s will offer similar levels of energy compared with the Tannoys, allied with more bass, although you may find their midrange less refined overall than the Monitor Audios. We'd be interested to hear which model you find works best for you.







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≥ The thick of it

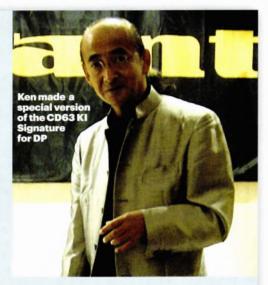
Hi – I did a bit of back digging and learnt that David had been in some collaboration a while back with Marantz's Ken Ishiwata. I remember there were a number in Belgium, Holland and Japan who were "puzzled" by David's involvement, can you tell me more?

It was only recently I became aware of the HFC issue where David penned two articles bigging up both Naim and the LP12 – Do what? David Price now in that camp? Well, I hope he knows what he is doing? I recently read the mag where he group tested turntables. Oh sigh... it is the cart and phono stage that determines sound quality. But in that group test it was a different cart on each turntable and different phono stage, so it was a group test of cartridges!

I know and David knows, it should have been one cart used on each turntable into one phono stage. This is very disappointing. I hope David knows what he is doing?

John Slevin

DP: Hi John. About eight years ago, I spoke to Ken Ishiwata about CD player design, and he explained the importance of selecting the right components in any given circuit. He suggested he could modify my old Marantz 14-bit machine. Sadly, it got damaged in transit, so Ken decided to mod another old Marantz he had knocking around – a CD63 KI Signature. He duly did his stuff, ripping out the guts of the machine and sticking better components and wiring in, and copper plating the chassis. The result was sonic dynamite, and I did a feature about it, which garnered enormous interest. Marantz did a very limited edition of these machines, and it was honorifically christened KI DP because it was I



who Ken made the machine for. No money changed hands, it was a limited number hobbyist project and not an official Marantz machine.

On to your other points. I like Linn and Naim, and have done for a great many years. But my relationship with them is simply as a critic, and I have written some pretty damming reviews of their products. It's just my opinion and is informed by nothing more than my lugholes. I don't have any special allegiance to either and if they do a clunker I will say so.

As for the group test you mention, was it the June 2013 one? If so, I am not quite sure what you're referring to, as I used the same reference Ortofon 2M Red moving magnet and the same phono stage with all of them, in addition to the bundled cartridges. This wasn't possible with the Thorens TD-158, which had a bundled, hardwired cartridge, but was a budget deck.

only a few kHz higher, it sounded noticeably smoother and more open. Likewise, a 24-bit/48kHz will sound smoother, more dynamic and more 'natural' than 16/48 DAT. Ramp up the sampling rate to 24/96 and you're into a new ballpark, where the music just begins to sound a lot more organic and less - dare I say it? - digital. Go up to 24/192 and rather than sound better in 'hi-fi' terms (ie noise, distortion, etc), the music is just more effortless and atmospheric. For me it gets close to the way I enjoy high-quality vinyl, although I am sure many others will disagree.

So, with PCM digital, it's a case of 'the more the merrier'. I really like hi-res, I'm just a bit sore that we had to wait so long for it!

ES: Plain vanilla CD if treated with any degree of respect and skill is able to deliver an audibly transparent performance. Where hi-res scores for me is that in having the greater bandwidth, studios and engineers are more likely to put the effort in to deliver a stunning performance. I have a steadily expanding library of hi-res for this reason, but good CDs (ripped, natch) can still deliver the goods.

PC: I couldn't agree more with DP - I have spent the last ten years extolling the virtues of 'maximum DVD-A type' resolution, and I am overjoyed it is finally here in significant volume. To answer Andrew's question, my feeling is that 24/192 will become the practical standard for some time to come. Streaming and converter products are now prevalently made with this capability. More is possible, but is it necessary? Some of the higher-end Cyrus converters are capable of 32-bit resolution although you will struggle to

≥ Bits and bobs

In digital audio, is the number of bits more important than high sampling frequencies? What are the benefits, subjectively, of both? The reason I ask is that there isn't a lot of hi-res digital media out there to buy, download and/or rip from DVD-A, so I am wondering if it's worth going for anything that's not 24/192, given that it will soon be obsolete?

Andrew Beck

DP: The digital word length (the number of bits) determines the dynamic range of the signal, so a 24-bit system has the ability to store signals with a wider dynamic range more accurately than a 16-bit. This means lower level signals have less distortion.

This generally manifests itself in a smoother, more delicate and

Is it worth buying anything that's not 24/192? It'll soon be obsolete

detailed sound with more atmosphere and depth. The sampling frequency determines the bandwidth of the sound, and the frequency response of the signal is half that of the sampling frequency.

Compact Disc, which has a sampling frequency of 44.1kHz, has a bandwidth of 22.05kHz; a hi-res file running at 192kHz will go right up to 96kHz. Because of the way the digital PCM system works, it is noisy towards the top of its bandwidth, so filtering is needed to cut this out.

This filtering causes phase problems, which is why it's better to have it done way,

way out of the audio band – such as 96kHz. That's the main reason why 192 or 96kHz sampling frequencies are used, not to deliver a vast bandwidth – most of which we can't hear.

In my experience, anything is better than the 16-bit, 44.1kHz sampling frequency of Compact Disc. Indeed, as a one-time DAT user, which ran at 16/48, I could really hear the benefit of its higher sampling frequency. Even though its sampling rate was



LETTERS

find 32-bit material with which to feed them - John Frusciante, late of The Red Hot Chili Peppers has some out there.

Much like sampling rates, bit depths are held back by the limits of what musicians practically use in the studio. Few recordings will require more than 24/96 to accommodate the resolution at which the material was recorded and mastered - 24/192 makes sense for one-time preservation transfers of disintegrating stereo masters. Over time, the growing use of 32-bit floating precision on some recordings may push 32-bit as a delivery format, but we'll see. Let's not speak of DSD, and start forgetting about 16/44.1...

AS: As a general rule, higher-res digital music is likely to sound 'better' for the reasons DP describes, however, as with most things hi-fi related, this sweeping assumption isn't as straightforward as it seems. It has been known for some hi-res music downloads - with a premium price tag - to have originated from 44.1/48kHz recordings, which have then been upsampled, in the same way an audiophile DAC at home operates, rather than originating from remastering the original recordings. So it's always worth doing a bit of research of an album/track's sound quality to make sure the native resolution of the source material is what it says on the tin.

While I always try to source hi-res downloads (if vinyl isn't available), I'm of the opinion that the quality of the recording and mastering is equally important as the formats on offer. There are some great sounding 16/44.1 recordings around, and likewise some not so good 24/192 downloads on offer. But in general, if a record company has gone to the trouble of offering a new recording in

Denon's PMA-720AE will make a great partner for Q Acoustics' 2050i speakers, reckons Ed hi-res, you can expect it went to similar efforts in the studio to get the recording right.

The studio master of Emily Barker's latest album is a great example of how a quality recording combined with a hi-res format can really get the best out of digital audio.

Will the Sonos connect:amp work with the Q Acoustic 2050i?

≥ iSay

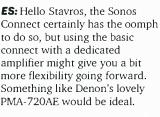
I read your review about the Q Acoustic 2050i loudspeakers, and I'm looking for a floorstander at this price so am really interested. I stream my music through my iPod, so I really fancy the Sonos connect:amp. I mainly listen to live music/performances. Will these work together? Stavros Nicolaou to do so, but using the basic connect with a dedicated amplifier might give you a bit more flexibility going forward. Something like Denon's lovely

Latin snazz

I have a pair of Dynaudio Contour 1.8 MKII loudspeakers, which I love. Today I decided to change my speaker cables and need your help. Which sounds better the Nordost Blue Heaven, Cardas Crosslink or van den Hul CS122? Thanks for your help with the best wishes from Brazil!

Rusel Barroso

DP: Blimey Rusel, what a question! I guess you mean which sounds better with my system', rather than 'which sounds better - period'? Loudspeaker cables are, of course, very equipmentdependent, and they're one of





Surround sound from a Mac is possible. but it is very fiddly to do

recommendations? Owen Morgan

ES: The Classe is a good decoder so I agree that a 'streaming transport' might be the way forward. These are a little thin on the ground (Cyrus and Bryston are the only ones that spring to mind). It would also be possible to use a more affordable streamer in this manner though. Pioneer's N-50 would be a fine candidate for this.

digitally outputs to the

Classe. What are your

thoughts and

PC: There are a few factors here to consider. The choice of NAS drive is key. You need to consider what the volume of your collection is going to be when converted to the codec of your choice - and find a ripping tool/strategy that suits your quality criteria. Not all rippers are equal and likewise the music serving software that runs on the NAS can vary in fidelity.

The Classe is actually 'only' 24/192 capable on its digital inputs (the internal processing is 64-bit dual float). Thus if you want your music connection to be networked rather than direct connect, the ideal way to feed your Classe is the likes of a Cyrus Stream X version 2, which is 24/192 capable.



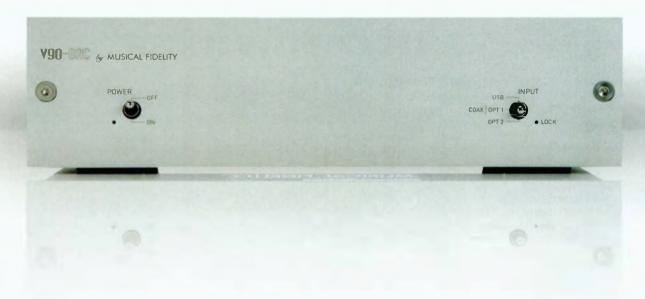




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the ways you fine-tune the final sound, so it's a bit reductive to talk about them in black and white terms. Sadly you haven't told me what your amplifier is, so I'm going to have to generalise. The Nordost is quite a bright, light, sparkly sort of cable with oodles of detail and insight. The vdH is a real smoothie, sweet and open and beguilingly musical. The Cardas is somewhere inbetween, with a clean, crisp, engaging sound and lots of detail. My hunch is that - with a neutral source amp you want something between the Nordost and the Cardas.

AS: I can understand why you're a fan of the Contour MKII loudspeaker, I almost bought a pair last month, but was pipped at the post on a certain auction site, alas it was not to be.

From memory the Dynaudios present a (claimed) 40hm load and 86dB sensitivity, so it's also worth considering the resistance qualities of your cable shortlist, to aid your amp driving them most efficiently (although this also depends on which amplifier you have, as some work better with resistant cables). Well within your budget are Van Damme's UP-LCOFC cables (van-damme.com/25.html) and I've had great results from the 6mm variant when driving more challenging loads. This cable may lack the detail of more costly rivals, but it's well worth considering at the price.





Letter of the month

PRIZE WINNER

Method-ology

Dealer System features are very interesting and absorbing, but always ignore the substantial cost of interconnect and speaker cables. Might I suggest that each dealer also adds an allowance for these? I will ignore the mains filtering, system supports etc. My point is that each system has substantial overheads in ancillary items that budding and existing audiophiles should be aware of

Secondly – individual reviews. Again these are excellent and greatly appreciated, but how can equipment costing £10,000 gain the same number of stars as equipment costing £400? I can accept that they achieve these stars 'within their price range' but this makes the reviews very subjective and less useful for someone wishing to buy or upgrade. Unbiased review is the strong point of *Hi Fi Choice* and, to make your lives really difficult, might I suggest that you provide two star charts (I); one against a similar price range and the second against a reference?

Richard Vass

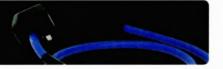
DP: Hi Richard – think of the *Dealer System* features as an impressionistic look at three systems and their respective differences. Because of the difficulty in covering just one system in four pages to any depth, it is necessary to be very concise and to the point when doing three! Factor in that the choice of cables and supports has a subtle and rather personal effect on the final sound, and it's better that you sort this out with the dealer yourself, through listening – that's what they're there for.

LD: *Hi-Fi Choice* is focused on how well products perform at their respective price points, which is why we rate things as we do. The current format has worked well for this magazine for the best part of 40 years, can't say fairer than that!

ES: As the writer of *Dealer Systems*, the decision to focus on the electronics isn't solely down to space. In the case of the second and third systems in particular, these would generally be considered upgrades rather than first steps and for that reason, the ancillaries could well be recycled from your existing system – my equipment rack for example is 13 years old and has seen a fair few electronics pass through it. Some dealers do complete systems though, inclusive of stands and cabling.

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The teens are a-changing

There's no doubt things are different now to the way they were, but does that mean that teenagers don't listen to music any more, asks the original teeny bopper **Lee Dunkley**

was in my early teens when I discovered my dad's record collection stashed away in an old suitcase in my grandparents' attic. With a flick of the latch to release the tired old suitcase lid I was hooked, and pretty much instantly transformed from a stereotypically bored late seventies teenager to a reclusive one hidden away in my room absorbed with my newly discovered black-gold treasure trove.

Listening and discovering music back then was a solitary experience best enjoyed in the comfort of my own room where I could listen uninterrupted for hours on end to a mono portable record player discovering old Motown classics for the first time and analysing the dog-eared covers and sleeve notes and planning which of my vinyl bunce to play next. That's what you did as a teenager in the late seventies and early eighties.

Admittedly it was rather an antisocial past time that didn't equip me with the necessary skills to integrate myself with visiting aunts and uncles sitting around in the lounge, but like many teenagers of the time it got me out from under their feet and listening to music was sanctuary away from the daily trials and tribulations that only a teenager can ever appreciate. I'd imagine my experience is one that many *Hi-Fi Choice* readers can relate to and a fairly common one among teenagers the world over.

Listening to music as a teenager in the seventies was a solitary experience

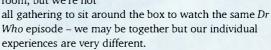
So what about now? Do teenagers still sit in their bedrooms listening to whatever the current equivalent of The Smith's is or

are they too busy playing Xbox, happy slapping one another or mugging old ladies?

Advancements in technology seem to suggest that the answer is a resounding no. With social media, computer gaming and mobile phones, young people today have so many more distractions than I did when I was locked away with my turntable. But are things really so different?

When it comes to people's listening habits, it's difficult to point to any cold, hard evidence, but one thing we can look at that isn't a million miles away is television. If you look at current viewing figures compared with what they were in the seventies, it would appear that TV viewing has changed immeasurably. Gone are the days of 25-million people sitting down to watch Morecambe and Wise. There are still shows that bring the family together, but not in such great numbers. What is surprising is that the traditional lounge where the family sits down to watch TV together has actually become a more sociable place than

ever before. The move to a more sociable home environment is in stark contrast to that of the previous 30, 40 or even 50 years and is entirely due to the way in which we now use our tablet and smartphone devices. You see, we may all be sitting in the same room, but we're not





Has the way young people listen to music really changed that much?

Getting smarter

Nearly one in four households now own a tablet or a smartphone device, and this number has doubled within the past year. Second room TV sets have fallen significantly in our homes and 41 percent of households own just a single TV compared with 35 percent of households with just a single TV a decade ago. But rather than simply watching the box, we've become adept at multi-tasking and embark on social media conversations, texting or instant messaging while watching TV. This behaviour has been coined media meshing, where the internet is used to enhance the viewing experience by reading a news blog about the BBC Proms or commenting on a Twitter feed about *The Apprentice* as it's being broadcast. According to Ofcom figures, half of UK adults are now multi-taskers while sat in front of the gogglebox.

So what does all of this tell us about music and whether or not today's teenager is sitting alone in their room listening to their tunes? On the face of it not a lot, but we can make some assumptions. There are more ways to get music than ever before, there are more ways to listen to it too, whether in your bedroom on a hi-fi, on the bus on a mobile phone or at the dinner table via a tablet. And with all the social media activity that's happening while watching TV, you can bet your bottom dollar that the same thing is happening with music. So teenagers can talk to friends about tunes as they listen to them, discover other fans with similar tastes across the other side of the world or even interact with the artist themselves. The nearest I could get to that was writing a letter and hoping that Morrissey or whoever might reply. Times have definitely changed for the better, we've never had it so good •



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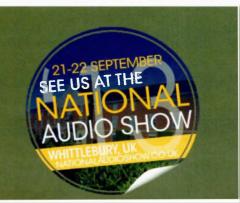
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Electric shady land

Mastering studios are strange, dark places where professionals and audiophiles are never supposed to meet, says **David Price**, so where does that leave Pete Hutchison?

ollowing my musings last month about what constitutes sonic greatness, I was interested to talk to Pete Hutchison at the Electric Recording Company, in preparation for a feature we're running next month. He's an interesting bloke, because he's one of those select band of recording professionals who other studio bods would call an 'audiophile'.

This marks him out from the great majority of 'pros', who can't be doing with anything they can't measure. The impression Pete gave me is that anyone branded with this label in the recording industry is regarded with no small degree of suspicion. The general feeling is that most meat-eating, Motörhead T-shirt wearing engineers think that anyone who bothers with the fine art of hi-fi tweakery is some sort of airy-fairy holier-than-thou sort, who you wouldn't want to share a beer with.

Ironically, Pete doesn't call himself an audiophile either. When pressed, he confessed he was "about five percent audiophile, ninety five percent purist", which threw an additional idea into the mix. On one hand you have the knuckle-dragging tendency in recording, where you go for the lowest noise and the widest dynamic range possible and that's the job done. On the other, you have the audiophile who will listen to 17 different pressings cut on the same kit at different times of the day and select their

Pete's records don't spend months qualify for the title audiophile - they're better than that

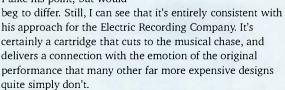
five favourite, then agonising over which to release. Finally, you have the 'purist' who is none of the above.

Pete is trying to position himself as precisely this - which is to say he wants, when repressing a classic recording - to make it pretty much how it sounded. It's about recreating the original record, warts 'n' all, so people can buy it and hear it as others did when it first came out. Where conventional remastering engineers would slap it through whatever happens to be in their studio and audiophile types spend ages tweaking whatever they've got to make it sound sweeter or more detailed, Pete goes his own way.

I expected to get deep into conversation with Pete about his favourite audiophile vinyl record labels, and hear long lists of superb and/or tragic attempts at selling old music on new vinyl. Instead, he told me he hadn't heard many, and instead spent his time collecting first pressings of whatever music he wanted to play. Yes, he's modded his system at home - and his studio reference system isn't too shabby, but he seems to be a great believer in recreating the music performance in an authentic way, rather than a

sonically pleasing - from an audiophile standpoint - one.

His choice of pickup cartridge was fascinating to me. In the past, I have irked many forum folk for confessing I don't like the Denon DL103 moving coil. I find it rather coloured, screechy and uncouth, but Pete loves it, and indeed jettisoned his once beloved Lyra because, he reckons, the Denon does something that no other cartridge can. I take his point, but would





Pete Hutchison: perfectionist and purist, but not an audiophile

The sound of music

The music I heard coming out of Pete's studio system (fronted by a Garrard 301/Linn Ittok/Denon DL103), issuing forth from his beautiful vinyl reissues, was superlative. Every pressing he played was quite 'lo-fi'; they were after all very early recordings of seminal musical performances, where the equipment simply wasn't the wide bandwidth, high dynamic range sort of kit you'd get today, or even 30 years back. But still it sounded sublime, with the phrasing and delicacy of the performances absolutely breathtaking. Everything Pete has done in the studio has been set up to capture precisely this, and it shows. His records don't qualify for the title 'audiophile' in the conventional sense - they're better than that.

Pete's contemporaries - some of whom likely think he's a namby pamby, shandy drinking audiophile because of the attention to detail he pays above and beyond the standard practice of applying noise reduction and adding loads of EQ to beef up the sound - probably wouldn't understand. Audiophiles in the worst hi-fi sense of the word won't either; his records certainly do not sound as 'hi-fi' as The Eagles' Hell Freezes Over or the latest Norah Jones. Instead, Pete's carved out a very special niche for himself, as a sort of sympathetic 'curator' of classic recordings. In simple terms, this means he doesn't bugger around with them. So he'll likely never be understood in studio or hi-fi land - it will never catch on, I tell you!





The heart and soul of music

Precision; a new luxury loudspeaker range from Tannoy, built to deliver music as it was meant to be heard. With audiophile features such as double-magnet drivers, hand-built crossovers and mass-load cabinet tuning, Precision has music at its heart and soul. Across two stunning floorstanding models, a compact stand-mount and matching centre channel speaker, Precision delivers breath-taking detail and musical dynamics. Built around a brand new 6 inch (150 mm) version of Tannoy's world renowned Dual Concentric™ driver, the contemporary cabinets boast premium fit and finish in a choice of colours. Powerful, passionate and incredibly precise, Precision gets to the heart and soul of music like no other speaker in its class.



Alive and kicking

A misty-eyed **Patrick Cleasby** wistfully looks back on one of his first audio loves – the Cyrus One, but will he ever rekindle that old spark or is the magic gone?

was given some heart recently when a colleague described how his son had gone off to university and against all expectation come back after his first term enthused with the quest for the true hi-fi sound that we all know about. Not only because it might mean there is some glimmer of hope for the audio standards of our offspring, but also because it stirred memories of my own experience.

It didn't start out as a deliberate plan at the time, but the lure of compact disc acquisition was really an inevitability once my neighbour had played me Peter Gabriel 4 on his Marantz CD-73. I had worked in a Little Chef all through the summer of 1985, escaped to Durham, and courtesy of the local dealer blew all the proceeds on a compact system suitable for a college room. It was made up of the rather ferocious combination of Mission 70 Mk IIs and a Cyrus One, somewhat blunted by a Yamaha CD X2. For the remainder of that first year I proceeded to deafen everyone in the vicinity with Sledgehammer, Alive And Kicking and Misplaced Childhood - to anyone whose revision was ruined I can only apologise.

I am constantly reminded of this time - although the flaky Yamaha was cast off to a bandmate mere years later, and the speakers were offloaded to my brother when I went to live in France for a bit (he's still using them 23

Somehow I predict that I may not be able to force myself to part with it occasionally abused

years later) - the Cyrus One in its original box never left me. It has kept going for 28 years, by having music

computers and drum machines stuck through it, and frequently discarded for the latest Pro-logic or Dolby Digital AV nonsense, (it may even have suffered the ignominy of having been run with a Mordaunt Short MS-1 Pro-logic decoder piggybacking on it!). The ageing amp has most recently found service when listening to these new fangled LP things, with its capable MC phono stage.

Somehow in the intervening years I never really kept track of the brand. While friends followed me into fandom, buying themselves Cyrus Twos and PSXs, which are also known to be still running, I let video and surround sound distract me. I did, however, always retain the vague feeling that I should catch up with where it had got to.

With all the recent hullabaloo about the Cyrus 30th anniversary, and the arrival of its streaming app, I recently had the opportunity to experience its current streamers, and in passing I found out that it was running a Twitter competition - tweet your serial number of a still extant piece



of old Cyrus kit, and the earliest number would win a free service including component upgrades. I found out just a day too late to enter, but just for laughs I filled in my details after the fact, and was told that I would indeed have won!

So we negotiated a deal whereby for a nominal sum my venerable Cyrus One could be spruced up, too. Away it went, in a non-vintage Cyrus box, for a spell of rest and relaxation, returning a week or two later, looking from the outside much as it had done before. Unfortunately, the Cyrus programme does not extend to all of the original casework, and in packaging it up I had noticed that one of the screws securing the front plate to the chassis appeared loose. As it remained so on return I was able to do something that had never previously occurred to me, and I took a look inside.

Sign of the times

The insides look as careworn as the still distressed knobs and worn power switch, (for some reason the photo on the competition winner web page is of my machine - you can see the knob and button wear and the misaligned side!), but there is a fascination in looking at the packed and jumbled contents of what had always been treated as a monolithic slab by me to this point - the chunky transformer and all those (presumably) refreshed capacitors. I contrived to get the somewhat Heath-Robinson side screw arrangement almost working again, and closed it up once more. In case you're wondering, it now sounds great post service!

As someone given in my own field to rescuing antique Macs from Oxfam and breathing as much life as possible into them, I appreciate the attempts of Cyrus to be green and wherever possible prevent its analogue (and digital) tech from falling into obsolescence and landfill. Just as I am given to inflicting those old Macs on my offspring, I should be tempted to foist the Cyrus off on my drumming son when he hopefully goes off to some jazz course or other in a year's time. Somehow I predict that I may not be able to force myself to part with it •



slightly beat up, but Patrick won't part with his Cyrus one

It may be old and



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Busman's holiday

Forget Hotel California David Vivian has discovered the B&B of music lovers' dreams the sort of place you can check out any time you like, but you'll never want to leave...

hope we didn't disturb you last night." It's the sort of line that breaks the ice over breakfast at most B&Bs. Couples squeezed into adjacent rooms with thin walls inevitably run the noise pollution gauntlet: TV turned up too loud, animated conversations, creaking beds. All part of the 'fun'.

"We slept like logs - didn't hear a thing." Usually it's a lie perpetuated by the tradition of British politeness. But not this time. And in the light of what I'm about to tell you, that's remarkable.

There isn't much that's typical about Llwyn Helyg, the B&B run by Caron and Fiona Jones on the outskirts of Llanarthne, a small community about seven miles east of Carmarthen in west Wales. Apart from the fact you can sleep there and have breakfast the next morning, it has as much in common with the cherished image of the B&B as a star fish does with Alpha Proxima. Guest house doesn't get us much closer. A substantial country pile, then? Warmer. One built from scratch with 10 years of blood, sweat and tears by a couple so into music and hi-fi that it has a dedicated listening room the size of a small church housing an epic US-flavoured high-end system, including by far the largest pair of subwoofers I've ever seen.

The couple who enquired after our gone-midnight wellbeing? They'd checked in that afternoon and as guests

Caron and Fiona envisage their place listening room like becoming a Mecca for music lovers

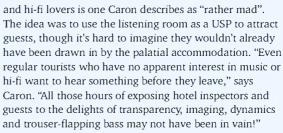
always are, had been drawn to the moths to a flame. They came across a pristine 180g Japanese pressing

of arguably Emerson, Lake & Palmer's finest and loudest moment: Brain Salad Surgery. As a late night introduction to 'The System', it could hardly have been more appropriate. When Caron asked "Would you like it loud?" they said "Yes please". No wonder they were concerned, but not even the thunderous finale to Jerusalem reached our ears – testament to the sound insulating properties of marble, which features throughout the property.

Caron and Fiona's hi-fi journey began in 1979. "I vividly remember my mother's horrified reaction when Fiona and I spent all the money saved for carpets and curtains on a Linn Sondek/Ittok/Asak with Meridian 101/105 amps and chrome-capped Gale 401A Speakers," recalls Caron. It was the start of something big in every sense of the word. "In the mid eighties we discovered the delights of 'American High End' and spent a very enjoyable 15 or so years with tri-amped active Apogee Divas (with the rare Sub10 subwoofers) driven by six Krell Reference KRS200

monoblock power amps and their partnering preamp. The Basis turntable and Theta CD transport and DAC front end is still 'in situ', but the rest of the system has changed."

The decision, in 1996, to build what is effectively a country house B&B for music



Seemingly not. Caron and Fiona envisage their place becoming something of a staycation Mecca for music lovers and have started to hold themed music evenings promoting the idea of the shared listening experience in an age of insular gratification fuelled by iPods.



'The System', as it stands, should do the trick. It comprises a Basis Debut Gold Standard turntable with SME V arm and Koetsu 80th Anniversary cartridge; a Theta Data Basic transport and matching Pro Gen 5 DAC; a Krell Reference KRS preamp; a pair of pure Class A Krell Reference KRS200 power amps driving Wilson Audio X-1 GrandSlamms speakers and a pair of staggeringly large and heavy Wilson Audio XS passive subwoofers powered by a Krell FPB700 power amp.

Like all complex high-end systems, getting the components to cooperate as a synergistic whole isn't the work of a few hours and, from an 'optimum set-up' standpoint, let alone a 'fine-tuning' one, it's in its infancy. The gargantuan subs aren't running yet, awaiting the tender loving care of Absolute Sounds' set-up guru Pedro Jorge to ignite their massive sub-bass potential. The room is a little too 'live' as well, though Fiona is on the case with several pairs of heavy drapes to dress the windows. But even as it stands, the scale and dynamics are awesome and surely enough to fire the passion of any music lover •



Could this be the perfect holiday home for serious music lovers?



Minitest

BLUETOOTH SPEAKERS £37-£180

Neville Roberts looks at four ways to beef up the sound from your smartphone or portable music player using Bluetooth

GOgroove

BlueSYNC MC Wireless Bluetooth Home Speaker System

PRICE: £37 WEBSITE accessorypower.co.uk

THE BLUESYNC MC Home Speaker System features an advanced SonusMax design and utilises Bluetooth v2.1+EDR with A2DP. It has two 2.5in, 3W full-range drivers that are in a single enclosure, featuring a rear-ported bass chamber. The internal amplifiers deliver a claimed 6W RMS per channel. There is an auxiliary input

for devices that do not have Bluetooth and a 3.5mm to 3.5mm interconnect lead is supplied, along with a UK mains adapter.

The volume can be controlled from the source device or via a rocker switch on the front panel. There are two other front panel buttons – one to use for pairing the device (which is incredibly easy in practice) and the

other for playing or pausing the music on the media player. A master on/off slider switch is on the rear of the speaker unit.

Although the sound is quite constrained in comparison with the other units on test here, I consider that the BlueSYNC MC delivers a more than acceptable sound, given the extremely low price of the device.

To get the best from the unit, it's a good idea to position it near a wall and at a similar height to your ears. I also find that I need to operate it with the volume controls at near maximum in order to get the sound at a reasonable level for a small room.



VERDICT

If you are looking for an absolute bargain Bluetooth speaker, then this will be a great choice, despite the rather limited volume levels



AVES Digital

Diamond Bluetooth speaker

PRICE: £130 CONTACT: 01908 319718 WEBSITE: avesdigital.co.uk

THE DIAMOND COMES in high gloss red, white and black or in a wood finish. Each channel is powered by a 15W RMS amplifier and drives a 3in, full range speaker and a 1.5in tweeter. The drivers are housed in a bass reflex enclosure and the bass ports exit to the rear. There's also a very useful remote control that operates a number of facilities.

The Diamond's amplifier includes a number of predefined equalisation settings. Apart from 'flat' (which turns off any of the equalisation presets), there are settings for rock, pop, classical or jazz. There is also an X-bass setting to enhance the performance at lower frequencies. All these settings are made using the remote control.

My first impressions are very good. The sound is very well balanced, full and detailed. The stereo imaging is surprisingly good from the single unit, which is clearly down to the use of separately ported enclosures within the unit for the left and right channels.



Vocals are well articulated and appropriately positioned within the soundstage offered by the Diamond.

I experiment with the various equalisation settings and, as expected, find that the best setting is with them all turned off!

The Diamond is at home with a wide range of musical tastes. It certainly elevates the audio from a humble smartphone into something that can fill a room with a pleasing sound.

VERDICT

A great-sounding unit that has a remote control and is very easy to use. The preset EQs are best avoided, but it's still well worth an audition





Cambridge Audio

Minx Go Bluetooth Speaker

PRICE: £100 CONTACT: 0333 9000093 WERSITE: richersounds.com

THE MINX GO contains an array of five premium-quality drive units inside. Two drivers are used for each of the left and right channels and the fifth is an Active Bass Radiator that is neatly integrated into the rear panel. There's a built-in intelligent lithium-ion rechargeable battery that, once charged, is good for up to 18 hours of continuous playback.

The speaker is controlled using three buttons on the top of the unit. Two are used for the volume and the centre button doubles up as an on/off control and for pairing with a player.

When I pair it with an Android phone, it connects immediately. However, when I try to do the same with a Sony Walkman, the Walkman asks for a passcode. As with

several of the other Bluetooth speakers that are reviewed here, no mention is made of a passcode in the instructions, so I guess at '0000', which is clearly correct as it then connects successfully.

When connected to the mains, the Minx Go can be used to charge up your tablet or phone thanks to its built-in USB power port. It also has a 3.5mm socket for direct connection of an analogue device, such as an MP3 player that does not support Bluetooth connectivity.

The sound quality from this neat little unit is full and vibrant. The speaker has a very good low frequency response, thanks to the bass radiator. All in all, this is a high-quality speaker that offers portability without compromising audio reproduction.





VERDICT

Excellent value for money, portable unit with a built-in rechargeable battery that sounds full and vibrant with plenty of bass response



Damson

Oyster Wireless Speaker

PRICE: £180 WEBS/TE: uk.damsonaudio.com

THE OYSTER CONTAINS a pair of 2in front-facing 10W midrange drivers, two side-firing 1.5in tweeters and a rear passive radiator subwoofer, which are aimed at delivering power, dynamics and clarity. It has a built-in lithium-ion rechargeable battery that will deliver 12 hours of continuous wireless music from a single charge. The unit is supplied with a carrying case, a mains power unit/charger and a 3.5mm to 3.5mm interconnect lead.

Under the hood, the Oyster employs digital signal processing to power the driver array to produce (what the maker claims is) an impressive sound. Another very useful feature is the ability to control some of the phone functions when the Oyster is paired with a Bluetooth handset. For example, one of the buttons on the top can be used to accept an incoming call. Furthermore, the speaker has a built-in microphone which can be used for hands-free calls – a really excellent facility.



After hitting the play button on the Walkman, I am greeted with a very impressive sound indeed. The Oyster's 'Wave Field Synthesis 3D Sound' processing creates a believable sound stage for such a small and portable unit. The top end is clear and clean and stereo imaging is great. The bass response, although extended, is not overpowering. In my opinion, it lives up to its claims and is well worth its asking price.

VERDICT

The Oyster is certainly a little pearl in the Damson range and has a super sound quality for a unit of its diminutive proportions



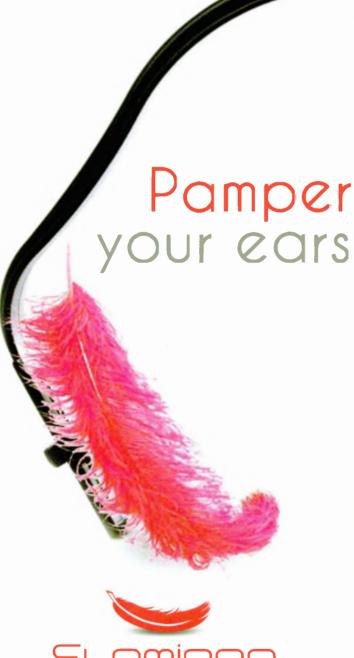


The tiny amplifiers in portable devices like smartphones and tablets are only just powerful enough to drive a small pair of headphones. If you want something more, you have to resort to powered loudspeakers that have their own built-in amplifier. One elegant solution is to use a Bluetooth-enabled speaker since that enables a completely wireless connection to your

music source. All you need to do is pair the Bluetooth loudspeaker with your MP3 player and you're ready to listen. Then, as long as you are within a distance of about 10m from the loudspeakers, you can hold your player in your hand to select tracks etc, and fill the room with music without any wires trailing between the two devices.

The four devices reviewed here can work with a wide variety of Bluetooth sources such as MP3 players, smartphones, tablet PCs and laptops.

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Van den Hul The Wave/ CS-122 Hybrid £310



From Holland comes this long-established cable specialist, with an impressive pairing

DETAILS

Cable loom

Netherlands

Interconnect/ speaker cable

- Interconnect:
- silver-plated copper with Hulliflex jacket Speaker cable: silver-plated coppe and carbon hybrid speaker cable with Hulliflex jacket
- Prices: interconnect £130/1m, speaker cable £20 per metre unterminated

Flamingo Audio

07833.955014

vandenhul.com

rom a company that has made itself a great name for the fine moving coil cartridges it makes, comes a vast range of interconnects and speaker cables. The Wave is towards the more affordable end of this, and is another silver-plated, copper cable featuring a "massive" 0.9mm central conductor of oxygen-free copper. A specially foamed dielectric insulation material is said to minimise high frequency signal attenuation. The outer and inner layer are made of the same material as the central conductor, which is described as a "triple shield" that is said to aid interference suppression. As with all van den Hul cables, it is covered in the company's own 'Hulliflex' cable jacket, which is claimed to be both environmentally friendly and contain no halogens.

The CS-122 Hybrid is an updated version of one of vdH's classic speaker cables, and sports two conductors made of 147 strands of 0.16mm diameter, high-purity, matched-crystal oxygen-free copper with a very dense pure-silver coating, alongside a carbon saturated layer that is said to

improve the sound. The cable jacket is also made of Hulliflex and is described as "a very attractive matt cream colour". During the debrief one of our panelists counters: "it looks like something you see in a hospital"!

Sound quality

From the opening bars of the Beethoven piece, it is obvious that what we are dealing with here is special. For the first time in the test, the sound hangs back from the speakers and dissolves into the room, rather than appearing to come from two points in space - which is what happens to a greater or lesser extent with the other looms. Indeed, the transparency of these cables is superb, but it isn't transparency at the expense of musicality, as the vdH loom also has a wonderfully mellifluous quality to it that sees the music ebbing and flowing in a seductive and arresting manner.

The Paul Simon track is proof positive of the way these cables are able to let the singer's real intentions flood out - every vocal inflection is carried beautifully, giving a mesmeric quality to the music. Sure, all the detail is there, but the bigger picture isn't lost in the process of rendering it.

The first track is startlingly different to most of the other cable looms, in the way the decay on the voice seems to hang on, rather than 'falling off a cliff' with most of the others. The vocals are expressive and dynamic. and this is set over a backing that suddenly takes on an urgent, snappy quality to it - when previously the musicians seem to just be going through the motions. It is amazing how the same beats sound so different, as if they've been set free.

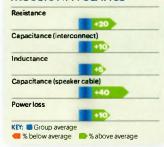
Soundstage width isn't as good as some here though; this is where the

ON TEST

In common with the Atlas Asymmetric interconnect, vdH's The Wave is also a 75ohm coaxial type and so lends itself to both 'analogue' and 'digital' (S/PDIF) duties. This common geometry is reflected in the similarly low inductance and capacitance of the two interconnects although vdH's greater conductor area lends it a very slightly lower 45mohm/m loop resistance

VdH's partnering CS-122 speaker cable, now in 'Hybrid' quise with mixed metal and carbon conductors is a very different beast from the original CS-122 that I tested for Hi-Fi Choice over 21 years ago. The spaced, figureof-eight geometry means the 1.0µm/m series inductance is unchanged, but the improved dielectric means capacitance is half what it was at just 17pF/m. Resistance has also been cut by a factor of nearly 3x at 11.4mohm/m, further improving the achievable amp/speaker damping factor. PM

RESULTS AT A GLANCE



vdH falls slightly short; it isn't constrained or shut in, just not quite as expansive as - say - the Tellurium Q. That said, depth perspective is brilliant, "The first cable I'm hearing with front-to-back dimensionality," says one panelist. Tonally it is pretty even - maybe just a touch on the dark and velvety side, but certainly not as sepia-tinged as the Tellurium Q.

The overall effect is of an absolutely stellar cable combination and one that's an essential audition for anyone that's in the market for such a thing. The great thing is that it's not really all that characterful, it's just very unobtrusive and lets the music's true flavour come flooding out •

Choice

OUR VERDICT

D QUALITY *** VALUE FOR MONEY LIKE: Very musical engaging sound; open and detailed

cable loom, one that's an essential audition

DISLIKE: Slightly constrained stage **** width BUILD QUALITY WE SAY: Superb value ****

FEATURES ***





ONE FORALL

David Price remembers one of the most popular British integrated amplifiers ever – Audiolab's evergreen 8000A

ight time, right place - that pretty much sums up the Audiolab 8000A. Picture the scene, it is 1983, and London's Tottenham Court Road is awash with big, bulky, Japanese amps of the sort that dominated the seventies hi-fi scene. Robustly built and with vast expanses of fancy brushed aluminium across their fascias, sadly few sounded up to much. Then there was 'the Brit pack'. Discerning buyers who'd grown out of the bright lights and flashing power meters of the Japanese designs, had the likes of Naim, Exposure, Nytech, Myst, Onix, NVA and Inca Tech aiming products directly at them. Trouble was, although they sounded great, build quality could be iffy and the styling an afterthought.

There were many eighties buyers for whom British amplifiers were just a touch too minimalist. Some didn't even have a front-mounted power switch, let alone a balance control, tone controls or tape monitor. A gap in the market began to open up for a product that would offer the best of both worlds – the reliability and flexibility of the Japanese amps with the fidelity of the Brit pack. Enter Audiolab's 8000A. Here we had a small British company launching a remarkably well-rounded and mature product; it was almost as if it was the 'mark 2' or 'mark 3' version, where all the bugs of its predecessors had been ironed out. Yet the 8000A was the company's first – and as it would turn out to be, most successful – product.

From humble beginnings

The brainchild of physicist Philip Swift and mechanical engineer Derek Scotland, the company was started "in the bedroom of my house in Cambridge, in autumn 1982", says Swift. They quit their day jobs as directors of Lentek Audio to make "a very high performance product at a very affordable price, one which was also practical and reliable". And they did – the 8000A was an extremely refined design with useful, facilities and plenty of power, plus a sound

that comfortably beat the Japanese. "We created a differential preamplifier circuit topology, which gave a very linear, low distortion, very quiet design; a very wide bandwidth power amplifier with low feedback". Swift told *Hi-Fi Choice*.

Launched in October 1983, the first Audiolab was a straightforward, no-nonsense product. It appeared in a polite gunmetal grey colour. It was made from sturdy, but not excessively heavy sheet steel and had a welter of facilities on its fascia, but again unlike the Japanese they were all useful. "It was lavish relative to those British minimalist products, but ours still had nothing superfluous", says Philip Swift. There were source and record selectors, a good number of line inputs (when on some Brit rivals you were lucky if you got more than two), volume, balance and tone controls, plus tone defeat, too. Great care was taken with the latter, which Swift says are more like 'tilt' controls than standard tone ones - they have a gentle action that works close to their

turnover frequencies, rather than spraying across large parts of the audio band. The knobs looked cool, worked smoothly and the 8000 had a general air of precision about it that just wasn't possible from some of its 'cottage industry' competition.

Around the back, there was a plethora of inputs – Audiolab boasted that its was the first ever amplifier to have a bespoke 'CD' input, complete

Sonics sounded great and roundly beat all the showy Japanese designs

with the correct sensitivity. Another plus was that they were all RCA phono sockets, when many Brit rivals like Naim and Myst were using DINs. There was also an excellent, switchable MM/MC phono input, which usefully had a set of RCA phono sockets for each, so you could effectively plug two turntables into it and switch between them. Decent speaker binding posts offered a choice of bare wire or banana plugs, unlike the strange arrangements that some rivals featured. The preamp and power amplifier sections were separable, giving a wonderfully simple upgrade path, too. All in all, it was impossible to criticise the 8000's connectivity and facilities; they were light years ahead of many rivals, and it was all laid out in a wonderfully simple way. 'A lot of effort went into the design", says Swift, and it shows.

Power to the people

There was one thing that struck you when you turned on your shiny new Audiolab – its power output, which was a claimed 50W RMS per channel. "This didn't change 'on paper', but the actual power output increased over

the years as we improved the product, and it was always capable of virtually doubling this into 40hms and could drive a 20hm load", says Swift. At a time when Naim's Nait struggled to get into double figures, this made the 8000A a veritable powerhouse. Lest we forget, just a decade earlier, this sort of wattage would have been reserved for high-end products. Its ability to go loud easily, and drive pretty hard loads and volumes over long periods of time without going up in

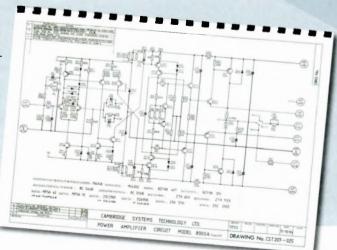
smoke, set it apart from many of its British rivals.

Still, the early Audiolabs didn't quite get straight As for sonics; they sounded good, but not great. The 8000A roundly beat the showy Japanese designs - sounding smoother and more couth - but you'd never put it ahead of the likes of an Inca Tech Claymore in its ability to make music in a natural, easy way. Rather the amp was a little cerebral, especially the early ones. Its tonality was remarked upon, as it sounded a tad 'grey' and homogenous; it would struggle to illuminate the different tonal footprints of say, one recording studio compared with another. And it didn't play music as smoothly as its rivals either - an early Naim Nait, with a fraction of the output power, could run rings around it in terms of making the music fun and fluid.

All these criticisms began to be addressed from day one; every "24 months", Audiolab steadily and subtly tweaked the amp to make it a better performer. In the mid eighties, its colour went to black and some useful circuit tweaks were made so that it sounded more natural. Reputedly, six revised main circuitboards were done during the life of the amplifier, with virtually every component modified by the time the 8000A reached the final curtain. Indeed, Philip Swift remembers, "there were 256 parts and only one single component was used right throughout the production run - the little round red push-button MM/MC selector at the back!"

The 8000A had a fine preamplifier section for its day; this always sounded a little stronger than the power amp and as the production run progressed, it became a really sweet-sounding device. Along with a very respectable, accurate and quiet built-in phono stage, it meant than many Audiolab owners used it as such

Below: some of the schematics for the 8000A



BUYING

Normally it's easy to fill half a page or so with the do's and don'ts of secondhand hi-fi buying, but in the case of the 8000A, there's relatively little to worry about. Because it was a good basic design, most issues are basically age and/or use-related, rather than any intrinsic faults. For example, the RCA phono inputs can crack on the printed circuitboard, with extended and unsympathetic use, so it's worth checking any amp works on both channels across all its inputs. As some of the amps are now 30 years old, it is natural that some of the capacitors may be past their best, so it is worth getting them tested and ideally replaced by a competent electrical engineer. The finest sounding amplifiers were the latest ones, just before Audiolab 'became' TAG McLaren Hi-Fi, so a well preserved late nineties amp is the best bet, although anything from the late eighties will be a pleasing listen. Expect to pay between £50 and £200 depending on condition and vintage.

long after they'd upgraded the power amp. Indeed, by the early nineties, it was so good that it was almost worth buying just to use as a combined preamp and phono stage!

Last of the line

The 8000A got better and better, and by the mid-nineties it was a very useful sounding bit of kit. Trouble was, the competition was improving apace too - and the likes of the Naim Nait 3 gave it a very hard time. The Naim had moved into a full-size box, got more power and a smoother sound, and now it was calling out to prospective 8000A buyers - yet it was better sounding and more fun to listen to. Still, the Audiolab soldiered on for a good long while, becoming something of a badge of middle class respectability. Partnered, say, with a Linn Axis turntable and some Spendor speakers it made a very nice noise indeed, even if wasn't quite the best in class.

Where it excelled was in the reliability stakes; so few of them went wrong that they became an immensely safe and sensible buy. Hi-fi magazine dem rooms were full of the things, often left in the corner for when their latest 'flavour of the month' amp went bang and they needed something reliable to get a review done. That's why the Audiolab 8000A is such a great bet as a general purpose integrated amplifier even now - find a good, 'low mileage' example and you should get superb service for not much money. And with well over 50,000 amplifiers made over some 15 years, there should be plenty out there to choose from if you take the time to hunt one down •

DEALER SYSTEMSZOUCH AUDIO

From Ato

Zouch audio might be a long way down the phone book, but **Ed Selley** thinks that it's really worthwhile looking it up...

n the halcyon days of the Yellow Pages being the go to document to find the services of a specialist retailer, deciding to start your business name with a Z was a bold move. In the case of Zouch Audio, there's a method to the madness. The location it is situated in might simply be listed as Ashby on road signs but its full name is of course Ashby de la Zouch and Zouch Audio is nestled in a side road off the town's high street.

Founded by Mike Statham in 1995 and ably assisted by his colleague Lee Sedgewick, Zouch Audio occupies a former coach house which provides them with two dedicated demo rooms and an open plan area that can also be used for demo work. The store's portfolio has remained very stable over the years and is intended to offer systems that can provide a slightly warm side of neutral sound that will work over a wide variety of musical styles. They can also do so at a very wide range of price points – the three systems you see here do not represent the minimum and maximum that Zouch can produce systems at.

This visit was arranged with NuNu

This visit was arranged with NuNu distribution and the three systems are built around Belles amplification – which is a Zouch favourite – partnered with other members of the Zouch portfolio.



THE EXPERTS



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Visions Vinyl



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Electric Mistress
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System 1 - Considered Response

THE FIRST SYSTEM of the day is tucked up in the smaller demo room – roughly the size of a small UK lounge – and even before it produces a single note, gives a very positive first impression. This is a compact and elegant collection of electronics that partner with an equally attractive pair of speakers to make a very handsome system indeed. Of course beauty is no guarantee of great performance, but it never hurts to have a system that won't scare the horses when you aren't using it.

Belles of the ball

The Belles amplification in this instance is the smallest product in the company's range. Somewhere between half and three quarter width and because the controls have been shrunk in proportion with the casework, the Soloist 3 preamp and Soloist 5 power amp look for all the world like they have been put on a

This is a system that sounds far bigger than it has any right to

really hot wash. There is nothing bijou about the specifications, though. The Soloist 3 is a five-input, two-output preamp with a Class A circuit and full remote control. The matching Soloist 5 power amplifier is conservatively rated at 65W and features the same attention to detail that the larger Belles amps do.

It is unusual that the source should be the largest piece of electronics here, but this is the case with the Astin Trew AT3500 CD player. This elegant-looking one-box design keeps to the Astin Trew philosophy by partnering a 24-bit DAC with a Class A output stage, which incorporates a pair of Electro Harmonix 6922 valves. It is immaculately finished and even comes with a rather smart remote.

Partnering this compact trio is the Proac Response D18 floorstander. This elegant two-way design is downward ported in typical Proac fashion and combines drivers developed specifically for Proac with a cabinet that is a lovely piece of furniture in its own right. As a system it certainly looks the part, but how does it sound?

Subconsciously it would be easy to expect that this compact and elegant system will sound like it looks, but none of the brands involved received that particular memo. This is a system that sounds far bigger than it has any right to, but manages to be both involving and believable while it does so. With Martha Tilston's Machines of Love and Grace I'm treated to a performance that combines a wonderfully relaxed and unforced presentation that sacrifices none of the detail or spark that makes this album so compelling.

Most surprising is the bass response. This system has a potent low end that is packed full of detail and possessed of the required agility to avoid it dominating proceedings. Switching to the more upbeat Huey and the New Yorkers' Say it to My Face, this bass gives the performance an authority and drive that is hugely entertaining. Taking this to its logical conclusion, Electric Mistress by Suicide Sports Club, tears along with real bounce and swagger to it. The Proacs are a relatively benign electrical load and it is clear that the Belles can exert complete control over them imparting a level of agility that is fairly unusual at the price point.

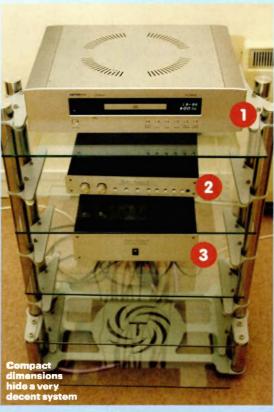
Delivering the goods

Neither is it a one trick pony. The tonality is fantastic with vocals and instruments sounding unfailingly believable. The way that this system handles demanding pieces is a demonstration of what happens when extremely well-sorted components are combined sympathetically to produce a system that plays to all of their strengths and delivers something that they can't do on their own. It also delivers on the Zouch sonic ideals. It is never harsh or aggressive, nor is it dull or restrained. You could have the most diverse musical portfolio going and this system will deliver the goods.

As an opening gambit, this system has a huge amount going for it. It will fit comfortably into almost any room and effortlessly handle a huge range of music once it is in situ. The bar has been set extremely high for the offerings that follow.

- ASTIN TREW AT3500 CD PLAYER £1,605
- BELLES SOLOIST 3 PREAMP £1,100
- **1** BELLES SOLOIST 3 POWER AMP £1,100
- O PROAC D18 SPEAKERS £2,145
 TOTAL SYSTEM PRICE: £5,950





DEALER SYSTEMSZOUCH AUDIO

System 2 – Rock of ages

THE SECOND SYSTEM was arranged in the open area on the ground floor and acted both as a demonstration of what is available a little further up the Zouch price structure and that Mike and Lee are as happy with vinyl as they are with CD. Like system one, this offering is still a compact and elegant one that should fit into most lounges without issue, but the equipment involved promises still more capability.

The vinyl front end comes in the form of the Townshend Rock 7. Zouch has been an advocate of the Townshend design since its founding and Mike rates it very highly. Latest in a long line of Rock turntables, the 7 is more skeletal than the preceding models, but the same principles apply with the tonearm damped at the cartridge end by an outrigger that sits in a silicone trough. This damping is intended to let the cartridge dig out everything in the groove and not the energy from the structure holding it. I'm delighted to note that the arm in question is Roksan's Tabriz, which is both a combination I haven't seen before and a use for one of the most underrated arms under £1,000. An Ortofon Rondo Bronze moving coil cartridge completes the ensemble.

Flying solo

Supporting the turntable is the next step up in the Belles range, the Soloist 1 integrated amplifier. Unlike the pre-power in system one, the Soloist 1 is a full-width design and features the distinctive styling of the rest of the Belles range - I'm sure that from some angles it looks like one of the buildings in the opening sequence of Blade Runner. With 150W on tap and five line inputs, it is also well placed to work with a wide variety of source equipment. As none of those inputs is a phono stage, it is partnered with Renaissance Audio's Re-Performance moving coil phono stage that is similarly understated.

Speakers in this instance come from Danish Brand Dali. The Epicon 2 is the smallest member of the Epicon range, but has the same technology as the larger models. This means that behind the superficially conventional (but very attractive) exterior lies innovations like the six-layer cabinet and Dali's unique wood fibre drivers. But does it give a sound to match?

The opening minute of Dr John's *Right Place, Wrong Time* is enough to demonstrate that the components in this system gel to form something that is greater than the sum of its parts. The first and most immediate aspect of this system's performance is that you don't listen to it and automatically assume it is a vinyl source. There's no softness or 'vinyl bloom' to it and it seems to be impressively immune to surface noise as well. At the same time, there is a naturalness to the performance that really only comes from vinyl.

Master and commander

This is also a system that has a commanding sense of timing and control. The snap and verve of the Dr John recording is beautifully captured and the Epicons reveal that they have much more bass than their relatively compact dimensions suggest that they should. Like system one, this bass is detailed and nuanced enough to complement the performance rather than dominate it. This still holds true with the massive slab of electronica that is Visions by Grimes. The way that the system locks the ephemeral vocals centre stage and places them over the rumbling low end is absolutely fantastic and still spectacular even at this relatively lofty price point.

When I switch to Nick Drake's immortal *Pink Moon* – a record that depends on midrange lucidity over low-end response, this system still delivers a beguiling performance. Drake's vocals have a realism and richness that really brings out the magic in the album and the accompanying guitar is utterly real and perfectly placed.

Very much like the first system, these electronics manage to be rich, smooth and refined without losing any of the detail and timing that really convincing music reproduction depends on. It is now time to see how Zouch handles streaming and computer audio.

- 1 TOWNSHEND ROCK 7 TURNTABLE £3,300
- 2 ROKSAN TABRIZ TONE-ARM £650
- ORTOFON RONDO BRONZE CARTRIDGE £675
- RENAISSANCE AMPLIFICATION MUSIC RE-PERFORMANCE MC PHONO STAGE £1,995
- BELLES SOLOIST 1 INTEGRATED AMPLIFIER £2,895
- O DALI EPICON 2 SPEAKERS £3,750 TOTAL SYSTEM PRICE: £13,265





DEALER SYSTEMS ZOUCH AUDIO

System 3 - Stream on

THE FINAL SYSTEM is visually impressive but still occupies a very sensible amount of floorspace. The price here is unrepresentative as a user would generally only choose one of the two digital front ends depending on their preferences. Choosing between them is going to be a tricky – if fun – decision.

The DSX1000 is the flagship streamer in Chord Electronics' range. A free software update has added DSD support over Ethernet, which makes it about the most all-encompassing streamer on the market at the moment. If you are more of a computer audio person, the Astin Trew Concord is almost as capable and gives you the vital asynchronous USB input to maximise performance from a PC.

While deciding between the two, you can rely on the digital capability of a third component. The all new A10 preamp from Belles is not only equipped with analogue inputs and a high-quality phono stage but also has digital and USB inputs. It is partnered with the company's substantial MB200 monoblock power amps that dispose of 200W into 80hms with output doubling into 40hms.

Riding high

This should be more than enough to convincingly drive the Dali Epicon 6 to any level you see fit. The bigger brother of the Epicon 2 in the second system is still a very elegantly proportioned speaker and alongside a larger cabinet and an extra one of those clever wood fibre mid bass drivers, also features a Dali speciality. As well as the conventional soft dome tweeter fitted, the Epicon 6 hands over to a ribbon tweeter for ultra-high frequencies, which promises higher performance at the very top end. Another flexible and fearsomely clever system then, but does this translate to musicality?

In a word, yes. Starting with the Chord, there is an assurance and sheer ability with the high-res download of Get the Blessing's OCDC that marks this out as being a cut above even its immensely capable smaller brethren. The texture and detail to the saxophone is tangible in a way that the less talented sources just can't manage. The Chord is in many ways not as laid back as the front ends of the other two systems, but equally it is never harsh or forward either.

The Astin Trew is more in keeping with the Zouch sound, but behind the slightly warmer and softer presentation is still a very rich and detailed performance that still has real depth and impact to it. Of course with the Epicon 6's in the system, bass impact is not a problem. By the standards of many £7,000 speakers, the Epicon is a relatively discrete size, but the bass response is still extremely deep and powerful. It has no sense of overhang or sluggishness either- a blast through Elliot Sharpe and Terraplane's Banking Blues gives the Dali's an opportunity to show superb fleetness of foot that is effortless and hugely entertaining.

A difficult choice

Choosing between the hugely capable digital sources that front the system would be tricky but fun. I'm a streamer person by preference, I like the format support of the Chord - to say nothing of the incredible sonics and the standard massively over the top casework - would win it for me. This is no disrespect to the Astin Trew; the Concord is capable of a wonderful performance, but would still be dependent on a computer. That said, I can think of more arduous tasks than sitting down and deciding between the two. The most significant thing about the system performance is that the Zouch philosophy is still present - a system that thrills without fatiguing - mission accomplished •

- 1 CHORD DSX1000 STREAMER £7,500
- 2 BELLES A10 PREAMP £3,695
- S ASTIN TREW CONCORD DAC £4,100
- BELLES MB200 MONO POWER
 AMPLIFIERS £7,000 (PAIR)
- DALI EPICON 6 SPEAKERS £7,800 TOTAL SYSTEM PRICE: £30,095







Zouch Audio's stated aim of creating systems that deliver musical fulfilment without tipping over into harshness or aggression is achieved by the three systems you see here. It's not too surprising with Belles amps featuring in all three that there is a degree of a house

sound, but the fact it's present across three formats and at such diverse price points is testament to the proof that Mike and Lee know what they are doing.

Picking a favourite is tricky as all three bring something to the table that is hard to ignore. The incredible scale from

the small system one is wonderful, the fantastic tonality of the second from the Townshend Rock 7 is fabulous and the impact of the third system is addictive. Regardless of your budget, the team at Zouch with NuNu's portfolio won't see you wrong.



Wham, bam and thank you, glam! **Simon Berkovitch** and **JT Rathbone** slap on the war paint and stomp to the most rumbustious sounds of the seventies

ig, dumb proto-punk guitar riffs, Stone Age percussive thuds, daft lyrics, intelligent lyrics, primitive synthesiser squiggles, terrace chants, rock 'n' roll brass, outrageous costumes and ludicrous make-up... any combination of these key components form the basis of the hundreds of early to mid-seventies UK recordings that we call glam rock.

From the conceptual art rock of David Bowie and Roxy Music, through the fifties revivalism of Wizzard and Mud to the raucous singalongs of the era's most successful group – Slade – glam was a broad church for what

was allegedly a disposable teenybopper racket. And while there's little to link big-hitters Wizzard and Sweet musically, both are glam to the core in that they got through a hell of a lot of Max Factor and Woolworths' glitter and weren't shy of dressing up. In short, glam was as much about the outrageous presentation as the outrageous music - and plenty of acts jumped on the bandwagon and slapped on the war paint and raided the dressing-up box with abandon, often looking like nightmarish bricklayers in eyeliner - The Glitter Band, take a step forward (but not too close, please).

What most glam acts did have in common, musically, was a lively, trebley sound (this was still the age of the transistor radio after all) and muscular guitar riffs (Sweet) and big, booming drums (Gary Glitter). Many of the most commercial sounding glam records contain percussive handclap breakdowns, echoing football terrace chants of the time.

Admittedly, there were some fantastic albums, as we'll discover with our profiled artists, but glam kept the pop single as its focus. Like its direct ancestor – bubblegum pop – glam was largely aimed at a younger audience for whom the

increasingly elaborate stylings of contemporary rock held little appeal. Slade, Mud and Sweet, along with other – teen-friendly – acts like The Arrows and Suzi Quatro, filled this gap admirably.

And these are just some of the big guns. In recent years, dedicated enthusiasts have uncovered forgotten 45s by the likes of Buster, Spiv, The Jook, and countless other one-hit wonders. Some were hopelessly derivative, some unlucky not to have hit the charts, but the best of them sparkle with an immediacy and a sense of fun that has lost little lustre 40 years later. So slap on the face paint and cum on feel the noise!

David Bowie

Jamming good with Weird and Gilly and The Spiders From Mars

avid Bowie had already released four LPs for as many labels by the time 1972's seminal glam album *The Rise and Fall of Ziggy Stardust and the Spiders from Mars* and its advance 45 *Starman* kickstarted his career as a major artist.

Bowie had enjoyed just one previous hit, but it's unlikely that many teenagers whose heads were turned by his alien appearance on teatime telly in July 1972 even remembered Space Oddity. That notorious Top of the Pops performance of Starman was instrumental in launching Ziggy the character and Bowie the artist, as well as furthering the momentum of the embryonic glam scene.

The centrepiece of Bowie's golden early 1970s trilogy of LPs – bookended by the equally impressive *Hunky Dory* and *Aladdin Sane – Ziggy Stardust*'s success and legend are buoyed by its central concept – that of a pop idol sacrificed on the altar of

rock 'n' roll, himself a cool mix of influences such as Syd Barrett, Jimi Hendrix, Vince Taylor and eccentric outsider musician the Legendary Stardust Cowboy.

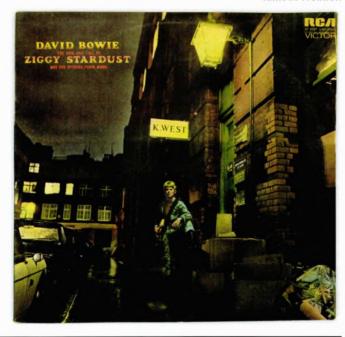
Written and recorded within months of *Hunky Dory*, Bowie's new songs were noticeably less playful and more muscular – and a hell of a lot more exciting. In short, David Bowie had it:

Ziggy kickstarted Bowie's career as a major artist

 outrageous looks, alien dress-sense and the songs to dominate the airwaves.

Bowie took Ziggy to America on his next album, *Aladdin Sane*, but famously, and quite bravely, killed the character off shortly afterwards. Despite his creator's intentions, Ziggy still casts a long shadow, as glam's pivotal long-player deservedly remains his most famous creation.

The pivotal glam album and Bowie's most famous creation



T-Rex

The Bopping Elf's journey from peacenik folkie to Electric Warrior

t's his run of monster glam hits with T-Rex for which The Bopping Elf is best-remembered, but it wasn't Marc Bolan's first stab at fame. Bolan switched from acoustic to electric guitar for Tyrannosaurus Rex's fourth set, Beard Cf Stars, but it was only with the adoption of a bona-fide rhythm section and a change of direction from folk to a more 1950s rock 'n' roll sound and a snappier band name that superstardom finally beckoned.

It was time for an image change, too. Out went the hippie threads and in came feather boas, luxuriant satins and glitter on his face. Marc Bolan, the charismatic glam frontman, was born and this striking, toughbut-effete image – combined with the music's new-found swagger – drew in a new, much younger audience like moths to a flame.

After two massive chart hits with Ride a White Swan and Hot

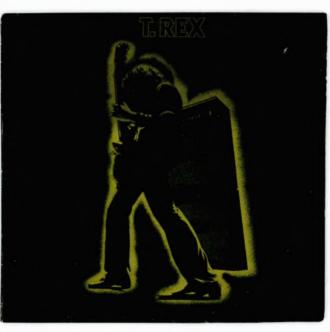
Love came Bolan's pinnacle: 1971's Electric Warrior LP. Despite producer Tony Visconti's occasional use of strings, the album's instrumentation retained a tight, stripped-down sound, focused on Bolan's echoey, Chuck Berry-inspired guitar and rich, flat drums.

Bolan quickly became king of the glam scene

Former Turtles Mark Volman and Howard Kaylan provided the immaculate harmonies.

From slinky opener Mambo Sun through string-laden ballad Cosmic Dancer to the punky stomp of It's A Rip Cff, Electric Warrior crackles with energy and confidence. And with the additional success of its call-to-arms spin-off 45 Get It On, it was no surprise that Bolan was finally king of the scene.

Electric Warrior the album that made Bolan a teen idol



Sparks

Beloved of Morrissey, Kimono My House was no Amateur Hour

sk a 40 or 50-something to name their most memorable Top Cf The Pops clips, and it's likely one of them will be the 1974 appearance of Sparks performing This Town Ain't Big Enough for Both cf Us. In an age before water cooler moments, most people of a certain age watched the BBC's popular weekly show - and a standout performance would be a Friday morning talking point in offices and playgrounds alike.

The song was distinctive enough, but the two brothers who fronted the group were just as memorable; hyperactive pretty-boy singer Russel Mael and keyboardist and principal writer Ron Mael, who sparked a thousand impersonations with his adventurous take on the Chaplin/Hitler look.

Sparks' eccentric, Hollywood-chic affectations belied a formidable musical talent, however: Russell Mael's neo-operatic, falsetto vocals were perfectly balanced by tough, rocking guitar riffs, mesmerising keyboard runs and jolting time changes.

Sparks had recorded two albums before *Kimono My House* made them stars.



Roxy Music

Channelling the styles of the past into the sound of the future

There's a convincing case for Roxy Music's debut having stood the test of time the best of all the albums featured here. But the jury's out as to whether Brians Ferry and Eno and co can even be considered glam rock: they are simply Roxy Music; a genre all of its own. That said, Roxy Music have more in common with the arch pop of Sparks and the conceptualising of Bowie than with Slade and the Sweet.

Debut 45 Virginia Plain reverberates with many of glam rock's key musical components – thudding drums, eccentric vocals, rock 'n' roll brass and synthesiser shrieks – and 1972-vintage Roxy – with Ferry's neatly tailored leopard print threads and retro quiff and Eno's heavily made-up, ultra-alien appearance – certainly looked the part.

If Virginia Plain was the sophisticated taster; the

self-titled debut album, was the main course. It was arguably the first time UK pop music had taken stock of its past, its future and its place in modern culture in such a sophisticated manner. The result? *Roxy Music* sounds as inventive and futuristic today as it did back in 1972.



SHOPPING LIST

Despite a handful of consistent LPs, glam was all about the singles. All of these familiar and obscure gems should be available to buy online.



The Jook Alright With Me (1972) This forgotten band's first, catchiest single. On their demise, half of the band joined Sparks.



The Sweet
The Ballroom Blitz
(1973)
Hot on the heels

Hot on the heels of smash hits Blockbuster and Hell Raiser came the group's finest three minutes.



Slade Cum On Feel The Noise (1973) Wolverhampton's finest's long line of hits peaked with this monster. An unstoppable banger of a record.



Suzi Quatro 48 Crash (1973) Female musicians fronting hardrocking bands were a rarity in 1973, but Quatro released a number

of classy 45s.



Spiv
Oh You Beautiful
Child (1973)
A bone-crunching
classic with over
the top vocals.
Compressed
handclaps never
sounded better.



Wizzard
See My Baby Jive
(1973)
Roy Wood and
band got their
glam rags on for
this great tribute
to Phil Spector's
Wall of Sound.



Tiger Feet (1974)
This party classic spawned its own (short-lived) dance and has one of the most infectious breakdowns in

all of pop.



Cockney Rebel Judy Teen (1974) Steve Harley's group trod the line between glam and art rock on this 1974 hit, with violin and proto-Mockney vocals.



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Audience adeptResponse Isotek Isol - 8 Quantum Qx2 & Qx4 QBase Qv2 Power supply upgrading

Equipment

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Treatment

Room treatment Room Tuning Resonators MiG's Panda Feet Sort Kones

Cable Lift







Nordost introduced its new Valhalla 2 Reference Cable Range at the High End Show, M.O.C. in Munich, Germany on May 9, 2013. The latest range consists of analogue, digital, and tone arm interconnects, as well as loudspeaker and power cables. The new Valhalla 2 range uses upgraded Dual Mono-Filament technology, along with an innovative proprietary connector called the HOLO:PLUG™. The HOLO:PLUG™ is a patent pending connector, designed to be the best possible interface between the cable and the component. Perfect signal integrity can be measured throughout the system. Designed to transfer every last nuance of detail, and they claim the HOLO:PLUG™ is a miracle of mechanical and electrical integrity. If you have an original Valhalla cable and wish to upgrade to the new Valhalla 2 please give us a call as we have an affordable upgrade path.



Audience The 'ONE'

The Audiophile's personal desktop or bookshelf speaker system.





Impedance 4ohms, Efficiency - 84db Max RMS Continuous Output Per Pair - 98db Max RMS Continuous Power/Speaker - 25w Size - 177mm H x 140mm D and 152mm W with stand 235mm H

"It tells the truth and will get you far closer to a sense of the real thing than any of its competing competitors can or will do." ~ Harry Pearson ~

PANDA FEET - Cable and Equipment support

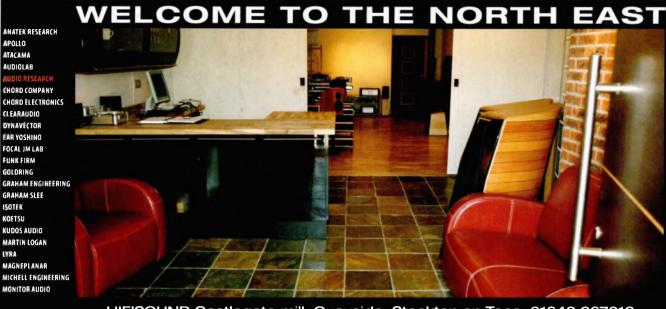








Made from sustainable Carbonised Bamboo, designed by Dave, and made exclusively in the UK by Atacama for High End Cable, the Panda Feet will guide and support most makes of High End Hi-fi cables from ribbons, ovals and round. As well as being ECO friendly and sustainable, Bamboo is fast being acknowledged as one of the finest materials for use in Hi-fi supports as many makers are employing the medium. This is the first time this sustainable product has been specifically designed to support your High End Cables. Panda Feet provide sound footing and spacing off the floor. Lifting your cables off the floor helps to isolate the effects of vibration and the Bamboo Panda Feet can also be used under power blocks and power conditioners when there is no room on your Hi-fi rack and where the only space available is the floor. A tidy solution.



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O1 Antonio Forcione & Charlie Haden

Heartplay



Musicreviews



BY THE LATE sixties, black American music had reached something of a crossroads. Motown and Stax were still making brilliantly crafted three-minute pop singles, but soul music had largely ignored the rise of psychedelia and heavy rock. As a result, popular music was as segregated as it had ever been. White American college kids found the black vocal groups with their cabaret-styled suits and dance steps vastly unhip, while black kids in the ghetto were baffled by the psychedelic ramblings of the Grateful Dead and their ilk.

Such divisions were abolished at a stroke by the funk-fuelled rock-soul hybrid invented by Sly and the Family Stone. The group's appearance at the Woodstock festival in 1969 was a game changer, making black music cool again for a white rock audience and inspiring a new, creative school of black musicians that ran from Funkadelic to Earth, Wind & Fire via Isaac Hayes and Stevie Wonder. Dressed in outrageous hippie threads and sporting an outsize Afro, Sly – real name Sylvester Stewart – was uniquely positioned to bring white and black

musical forms together. His roots lay firmly in gospel and r&b, but by the mid-sixties he was working in San Francisco as a producer of white rock bands. Inspired by both, he formed the multi-racial Sly & The Family Stone in 1967 – and music was never the same again

Higher! sounds just as liberating today as it did back then, more than 40 years ago

Four discs featuring 77 remastered tracks chronicle the birth of the new soul music combining rock propulsion, funk groove, psychedelic guitars, sound effects, civil rights radicalism and gospel positivity

There are rare early solo recordings and a handful of tracks that take the story right up to the mid-seventies, when the band fell apart amid

prodigious cocaine abuse. But the majority of the material concentrates on the period between 1968-72 when the band was in its trailblazing pomp Dance To The Music and I Want To Take You Higher – the songs that catapulted them to rock stardom after their inclusion in the Woodstock movie – may today sound over-familiar; but at the time the seamless blend of James Brown and The Who was nothing short of revolutionary.

Every one of the group's signature hits has been remastered from the original mono single mixes – the first time that they've been retooled in the digital era. They crackle with a sharp and ferocious intensity as a thrilling homage to the golden age of transistor radio. What is also notable is Sly's undeniable genius in the studio. Music so meticulously arranged and produced in every detail can seldom have sounded so spontaneous and freeform. There was, to quote the band's most famous album title, a riot goin' on – and it sounds just as liberating today as it did back then, more than 40 years ago.

The Alan Parsons

| Robot: Legacy Edition

Arista/Legacy

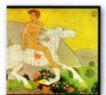
AFTER WORKING ON Pink Floyd's Dark Side Of The Moon as EMI's top engineering wizard at Abbey Road studios, Alan Parsons branched out under his own name to create a series of sophisticated, audiophile concept albums that not only sold millions, but went on to become revered as hi-fi demonstration records. After testing the format with 1976's Tales Of Mystery And Imagination, he followed with 1977's I Robot. Based on the sci-fi stories of Isaac Asimov, it became a multiplatinum seller and included the US hit single, I Wouldn't Want To Be Like You.

ons branched out

Smartly remastered and now repackaged as a double CD with nine previously unreleased tracks, the swirling synthesisers of Parsons' flawless production rather outshine the compositions, which struggle to reflect the profundity of Asimov's writing.

But using a coterie of studio musicians alongside a selection of guest singers, including the Hollies' Allan Clarke, Parsons' superior prog-rock veneer lifts the material out of pop mundanity. NW

MUSICREVIEWS



Fleetwood Mac Then Play On



Warner Music

BEFORE RUMOURS MADE Fleetwood Mac the biggest band of the seventies, it is often overlooked that they were in an earlier incarnation of arguably the finest British blues band of the sixties. Released in 1969 Then Play On was the final album to feature the band's brilliant, but troubled founder Peter Green, Now remastered and expanded with bonus tracks, there's plenty of Green's burnished guitar playing on a set that combines raw blues power with more experimental songwriting. The addition of two non-album hit singles Oh Well and The Green Manilishi enhance the package considerably. **NW**



Gregory Porter Liquid Spirit



Blue Note

THE MAN IN the hat's third album further explores the territory that he's made all his own on past releases (2010's Water and 2012's Be Good) smooth supper club jazz backing that would fit in perfectly with the finely recorded noodling of an average hi-fi demonstration, but lifted several levels above the mundane by Porter's effortless mix of intricate jazz chops with his powerful, gospeltinged soul bear of a voice.

No Love Dying is a glorious ode to a higher desire, allowing his rich baritone to soar, while the title track shows his funky side with some down 'n' dirty contrapuntal swing. DO



Neither grey nor a reverend, Grey Reverend sounds good to us

Grey Reverend

A Hero's Lie



Ninja Tune

THE BROOKLYN-BASED SONGWRITER known occasionally as LD Brown has popped up on a number of albums by other artists, including the likes of the Cinematic Orchestra and Bonobo, but this is only his second long player under his own Grev Reverend moniker

Its stripped-back acoustic textures are a far cry from the lush electronic soundscapes of his Ninia Tune label mates, relying for the most part on his percussive guitar picking and a voice that's by turns delicate, raw and intimate. His quietly intense style leans more towards Elliott Smith than Son House, but there's an honest, unaffected quality that does justice to both. DO

AUDIOFILE VINYL

Nancy Wilson This Mother's Daughter

Capitol/Pure Pleasure



NANCY WILSON IS a

jazz singer who got her break when Cannonball Adderley encouraged her to move to New York where she was signed by Capitol Records. Since then she

has made over 50 albums. This 1976 release finds her in the illustrious company of Dave Grusin, George Duke and Steve Gadd among other top-flight jazz crossover musicians, and as a result is a funky, soulful and superbly crafted recording on which her dextrous, honey-coated voice manages to retain a sexy edge and avoids

the pitfall of becoming over polished. There is one string-soaked track that is a little schmaltzy, but it's mostly inventive and varied with several excellent pieces including the Duke-arranged China, which brings the sound right up to date. Tree of Life is also excellent thanks to some supreme bass playing from Chuck Rainey and backing vocals that are reminiscent of Pastime Paradise. The final track is the winner, Stay Tuned allows Gadd to show off his chops with space left for a flugelhorn solo from Blue Mitchell - you don't get many of those to the pound.

It's not the most open or dynamic of recordings but this remaster does plenty to bring out the deluxe tone and supreme musicianship. JK

HIGH RESOLUTION DOWNLOADS



24-bit/48kHz

Joseph Arthur The Ballad Of Boogie Christ

Bowers and Wilkins

HAVING RELISHED ARTHUR'S last release, (Redemption City), I had huge expectations for this. I am pleased to say that my hopes are entirely fulfilled as he once more delivers his mix of intelligent and insightful songwriting along with brilliantly judged musical arrangements that perfectly complement his wordsmithery. To complete the luminosity of this superb download, the recording is faultless and matches the musicianship peerlessly. MS



Antonio Forcione & Charlie Haden Heartplay

24-bit/192kHz The Naim Label

TWO OF THE Naim Label's best-selling artists joined forces some while ago to provide this fine album – acoustic guitar pyrotechnician, Forcione and the widely respected and much in demand, jazz bass maestro, Haden. The two virtuosi play brilliantly together here and this is highlighted on this masterly 24/192 reworking of the original analogue 'True Stereo' recording. The music thoroughly justifies this painstakingly remastered gem. **MS**

CD & THE ORIGINALS CATALOGUE Classical

Classical perfection straight out of the seventies



SACD (Hybrid)

BIS-2012

RACHMANINOV'S FIRST SYMPHONY starts

with a snarl. Here, though, the opening is slightly muted, and initially one's impression is that the playing is slightly underpowered. Yet, listening again, one registers the subtlety of the playing, and the unerring way climaxes unfold. This is not a loud hectoring performance, but one of insight and imagination. The first piano concerto is played with great fire and passion, and Yevgeny Sudbin is an excellent soloist. The recording is effortlessly detailed and open, with a wide dynamic range and plenty of detail audible without obvious microphone spotlighting. JH

Debussy; Ravel; Scriabin

Symphony Orchestra Claudio Abbado

CD

DG 'Originals' 00289 479 0013

THE DEBUSSY AND Ravel pieces were taped during DG's first Boston sessions in 1970, and they present this great orchestra in a new light. The sound – spacious and refined, yet detailed and atmospheric – is beautiful and realistic. In Debussy's Nocturnes, this delicate hall ambience creates some magical effects. Abbado's performances were (and are) a model of taste, with every strand carefully balanced and subtly nuanced. Scriabin's Poem of Ecstasy, recorded a year later, sounds suitably feverish and volatile – the sound being a mite harder, tonally, and more forward. DG's new 'Originals' transfer improves slightly on the earlier full-orice issue. **JH**

BLU-RAY DVD



Aerosmith

Rock for the Rising Sun

eagle-rock.com



AEROSMITH ARE BIG in

Japan, that much is clear from this 2011 footage from Tokyo, and naturally Steven Tyler, Joe Perry et al lap it up. They put on a good show, one that belies the degree to which they maxed out on

drink and drugs in the past. Tyler has become the grand old dame of rock 'n' roll, but his voice is in better fettle than many of his more washed up contemporaries. The sound is compressed, but has more energy than usual and makes the most of the tone from the contrasting guitars of Perry and Whitford. **JK**

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Our DRAGONFLY



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AVI Neutron V speakers. In piano black gloss, as new condition, hardly used. Boxed, £240: **01642 559204** (Cleveland).

DENSEN B₁₁₀ amplifier in silver, recently upgraded to + version £875. Gizmo remote in black £85. MM phono board £85. Or all for £995. Can demo, buyer collects: **07501130403** (Southampton).

SPENDOR A5 compact column loudspeakers, black, unmarked, boxed, exquisite sound £1,100:

01952728773 (Shropshire). BOWERS & WILKINS

pair floorstanding 683 speakers. Red cherry finish, unmarked and occasional use, factory packing £575:

01908 376966 (Bucks).

WANTED Marantz AV9000 pre-amp. TEAC X1000R reel-to-reel. Buyer will collect: **01243 860634.**

MONITOR AUDIO M8 Gold, floorstanding speakers. Purchased in 1993 costing £1,100. Good condition.

£150 to a good home: stephen.geary2@ntlworld.com

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BRING your Linn LP12 up to date!! have a lovely brand new Cherry plinth bought from Grahams, but ended up having a black one instead. Half price £200: 0208 5242181.

WANTED amplifier in mint/

near mint condition for vinyl turntable: **01305 814033**

MUSICAL FIDELITY M6

preamp, M6 CD player, F15 power amp. All silver, all boxed, as new: £800 each. Martin Logan Odyssey speakers excellent condition: £1,000. New home forces sale:

07581 390 326 or email: keithsunasky@outlook.com.

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alanmcleod535@btinternet.com.
CHORD Indigo XLR

balanced interconnects 1m, immaculate condition (£1,340) £495 ovn:

01159288006 or email:

with YDS12 iPod dock: just one of many bargains

Yamaha's A5500





Rolfyjordan@GmaiLcom Nottingham.

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0207 4998729.

CHORD Cobra Plus sub signal leads, 10m (£147), 3m (£70): £100 for both plus postage. Ecosse Baton II Ref Interconnects 0.8m (£100): £50 plus postage. Russ Andrews RGB Scart (£200) £60 plus postage:

01772 812992 (Preston).

ATLAS Elecktra 1m XLR balanced interconnects. Boxed. Fantastic sound and condition. Can be heard before purchase. £185 ovno: 0115 9288006 or email: Rolfyjordan@gmail.com (Nottingham).

PIONEER CS-301 speakers in black finish £45, Mordaunt-Short MS235 speakers in wood finish £45, Bang & Olufsen P30 speakers in wood finish £75: 01302 772495 or email: adrian.petch@btinternet.com (Lincolnshire).

MARANTZ PM6003 integrated amplifier, well

reviewed, in mint condition, boxed with manual, light use, bargain, £100. Buyer to collect: 01253 856422 (Lancashire).

MISSION 792 speakers, matching stands, gloss, excellent condition £350. 4 Russ Andrews 1m Power Max IEC cables £25 each. Kimber 4VS speaker cables 2.5m terminated £60. Will post. Prices exclude p&p:

01772 468116 (Lancashire).

SUGDEN Mystro amp with free Sugden CD 21 (£3,000)£500. As new, one owner. Celestion A3 top of the range speakers (£2,750)£500. Amp three years old, guaranteed until October 2014: **01246 224144** (**Derbyshire**).

WANTED late van den Hul Frog gold cartridge. One requiring repair considered. White Beauty also considered: 01505 346791 (Renfrewshire).

SPENDOR A6 floorstanding speakers. Oak finish, excellent condition. £1,100 ono. Can demo. Buyer collects: 01798 475319 (Essex).

DENON DVD-A1 DVD player (not Blu-ray) champagne colour with Denon D Link and remote/manuals. £300. Denon AVC-A1SR amp, champagne colour. With remote and manuals. £350:

07767 270242.

QUAD FM4 late model with grey/bronze buttons and phono outputs. Mint

BUYING SECOND-HAND can be a great way to pick up a bargain. A formerly expensive second hand component might well prove a better long-term bet than a brand-new product if the price is right. DO SOME RESEARCH on which brands have a good service back up, so if something does go wrong, you can get it fixed. Unless you purchase from a dealer, you're unlikely to get any warranty, so it's up to you to ensure the fitness of any gear that you buy. USUALLY speakers should be less prone to breakdown than amps, and amps should be more reliable than CD players. But any abused component could be trouble – have a proper demo and judge the seller as well as the goods!

condition. £140. Radford STA 25 'Series 3' valve amplifier silver wired. Cherished for15 years. £1095 ovno: **024 76679165 or 07968769595 (Coventry).**

ISOTEK Titan mains conditioner in excellent condition, bought from new, complete with manual and original box. £975 ono: 01303 863424 (Kent).

KEF Q100 black ash, brand new boxed, magazine prize. I have documents to prove. Highly rated standmounter £230 (£150 below retail): **07884** 430988 or **01782** 397204.

TELLURIUM Q Black 1m digital cable. Locking RCA phono each end. As new, only a few weeks old. £195. (new price £390). Pictures available: 01403 711778 or 07813 367409 or email: lyndon.taylor@tiscali.co.uk (West Sussex).

NAIM Supercap 2 in mint condition Serial no: 243xxx. 6 years old, original box. £1,820: email: hh@hhaps.dk (Denmark).

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KIMBER Select KS3038 speaker cable, 2.4m, £4,500. Kimber Select KS1136 XLR interconnect, 1m, £1,150. Kimber Select KS1036 interconnect, 3/4m, £950. Kimber Select 9033 Jumper set, £200. All with cases: 01772 314151 or email: jamesmckendrick@ btinternet.com.

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KEF X300 A speakers, only 4 months old, in like new condition, original documents and packaging are intact, asking for £500 (RRP £600), prefer buyer collection: 07741 485209 or email: budtsui@gmail.com.

SONUS FABER Musica amplifier. Boxed, very good condition £1,000 ono:

07753 271812 (Notts).

SPENDOR 58E £300 ono. No boxes, buyer collects. Will demo: email: moss8rg@ btinternet.com (Northampton).

DPA 200 preamp and power amp £300 each. E.A.R. 834L Delux preamp £700. All boxed, in good condition: **07890 896819 (Cumbria).**

GRACE M902 headphone amp £995 (£1,500), Arcam BB3 £85 (£360), Musical Fidelity X10 V3 tube buffer £200 (£300), Michi preamp by Rotel, fabulous, £800 (£1,250): 07811 613140 (Bristol).

PAIR of custom-built speaker stands. 5kg each, finish black hammered. Height: 35.5cm; base: 25 x 22cm; top: 20 x 17cm. Excellent condition. £45 ono, buyer collects: 01258 454084 or email: gandjboutelle@talktalk.net (Dorset).

PRIMARE CD31 CD player and 130 integrated amplifier (Balanced or RCA interconnects). As new, high-quality system bought ex-demo as second system, but never set up £ 1,500 (£3,000 new): 07712 875316 or email: jeff.wilding@tiscali. co.uk (Manchester).

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Streamer £500 (£1,015);
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Maximum Super Tweeters
£400 (£800); Chord
Signature Plus 1m RCA
interconnect £350 (£765).
Allitems are in excellent
condition and come with
manufacturer-supplied
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manuals. Excludes postage:
01305 263069.

USHER S520 standmount speakers, black gloss finish, immaculate condition, boxed, £250 incl delivery. Kudos S50 speaker stands, black, 20 x 15cm top plate, 60cm high, VGC, £60 (£170 new): 01706 345418 or email: mail@rodtheobald. force9.co.uk (Rochdale).

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SOMETHING SOLID speaker stands. Fully welded construction, black, 63cm height, mass filled, spiked feet, photo available. Ring for other dimensions. Quality stands. VGC. £50: **01582 423791 (Beds).**

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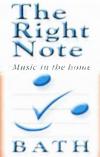
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panels (expect a 'Wow' reaction in the A/B test!) and use the VTL TP-6.5 phono stage for the fabulously quiet but dynamic Spiral Groove SG I. I tuntable and Centroid arm.

** See: www.chestergroup.org and Whittlebury Hall NN12 8QH

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Philips

Fidelio AW9000 wireless speakers

WIRELESS SPEAKERS ARE

the big thing in hi-fi currently, with numerous manufacturers introducing models in an attempt to get a foothold in the market so expertly captured by the likes of Sonos. The AW9000 is the current flagship in the three-strong Philips lineup designed to stream audio directly from a computer, Android or iDevice, plus access internet music streaming services and internet radio stations.

The diamond-shaped wooden enclosure standmount speakers are designed to sit on top of wide and rigid stands away from walls and with a slight toe-in towards the listener. Behind the non-removable grilles each speaker unit is fitted with two mid-bass drivers positioned either side of a centrally located 25mm soft dome tweeter in what is termed a D'Appolito array. A large bass port can also be found at the rear.

The left speaker is fitted with a digital amplifier that drives itself and the accompanying passive right speaker via a wired connection that links the two. As well as wirelessly connecting to your home network there is an Ethernet port for direct-wired connectivity to your home router. Additional connectivity includes S/PDIF optical and coaxial digital input sockets alongside a stereo analogue input, 3.5mm jack labelled MP3-Link and a mains power inlet.

In the air

There's no remote control supplied with the speaker system. Instead there's a free Philips app called AirStudio available to download on both iOS and Android devices. Once downloaded it guides you through network setup and integrates streaming music control directly to the Philips speakers from a variety of connected sources. The app's onscreen setup instructions read simple enough, but there's little about the installation procedure that's intuitive in linking the Philips





speakers to a home network, and deciphering the sequence of amber, green and white blinking lights to show the speaker system's status. It takes me several attempts before I successfully get the AW9000s to communicate with my home network.

The wireless network linking process certainly lacks some reassurances, but once connected the app shows all the compatible speaker systems it detects as well as the supported audio devices it can find, including DNLA and devices already running AirStudio. Then all you have to do is link the audio device icon you want to playback from by pressing and dragging it to the speakers icon.

I'm pleased to say that I am pretty impressed on my first listen with music streamed directly from my MacBook to the speakers. The AW9000s produce a big sound and expansive soundstage that stretches beyond the dimensions of the speakers. This is most likely due to the unique speaker placement array offering wide dispersion.

For a compact standmount speaker design it has plenty of bass energy. The port at the back helps to enhance bass output, but I do find that the AW9000s needed to be kept away from the wall to reduce a slightly over boomy bass and they work best positioned at 300mm or so away.

Hard-to-master female vocals are nicely voiced and Wasting My Young

Years by London Grammar sounds sweet and is surprisingly captivating. Treble is open and detailed and the Philips speakers do a good job of handling low data rate streams and make the music very listenable indeed. Internet radio and music services share similar sonic characteristics, but it's easy to hear the lower bitrate quality of these streams on the AW9000.

Drag and drop

It's not all good news, however, and despite my best efforts and successful streaming to other wireless devices around my home, the Philips speakers just don't want to stay connected to my network and regularly drop their wireless link during playback.

The timing of the drop is never consistent and can happen after just a few minutes or several tracks into an album. It's frustrating to say the least and requires the wireless connection to be reset for the speakers to reappear on the network and allow you to play music streams. Others share my experience and although the new app is an improvement, it's unstable.

Philips has gone to a great deal of effort to give the AW9000 impressive looks and sound, but the poorly integrated AirStudio app means it's a long way short of being taken seriously as a Sonos rival. **LD**



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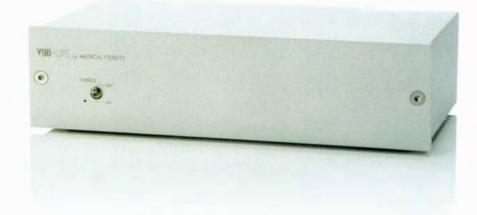
V90-LPS phono stage

IT'S MORE THAN a little paradoxical that Musical Fidelity started out, ostensibly, as a purveyor of big pre-power amplifiers and integrateds, pushing out large amounts of mostly Class A watts in a manner that would make your average tube amplifier glow with envy! As it happened though, hi-fi history has decided that the company would become most famous for its tiny mini boxes, with preamps, buffers and DACs inside.

V for victory

The X-series started it all in the nineties, but then the company launched the recession-busting V-series. These were super-cheap, stripped-down devices with pretty crude casing and graphics, but inside they had state-of-the-art electronics. They measured well, and performed way above their price point, which was sometimes as little as £99. Now, the V series has been rotated through 90°, got nicer casework (170 x 47 x 102mm, 600g) and a slicker finish, and ends up selling for around £149 in the LPS form you see here.

The V90-LPS is basically an op-amp-based solid-state phono stage, set inside a high-quality (especially at the price) silverpainted case, with a simple aluminium fascia and a small front-mounted power switch. The switched mode power supply is – for sonic as well as practical reasons - outside the casing, and comes as a small 'wall wart'. This, of course, means it's theoretically possible to upgrade it at a later date. Round the back, there are three pairs of phono sockets; two going in and one going out, the former being a choice between moving magnet (input sensitivity 3mV) and moving coil (200mV). The latter pair is the line output, and there's also a little switch to toggle between MM and MC – handily, this means you can keep two turntables rigged up to the one phono stage, providing one's got an MM and the other an MC cartridge in. Finally, there's an earth terminal and the DC power input.





The matching V90-DAC recently impressed me, so I'm interested to see how the phono stage fares. It has a fairly similar 'house sound', which is very pleasant and enjoyable for the price, one that displays surprising refinement - indeed I have to pinch myself to remind me it's a whisker under £150. In absolute terms, of course, it isn't the world's smoothest, sweetest or most three-dimensional performer (you wouldn't expect it to be), but it does have a clean, open. matter-of-fact sound that's completely devoid of harshness. Given that several other phono stages around this price are a tad too rough and ready, this is a salient point. It's great for crisp, spacious pop such as Eurythmics' This City Never Sleeps. The V90-LPS gives Annie Lennox's distinctively icy voice decent body and depth, behind which the sequenced bass synth powers along with real bite. There is a nice rhythmic flow to the proceedings, this phono stage being able to capture the track's sense of occasion adeptly.

Fun Lovin' Criminals' fulsome, fat sounding Love Unlimited doesn't sound quite as rich as it can on pricier phono stages; the LPS certainly doesn't add any extra tonal colour or warmth to the proceedings. But that's not to say it's a hard or forward design; it isn't! Whether it's from a warm-sounding Goldring G1042

moving magnet or Audio-Technica's slightly more clinical AT-OC9MLIII moving coil, the Musical Fidelity is a stable, middle-of-the-road performer with absolutely no unwanted nasties. Noise is very low - again this proves a nice surprise as it isn't always the case under £200. I feel the dynamics are good, too, and the music pushes along with a clean, crisp and positive gait. Bass is tuneful, even if isn't quite the punchiest around, midband is decently three dimensional and the treble is delicate.

Dress to impress

The new Musical Fidelity V-90 LPS is a very impressive little product at the price, then. It's way less than most 'serious' vinylistas would spend on a phono stage, yet its performance doesn't fall far short of several £500 designs. That means if you've got a Rega or a Pro-Ject turntable, for example - with a good, but not great cartridge - you can get a really solid performance without the need to spend so much. At a push, the LPS is even good enough to work with turntables the calibre of, say, Michell's GyroDec, without spoiling things. This makes it cracking value, and its choice of MM and MC inputs allied to neat styling and fine build make it all the more desirable at its low price. **DP**



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Panasonic

SC-NE3 wireless speaker

WIRELESS SPEAKER SYSTEMS

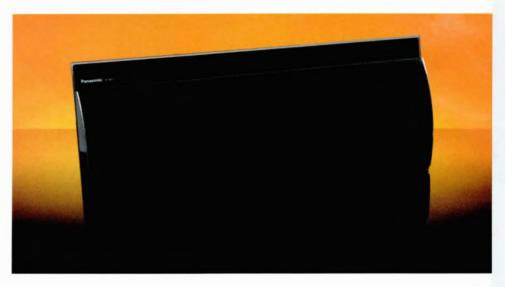
are one of the biggest growth areas in home audio – see our *minitest* on four budget models starting on p84. They offer a convenient way to connect with your music on a home network or streamed from music services like Spotify and last.fm via a smartphone or tablet device.

There are numerous models lining up to help you unleash music from the confines of a portable device's built-in speakers, and Panasonic has three wireless speaker systems in its range aimed at doing just that. The SC-NE3 on test here sits in the middle of the line-up between the entry-level SC-NE1 (£181) and the range-topping SC-NE5DB (£380). All three models share the same 570mm-wide cabinet design, fitted with two 80mm drivers and a pair of 25mm tweeters positioned at either end. Bass reflex ports fire out the back. The styling looks more home cinema soundbar than stereo music system and can be wall mounted and connected to a TV's audio analogue output via the 3.5mm jack input at the back. A short 0.5m mains cable is supplied, so you'll need to invest in a longer lead to reach far away power points.

Connect more

The SC-NE3 is all about wirelessly connecting to portable devices and supports Airplay, Bluetooth and wireless DLNA. There's no mention of Bluetooth apt-X. Connecting to your home network is fairly straightforward using the Setup button on the supplied system remote control. The SC-NE3 locks to the network if your router has WPS (Wi-fi Protected Setup) support and establishes a secure wireless link. Hooking up with a Bluetooth music playback device is similarly straightforward and follows the usual select-to-pair routine. There's no sign of NFC (Near Field Communication) compatibility where you simply place newer Android devices close to the unit for automatic Bluetooth pairing.

Design-wise, the Panasonic isn't going to win any awards for its



functional styling, but build quality is of the brand's usual high standards and the SC-NE3 feels solidly constructed and neatly finished.

Once connected to a device the SC-NE3 is ready to play music stored on a laptop or home network or accessed from music services via tablet and smartphone devices. The factory-set sound options are a respectable starting point, but the Panasonic sounds a little restrained on the first listen, with a lack of bass energy and openness that leaves it sounding a little flat and lacklustre. Pressing the D Surround button helps to open up the SC-NE3's rather narrow stereo soundstage and creates a wider stereo effect as you step through the two-level processing mode that makes it appear as though the sound is coming from a pair of speakers spaced progressively further apart. It gives impressive results, but doesn't approach anything like a surround experience as the name suggests, and is possibly most effective when the SC-NE3 speaker system is being used as an upgrade to a TV's built-in speakers to give the impression of a wider soundstage that fits with larger screen sets.

Selecting the D Bass mode (the D stands for dynamic) gives a useful improvement to the lower frequency energy listening to *Madness* by Muse streamed over Airplay from a

MacBook. It's not the punchiest or most propulsive bass line, and neither does the SC-NE3 dig particularly deep, but it's tuneful enough and gives the track just enough energy to carry it along. There are some cabinet resonances in the upper bass region that affect clarity and make Caro Emerald's Tangled Up sound a little thumpy and lacking in bass definition. Similarly her vocals lack sparkle in the lower mid registers, although vocals from Jennifer Warnes are handled with more finesse and sound natural.

Spot the difference

Sound quality from Bluetooth devices has similar sonic characteristics and it's difficult to differentiate between the Bluetooth or Airplay wireless connection methods, owing to the overall sound quality characterised by the SC-NE3 speaker system. High frequencies are detailed without being harsh or over sibilant on tough-to-handle female vocals, and a slight increase in treble over the factory-set level results in a more open and detailed sound that makes the SC-NE3 a more enjoyable listen. Bland looks aside, the SC-NE3 is a convenient way of wirelessly connecting to your music and provides a respectable addition to a kitchen or bedroom. LD

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THE WORLD AND his wife appear to be making headphones at the moment, and I wouldn't mind betting that the majority of homes have several sets within fairly easy reach. These are usually the type supplied with smartphones or music playback devices that fit in the ear, and we all know how poor they can sound. But fashions evolve, and technology developments and changes to lifestyles have seen the headphone catapulted from humble accessory to hi-fi must have. Well-established manufacturers are getting in on the act too, introducing their brand to whole new audiences keen to experience the enjoyment of listening to high-quality audio. NAD is among the many newcomers to the headphone market and the HP50s represent the first set of cans to be added to its VISO accessory range.

Hefty heritage

Given the changing consumer appetite for hi-fi headphones, it's no surprise that the respected Canadian brand should move into this market. The HP50s may be NAD's first, but it's no half measure and even the packaging is worthy of comment, owing to its sturdy feel that will undoubtedly encourage owners to take pride and store their HP50s in the protective packaging. There's a Neoprene carry case with a luxury, quilted lining as well as two tangle-free interchangeable cables - one with in-line Apple remote and microphone, and one without. There's a neat mini travel pouch, which contains gold-plated stereo jack and airplane adaptors. Interestingly, neither of the cables have gold-plated jacks, but they can be fitted to either the left or right ear cup, and can be daisy-chained to another listener.

The luxury feel follows through to the headphones themselves, with over-ear, noise-isolating foam pads, beneath which there are 40mm drivers neatly housed in the sizable acoustically optimised ear cup. The headband is nicely padded and the brushed metal and chrome ergo



hinge arms are very neatly finished. They are lightweight and comfortable to wear and the cushion ear pads are breathable, which is good news for lengthy listening sessions.

Placing the HP50s over your ears is nicely isolating without cutting you off entirely from the outside world, and treads the fine line between feeling completely shut-off from external noise and listening in what feels like a relaxing listening room that's moderately sound proofed. NAD has spent some considerable time developing its RoomFeel tuning technology, seen here for the first time. The technology is the result of exhaustive blind listening panel trials on the preferred headphone frequency response curve, derived from acoustical measurements taken from a calibrated loudspeaker system in a real listening room. And I must say, the results are rather impressive.

The HP50s have an instantly warm and involving sound that is extremely likable. The first thing you notice when placing the headphone over your ears is a bass response that feels well extended and mildly enhanced. It's rich and perhaps a little warm for my tastes, but the sound is punchy and digs deep into the bass line.

It's not the tightest or most dynamic bass performance that I've ever encountered, however, and there's a tendency to make Paloma Faith's vocal on her remarkable cover of *Never Tear Us Apart*, seem rather recessed and as though her voice has been placed a little further back in the mix. Indeed, there's very little that sounds forward about the performance of female vocalists on these headphones – something that is most probably the result of frequency contouring.

Male voices seem to fare a little better, and David Bowie's vocal on *Valentine's Day* sits where you expect, but the track does wrestle with the slightly over-eager bass characteristics of the HP50s. Some adjustment of the EQ settings on my player make a worthwhile improvement, with bass levels reduced and slightly increased treble for openness and HF clarity.

Comfy slippers

The HP50s produce rather a relaxed sound that fits characteristically well with the NAD brand, and is perhaps more comfy slippers than dancing shoes. The sound is musical and enjoyable, but not one that opens you up to the intricate layers of a recording to reveal subtle nuances. It's rather like listening while luxuriating in a lavishly upholstered private VIP booth; there's plenty of energy to soak up, but ultimately you're left feeling a little removed from the live performance. **LD**



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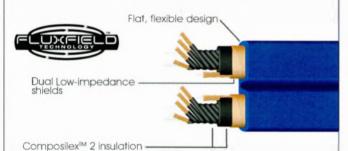
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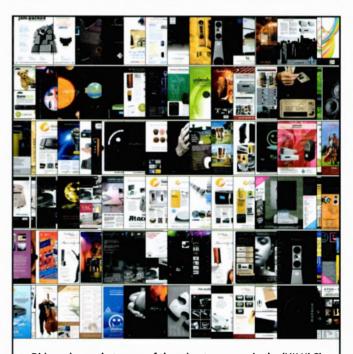


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THE PS AUDIO Dectet Power Centre is a mains distribution unit designed to optimise the power being supplied to up to ten components – divided into three distinct groups – in your audio or AV system. It is a neat, slim-line device and is quite inexpensive given that it is beautifully formed and promises not to compromise the dynamics of your system.

The Dectet – a far simpler device than PS Audio's bigger-ticket mains regenerators - features three Isolated Zones (Isozones) with multiple mains outlets in each. Each zone is individually isolated and filtered and the first of these is the High Current Zone, a low-loss common-mode filtered feed intended for equipment such as power amplifiers that need to draw a lot of current. Other Isozones - all of which are star wired with heavy gauge cable - should be used to separate digital from analogue components. PS Audio further recommends the use of: "only the highest quality AC power cords" to connect equipment to the Dectet in order, particularly, to minimise noise radiation. As the company is keen to point out: what you hear from your system is simply the AC power from your wall sockets after it has undergone modification by your electronics. The company is also keen that users investigate supports such as spikes or sorbothane-type pads placed under the device, believing that these will further influence the sound the system ultimately delivers.

It's oh so quiet

The first thing I notice is a distinct lack of any background noise. Not that there was any great amount before: in fact, its presence before was barely noticeable, but its absence once it's gone is apparent. The noise on a rip of Keith Jarrett's 1975 *The Koln Concert* emerges clearly from the sound stage in which the faulty piano rightly assumes all three of its dimensions.

Even in my computer-filled office where one might reasonably expect



the mains to be severely polluted, the effects of the Dectet are more subtle than dramatic, possibly because my rural location provides cleaner than average raw mains. As a result, any improvement to my mains set-up brings smaller rewards than they used to when I lived in London. However, even though they are subtle, they are still appreciable and welcome.

Playing The Koln Concert it seems that individual notes within trills have greater individuality and definition. They also show more of the piano's 'jangly' timbre: their note shape has crystalline relief, which helps emphasise the poor state of the instrument. This openness subjectively widens the spectral scope of the recording, bringing out playing at both extremes of the keyboard with greater clarity and detail - even though Jarrett concentrated his playing during the event to the instrument's midrange. This enhanced clarity also benefits micro and macro dynamic contrasts that give the portrayal of his playing a more natural and emotive feel.

The human qualities of Gillian Welch and Dave Rawlings emerge equally on their playing and singing on *The Harrow & The Harvest*. The Dectet appears to remove a degree of grain that previously masked subtle elements of Welch's voice. This clarity is maintained even when a formerly

noisy/dirty Switched Mode Power Supply is connected to one of the Dectet's filtered outlets.

The major benefit of the Dectet, however, is that it seems to do absolutely nothing deleterious to the dynamic compass of the system: the streamer, DAC and power amplifier retain all the dynamic expression they demonstrated before being connected through the unit. In fact, the system ultimately sounds more dynamically charged in micro and macro terms than it had before, most likely as a result of the noise floor being lowered.

Close encounters

Another subjective impression is that I feel closer to performers, particularly vocalists, more as though they are communicating solely with me, and the sense of intimacy, and the meaning and relevance of the lyrics is heightened. Whether this proves true for you in your circumstances will involve you trying it within your system. We all might share the same 240V of National Grid, but everyone's experience of this power strip will surely vary depending upon the exact circumstances in their locality. Regardless, unlike most filtered power strip designs, I think this inexpensive device is definitely worth a test run in your system. MS

OUR VERDICT



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Mark Grant Cables

Isotek System Set-Up Disc

SETTING UP A record deck is quite an involved process and requires a number of adjustments to be made to get everything working perfectly and a test LP is an essential accessory to enable these adjustments to be made. A useful spin-off is that some of the tracks of these LPs can be used to check the phasing and identification of both channels and also the positioning of the loudspeakers in the listening room. Although a CD player has no such requirement for calibration of the mechanism, there is nevertheless still a need to check phasing and loudspeaker positioning – hence a test CD that addresses these issues.

One such check disc is the Isotek System Set-Up Disc, which contains 20 tracks to help set up, test and fine tune your audio system. The CD consists of a mix of music, sounds and voices, incorporating 14 specific test and tune-up tracks, followed by six tracks of carefully selected music. The test tracks include channel identification, phase tests, speaker position and soundstage tests, stereo image depth tests and frequency range tests. The human voice and the sound of castanets are used with different amounts of volume, phasing and reverberation being applied to each channel to move the sounds around the sound stage.

Testing testing...

On my system, I found that this CD has indeed been very cleverly engineered not only to move the sounds between the left and right channels, but also to generate considerable depth to the image and have the sounds move towards, away from and even around the listener, if everything has been set up correctly



The CD confirms that the obvious settings – for example the channel identification and phasing – are correct. It also checks the less obvious settings, such as the positioning of your loudspeakers and listening chair, to achieve the best overall audio experience. The music tracks have been well chosen to highlight atmospheric detail, soundstage depth, timing and dynamic ranges.

In conclusion, it is an excellent CD that really does help fine tune your audio system. **NR**

PRICE £20 CONTACT 01482 887717 WEBSITE markgrantcables. co.uk OUR VERDICT

Analogue Seduction

Analogue Studio Anti-Static Cleaning Cloth

ANY RECORD CLEANING cloth worth its salt should not only clean your records, but also remove static electrical charges that can build up on the playing surfaces of the vinyl. One such cloth is the Analogue Studio anti-static cloth available from Analogue Seduction and this also lubricates the vinyl playing surface as well. The cloth may be used on its own or in conjunction with a cleaning spray for those stubborn stains and greasy fingerprints!

Over time, dust and dirt collects on vinyl and this can negatively affect sound quality and even potentially damage your stylus.

One of the nice things about dry record cleaners is that they can be used routinely before and after every playing without having to wait for any liquids to dry off. This cleaning cloth is a simple and low-cost solution to the problem of keeping your

records clean. As with all cleaning cloths, it is best not to clean the record while it is on the turntable as you will be applying a sideways force to the central bearing while wiping the record. This can cause premature wear of the precious central bearing of your turntable. Instead, place the record on a flat, clean surface and wipe around the vinyl, moving the cloth carefully in the direction of the groove before playing.

A clean getaway

The cloth is supplied in a blister presentation card, although I would like to have seen some sort of storage pouch or container included in order to prevent it from picking up dust itself when not in use. However, this is a very minor issue, especially given the low cost of the item. I happen to have a spare re-closable plastic bag of just the right size, which I use for

storing the cloth once I've removed it from the packaging.

The cloth works well in use and is a valuable accessory to have with your precious vinyl collection. **NR**







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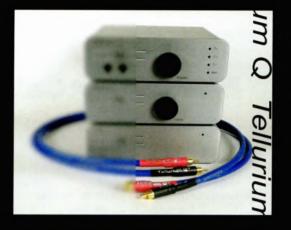
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Pro-Ject

Head Box DS headphone amp/USB DAC

FOR A COMPANY best known as a maker of turntables and other analogue accessories, Pro-Ject has certainly been putting the effort in elsewhere. The 'Box' range of components is now a bewildering array of models that extends through amplification, speakers and digital. Some of these products are conventional enough, but others sit astride more than one category. The Head Box DS is just such an item, combining as it does the functions of a headphone amp and USB DAC.

The amp section is straightforward enough and supports headphones with an impedance of 30ohms and up. Connection comes courtesy of a single 6.3mm jack on the front panel and volume adjustment is carried out via one of the two pairs of buttons positioned nearby. The other pair allows you to select inputs. These include an analogue RCA connection, allowing it to be connected to the tape loop out or to a single source.

So far, so normal, but alongside the analogue input is a trio of digital ones. The Pro-Ject is fitted with a single coaxial, optical and USB connection with decoding by a Burr Brown PCM1792 chipset. These are 24/192kHz-capable and in the case of the USB is a driver based asynchronous design. As a headphone amplifier, these can be listened to via the headphone output, but the Pro-Ject also has an RCA line level output for use as a standalone DAC. The inputs all work well, although I can't get the USB input to work in driverless '1.1' mode. This is not too much of a problem, though, as the driver installs without incident and doesn't appear to affect anything else on the installed machine.

Display away

Pro-Ject has been using a variety of OLED displays on the Box range for a while now and the one fitted to the Head Box is a fine example. As well as the volume of the headphone amp, it shows the input selected and the incoming sample rate. For such a small display, it is





extremely clear and easy to read and makes everything else at the price look a little crude in comparison.

The good news is that the Head Box is more than a smart metal case. With a pair of PSB M4U1 headphones attached to the front panel and the Head Box connected to a Windows 7 laptop running Foobar, the performance is extremely assured. The presentation is even handed and well integrated from top to bottom. Listening to the lossless FLAC of Boards of Canada's Tomorrow's Harvest captures the sparse, almost alien presentation of the recording and the potent bass that the album depends upon is well reproduced.

Switch to something more dependent on midrange and treble energy like Calexico's Algiers, and the Pro-Ject is also a strong performer. There is a richness and detail to vocals that greatly aids the believability of the performance and the impressively low noise floor means that incidental detail is easy to pick out without sounding forced. There is a sense that the amplifier might struggle with headphones that present a tough electrical load and it will harden up at high volume, but these are likely to be significantly more expensive than the Pro-Ject is.

Using the Head Box as a DAC into a Cambridge Audio 851A demonstrates most of the same performance traits.

The Pro-Ject is not the most forceful performer I've listened to – it tends to sound a little relaxed with up-tempo material and there is a very slight lack of final impact to deep bass (although what bass there is has good detail and texture to it) in comparison with the headphone output, which means that up against Micromega's minimalist MyDac, it can sound a little polite (although the Pro-Ject is effortlessly more substantial in terms of construction and features). Equally, however, there isn't much you can play on the Pro-Ject that seems to upset it. The performance across the different digital inputs seems extremely consistent with no serious changes in performance and the analogue input appears to be transparent, too.

The price is right

Given the comparatively affordable asking price of the Head Box, it would be reasonable to expect it to offer a stronger performance in certain areas, and it is certainly a far better headphone amp than it is a line-level DAC. That being said, it is far from a poor performer in this regard and the excellent performance over headphones combined with the substantial build quality and the useful feature set mean that the Pro-Ject is a very clever box of tricks indeed. **ES**

icon Audio



The Unique Stereo 40 MK III KT88m Our best ever mid range amplifier!



designed by David Shaw

Shown with upgraded Treasure CV181s and Full Music TJ 6SL7, Jensen copper foil in paper and oil capacitors

Superbly engineered. Very versatile 40w+40w UL or 20w+20w Triode Whilst our flagship models rightly get superb praise from reviewers worldwide for their performance and value, we never lose focus on our more affordable products and regularly update them when the opportunity arises. Such is the case with our Stereo 40, Our original brief over 10 years ago to make the best possible EL34/KT88 valve amplifier for a reasonable price still holds true. Our latest Stereo 40 MK IIIm incorporates several improvements. Now with a meterw hich allows a very simple way to check that the output valves are operating at their optimum value and best performance. This will also tell you when a valve is due for replacement or when it is failing. Something other designs don't do. The Stereo 40 is almost unique in its ability to use a very wide range of valves including 616.

5881, EL34, 6CA7, KT66, KT77, 6550, KT88, Now made very easy to change if you like "tube rolling". In our quest to make the best amplifier in its class we also include all the features we think a good amplifier should have including Triode or Utralinear operation. remote control, a record loop, a warm up/standby facility, valve rectifier, Low Distortion Tertiary output transformers and many more features.

There are also things we don't include like printed circuit boards and transistors both of which we feel degrade the performance of valve amplifiers. Obviously the overriding priority is the sound quality which must come from good engineering which we believe to be far ahead of the Stereo 40's modest price.

Our four cornerstones are Quality Performance and Value, And in the future, Service when you need it. In this age of "built in obsolescence" it may be unfashionable to talk about repairs and spares but our commitment to future service means you should be able to enjoy your amplifier for at least 20 years.

All of our amplifiers are designed and finished in Leicester they are commissioned and serviced by the people that designed them so you can be sure of our quality control and long term performance. Our new series of "Low Distortion Tertiary" output transformers are the best we have ever made, enobling us to less global feedback by about 40%. All our amplifiers are hand made using "point to point" soldering without using printed circuit boards. We are convinced this sounds better. It also allows for easy servicing, upgrades and modifications and long life. Remote controlled volume is useful for fine tuning your listening level to match your taste. High quality components are used throughout including an "ALPS" volume control, silver plated PTFE audio cable SCR capacitors audiophile resistors. Power Amplifier operation is possible by selecting a lower

"gain" on the rear of the amplifier (this is done without attenuation which would lose quality). Londspeakers of nominal impedance between 3 ohms and 10 ohms may be used with virtually no reduction in power or quality. A valve rectifier with choke regulated power supply adds a richness to the sound quality that silicon devices alone are unable to do. Tape and other methods of recording and playback are catered for by the "Tape Monitor". Also useful for Home Linema applications.

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Black Rhodium

Oyaide MWA-RC Magnetic Wave Absorbers

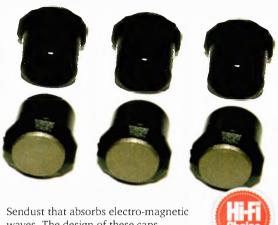
NOISE AND RADIO frequency interference (RFI) can find its way into your audio system through all sorts of routes. In particular, it can enter through the unused sockets on amplifiers and other pieces of audio equipment. This noise and interference can be minimised by applying shorting links to inactive inputs and by fitting special filters to unused outputs. With the growing popularity of digital electronics such as computers and mobile phones - the need to protect sensitive audio circuits from the high-frequency interference generated by these devices is becoming far more urgent. Enter the new Oyaide MWA-RC Magnetic Wave Absorbers!

Oyaide has a view that, in strong fields of interference, shorting links

can actually behave like low impedance aerials that will pick up RFI and feed that to the input of your amplifier. To avoid this issue and provide effective shielding, Oyaide has developed the MWA-RCs to prevent this noise, as well as dust, from entering your system. Simply attach these devices to unused RCA phono sockets on your equipment and since they do not short out the signal, they can be applied to both input and output sockets.

Good vibrations

The MWA-RCs are made from polypropylene to dampen even the smallest of vibrations that can occur in unused sockets. Furthermore, they have a 1mm-thick magnetic wave absorber on the cap, which incorporates a material called



waves. The design of these caps maximises RFI attenuation up to frequencies in excess of 1GHz.

These magnetic wave absorbers are sold in packs of six to fit on up to three pairs of unused phono sockets. I find them very effective, particularly when utilised on any inactive outputs. Dynamics in the music seem to be more refined and effortless with the Magnetic Wave Absorbers fitted and the music flows more smoothly. This is an excellent value accessory for your hi-fi system. NR



Oriton

Black Racer Interconnect Cables

MATERIAL SELECTION IS a key element of the Black Racer, which is the only interconnect cable made by Oriton. Copper has been chosen for the core conductor, and it is also filled with a special shock absorbing material to shield the audio signal from noise produced by physical vibrations. The audio signals are further protected from the intrusion of both RFI and EMI by a mesh shielding, which is quoted as giving approximately 95 percent rejection of this interference and the shielding also functions as the earth return. The RCA phono connectors have also been designed to Oriton's high standards and further reduce vibration. Oriton claims that all this results in greater musical clarity and tonal delicacy.

The interconnects are clearly very well made and finished to a high standard. The phono connectors are produced inhouse and work well in

practice as they clamp onto the socket with a twist lock. The cables are very flexible and can easily be routed at the back of the audio equipment.

Thin Lizzy

Straight out of the box, I find the sound thin and two-dimensional. However, I never expect cables to start sounding their best until they have been run in and after a good 10 hours of use, I find that they open up and

start to reveal much more detail in my recordings. These cables are very neutral sounding, so they should suit a wide variety of systems. They convey individual instruments in a very

natural way and full orchestras sound well-balanced and are easy on the ears.

Overall, the Black Racers produce a well-rounded sound and there is an impression of great openness and transparency, which conveys the music with an effortless dynamic quality. They are certainly worthy of consideration. NR



DETAILS £399 per 1m pair 01633549530 WEBSITE oriton.co.uk **OUR VERDICT**



In short, the Atlas Element USB is a spectacular performer at a beer-budget price. As such, it comes heartily recommended.

HiFi Choice,
May 2013



atlascables.com



Andrew Simpson casts his expert eye over his pick of the best hi-fi websites and online content



SAY IT AS YOU SLEE IT

Graham Slee has a reputation for his no-nonsense demure range of discrete amps and phono stages. That Graham also has time away from the workshop to maintain such an active online resource shows the man's dedication to his products and customers. The site contains all the usual product info you'd expect, but what's more unique is how Graham also likes to open up

About the wint

that one can make all this hard a falling space first product or it would for promot 15 beauth advances. This borrows in the terminal of the terminal and increase are. The core of products and products of products and products of products and products of products and products are products and products are products and products are products and products are products are products and products are products are products and products are products are products are products and products are product

DIY YOUR M-DAC

Audiolab's seminal M-DAC needs little introduction, offering 32-bit resolution, balanced outputs and more features than you can shake a USB stick at.

Now, thanks to its loyal followers and the brains behind the box, John Westlake, the DAC has gained a new lease of life. What began as discussion threads has been recast into a dedicated M-DAC wiki, which pulls in the various upgrades developed by John and his fellow forum users.

The Wiki is broken down into hardware and software downloads that link back to the forum thread that the changes stem from. New features include phase inverting, auto-dimming the DAC's screen and bug fixes for Macs and PCs. For M-DAC owners, this is a fascinating window into the fan base that's grown to love it.

discussion, opinions and product feedback.

"The blog is where I share my thoughts and try to show both sides of the story, while inviting replies to get the debate going, the way a blog should be," says Graham. "It's not called my audio soapbox for nothing!"

Equally refreshing is the site's forum, where you can chat to other GS product owners with hundreds of topics and thousands of posts spread across DIY mods, user reviews and general discussion around vinyl, digital audio, music and more.

There's also a classifieds section, record exchange and a product loan scheme run through the forum community.

"The loan scheme is built on trust and kindly run by our volunteers," says Graham. "We now have loan schemes across Europe, Australia and the USA all run through the forum. I've found being open with my customers has broken down barriers, which makes them want to be involved."



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Imagine a site that melds the best of Wikipedia, Amazon and Ebay for the serious music collector and you're singing from the same hymn sheet as Discogs. It's an awesome user-driven music resource "on a mission to build the most comprehensive music database and marketplace". And judging by the 140,000 contributors, who've so far built up a catalogue of over 3.5 million recordings from 2.5 million artists, its not messing about.

Searching by artist or album allows you to plunder release dates, formats and a level of detail that puts most sleeve notes to shame. Vinyl junkies can compare run-out grooves to see how close their discs are to first pressings. Add in user accounts, an active forum and a marketplace, and this becomes one of the best online record shops around.

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HIFI GEAR (@HIFIGEAR) We've had the

We've had the lid off our Arcam D33 DAC, as we like the look of circuit boards! Come see the eye candy! **fb.me/2wY1eQ5rc**

M

MERIDIAN AUDIO (@MERIDIANAUDIO)

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CLASSIC ALBUM SUNDAYS (@CLASSICALBUMSUN))

World's most expensive record cover goes up for auction. Any guesses? ow.ly/nrN82 @dustandgrooves@vinylcollective @CratesofVinyl



THE MUSIC ROOM (@MUSIC_RM_GLA)

What would you like us to demonstrate at the National Audio show (Whittelbury) this September? Any requests?

@UK_Audio_Show



OPPO DIGITAL (@OPPODIGITAL)

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com in a while, you may want to. We have revamped our website to be cleaner, faster, better

CHATTER

Interesting to see the results of The Chord Company's Facebook poll in July, asking users what their main music playback source is. CD was format king taking almost half of the votes and computer' in second place: on.fb.me/15PSkll

Looking for some home installation inspiration? Artcoustic has been busy filling its Flickr site with pics of

some amazing rooms adorned with its wallhung speakers: flickr.com/photos/ artcoustic/

MoIntosh ran a photo comp on its Facebook wall last month for owners to post pics of their MoIntosh setup, with the most liked photo owner winning some MoIntosh merch. There were some serious rigs to behold: on.fb.me/18BWhME



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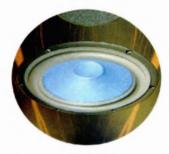


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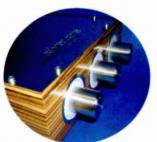


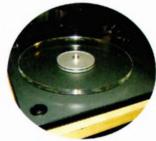


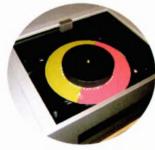
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We take a look at the very handsome standmount speaker from one of Britain's most famous loudspeaker brands



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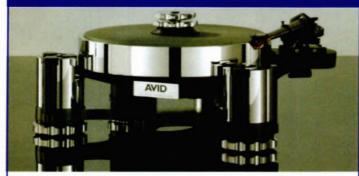
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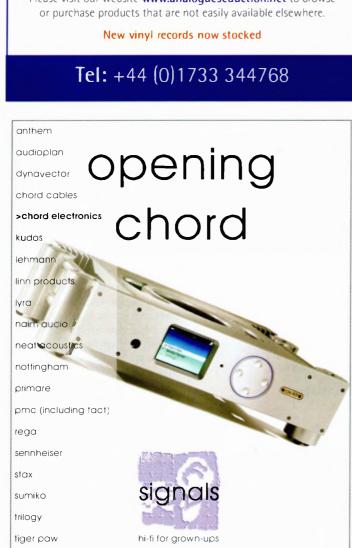


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WE HEAR...

NEWS COMES THAT ONE OF THE BEST mid-price CD spinners of late, the Cyrus CD8SE (and indeed its CD6SE little brother) is due for the chop soon. In their places, a brand new Cyrus CDi silver disc player will arrive, said to offer "the latest Cyrus engineering", a new circuit and an advanced 32-bit DAC. Is it telling that one model is replacing two could the writing finally be on the wall for the silver Frishee?

FANS OF ANALOGUE EXOTICA will be interested to hear murmurings of Clearaudio's new Absolute Phono stage. Costing around £9,000, it works with Clearaudio tonearms that have a tiny circuitboard fitted to amplify the MC at its source - this is claimed to give around 10dB extra signal-to-noise ratio. Our spy says it also uses 'current gain' rather than 'voltage gain', so adjustable cartridge loading isn't needed.

WILTSHIRE CABLE SPECIALIST The Chord Company is continuing its range revamp with mid-price interconnects to follow the recent new Crimson, Cobra and Chameleon (Audiofile, HFC 375). The new Cadenza, Chorus and Anthem cables boast heavier-gauge conductors, new VEE 3 plugs and improved conductor designs. Prices are £220, £350 and £450 for 1m respectively.

ONE OF BACKCHAT'S FAVE MINIATURE MONITORS - Monitor Audio's wonderful Radius90 - gets its second series of modifications, which should make an already great little box even better. A new metal C-CAM mid/bass drive unit and a new C-CAM gold dome tweeter are fitted to this £350 speaker and similar upgrades apply across the Radius range.

THROUGH THE PAST, SMARTLY...



HI-FI CHOICE ISSUE 75 OCTOBER 1989

Back in the late eighties when Dr Dre was a rapper embarking on his career, rather than the owner of the most recognised headphone company in the world - cans weren't the fashion accessory they are today and your

choices were probably limited to black, grey or... a different shade of grey. This didn't stop Jason Kennedy from putting 20 sets of 'ear goggles' through their paces. Honourable mentions went to AKG. Bever Dynamic, JVC, Sennheiser, Sony and Stax models, which got Recommended awards, while Best Buys went to Sony's MDR-A21/L and Sennheiser's HD40. Meanwhile, HFC feature writer Richard Black completed his series on the rebuilding and refurbishment of an old Studer C37 tape recorder that was found in a builder's skip.

Elsewhere, the Guildford four were released from prison after spending 14 years under lock and key – alerting Daniel Day Lewis to an opportunity to act his socks off, his holiness the Dalai Lama won a Nobel prize for peace and an official news agency in the Soviet Union reported the landing of a UFO in the Russian city of Voronezh.



HI-FI CHOICE ISSUE 158 OCTOBER 1996

Whileback in 1996 many people were dreaming about a new millenium filled with flying cars, hoverboards and robot servants, in HFC we were more concerned with audio formats. As editor Stan Vincent sagely

pointed out: "You need Steve Austin's bionic eves to predict which music format will dominate in years to come", before pointing out that this new fangled DVD might not be the "new CD" after all. Apparently a new development for computers might hold the key to the future. "The headline application these days is the World-Wide Web (WWW), which is like the biggest most exciting, easiest-to-use encyclodaedia you've ever encountered" and, we were told, it could be the souce of new music formats offering "near

CD-quality sound". Little did we know...

Meanwhile, the world watched in fear as four British 'sonic terrorists' spread a new brand of horror across the nation. Having already hit the number one spot with Wannabe in August, The Spice Girls followed up with Say You'll Be There. Some still bear the scars of this audio atrocity...



DESERT ISLAND DISCS

This month **James Talbot**, founder and ceo, Damson chooses four of his favourite long players...



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(WHAT'S THE STORY) MORNING GLORY

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FAR FROM THE MADDENING CROWD

By far the biggest influence on my current musical tastes. The varied shades of Indie and electronic music is where my heart lies.

PASSION FOR SOUND

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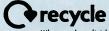


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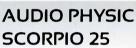


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