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Welcome

www.hifichoice.co.uk Issue No. 381 February 2014





I love radio! I've been a fan for as long as I can remember, tuning into my favourite radio station every morning as a matter of routine. My choice of station has changed somewhat over the years – some may even say matured – as I move away from the youthfulness of Radio 1 to the more eclectic mix of Radio 6

Music and the informative Radio 4.

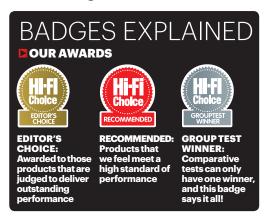
I know that my passion for radio is shared among many hi-fi fans, as the love for the medium has been well documented in these pages over the years. Despite the number of FM tuner models diminishing on a seemingly daily basis from the ranges of hi-fi separates manufacturers, the desire for radio broadcasts with decent sound quality is still very much on the agenda for hi-fi fans. DAB sound quality is widely regarded as below par and, as such, has struggled to get the kind of foothold the government wanted, resulting in December's announcement by communications minister Ed Vaizey that scraped the anticipated FM radio transmitter switch-off date from 2015. With no new target date set, the government has been clear that a decision on digital switchover can only be made when various benchmarks are met, including when digital listening reaches 50 percent. It is currently 35.6 percent. There will be £21 million of investment from the BBC, government and commercial radio to increase digital radio coverage, so more homes can receive it. Let's hope that radio's digital future also includes plans to improve on sound quality.

Musicreviews

USB DAC



Rebecca Ferguson Freedom



Lee Dunkley Editor

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GROUP TEST





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Linn Axis turntable (Retro)

88

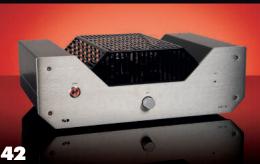
"The NWZ-F886 sounds detailed and smoother than an otter in Speedos."

Adrian Justins: Sony NWZ-F886 portable media player p107

TESTED THIS MONTH



Marantz CD6005/PM6005 CD player/amp



Valve Audio Devices DAC-10 DAC



50

Pro-Ject 1 Xpression Carbon turntable



Kit testing

Marantz

CD6005/PM6005 CD player/ integrated amplifier

Valve Audio **Devices**

DAC-10 DAC (Exotica)

6 Spendor

A6R floorstanding loudspeaker

Pro-Ject

1 Xpression Carbon turntable

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Linn

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GROUP TEST

Phono stages £149-£380

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37 Rothwell Rialto

MINI TEST

Contact cleaners £5-20

84 Kontak

Electrical Contact Cleaner

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CHOICE EXTRAS

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Nine Audio

Vega headphones

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

Audiofile

THE LATEST INDUSTRY NEWS...

The XL factor

Stylish all-in-one speaker system equipped with Bluetooth, CD and DAB radio takes to the stage

PRICE: £1,799 AVAILABLE: NOW

CONTACT: 0843 5236344 WEB: GENEVALAB.COM

THINK OF ANYTHING to do with Switzerland and you'll probably say cheese, chocolate and timekeeping as your top three things most commonly associated with the country. Also recognised for remarkable efficiency and engineering, the Swiss have undoubtedly spawned a number of highly regarded audio makers over the years, with Geneva Labs being the latest brand to come from the home of yodelling with a range of stylish DAB radio systems.

Adding to its range, the Swiss-based electronics manufacturer has unveiled

The cabinet houses six speaker drivers – three drivers per stereo channel

the Model XL Wireless, an all-in-one stereo system. The design-conscious company tells us that the latest model incorporates Bluetooth wireless connectivity with support for apt-X streaming from compatible smartphone and tablet devices.

It also features a built-in CD player with slot-loading mechanism on the top, as well as DAB/DAB+ and FM radio receivers, along with six FM and six DAB station presets, all housed in an eye-catching wooden cabinet measuring just 550 x 613 x 370mm (WxHxD).

The cabinet enclosure also houses six speaker drivers – three drivers per stereo channel – in four discrete acoustic chambers, the maker says. Each channel has a 1in tweeter, 5.25in woofer and 8in subwoofer

driver powered by an individual Class D amplifier, which Geneva Labs claims delivers 16, 32 and 125W to each of the respective speaker drivers, generating a wide, flawless frequency range for music lovers and style gurus alike, or at least that's the hope.

Touch-sensitive navigation controls adorn the top of the cabinet, and a slender remote control handset is also supplied. Additional connectivity for wired devices is provided in the form of a stereo minijack as well as stereo RCA inputs at the back of the unit.

The Model XL Wireless is available in three high-gloss colour finishes including red, white and black. A premium walnut finish (shown below) is also available at an additional cost of £100. The optional brushed-aluminium floorstand (pictured) is also available and will set you back an extra £189.





It incorporates Bluetooth wireless connectivity with support for apt-X streaming from compatible devices

COMMENT

WHO'S CHEATING WHO HERE?

If, like us, you're a regular user and big fan of Spotify's excellent music streaming service, you'll no doubt have noticed the minor disagreement between Moby and Radiohead's Thom Yorke. For those that weren't paying attention, Yorke has stopped Radiohead's music being available on Spotify arguing that the royalties the company pays artists are pitifully small and are unfair on up and coming musicians trying to make a living. Moby disagreed, stating that though he loves Radiohead, he felt that Yorke was talking nonsense. All very civilised then as disagreements go, but Yorke's actions appear to have made Spotify sit up and take notice. In early December, the streaming service unveiled an analytics system for musicians in an effort to be more "transparent".

The service provides direct access to data for musicians about their music and – more importantly – where the money goes. So does it shed any light as to why, as Thom would have us believe, musicians are being ripped off? Course it does and it's not exactly the biggest surprise ever...

Take a look at the section labelled Royalties and Spotify reveals that it has paid out an estimated figure of \$350 million to rights holders, which sounds like more than enough money for everyone from Lady Gaga to the smallest struggling songwriter to be doing alright. However, take a closer look and why the issue ever arose starts to become a little clearer. Point number four on the page states: "Once Spotify has paid a rights owner the total royalties due for their accumulated streams, that label or publisher pays each artist according to that artist's contractual royalty rates". So, in short if musicians are being paid peanuts from Spotify it's because of the contract they have with their record company and the duff terms they've agreed to when it comes to rights and royalties.

Clearly this is a bit of coup for Spotify as it suggests that it's not the big bad wolf, but it is in fact the record companies (isn't it always?). But more importantly it means we can carry on using the service without feeling the slightest bit guilty...



Chord sound on the go

CES 2014 sees the launch of Hugo - a headphone amp for wherever 'you-go'

PRICE: £1,200 AVAILABLE: JANUARY

CONTACT: 01622 721444 WEB: CHORDELECTRONICS.CO.UK

KENT-BASED CHORD ELECTRONICS announced the launch of a portable headphone amplifier at CES 2014 in Las Vegas this month. Called Hugo – because you can take Hugo wherever 'you-go' – the palm-sized player claims to offer studio sound quality, advanced connectivity and uncompromising file playback capability. The maker tells us the Hugo headphone amp/DAC offers five digital inputs as well as A2DP apt-X Bluetooth, plus 384kHz PCM and DSD 128 playback for high-resolution DXD (Digital eXtreme Definition) music files. Two USB inputs: one driverless input for legacy USB devices and one asynchronous high-definition USB port for operation up to 384kHz. There are also coaxial and optical digital inputs.

The silver aluminium casework has a hard-anodised finish and the top-mounted 'porthole' shows the internal circuitry, which changes colour dependant on incoming sample rates. The built-in battery reaches full charge in two hours and offers 14 hours of use, the maker says.



IN BRIEF

USB-POWERED DACMAGIC BOX



 Cambridge Audio has unveiled the DacMagic XS USB DAC, a matchboxsized digital-to-analogue convertor and headphone amp. Encased in brushed aluminium and weighing a mere 100g, the DacMagic XS uses technology from Cambridge Audio's high-end DACs. It connects to any USB port and handles all your favourite music from MP3s through to 24-bit/192kHz hi-res files. An LED shows current sample rate and the built-in headphone amp with adjustable volume control improves on the majority of laptop soundcards, claims the maker. The DacMagic XS is available now from Richer Sounds stores, priced £99.95.

CAMBRIDGEAUDIO.COM

ATC adds to Passive Series

PRICE: £1,996-£3,275 AVAILABLE: NOW CONTACT: 01285 760561 WEB: ATCLOUDSPEAKERS.CO.UK

Following the launch of the SCM7 and SCM11 standmount loudspeakers in late 2013, ATC has recently announced the inclusion of two additional models to join its Hi-Fi Passive Series, completing the lineup. The second-generation SCM19 standmount and SCM40 floorstanding models both employ the company's all-new SH25-76 25mm soft dome tweeter, sharing technology with the company's soft-domed mid-range unit.

The all-new ATC tweeter employs a dual suspension system suggesting improved performance at high power output levels, while a 5.5mm alloy waveguide provides optimum dispersion, a flat on-axis frequency response and resonance-free operation, the maker tells us. Partnered with a 150mm mid/bass driver on the standmounting SCM19 speaker design, and individual 75mm soft-dome mid-range and 164mm bass drivers on the SCM40 three-way floorstanding design, the improved speaker crossover stages afford the ATC Hi-Fi

Passive Series range of speakers greater power handling, frequency integration and clarity, says ATC.

All Hi-Fi Passive Series models are housed in high rigidity curved cabinets and are available finished in cherry or black ash veneers with anthracite grey metal grilles fixed to the front of the cabinets by concealed magnets.

As with all ATC loudspeakers the model number denotes the speaker's internal cabinet volume in litres, and each comes with a six year maker's warranty.







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INGENIUM

TONEAudio Magazine 2012 Publisher's Choice Award

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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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Elac Air-X

German speaker brand adds wireless technology

PRICE: £2,499-£4,299 **AVAILABLE:** NOW **CONTACT:** 01285 643088 **WEB:** ELAC.COM

JOINING THE TREND for wirelessly connected speaker systems, Elac has announced the launch of the first models to debut its AIR-X wireless technology. The AIR-X 403 standmount and AIR-X 407 floorstanding loudspeakers are active models incorporating built-in Class A/B amplification. The AIR-X AMP unit connects to audio signals losslessly transmitted at 24-bit/48kHz from the AIR-X BASE, but balanced XLR and unbalanced connections are provided where wireless transmissions are not desired. Both speakers incorporate internal digital signal processing (DSP) functionality to allow them to be 'tuned' to fit with their surroundings, explains the maker.

The AIR-X system can be expanded to include additional loudspeakers controlled by one or more AIR-X BASE units (£349). Analogue and digital inputs are catered for, including a USB-B port for direct connection from a PC. One BASE unit can control up to three zones, playing the same signals throughout the house or different signals in every room, the maker says.

Both speaker models are available in either gloss black or white finishes.





IN BRIEF

JVC'S Z SERIES HEADPHONES

Four new models join the JVC headphone lineup to form the Z Series range. Featuring the company's Real Sound System technology, the HA-FXZ100 (£160) and HA-FXZ200 (£230) in-ear models add an 8.8mm woofer unit to the twin system structure and boast significant design firsts that redefine bass quality for in-ear headphones, the company claims.

The HA-SZ1000 (£230) and HA-SZ2000 (£300) over-ear models also carry the Real Sound System tech and benefit from a dual bass-reflex system that features two separate chambers for richer bass, which means the main 55mm driver can be optimised for mid-to-high frequencies, explains JVC. All models are on sale now.



Cocktail Audio music hub

PRICE: £869-£1,349 AVAILABLE: NOW CONTACT: 01732 765157 WEB: SYGNIFI.CO.UK

The X30 is the second music centre hub to come from Cocktail Audio, adding greater storage options and flexibility over its more affordable X10 sibling. Unlike music centres of the seventies combining record deck, cassette recorder and FM radio, the X30 brings together a CD ripper, HD music server, streaming and radio receiver duties in a single hi-fi separates-sized component, available in black or sliver finishes

The X30 adds storage options ranging from 500GB up to 4TB, which the maker says is enough for storing around 40,000 MP3 music files at 192kbps – support for WAV, FLAC and OGG file formats is also offered. A customised storage drive drawer allows for quick and easy

storage expansion and supports 2.5in and 3.5in SATA hard drives or 2.5in solid-state drives (SSD), the maker says.

The front-loading CD mechanism offers high-speed ripping up to 24x, and claims it's silent enough to enable simultaneous music listening. The X3O hub is navigated via the front panel's 5in colour LCD screen, which also displays album and track artwork. A remote control is provided with the X3O and there is also a free app downloadable for both iOS and Android devices to enable control and streaming from smartphones and tablets.

The Burr-Brown PCM1792A digital-to-analogue convertor supports 24-bit/192kHz music file

formats including AIFF, ALAC, MP3, WAV, WMA and FLAC. Gapless playback is also available.

The X30 provides Toslink, coaxial and AES/EBU XLR digital outputs with support up to 24bit/192kHz, meaning the X30 can be used as an audio server and source device for those wishing to use an existing external amplifier or DAC.

The built-in amplifier claims 50W per channel output and turns the X30 into a complete music system with the addition of a pair of speakers. It can accept additional digital sources via its Toslink and coaxial inputs as well as analogue sources via a pair of RCAs. It comes with an Ethernet socket, but an optional wi-fi dongle is available for wireless connectivity.



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Pioneer stations

Hi-fi docks with Lightening connector, DAB+ and Spotify

CONTINUING WITH ITS interest in two-channel audio come two sound systems unveiled by Pioneer at the end of last year. Measuring a total of 520 x 218 x 137mm (WxHxD) and weighing in at 3.9kg, the X-SMC11DAB and X-SMC55DAB micro-sized systems receive both DAB+ and DAB digital radio broadcasts. The hidden push-out dock with Lightning connector enables device connectivity for iPhone 5, 5th-generation iPod touch and 7th-generation iPod nano users. USB ports allow for a direct digital connection to mobile digital devices and both models have a CD player with MP3 and WMA playback compatibility, says the audio manufacturer.

The X-SMC55DAB is the more flexible system of the two and is equipped with built-in wi-fi and Wireless Direct to enable users to stream their music from a mobile device without a wireless router. Both Apple AirPlay and DLNA v1.5 is supported, allowing users to place the speaker anywhere in the home and play directly from a Mac, PC or portable device, cable-free.

The X-SMC55DAB is also the first Pioneer micro system to integrate Spotify Connect, and a free ControlApp expands control directly from a mobile device for both iOS and Android users.

Both sound systems are available now with the X-SMC55DAB priced at £300 and the X-SMC11DAB priced at £220.



Danish Bluetooth system

PRICE: £500 AVAILABLE: NOW WEB: TANGENT-AUDIO.COM

Scandinavian manufacturer
Tangent has unveiled its Classic
wireless loudspeaker system, which
it claims offers a unique, iconic
design along with audiophile sound
quality and superb ease of use.
Looking more like a piece of
furniture than a hi-fi system, the
Tangent Classic is a stereo speaker
system with separate bass reflex

enclosures housing a pair of 1in soft dome tweeters and 5in mid/bass speakers driven by a claimed 50W per channel built-in amplifier.

Wireless Bluetooth connectivity incorporating apt-X capability is onboard, while on the rear panel there is a 3.5mm jack input as well as a USB port that will recharge an iPhone or iPad.

Available in walnut or ash wood veneers, the infrared remote control and smartphone/tablet stand are both made from the same wood veneer to match the speaker system. The Tangent Classic is being sold for a limited period through Selfridges London, Birmingham and Manchester, and at www.johnlewis.com.



IN BRIEF



ECO ON-EARS

• Eco-conscious headphone manufacturer Thinksound has announced the introduction of its On1 on-ear headphones. The first on-ears to come from the US maker use sustainable wood and recyclable materials where possible to achieve the smallest eco-footprint for a pair of headphones, the maker says. The wooden ear-cups are fitted with 40mm drivers and come with detachable cables and carrying pouch. They are set to cost £300.



CORRECTION

• In the October 2013 issue we published a review of the Pro-Ject Head Box DS headphone amp/USB DAC on page 117 of Choice Extras, written by Ed Selley. The review incorrectly stated that the Head Box DS was fitted with a Burr-Brown PCM1792 chipset, when in fact it has always used a Cirrus Logic CS4344 DAC chipset as detailed in the maker's specification.

This inaccuracy lead to a response to a reader's letter being published in the January 2014 issue on page 74, which was further incorrectly diagnosed by the respondents Ed Selley and David Price. Their comments were unfortunately misinformed and we would like to apologise to Pro-Ject and anyone else that was affected by the error.

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Autorefresh

Now we're properly into 2014 it's time for Marantz's budget CD player and amplifier range to get a refresh. **David Price** is suitably impressed





lashy products come and go, sensations soar up the sales charts and then fizzle away and a procession of award winners fill dealers' shelves. But amidst all this drama and chaos, there's one thing about which you can always be sure – Marantz budget separates will always offer quality. Marantz's entry-level CD player and amplifier are never going to be stinkers! Nor, to be frank, are they going to be dramatically different from their predecessors, save a tweak here and a feature change there.

Residing on the very first rung of the Marantz silver disc-spinning range ladder, the CD6005 doesn't offer SACD playback functionality. But most won't be troubled by this, as the format isn't exactly set to take off. Instead, the company has spent the money in a very economical way but where it's most important to get the best possible – something Marantz is rather good at doing! Your £350 buys you the very same reliable CJDKT690 disc playing mechanism fitted to its predecessor, feeding a Crystal Semiconductors CS4398 DAC, digital filter and noise shaper IC. The analogue output stage gets Marantz's HDAM-SA2 amplifier modules, and the company says new customised block capacitors are fitted along with high-speed Schottky diodes. There's been some tweaking of the mechanical aspect, with a new metal bottom plate and the coppered stabiliser plate on the power regulator to minimise vibration.

The major concessions to modernity – things you wouldn't find in an equivalent budget Marantz of just a few years ago – are the new remote control, a front panel USB input for iPods and a revised low power (0.3W) standby arrangement. An extended period of non-use slips the machine quietly into standby mode. In other respects, including the decent power supply, the '05 is similar to its predecessor. As with the amp, the CD spinner comes in a choice of black or silver and it feels sturdily made considering its modest price point.

The PM6005 integrated amplifier gets rather more drastic surgery, following the fashion for offering a bundled DAC built in to the amplifier, meaning you can hook up anything that outputs a coaxial digital or Toslink signal and play it direct through the amp via the built-in 24-bit/192kHz high Crystal Semiconductors CS4398 (as per the CD6005). It's not always a good idea to put noisy digital electronics inside an amplifier, so Marantz has taken the

trouble of secreting it in an extra metal housing inside.

The PM6005 is also noteworthy for using discrete components throughout the pre and power amplifier sections, with no ICs in the signal path. Marantz says doing it the old-fashioned way means it is possible to refine the sound more, thanks to the use of specially selected components. A decent sized, low impedance shielded toroidal transformer provides the juice, via customised main capacitors.

High-quality Japanese Sanken 2SA1694 and 2SC4467 output transistors are used to deliver a claimed 2x 45W RMS per channel into 80hms.

As well as the two digital inputs, it has six analogue inputs including MM phono. Tone controls are fitted, but work too intrusively for my ears; it is best to press the 'Source Direct' button and defeat them along with the silly Loudness button (is it still 1975?). Also specified are binding posts for two pairs of loudspeakers, with front panel switching; sadly these are of barely acceptable quality, feeling flimsy and liable to break after a few moments of less than delicate handling. The supplied Marantz

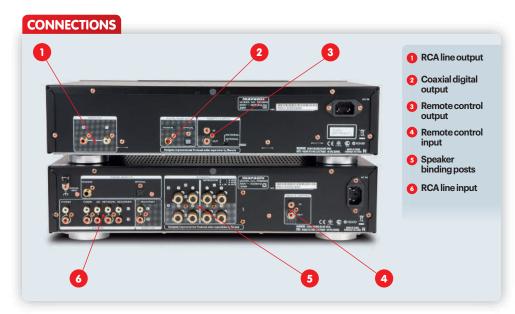
They suit percussive, but tonally slightly light and bright speakers to a tee

System Remote controls the amplifier as well as CD player and network player sources.

Generally, the quality of finish seen in both these components belies their low prices. You're never really aware you're in the cheap seats, so to speak, because the controls work smoothly and there are no disconcerting bangs and pops. Only the aforementioned sub-par rear socketry on the PM6005 lets the side down, and that odd hatch on top of the amplifier's vented top plate isn't its prettiest feature.

Sound quality

As you might expect, this Marantz combo sounds big, fat and warm. Both components have been voiced to hide their budget origins as well as is possible, and in this Marantz has succeeded. They simply don't sound like your average, cheap, screechy budget hi-fi separates. Indeed, they're so good that you can put them through some pretty accomplished, high-end speakers and they still won't give the game away. In absolute



terms, all they ever get to being is a bit diffuse and opaque – in short, if you want vast tracts of detail, then buy something better!

First, each component in isolation. Driving a Creek Destiny 2 – an excellent integrated that's around five times the price of the PM6005 – the new Marantz CD6005 sounds very nice indeed. Treble is crisp and spacious – maybe not the world's sweetest or best finessed – while midband is smooth and open with a good sense of image placement. Bass does its own thing happily, sounding surprisingly strong and tuneful for a cheap silver disc spinner, and the overall result is a very enjoyable

They don't sound like your average, cheap, screechy budget hi-fi separates

rendition of REM's Maps and Legends. The player picks through this rather murky mix surprisingly well, throwing out Peter Buck's multilayered guitar tracks and Mike Mills' pleasing harmonies, behind singer Michael Stipe's monotone.

With bigger, sassier pop music, like Calvin Harris' *Get Ready For The Weekend*, the CD6005 dives in and has fun, sounding bouncy and game for a laugh. That big, warm bass now begins to drag things slightly, softening the impact of the propulsive bottom end that gives the track its motive force, but it's still a really pleasing thing to listen to. Likewise, the 6005 sits on dynamic contrasts just a touch, giving the sound a slightly flat and compressed feel – but again the player's natural tonal

warmth makes it feel as warm as a winter woolly, which is just what you want from a budget silver disc spinner. Basically then, it's big and warm, but a little lacking in dynamic punch and transient speed.

Running the PM6005 from an Audiolab 8200A CD player, and it's spooky how that rich, slightly soft and hazy sound of the CD6005 is repeated with its matching amplifier. The rather sudden action of the volume control gives too much loudness from around nine o'clock to 12 on the dial, making it hard to trim lower listening levels easily. But when you've got used to this, you'll not fail to like the big-hearted nature of this integrated. It seems to bounce along with a smile, determined to enjoy whatever you play through it, without a care in the world. UB40's One in Ten is very tuneful, the Marantz pushing out plenty of bass that sounds surprisingly supple, while the midband is wide and airy, with lots of detail to the percussion. Vocals aren't as smooth as they might have been, but never grate; indeed the amplifier's only real sin is that of omission, as it fails to drill down into the low-level detail.

Put a warmish, softish CD player together with a warmish, softish integrated, and there are no prizes for guessing what sort of sound they make as a pair! But the great thing is that they'll suit percussive, but tonally slightly light and bright speakers – such as the Acoustic Energy AE301 standmounters for example – down to a tee. Hook them up with the powerful Q Acoustics 2050i floorstanders and you have a very synergistic combination. It's almost as if



Surprisingly perhaps, there aren't many direct rivals for this duo - it is one rung of the ladder too low for the likes of Arcam, Audiolab. Cyrus, Roksan, et al. However, it is quintessential NAD territory and this brand fields the C 546BEE (£499) CD player and C 326BEE (£349) integrated amplifier against the Marantzs. There's no mistaking the apparent superiority of the Marantzs' build and finish as the NADs feel flimsy and plasticky by comparison. Both combos are well appointed feature-wise and strangely both offer quite a warm, sweet, smooth sort of sound, which is unexpected at this end of the market. Both CD and amp duos go for sweetness above detail, so they seem a little hazy and opaque by the standards of pricier kit, but the NAD has a firmer bass at the expense of the fine sense of air and space the Marantzs deliver.

Marantz has sat down and designed a system to be used very successfully in 'real-world' budget conditions, and compensated for the slightly stark nature of many inexpensive loudspeakers. The overall effect is very enjoyable, and it makes me just want to keep on listening.

Conclusion

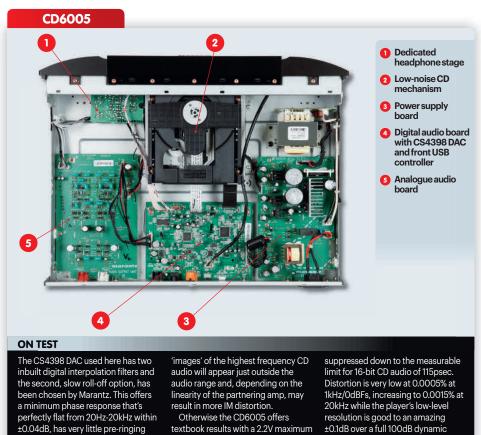
Designing budget separates such as these is the art of the possible and it all comes down to how cleverly you make the compromises. Neither of these components will threaten the best £1,000 product, but nor will you be lamenting the fact that you haven't spent such a sum. Essentially then. these Marantzs' sins are those of omission, they won't offend, but it's just that they don't give you as much as other, pricier designs will. They are, however, excellent value - but their key problem is that some rivals are too; this combo faces stiff competition from the likes of NAD and Cambridge Audio, both of which field very strong players in this section of the market. My suggestion is that anyone that's interested should go and audition them, and I'll be surprised if you aren't beguiled by the sound that this recently tweaked dynamic duo can make •





Q&A

Oliver Kriete



Otherwise the CD6005 offers

but, equally, quite poor stopband

rejection of 27dB. This means that

and 125W into 8, 4, 2 and 10hm loads

sufficient for most sensitive speakers

likely to partner this amplifier while

under dynamic conditions. The maximum 11.2A current will be

textbook results with a 2.2V maximum

output, a 200ohm source impedance,

wide 109dB A-wtd S/N ratio and jitter

resolution is good to an amazing

±0.1dB over a full 100dB dynamic

distortion does increase at the

20Hz (low bass) and 20kHz (high

on the output is held <2mV. PM

treble) at 10W/8ohm. Any DC offset

frequency extremes, up to 0.035% at

from 20Hz-20kHz. PM

range. Stereo separation is >100dB

Marantz D&M product manager

DP: Is there still a market for budget CD players and amplifiers?

OK: There is always a demand for good products in each price class. Not everyone is able or willing to spend thousands of pounds for their system, so yes this is still attractive and we can offer our customers extremely good value for money here.

How does the CD6005 differ from its predecessor?

We didn't see any necessity for radical changes on this unit, so feature-wise we kept it the same. while sourcing a new CD mech, which performs very well and doing additional component tuning in the power supply and output stage. We think it betters even its highly awarded predecessor, but of course, we have kept the overall sound balance.

Why is there no SACD playback on this model?

In this price class SACD playability is not a realistic feature, if you take it seriously. It might be possible by using a different mechanism, but you will have to spend extra money on the other sections such as the power supply and output stage to achieve decent quality, thus raising the price. Also, it's not a highly requested feature in this price class; the front USB input is much more important.

How does the PM6005 differ from its predecessor?

The percentage of non-packaged media is increasing year by year and sources such as media players or PCs only offer limited audio quality via analogue output. So our new PM6005 recognises this, integrating both optical and coaxial digital inputs to its source options, followed by a high-quality DAC and Marantz's own HDAM amplifier modules. This is an easy and effective way to significantly improve the quality of your nonpackaged media playback. With its CD6005 partner, it offers a nice tonal balance over the full frequency range spectrum, but the system does play powerful, too.

PM6005 Main audio board with separate digital circuitry Pre amplifier and volume control Fully shielded toroidaltransformer Stand-by power supply 6 Main amplifier stage Fully shielded digital input section 4 5 ON TEST Rated at 2x45W/8ohm, Marantz's the 0.056ohm output impedance will 'average' while distortion is largely PM6005 delivers closer to 2x56W/ not result in any response variations. unaffected by output power at 8ohm in practice, with 2x79W/4ohm Interestingly its native response is ~0.007% through the midrange at not wholly 'flat' but shows a shelf at and increasing to 81W, 135W, 160W 1-50W/8ohm. Not unexpectedly,

very low frequencies (max -0.15dB from 20-200Hz) and through

presence and treble (max -0.3dB

S/N ratio (re. OdBW) is perfectly

from 5kHz-20kHz). The 86dB A-wtd

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How we test

Hi-Fi Choice employs the most rigorous test and measurement regime in the business. Here's how we do it...

Unique group tests

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

PHONO STAGES GROUP TEST

AS GETTING TO grips with the various settings that each of our more complex phono stages offers requires repeated listening sessions with different cartridge types (high-output moving magnet and low-output moving coil), it isn't practical to carry out this month's group test with our usual listening panel present. This allows the process to be extended and a more tailored procedure to be applied.

For those phono stages fitted with circuits that cater for both pick-up types, listening is carried out using one of each that represent the best of the budget breed, which are typical examples that these phono stages are likely to find

themselves called into duty to serve. Nagaoka's MP-150 is a recent *Hi-Fi Choice Group Test* winner (Sept, 2013) and for good reason, it's a superb cartridge that's consistent across all music and with good channel symmetry. For MC duties, Denon's stalwart low-output DL-103 remains popular with audiophiles as the low-priced MC of choice, thanks to its excellent tracking ability. And with its claimed output of only 0.3mV, the Denon really forces our MC-equipped phono stages to break a sweat.

All of our stages are put through the same cycle of music from four different test records, each chosen to reveal varying audio traits.

SENSITIVITY (GAIN)

The gain of the phono stage is the ratio of input to output signal level, typically 40-50dB (x100-x320) for MM and 60-70dB (x1000-x3120) for MC.

INPUT HEADROOM

Depending on the design of the phono stage's RIAA eq stage(s), there will be a limit to the maximum signal level permissible at its input before clipping (overload) occurs.

DISTORTION VS LEVEL & FREQUENCY

This value represents a measure of the distortion trend across the full 20Hz-20kHz frequency range and from 10mV to the phono stage's max output.

SIGNAL-TO-NOISE RATIO

A representation of the phono stage's A-weighted Signal-to-Noise (S/N) ratio, measured in 3rd-octave bands from 20Hz-20kHz relative to its output with a 5mV (MM) and 500V (MC) input.

FREQUENCY RESPONSE

A measure of the 'flatness' of the phono stage's RIAA frequency response from 20Hz (low bass) to 20kHz and beyond (extreme treble).

RESULTS AT A GLANCE Sensitivity (gain) +10 Input headroom +40 Distortion S/N ratio +50 Frequency response +10 KEY: Group average % below average % above average

OUR GROUP TESTS

and In-depth review are subject to exhaustive lab testing by Paul Miller using the QC Suite Functional Testing Station (left). Paul has tested more hi-fi equipment than any reviewer in the world, so you know you're in safe hands.

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

▶ REFERENCE SYSTEM

TURNTABL

Pink Triangle Export GTI with Funk Achromat and record clamp Audio Note Arm 1 Version II

AMPLIFIEI

Musical Fidelity M6PRE/M6PRX

OLIDSDEAKEDS

Audiovector Mi 3 Signature CABLES:

Crystal Cables / Van Damme

TEST MUSIC



DAFT PUNK
Random Access Memories
Vinyl



FAIRPORT CONVENTION Unhalfbricking Vinvl



REM Automatic for the People Vinyl



NIGEL KENNEDY AND THE ENGLISH CHAMBER ORCHESTRA The Four Seasons Vinyl



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.





Grouptest



PHONO STAGES £149-£380

Magic boxes

Thanks to vinyl's continued popularity, the affordable phono stage market is as buoyant as ever says **Andrew Simpson**

THE FALSELY PREDICTED demise of vinyl by many hi-fi companies in recent years has led to the phono stage no longer being standard fare inside many integrated amps, which has consequently aided the rise of the standalone phono stage. For some, having to fork out for a separate phono amp used to be seen as nothing more than a pain in the wallet. However, it's now generally accepted that placing the sensitive amplification circuitry needed to get a record player's output level up to that of CD, within its own dedicated box and away from the rest of an amp's internals, aids getting the best sound from the black stuff. Thus, even if your amp does come equipped with a phono stage, opting for a more bespoke standalone unit should yield sonic improvements.

This month we've six flavours for you to choose from, ranging from the shockingly good value Musical Fidelity model at under £150 to almost £400 for Rothwell's Rialto.

Tailor made

In this price bracket, most vinyl spinners are probably using similarly priced moving magnet, rather than moving coil type cartridges, to get the best sound for their buck. Perhaps reflecting this, of the units we have on test neither Rega's recently restyled Fono MM or Graham Slee's updated Gram Amp 2 SE models cater for MC pick ups.

Despite being the cheapest on test, Musical Fidelity's all new V90-LPS says you can have your cartridge cake

Opting for a more bespoke standalone unit should yield sonic improvements

and eat it, and offers inputs for both MM and MC pick-ups. Pro-Ject's Phono Box DS goes further and offers adjustable load, gain and capacitance settings allowing you to tailor its internals at the touch of a button. While Edwards Audio's cool-looking MC1 Plus rivals the Pro-Ject for cartridge matching, you'll need to lift its lid to make these adjustments. Finally, while catering for both MM and MC, Rothwell's Rialto may look the least sophisticated of the pack, but its price tag suggests otherwise.



Edwards Audio MC1 Plus £330 p27

This British-based company specialises in analogue replay and the gorgeous-looking Plus model employs Edwards' unique circuitry and adds extra cartridge matching options to the standard MC1.



Graham Slee Gram Amp 2 SE £260 p29

A moving magnet only model, the latest Gram Amp 2 SE gets a wider case and is equipped with Graham's 'Fast-Active' equalisation technology. It's the smallest unit on test, but punches well above its weight.



Musical Fidelity V90-LPS £149 p31

As part of Musical Fidelity's new V90 range this unit is the cheapest in our group. Not that you'd guess judging by its alloy casework. Nor is it cheap on spec with separate inputs for MM and MC pick-ups.



Pro-Ject Phono Box DS £219 p33

Stemming from this Austrian company's high-end DS range, this black box floors most rivals in terms of features and usability. A few years ago this level of features would be unheard of at its



Rega Fono MM £198 p35

With a legacy for making class leading mid-market turntables, you know you'll be getting a product with real pedigree from Rega, and its revised MM phono stage model now comes with a chic facelift.



Rothwell Rialto £380 p37

It may look like it predates the flux capacitor, but this MM/MC phono stage boasts some clever tech under its lid to justify its price tag. The question is how will it fair against the less pricey competition?



Caruso Blu

The Musical Miracle Cube



The new *Caruso* Blu sounds even better than its predecessor, looks even better, and boasts the very latest technology.

The combination of active overall design, with three 50 Watts highperformance output stages, new, specially designed speaker drive units and the digital signal processor, delivers an incredible sound experience.



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Hand built in Germany, the Caruso Blu from T+A is available in the UK now.



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Edwards Audio MC1 Plus £330

Packed with features behind a stylish front panel, could this be all the phono stage you'll ever need?

DETAILS

PRODUCT Edwards Audio MC1 Plus

ORIGIN UK

MM or MC phono stage

WEIGHT 0.5kg

DIMENSIONS (WxHxD) 115 x 47.5 x 160mm

- MM/MC phono
- stage
 Variable load
 settings for MM
 and MC
- Six gain settings Off board split rail 18V DC PSU

DISTRIBUTORTALK Electronics

01491572523 WEBSITE talkelectronics.com

aunched as a sub-brand of Surrey-based TALK Electronics, Edwards Audio was created to offer more affordable add-on boxes, which began with the MC1 phono stage. Despite its name, the MC1 Plus is both an MM and MC stage, and what the extra £50 buys you over the standard MC1 is more loading and gain options, because - despite the lack of any visual clues on its case it is packed with a variety of settings to accommodate most pickups. To access said settings, however, takes a good eye and some effort, as you have to remove its rear panel and slide out its internal PCB to access a selection of jumpers. That the manual states: "No user serviceable parts inside, so please do not be tempted to play or modify any part of the MC1," seems a bit contradictory - even switching off the unit's glowing blue fascia requires moving an internal jumper! To help you along, Edwards supplies a circuitboard diagram with colour-coded key, showing which jumpers select MM/MC, gain and load settings.

The Edwards Audio offers five input load settings at 47k/1000/470/100/

Edwards Audio MC1 Plus

10ohms and six gain settings (see On Test above), meaning pick-ups ranging from low output MCs upwards should all be well served. The Edwards also boasts a fully discrete gain stage followed by a unique op-amp-based active bass and passive treble EQ filter, followed by a buffered output section.

Like every other phono stage on test, the Edwards is powered from a supplied external wall wart and its 18V DC split rail transformer is by far the most substantial in the group, with a decent cable to boot. The Edwards' PSU can also be upgraded to one of its more costly PSUs, which also sport matching alloy/ acrylic cases.

Sound quality

The Edwards puts in a sophisticated and controlled sonic performance that sounds open and transparent, without taking too many risks. For example, the way the MC1 Plus projects Sandy Denny's voice without it becoming 'shouty', even at high volumes, is testament to its measured nature, although I'd welcome perhaps a little more passion.

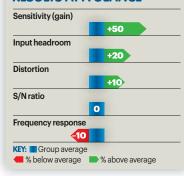
Reinforcing its organised approach, the soundstage within which the Edwards renders Daft Punk's music isn't as wide as some of its cheaper rivals, but instruments are clearly defined and each has a sense of its own space within the mix. The caveat to this is that more energetic music can tend to sound a bit predictable, and I find myself craving a bit more vigour in the music to really fully engage me. The Plus sounds far more at home with the Vivaldi and REM

ON TEST

By far the most versatile phono stage in this test, the MC1 Plus is also very complex to adjust! Configured, step-by-step, to offer +36dB (MM), +42dB (MM), +50dB (high o/p MC), +56dB (high o/p MC), +62dB (MC) and +68dB (low o/p MC) gain, the true values came in at +36.1dB, +42.4dB, +50.3dB, +58.5dB, +63.5dB and +71.5dB with input overload limits of 158mV, 74mV, 29mV, 11.5mV, 6.5mV and 2.6mV respectively. This gives a generous enough headroom of +23.4dB in the +42dB MM setting and +22.3dB in the +62dB MC setting to prevent clipping with most pick-ups. The 83dB/72dB A-wtd S/N ratios are good enough here too.

The frequency response is consistent between gain settings, with a faint +0.2dB bass lift at 20Hz and a slight shelf through presence and treble of -0.2dB. The 10ohm source impedance also allows the MC1 Plus to drive any cable/preamp combo. PM

RESULTS AT A GLANCE



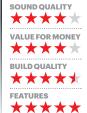
material, here channel separation is good across both of its MM and MC circuits and bass extension is equally well managed, allowing me to push the volume up without ever feeling overwhelmed in any way.

In some respects the Edwards' bass gives a similar performance to that of the Rega Fono, and mid to lows don't quite have the tangible presence of some of its rivals.

Overall, though, the Edwards Audio puts in a detailed performance, but I sense it needs to let its hair down a bit more to bring more emotion to the music. It does nothing particularly wrong and seems well suited to instrumental pieces •

Choice

OUR VERDICT



LIKE: Caters for a wide range of cartridges; controlled, even sound

DISLIKE: Having to move internal jumpers to alter settings will be off putting for some

WESAY: Good looks and sound, with plenty of features, but fiddly to adjust

OVERALL



MUSICAL FIDELITY

MF-100

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When music matters most

VERY HIGH QUALITY • MUSICAL FIDELITY DESIGNED NEODYMIUM DRIVE UNITS



Graham Slee Gram Amp 2 SE £260



Will this Yorkshire-built no-nonsense MM-only miniature deliver sounds worthy of its special status?

DETAILS

PRODUCT Graham Slee Gram Amp 2 SE ORIGIN UK

TYPE MM phono stage

WEIGHT 0.3kg

DIMENSIONS (WxHxD) 107 x 50 x 117mm

FEATURES

- MM only
 'FastActive'
- op-amps
 Upgradable off
 board power supply

DISTRIBUTOR

Graham Slee Projects Ltd

WEBSITE

TELEPHONE 01909 568739

gspaudio.co.uk

ith a background in broadcast engineering going back decades, Graham Slee has been building commercial phono stages since just before the millennium. Despite being the smallest and lightest of our group, it's almost twice the size of the version it replaces.

The almost pocket-sized aluminium case is solid to the touch and comes with minimal features with no low-output MC circuit or switches to alter gain and resistance. The Slee is a JFET op-amp design, using Graham's own 'FastActive' EQ circuit, which he says brings more accuracy to the music than passive or more traditional active circuits.

The Special Edition is the second model in Slee's four-strong moving magnet range, adding more gain than its entry-level £180 Communicator sibling. Forking out £430 and £540 respectively for Graham's higher priced Era Gold V and Reflex M models buys you more advanced internals, designed around Slee's ultra-linear circuit technology.

All models can also be upgraded with Graham's own standalone £185 PSU1 power supply, to use in place of

the supplied switched mode 'green' 24V DC wall wart. As well as a range of dedicated MC phono stages, Slee also offers his £640 Elevator EXP MC step-up transformer, to be used in conjunction with his MM stages when running low output MC pick-ups.

Sound quality

Out of the box, this is in many ways the most musical phono stage here. Its sound is very 'analogue', almost valve-like in its nature, which contrasts the more clinical sounding Edwards and Musical Fidelity models.

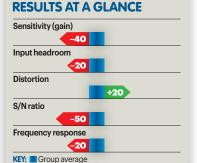
With Daft Punk, the Gram Amp immediately gets to work with the layered percussion, surrounding it with plenty of air and binding its beat together, so that notes follow on from each other cohesively, facilitating the flow of the music. Likewise, the little Gram doesn't force proceedings and instead lets the musical detail do the talking to get your attention. For example, the way Daft Punk's piano notes are given time and space to ring effortlessly within the soundstage is really quite captivating.

Between the tracks, surface noise is more obvious through the Slee than the Pro-Ject or Rega models (its nearest price rivals), especially within the gaps of my four-decades old *Unhalfbricking* LP, although once the music begins this becomes unnoticeable. And once the Slee sets Sandy Denny's vocals free from my speakers, this is even more of a distant memory. The Slee gifts Denny's voice with a softness that some of the other phono stages on test struggle to match with such consistency, especially during her

ON TEST

Like Rega's Fono, the Gram Amp 2SE offers a fixed +41.4dB gain with a standard 47kohm loading (8.5mV MM input sensitivity), but while it enjoys low levels of hum – residual noise is just -74dBV – its moderate 'white noise' reduces the overall A-wtd S/N ratio to just 73dB. This is some 12dB behind the Rega and the Pro-Ject Phono Box DX for the same gain, for example. Nevertheless this is on a par with vinyl 'roar' noise so may even have a positive subjective impact!

Distortion is lower than Slee specifies (0.03%) at 0.0007-0.006% (20Hz-20kHz) just as the maximum output (1.2V) is healthier at 5V, albeit from a high-ish 760ohm source impedance. However, the input overload limit of 44mV is bang-on specification and not especially generous – beware very high output MMs. The response has a very gentle bass roll-off (-3dB/6Hz) and slight presence/ treble emphasis (+0.2dB/10kHz). **PM**



more powerfully sung sections. The Slee's bass is one of the strongest in the group, but reflecting its relaxed nature it's not as controlled as the Rothwell and Edwards models, which lead the field in this respect. This aspect of its performance doesn't overshadow the Slee's virtues by any means, but it's worth partnering it with a cartridge that has plenty of grip to balance things out.

% below average > % above average

Overall though, the Gram Amp offers a level of musical enjoyment beyond what its price tag suggests. Instead of being overly analytical, it's warmer and more relaxed in nature, which will float many analogue lovers' boats •



HIFF Choice OUR VERDICT

LIKE: Well engineered, great sounding unit that brings music to life

DISLIKE: Earth pin could be bigger

WE SAY: Superbly musical, dedicated MM phono stage that's the best at its price



FEATURES



The perfect high-end system, in two simple steps:

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Musical Fidelity **V90-LPS**£149

Musical Fidelity's entry-level phono stage gets a handsome box that belies its beer-budget price tag

DETAILS

PRODUCT Musical Fidelity V90-LPS

ORIGIN UK/Taiwan

TYPE MM and MC phono stage

WEIGHT 0.6kg

DIMENSIONS (WxHxD) 170 x 47 x 102mm

FEATURES

- Separate MM and
- MC inputs
- Op-amp based circuit
- External PSU

DISTRIBUTORMusical Fidelity

TELEPHONE 0208 9002866

WEBSITE musicalfidelity.com

hether you're into luxury hi-fi separates with serious sonic muscle or just starting out on your audio odyssey, it's likely Musical Fidelity has a product range for you. The V90 series, which the LPS is picked from, recently updated the previous entry level V range and offers a matching DAC, mini-integrated and headphone amp, with the 90 moniker denoting how the older V series cases have been turned through 90° for the new range. And speaking of casework, despite this being the cheapest unit on test by a £50 margin, the LPS comes in a very finely finished box, with a chamfered front panel mirroring MF's much more costly M range of products in miniature. Like the Slee model, the MF utilises a solid state op-amp circuit, which is fed by an off-board 12V DC transformer that keeps the power supply away from its internal circuitry.

The MF is the only model on test to offer separate RCA inputs for moving magnet and moving coil type inputs, meaning this unit could be used to support two turntables, providing one is equipped with an MM pickup and the other with an MC. These input sockets share the V90's rear panel with a pair of output RCAs, an MM/MC selector button and a chunky

R OUTPUT RALANGE HISTORIAN COLORS FROM THE ANALYSIS OF THE ANA

earth wire connector with a handy through-hole in its threaded pin to aid earth-wire clamping. The V90's front panel hosts an on/off toggle switch.

As our lab test reveals, gain is fixed at 41.5dB for its 47kohm MM setting and 60dB for its 1000hm MC input.

Sound quality

Overall the Musical Fidelity has a bold sound that packs plenty in, and this gets to the heart of what the LPS is all about. It serves up the music in an impartial way, making sure you hear everything in equal measure without showing a preference for any particular genre or area of the sound spectrum. The LPS renders Daft Punk with a solid performance and doesn't allow any part of the music to take the lead and dominate the song, instead the LPS ensures everything in the performance reaches the listener composedly.

Bass is particularly noteworthy for such a modestly priced little box, which reveals itself as soon as I begin settling in to the REM tracks. The LPS ensures Mike Mills' firm-fingered plucking technique comes across as his double bass notes are generated to underpin the arrangement.

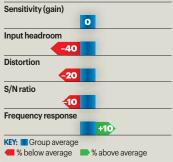
Comparing how the LPS handles this track with the performance of some of the more costly rivals on test here, it perhaps lacks the greater degrees of realism that a bigger outlay of cash buys you. For example, while the Musical Fidelity gives the strings in the Nigel Kennedy piece plenty of weight, I can't help noticing I'm missing a sense of texture to their resonating nature to make them sound more like the real thing.

ON TEST

A high value, back-to-basics solution, the LPS is not without some compromise. On the one hand, the V90-LPS combines standard +41.5dB and +60dB MM/MC gain settings with 47kohm/100ohm loading and offers a sensibly tailored frequency response that's very slightly 'up' at +0.15dB/20Hz before rolling gently away through the high treble at -0.24dB/20kHz and -2.6dB/100kHz.

The A-wtd S/N ratios are adequate at 80dB (MM) and slightly less impressive at 70dB for MC while distortion holds to a low 0.0004% through mid and treble, increasing at bass frequencies to 0.01% at 20Hz. If there's a problem with the LPS then this lies with its limited input overload margins – just 22mV via MM and 3.2mV via MC. This is equivalent to a headroom of +12.9dB and +16dB, the former not really sufficient to accommodate high output MMs without the potential for clipping on highly modulated grooves. **PM**

RESULTS AT A GLANCE Sensitivity (gain)



Exploring the V90's moving coil input reveals this is a worthwhile inclusion. The Fairport material has equal amounts of presence and instrument separation in this mode compared to how it sounds in MM, which is impressive given the price.

Overall then, this is a good value all-rounder and worth auditioning if you're looking to build an entry-level vinyl front end or add a budget MC option to an amplifier already catering for MM pick-ups. Cross comparing the V90 to other stages on test here, however, highlights that greater levels of musical insight are available elsewhere for not that much more money •

HIFI Choice

OUR VERDICT

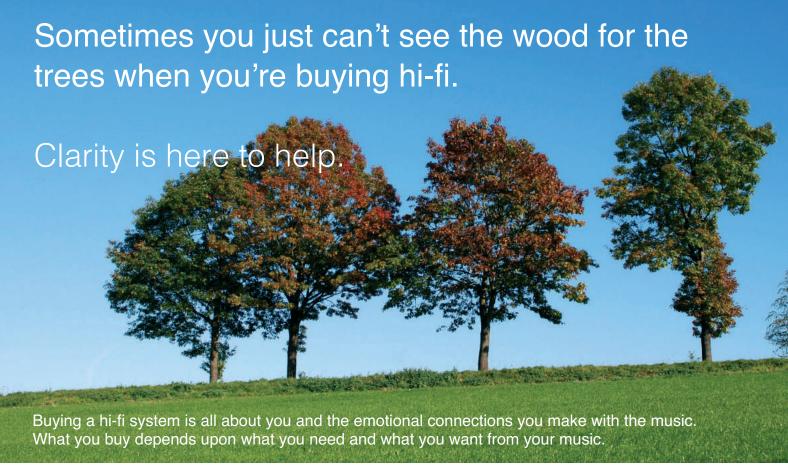
LIKE: Top build quality, expansive full sound and great looks

DISLIKE: Lacking in ultimate detail compared to more expensive rivals

WE SAY: Sensible features and great sonics make this cracking value







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Pro-Ject

Phono Box DS £219

This little black box promises a plethora of features to satisfy even the most consummate cartridge swapper

DETAILS

PRODUCT

Pro-Ject Phono Box DS

Austria

MM or MC phono stage

WEIGHT

1.1kg

DIMENSIONS (WxHxD) 103 x 72 x 156mm

- MM or MC
- Three gain
- settings
 Variable load resistance and capacitance
- settings
 20Hz switchable
- subsonic filter

 Off board PSU

Henley Designs TELEPHONE 01235 511166

WEBSITE

henleydesigns.

hatever your listening preferences, you can bet your bottom dipswitch that Pro-Ject has a one-box solution to meet your audio needs. The DS range swims upstream of the Classic, Elemental and S lines and sits just below Pro-Ject's flagship RS models. This standard DS is a streamlined version of the £325 DS+, so instead of a front panel digital screen you get printed legends and blue LEDs. At the top of the DS range resides the £425 Tube Box DS, which as its name implies, employs tubes in

Unlike the Edwards and Rothwell models overleaf, the Pro-Ject is designed to be extremely userfriendly and its push-button front panel means you don't have to go poking around under its bonnet to tweak its internals for accurate cartridge matching. The DS caters for a variety of MM and MC pickups with thee gain settings at 40/50/60dB (to support MM, high output and low output MC pick-ups), four load resistance settings at 47k and 10/100/1000ohms and input capacitance settings at 47/147/267/367pF's.

its output stage.



The DS also offers a subsonic 20Hz filter switch on its rear panel, to cull unwanted ultra-low rumble. It has dual mono circuits that share the same PCB and, like the Edwards and Rega offerings, its EQ is part active and part passive.

Although it's not the biggest unit here, the Pro-Ject is by far the heaviest and its utilitarian case is solidly made. Like every other phono stage in our group, the DS is powered via a supplied external wall wart.

Sound quality

Sonically the Pro-Ject is a bit of mixed bag. With some material it excels and with others less so, compared to its nearest price rivals. Through its MM input, REM's Sweetness Follows has plenty of body and instruments are evenly dispersed in the mix without being too forthright. Guitar and vocals settle nicely as the song progresses and I'm comfortable placed within the soundstage, able to define each instrument's contribution.

However, in New Orleans Instrumental No.1 the midrange begins to overwhelm the soundstage and repeatedly takes my attention away from instruments occupying the lower and higher frequencies. This is illustrated through how the DS lets the horns dominate over the piano and double bass within the piece.

Likewise, within Fairport's Autopsy the DS seems to prioritise Thompson's guitar, which - despite sounding somewhat closed in - is beamed at me with a sense of urgency, subduing contributions by other musicians. However, the changing rhythms of this track demand a more objective

ON TEST

Rather than offer discrete MM/MC settings, Pro-Ject's Phono Box DS is equipped with variable gain and loading (10, 100, 1kohm and 47kohm) for its single set of RCA inputs. This is potentially more useful – its +40dB/ 47kohm setting is ideal for MM pick-ups, the +50dB for high output MCs and +60dB for standard MCs (very low output MCs typically required around +70dB). All three gain settings are accurate to within 0.2dB while the input overload ceilings of 112mV, 36mV and 11.5mV, respectively, all represent a healthy +27dB margin above a nominal 5mV/1kHz/sec pick-up output (re. MM/40dB). The 85dB, 83dB and 78dB A-wtd S/N ratios are also generous and distortion very low at 0.0006% through the midrange, rising to 0.068% at 20kHz. The corrected frequency response is mildly tailored, flat from 1kHz to 100kHz (+0.3dB), but with a -0.3dB shelf through lower midrange and bass. PM

RESULTS AT A GLANCE Sensitivity (gain) +30 Input headroom Distortion

S/N ratio Frequency response KEY: Group average

presentation from a phono amp, to keep you involved with everything that's going on in the mix.

Across the Daft Punk material the Pro-Ject's bass quality is strong, and this is the same for both MM and MC inputs, which is a welcome surprise given its price. At the other end of the scale, the treble isn't as crisp as the more pricey Rothwell's or the slightly cheaper Rega's top ends, which is emphasised through a slight softening of Daft Punk's percussion, especially through its MC input.

While being packed with promise to cater for a wealth of pickups, the Pro-Ject seems to lack sparkle in equal measure across the board •

Choice

OUR VERDICT



LIKE: Extremely user friendly and packed with features. Sounds impressive with some material

DISLIKE: Inconsistent performance

WESAY: Solidly built with lots of features and a great price, but partner wisely

OVERALL



The Game Changer

Once in a while, a product comes along that 'redefines the meaning of excellence'. That time is now.

Q Acoustics is proud to introduce the Concept 20 loudspeaker.

The Concept 20 is a truly remarkable new loudspeaker which delivers a level of sonic performance previously only available to audiophiles able to invest in high-end models.

This exceptional performance has been achieved by using breakthrough technology and applying scientific methodology to overcome the fundamental problems of speaker design.

As well as class leading drive units and crossover, the beautifully lacquered Concept 20 cabinet utilises GelcoreTM construction, specifically developed for acoustic enclosures. In effect this is a 'cabinet within a cabinet'; separated by a special, resonance cancelling compound. This enables the drive units to simply reproduce music, completely unencumbered by cabinet induced colouration.

The result is nothing short of sensational.

For the very best results the Concept 20 should be used on its unique dedicated speaker stand, which uses the same GelcoreTM construction technique.









What Hi Fi? Sound and Vision, Group Test Winner, June 2013

AV Forums, April 2013





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Rega **Fono MM £198**



Dedicated moving magnet preamp from the master of affordable vinyl spinners gets a classy facelift

DETAILS RODUCT Rega Fono MM ORIGIN UK TYPE MM phono stage

0.6kg MENSIONS (WxHxD) 178 x 45 x 140mm

MM only
 Fixed 47kohm

loading
• External PSU **DISTRIBUTOR**

Rega Research Limited WEBSITE rega.co.uk

esplendent in its new case with glowing logo, Rega's restyled Fono MM sports a case that matches its

higher-end electronics in miniature. It is a dedicated moving magnet-only design, so those who favour low output moving coil cartridges will have to look elsewhere.

Like the Edwards, its EQ circuits are part active, part passive with the active element reserved for lowfrequency duties and passive for high frequencies. Rega points out that it's paid careful attention to keeping the PSU output impedance low and that the Fono enjoys trickle down tech from its more costly MM/MC input-sporting Aria phono amp (£798), which unlike the Fono, comes with a variety of switching options. The Fono boasts similar topology to the Aria and has part dual mono circuitry with polyester coupling capacitors, whereas the Aria is fully dual mono with polypropylene caps.

Compared to its £85 Fono Mini A2D little sibling, the Fono MM comes with a more sophisticated discrete amplifier input stage in place of the Mini's IC stage.

As our test results reveal, the Rega also employs inbuilt subsonic roll-off to quash low-frequency rumble. Like the Musical Fidelity and Pro-Ject

Serial No - 0 9 7 2 5 8

models, it sports a front panel on/off switch and build-wise it feels robust enough, although like its rivals, its rear plugs are quite close together, which makes fitting over-sized RCA connectors a bit awkward.

Sound quality

The Rega's audio personality is the sonic opposite of the Musical Fidelity, which it sits on the next rung up from in our Group Test's price pecking order. Where the Musical Fidelity goes for a big presentation that belies its price, the Rega's sound is more focussed around opening a window into musical detail.

Within our group, the Rega sounds closest to the Edwards, offering a similarly refined sound, but with a wider soundstage. During the Vivaldi piece's more intense sections, for example, the Rega allows the instruments to spread from the centre of the soundstage to well wide of the speaker plane.

Another string to the Rega's bow is its penchant for bringing out the rhythm of the music. Daft Punk's melodies bounce along at a pace and the Fono seems to revel in picking up the tempo when the chorus kicks in.

Daft Punk's track also exposes the Rega's particular brand of bass, which is also in a similar vein to the Edwards phono stage. Bass isn't there in abundance, but the bottom end the Rega does possess is controlled and without any tendency to boom. Compared to the similarly priced Pro-Ject, the Rega's upper bass and midrange is more evenly balanced in the scheme of things, which helps the Fairport Convention track get across

ON TEST

As a dedicated MM-only phono stage, Rega's recently repackaged Fono goes head-tohead against Graham Slee's Gram Amp 2SE. The Fono offers the same +41.3dB overall gain with 47kohm loading and the response shows a similar profile with a shelved-up presence/treble of +0.2 to +0.5dB from 4kHz-100kHz. The subsonic bass is more obviously rolled-off at -1.7dB/20Hz down to -10dB/7Hz, which makes the Fono better suited than most to systems with ported loudspeakers.

Distortion is very low indeed at 0.002-0.00024% (20Hz-20kHz), several hundred times lower than most MM pick-ups in fact (re. 5cm/sec)! The Fono offers a substantial 7V maximum output through a low-ish 190ohm source impedance while the 65mV input overload limit yields a higher margin for peak-recorded grooves (+22.3dB re. 5mV) than the Slee. Noise is much lower too, with an A-wtd S/N ratio of 85dB. PM

RESULTS AT A GLANCE Sensitivity (gain) Input headroom Distortion S/N ratio Frequency response KEY: Group average 🛮 % below average 🔃 % above average

all of its little nuances buried in the mix. Compared to the Slee and Rialto models, the Rega isn't quite as full bodied and ultimately lacks the same levels of impact, but its bass control is tighter than the Slee.

For less than 200 sheets of your hard-earned cash, the Fono gives you a grown-up sound that's transparent and with a dash of verve. The Fono is blessed with a bubbly energy that should be a welcome tonic for budget or dull-sounding vinyl front ends craving a bit more life. In absolute terms it doesn't have the sonic authority of its more costly rivals, but it's still an accurate and highly entertaining performer •





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Rothwell Rialto £380



It's likely that the Rialto won't appeal on audio eyecandy grounds, so will its performance justify its price?

DETAILS

PRODUCT Rothwell Rialto ORIGIN UK

TYPE MM/MC phono stage

WEIGHT 0.57kg DIMENSIONS (WxHxD)

60 x 92 x 155mm

FFATURES

- MM or MC
- Discrete
- transistors

 Class A circuits
- Seven stages of power supply filtering
- External PSU

DISTRIBUTORRothwell Audio
Products Ltd

TELEPHONE 01204 366133

WEBSITE rothwellaudio products.co.uk ith almost 25 years' experience, Andrew Rothwell's Bolton-based company has been in the phono stage game longer than most. The Rialto is nestled between a £300 MM-only stage and three MC step-up

MM-only stage and three MC step-up transformers costing up to £485. Rothwell also offers a valve-based MM phono stage that's called the Iridium, which comes with a price tag north of £1k.

The Rialto claims seven power supply filtering stages, three Class A gain stages and discrete transistors, which Rothwell believes are better designed to work with the ultra-low signal levels of moving coils, when compared to op-amps circuits.

Moving magnet and moving coil circuits are fixed at 47kohm and 100 ohm respectively. The Rialto's power source is via a supplied 24V DC wall wart, which Rothwell says isn't worth upgrading thanks to the extensive power supply filtering already installed into the Rialto.

For those of us partial to hopping between MM and MC cartridges, a screwdriver is needed to make the leap, as the Rialto's MM/MC switching buttons reside on each PCB

24V DC DC DC Input Output

channel within its case, in an attempt to keep signal paths short.

Despite its basic looks, the Rothwell's front panel's etched typography is a nice touch and round the back its earthing post is the most heavy duty on test, suggesting this product really means business.

Sound quality

Opening the Rialto up with the pumping rhythms of Daft Punk's *Instant Crush* tells me straight away that this phono stage will take some beating. The dynamic swings of the percussion sound effortless and possess more oomph than any of the other units on test. Despite hearing this track repeatedly during my test sessions, I find myself helplessly foot-tapping along to the melody, anticipating the band's next move.

Hearing music through the Rialto shifts my reviewer's focus and I find myself concentrating less on the boundaries of the soundstage it creates and more on what's happening within it. The way it allows Daft Punk's keyboards to run up and down the frequency spectrum with real freedom draws me in as my ears chase their notes around its sonic landscape.

Nevertheless with the REM material, the Rialto's soundstage is as deep as it is panoramic and it has a flair for knowing when to let instruments come to the fore and shine within the mix to bring the music to life.

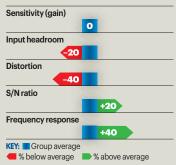
The Rialto fairs particularly well through its MC circuits, which give nothing away to its MM input and better them in some respects, especially with more orchestral

ON TEST

While the Rialto's MM/MC gain values are relatively standard at +41.8dB/+61.5dB, the input overload margins are less generous. So while an 8.1mV MM pick-up output is required to raise a 1V output from the Rialto, the MM stage clips if the input exceeds 36mV. For both MM and MC inputs this represents a headroom of just +17.1dB (re. 5mV/500uV, respectively), which is right on the edge of most high output MM/MCs tracing peak modulated grooves.

Used within its capacity, the Rialto has much to recommend it including a very flat and extended response (±0.1dB from a subsonic 10Hz to an ultrasonic 100kHz) and while distortion is not super-low at 0.035% through bass and mid, rising to 0.17% at 20kHz, this is still way below the level of pick-up/vinyl replay distortion. Stereo separation is only a little weaker through the bass (40dB) than mid (60dB). **PM**

RESULTS AT A GLANCE



material. With vocals the Rothwell is an equally capable performer, for example it replays Sandy Denny's voice with all the delicacy of the Edwards model, combined with the tonality and body of the Slee's rendition. The Rialto really gets across Denny's beguiling talent to swing from intimate to powerful within the same breath.

As the most expensive model on test and the plainest looking, the Rialto needs to work harder than most to justify its cost. Across both MM and MC inputs it proves to be an enthralling all-round performer that's sonically able to compete with phono stages at twice the price lacktriangle

HIFI Choice

OUR VERDICT



LIKE: Remarkably consistent performer with a rich, natural sound

DISLIKE: Looks dated **WE SAY:** Sublime sounding player with effortless grip. Sensible build and features

★★★★ OVERALL

FEATURES



Group test verdict

He's given this month's contenders a thorough workout, so before he takes a well-earned breather, it's over to Andrew Simpson for the final verdict

A FASCINATING AND diverse group, each of these phono stages has its own merits that will appeal to different buyers. The first to leave the ring is the Pro-Ject. I had high hopes for it, as it's a lot of phono stage for the money. With some material it sounds great and tuned to a cartridge that's less forward in the midrange it may prove a perfect partner, but its inconsistent midrange lets it down. Next up is the Musical Fidelity, which has to be viewed in the context of its price. It's easy to see why it earned itself a Recommended badge back in October as its well made and will

better most phono stages found inside your average budget integrated. It falls short because of the company it finds itself in. If only the Rega hadn't shown up and spoiled the party by highlighting how much more musical insight an extra £50 buys you...

Next is the Edwards Audio. It looks dashing and offers similar levels of insight to the Rega, but as the second most expensive model, it's bettered by cheaper rivals. And while it offers plenty of features, you'll probably need the help of your dealer to make use of them, which is a bit of barrier.

The Rega, therefore, takes a well-deserved bronze medal. At a whisker under £200, the Fono MM is a wonderfully engaging performer that's a joy to listen to. Where it's pipped at the post by our top two is in how it doesn't quite have their ability to create such a dense and richly textured sonic landscape.

The Slee goes the distance because of its impressive levels of scale and weight, combined with its deeply analogue nature that strips away any rough edges, which makes it a joy to listen to.



The Rialto may look like it's fresh off Spinal Tap's tour bus, but it's what's on the inside that really counts. It sounds effortlessly smooth and detailed with a powerful bottom end and superior grip. Add to this an equally capable MC input and we have a worthy victor.



TRY WITH THESE

Moving coil

Variable loading

Variable gain

Off-board

TURNTABLE: Rega RP1£230

The entry level RP1 is a well-presented starter package that offers a fuss-free setup with a decent cartridge and an arm of true class that offers a sound that's smooth and pacey.

Yes

Yes

Yes

Yes

MOVING MAGNET CARTRIDGE: Ortofon 2M Blue £170

No

No

No

Yes

This mid-market MM enjoys features borrowed from Ortofon's more premium ranges. It's well-built, easy to install and with a healthy output it offers a clear and open presentation with plenty of bite.

Yes

No

No

Yes



Yes

Yes

Yes

Yes

TEST LP: Hi-Fi News Analogue Test

No

No

No

Yes

Whether you own a state-ofthe-art superdeck or an entrylevel LP spinner, making sure it's properly set-up is vital and this comprehensive test LP will help you ensure your vinyl rig is performing at the top of its game.



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experience.



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PMC • TWENTY-22

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Vee power

Valve Audio Devices' new DAC-10 DSD is a strikingly styled, gutsy sounding DAC with a difference, reckons **David Price**

f 2013 was anything to go by, 2014 should be the year of the DAC. Last year, you couldn't move for new designs, almost universally sporting asynchronous USBs for connection to computer for hi-res, and – less commonly – DSD playback. Another trend was the increasing use of tubes in the output stage and this is one of those happy accidents where the sonic characteristics of glass bottles flatters digital audio, or masks its failings, depending on your view.

You could say that digital audio convertors are rapidly becoming to hi-fi what Sports Utility Vehicles are to cars. Increasingly, they seem to do

everything, deal with any kind of musical terrain, and keep getting more versatile, taking on ever more functionality. If that's the case, then you might liken the DAC-10 to a sort of Overfinch Range Rover – into its already impressive chassis it slots a host of special, often bespoke bits, to deliver a seminal all-round sound.

As with the aforementioned four-wheel drive executive express, I am not completely sold on the body styling. Standard is a superbly done thick brushed aluminium fascia plate, but I just don't think it suits the 'Darth Vader' styling. Happily, there's also a piano black option, which I suspect would work better aesthetically.

DETAILS

PRODUCT
Valve Audio Devices
DAC-10
ORIGIN

ORIGIN UK

TYPE
Digital-to-analogue
convertor

WEIGHT 13.5kg

DIMENSIONS (WxHxD) 435 x 150 x 290mm

EATURES

PCM (up to 24/192), DSD compatible RCA coaxial, BNC, Toslink, USB 2.0, AES/EBU digital inputs
 RCA and XLR analogue outputs

analogue outputs
Tubes: 2x 6SN7,
2x CV574, 2x 6N6P

DISTRIBUTOR
Valve Audio Devices
TELEPHONE
01327 876673

01327 876673 WEBSITE

WEBSITE valveaudiodevices. There is no doubting the build quality. The rigid monocoque case has even been polymer coated and polyurethane damped to keep vibrations to a minimum. This is no bad thing when tubes are used, as they're microphonic and will blur the sound if they vibrate. EMI and RF screening is said to be used too, and the DAC is directly grounded via the safety 'earth' pin in the fused IEC socket, done with a keen eye on electrical safely and also to ensure the EMI/RFI screen works.

Striking though it is, most customers won't be buying the DAC-10 for its styling – it's what is under the hood that counts. And there are six glowing thermionic valves – two Souz 6SN8S drivers, a pair of mil-spec CV574 rectifiers and twin 6N6P double triode valves, all of which VAD says have been carefully selected for reliability and robustness. The triode valve analogue output stage operates in pure Class A, and modern tube best practice is followed with good new old stock valves specified, short signal paths and point-to-point silver wiring.

Inside, the digital and analogue power supply sections are separate,



as are those for the left and right channels – making a total of four mains transformers used. VAD says that all power supplies are choke loaded and feature inductors, polymer and film capacitors and paper-in-oils, plus 'series' resistor-less components. Specially selected silver mica and paper in oil capacitors are used for the audio signal output.

It might be striking, but it's what's under the hood that really excites

Valve Audio Devices would rather not divulge the choice of DAC chip, preferring to say it is simply a 'current production' 24-bit dual DAC circuit, "selected and uniquely configured by VAD" and directly coupled to the triode analogue output stage with minimum phase digital filter characteristics. The DSD filters have been designed to provide minimal processing to the DSD stream with no decimation, re-quantisation or noise-shaping, the company says. The digital board is bespoke and populated, soldered and tested by hand, and also has a built-in asynchronous 32-bit/192kHz high-end audio USB interface using the i2S transmission standard.

The DAC-10 is fairly minimalist in terms of facilities - the £600 Audiolab M-DAC beats it here. There's no display of sampling frequency, which is so vital when it comes to computer audio; instead is a single 'lock' LED and a power button on the other end of the fascia. In the middle is the (analogue) volume control, which gives a (claimed) maximum of 4.5V RMS, which is high, and this can be controlled with the bundled handset. Round the back, there's a stack of connections - RCA or XLR analogue outputs, plus RCA coaxial, BNC, Toslink and AES/EBU digital inputs. There's also a USB 2.0 input, and the relevant switching between the various digital inputs; this is fiddly and would've been nicer on the front.

Sound quality

There is a certain 'rightness' to the sound of the DAC-10. It comes over as a simple conduit for the music, letting it – as someone once said – blossom and letting it flow! For example, UB40's *Food for Thought* is a joy. It's not a hi-fi recording, but the DAC-10 pulls me right in and charms me with its wonderful sense of authenticity,

and connectedness to the music. When the saxophones kicks in, it is a revelation. Even off CD it sounds sweet, natural and breathy. The usual sandpapery layer that 16/44 seems to give is gone, and in its place is a remarkably natural tonality.

That rich and raspy, but silky smooth sax sound is just the start of the fun. Alongside an excellent tonality, the VAD has the ability to convey the rhythms inside the music in an unerringly faithful way. In the past I've been of the opinion that 16-bit digital cannot 'time' properly, and few DACs I've heard have

The DAC-10 is covered in cotton candy, so silky and smoky and gentle

disproved this. The VAD certainly does, possessing as it does a wonderful rhythmic gait. But here's the thing – it isn't forced and mechanical or overblown and melodramatic, as some DACs that are supposed to have great rhythmic alacrity sometimes are. Rather, the DAC-10 is effortlessly understated; it doesn't shove rhythms at you, making an enormously big deal about the subtle interplay between snare drum, hi-hat and bass. Rather, it just seems to give them lots of room to be themselves and do their own thing -'lilting' is a bit of a cliché, but it's a good word to use here.

The result is that Food for Thought rolls along beautifully, in a way that totally distracts the attention of the listener from whatever else he or she may be doing. The sound is immersive, it pulls you in and holds you almost in a trance. Love's lead singer, Arthur Lea, has a beautiful voice, and the VAD conveys it with a

CONNECTIONS



Q&A Gregor SzymczykVAD founder and chief designer



DP: What's the most important part of the DAC-10's design?

GS: The design has been developed and fine-tuned over many years with every part honed to achieve the very best sound. Ultimately for us, it is all about the music and we have kept going until we can design a product that truly moves us. Examples of how we work include the quality and separation of all power supplies, over engineering where it makes sense, the selection and quality of passive components, the inductance of digital PCB connections, the choice and configuration of active components and their initial quality, the use of vacuum tubes not to create a 'tube sound', but to make a pure one, the design and quality of analogue valve stage and chassis arounding issues. Some amount of engineering magic is also important I think, which I would explain as developing and applying solutions that are non-standard approaches.

Why include DSD when almost no one has any files at the moment?

There is a growing interest in downloadable Direct Stream Digital files, and more titles are becoming available. We believe that native DSD recordings available to purchase are here to stay and wanted to include the DSD playback in its purest form. DSD can sound better than PCM, when recorded originally in DSD and played as native (without back conversion to PCM) or any other manipulation such as converting low-rate PCM to DSD.

Why build in the United Kingdom when it is cheaper elsewhere?

During the R&D process, I've met many fantastic people who helped us with our casing, sourcing of the components and generally helping with the project – all of whom are in the UK. So I cannot imagine myself making our products anywhere else. Cheaper elsewhere? Maybe for mass production at the moment, but VAD products are all hand-built and we are proud to manufacture in the UK. I believe that Britain can manufacture anything competitively. It just needs more people to give it a try!

Glass bottles and digital audio appear to be a match made in heaven



purity and sumptuousness that I haven't heard from other DACs. It is – to borrow one of the great man's phrases – covered in cotton candy, so silky and smoky and gentle. Again it seems to strip away a layer of grime and expose it in its full, fragile beauty. It is one heck of a seductive performer, charming and beguiling the listener into wanting more.

By the same token, it is still very tight. Sometimes vinyl LPs lure you in and make you smile, but they can be loose and imprecise - sounding 'nice' rather than accurate. But you can't accuse the VAD of this, as it has an extremely solid backbone to what it does. Its soundstaging is very 'architectural' - everything is well laid out in the stereo mix, and images are tightly located and set into proper perspective. One spin of my favourite DG pressing of a Karajan Beethoven's Fifth Symphony shows how spacious it can be, yet everything is so well ordered within the recorded acoustic. Ironically, this makes Love's Maybe the People..., with its George Martin-style split stereo, sound more coherent than is normal.

Given it's excellent 16-bit/44.1kHz Compact Disc sound, I am eager to try it on hi-res, and it doesn't disappoint. Sometimes high-resolution files can disappoint, sounding more impressive from a hi-fi perspective, but not necessarily more musical - but not here. Herbie Hancock's Future Shock at 24/96 is extremely clean and ordered, with oodles of space in the mix, yet massively powerful, too. The DAC communicates the song's chord progressions beautifully, giving a great sense of the song having a strong direction to follow. Rhythmically superb, it still doesn't force the beats out at you, preferring instead to charm and beguile the listener. Bass is amazing enough via 16-bit, but at higher resolutions it is

breathtaking. The picture is the same for DSD too, with Alex de Grassi's *The Water Garden* coming over in a natural and spacious way.

Indeed, so open, even and effortlessly musical is the DAC-10, that one has to scrabble around for things to say about it. The only obvious flag it flies is that it is a tube design. There is still a little bit of hiss to be heard at very high volumes – it's rather nice and comforting, but it's still there whereas a good solid-state design will give you an 'inky black' silence. The bass lacks that last few percent of tightness, it's ever so slightly soft on leading edges, lovely as it is all the same.

Conclusion

A fabulous sounding device then – but so it should be at this price! The Valve Audio Devices DAC-10 is an auspicious debut from a new manufacturer, and obviously encapsulates a high amount of development work. The result is a wonderfully natural and enjoyable sound – not something you always associate with digital audio. If you're lucky enough to be able to entertain thoughts of buying a top-class DAC, this is an essential audition ●



The obvious rival here is

dCS' £7,929 Debussy. It employ's the company's bespoke hardware and software. The RingDAC, as it is called, offers a sound completely unlike any other DAC around. The dCS is amazingly detailed, the sound is 'alive' with texture and has a wonderfully spacious nature. You wouldn't call it the world's most beguiling listening although less forensic, the VAD tugs at the heart strings more, giving an exuberant sense of the majesty of the music whereas the dCS operates on a more molecular level, sifting right down through layers to the very bottom of the noise floor. Both are superb but very different, so go try them for yourself.



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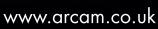
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Six appeal

Spendor's new A6R floorstander is an extensively reworked version of an old favourite. **David Price** listens in

ne of the best things about Spendor is that when its ranges are refreshed, it's a worthwhile update. The company's MD Philip Swift 'gets it' that buyers aren't always taken in by the addition of an alloy trim ring, a five percent more expensive crossover capacitor and set of gold-plated spikes. So when it does something, it's worth sitting up and taking notice. Any 'R' version (as it's 'Revised') really is worth paying attention to.

Currently the A series is the subject of Spendor's gaze. This is Spendor's mainstream range, fighting it out with mid-price speakers the world over. They look rather underwhelming, but they're really rather handy.

For the new A6R, Spendor claims "a dramatic uplift in dynamics,

It's one of those speakers that gets straight 'As' across all disciplines

resolution and low-frequency extension". This small-to-medium size box sports a new mid/bass driver that uses the company's latest EP77 'engineering polymer' cone, new surround and suspension materials. These are said to improve low-level linearity and mechanical stability. To go with this is a re-engineered crossover, devoid of series-attenuating resistors to minimise thermal modulation distortion. It also gets precision-wound high-linearity tapped inductors. At 4kHz, the new crossover begins feeding the same 29mm wide-surround tweeter with a bi-elliptical acoustic lens, which is said to give smooth extended high-frequency response.

The cabinets have also been breathed on, although you'd not know it from the outside. Spendor's linear-flow port is retained, sounding far less obvious than many rivals' cabinet apertures. It's also very forgiving when positioning; I can run the A6Rs pretty close to my back wall

without any obvious nasties in the bass. Inside, the company's 'Dynamic Damping' is deployed – these are small low-mass constrained polymer dampers at key energy interface points. Silver-plated pure copper wiring is used, with halogen-free dielectrics. The speakers sit on four machined steel stabiliser inserts, secured directly into the main structure of the cabinet and give a firm foundation.

The review pair come in a very attractive light oak finish; they look discreet and tasteful in my listening room. Other finishes include cherry, dark walnut and black ash.

Electrically, the Spendors prove to be a very benign load; quoted sensitivity isn't earth shattering at 88dB, but a lowish power solid-state or tube amp will still drive them to decent levels in a largish room. And sitting just a few inches away from a rear wall with a subtle few-degree toe-in, they sound like they've been made for my listening room and Creek Destiny integrated amplifier. Very few of the 120W per channel are needed to get decent sound levels, and when more are deployed the Spendors take it like old pros.

Sound quality

Every speaker brand has a distinctive sound and Spendor is no exception. But rather than trying to voice in character, Spendors go the other way - they're self-effacing, even and neutral. This is both bad and good, because initially they don't sound so special; there's no amazing bass to be bowled over by, or a treble that's so sharp it could be emitting gamma rays. Nor does the midband come out and punch you in the face. But after you've got over your initial, slightly anti-climactic first acquaintance with these speakers, you soon begin to change your mind. You might find them over polite at first, but then you start listening in to the music itself.

This is the difference between the A6R and many flashier rivals. It doesn't bowl you over, but instead just seems to step aside and let you and

DETAILS

PRODUCT Spendor A6R ORIGIN

TYPE

Floorstanding loudspeaker

WEIGHT 18kg

DIMENSIONS (WxHxD) 192 x 875 x 280mm

FEATURES

- 1x Spendor 180mm EP77 mid/bass unit
- •1x 29mm widesurround dome tweeter
- Quoted power handling: 20-200W
 Quoted sensitivity: 88dB/1W/1m
- Quoted impedance: 80hms nominal (min. 60hms)

DISTRIBUTORSpendor Audio
Systems

TELEPHONE 01323 843474

WEBSITE spendoraudio.com the music get along together. Rather like a car salesman who's happy to leave you alone in the showroom to play with the object of your desire, the new Spendor has a very light, but deft and skilful touch. It knows how and when not to interfere, where less sophisticated, more impetuous rivals might be falling over themselves to demonstrate their punchy bass or laser-etched treble. Essentially then, the A6Rs are so boring that you're not

distracted by them!

This means you can play pretty much any type of music and they'll still let it sing. Contrast this to all number of KEFs, Tannoys and Focals, which seem to be great with some types of programme material and rather less impressive with others. Take Manix's Living In The Past; this is a slice of retro techno, a sort of latter day rave anthem. It's pretty much the last piece of music I would ever imagine Spendor using to voice this new speaker, but still the A6Rs sing their hearts out - or rather let the music sing its heart out. Having recently lived with the higher-end Spendor D7, it's a case of déjà vu because the A6Rs play the very

Bass is excellent and I can vouch that Spendor's special port design works very well. Even at high levels, there is no huffing, puffing or chuffing, and the low frequencies remain tight and supple. True, it isn't

As gorgeous as the light oak is, there are also cherry, dark walnut and ash finishes



Q&APhilip Swift MD, Spendor Audio



DP: Why do an 'R' version of the A6?

PS: We've recently introduced important new driver materials and crossover topologies in our D7 loudspeaker. We were sure we could use these as the basis for a significantly improved A6R. It has a significantly deeper more powerful bass and sounds more coherent, more transparent and dynamic.

Essentially it is an entirely new loudspeaker, which retains all the positive elements of the A6.

What improvements has the new mid/bass cone material brought?

The old A6 had our EP38 translucent cone material, it was our first 'new generation' Engineering Polymer (EP) cone. It has taken us many years of research to find a substantially superior material. EP77 is more rigid for better bass. The residual break-up modes are vanishingly low, which results in a more natural, transparent, dynamic sound.

Why have you decided to do a traditional 2-way 'box' speaker?

Cost and size are significant factors and we think the A6R delivers an ideal balance of performance and size at a very affordable price. Our 2.5-way D7 is undoubtedly superior, but it is also bigger and more expensive. The cabinet isn't curved because in a typical home, furniture, equipment and layout tends to follow a very rectangular format. Everything fits and there is a pleasing timeless harmony. In a showroom fancy shapes can look impressive, but the novelty soon wears thin when you get them home! Carefully engineered curves and swoops in close proximity to mid and HF drivers can bring some sonic benefits, but a correctly dimensioned and braced rectangular cabinet is a highly effective way of creating a rigid enclosure, which also breaks up standing waves and avoids resonances and audible diffraction effects.

As it happens the A6R is very much on-trend with its pure form 'squared-off' cabinet. We notice many well-known loudspeaker manufacturers are turning away from curvy shapes – the future is simple and pure!



HOW IT COMPARES

Monitor Audio's GX200 is an obvious rival for the A6R, being one of the very best floorstanders at the price. The finish of the MA is more lavish, making the Spendor look plain. This 3-way design gives a very open, crisp, intricate sort of sound. It's a little more forensic than the A6R, with a lovely ribbon tweeter that boasts a wider and more atmospheric treble. The midband is very transparent, but slightly smaller scale than the Spendor, and lacks its easy rhythmic flow. On the other hand. there's a fraction more low-level detail. Bass is similarly good, although the A6R may just have the measure of the GX200 here.

ultra-taut like a good infinite baffle speaker, but it is still a very good implementation of a reflex port that lets the bass driver do its job accurately, with little interference. The result is a lovely, lilting musicality with just a tiny bit of softness and looseness, which any ported speaker gives. The low frequencies prove very even too; there's no big 'hump' around 100Hz to give the (false) sensation of a strong bass. But when called upon to deliver vast tracts of low frequencies, the A6R doesn't baulk - it proves able to dispense enough bottom end to flap your flares, if not quite blow your wig off.

The midrange performance of the A6R is lovely. It does that very special trick of being incisive and detailed without sounding like a speaker that's trying to be incisive and detailed! Rather it has a smooth, gentle, delicate sort of character that seems to dissolve away and let you focus on the mix; there's no honking or squawking from the cone, no sense that you're listening to something artificial. In absolute terms, that mid/bass unit lacks the amazing translucency of a ribbon or an electrostatic panel, but it's never

muddy or grey or metallic sounding. Once again, it's sheer even-handedness wins the day! Cue up some lilting jazz from Hank Mobley's *Soul Station* and there's a fantastic sound to the saxophone – never harsh, it's nevertheless dripping with rich, resonant harmonics. Behind this, a wonderfully fluid groove gets going courtesy of great drum kit work; despite not throwing everything at you on a plate, the A6R still proves to be highly rhythmically adept.

It is very good at soundstaging too; it's one of those speakers that seems to be able to throw out excellent stereo with precious little setting up or fine tuning. But time spent getting a few degrees toe-in, and the listening height right via the front spikes pays dividends, and they'll end up projecting the music like a hologram in your lounge. Spring Rounds from Stravinsky's Rite of Spring shows the depth and breadth the Spendors are capable of; short of going up to £5,000 designs, you'll struggle to get a larger, more spacious recorded acoustic. Within this, instruments are located with pin-point precision.

Conclusion

Spendor's new A6R floorstander is actually quite a hard speaker to describe, as it really doesn't draw attention to itself. Rather, it lets you play pretty much any type of music you like, and gives you a very clean, open, engaging and enjoyable rendition. It's one of those speakers that gets straight 'As' across all disciplines, while never quite making it to A-star in any. Its sheer competence across the board means it's really hard, if not impossible, to beat. You just can't help really liking it, no matter what you're currently used to and how expensive it is. As such, it comes heartily recommended - if you want your music to do the talking and not your loudspeakers! •



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noun

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adjective
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Carbon emissions

The Xpression series is brought right up to date with a new carbon fibre tonearm, Neville Roberts takes one for a spin

ounded back in 1990 by Heinz Lichtenegger, Pro-Ject's debut turntable was the Pro-Ject 1. The Xpression series traces its lineage back to these early days and so Heinz takes particular pride in this model. The new Pro-Ject 1 Xpression Carbon turntable is an upgraded version of the Xpression III, but the only common features it has are the same size plinth and similar feet.

The 1 Xpression Carbon has a medium-density fibreboard plinth, which is available in three gloss finishes: black, Bordeaux red and midnight blue. The plinth is supported by three height-adjustable, rubber-damped aluminium cone feet. It benefits from a new AC motor design that is powered by a 15V DC wall-wart power supply. This motor is isolated from the main plinth by two rubber grommets designed and manufactured by Ortofon. The motor is fitted with a dual pulley for 33 and 45rpm speeds, and an optional 33 and 78rpm pulley kit is also available as an extra (although I'd not want to get the Ortofon cartridge anywhere near a shellac 78!) The pulley is coupled to a sub-platter by a belt and the high-gloss black main platter sits on the sub-platter. To my taste, the painted pressed-metal main platter looks a teensy-bit utilitarian, but maybe that's just me! Speed-change between 33 and 45rpm is effected by

DETAILS

PRODUCT Pro-Ject1Xpression Carbon

ORIGIN Austria

Belt-drive turntable

WEIGHT 5kg

DIMENSIONS (WxHxD) 415 x 118 x 320mm

FEATURES

• Carbon fibre

tonearm New AC turntable motor design

Ortofon 2M Silver

moving magnet cartridge
• Supplied with both felt and cork

turntable mats

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removing the main platter and moving the belt on the motor pulley, using a supplied plastic hook so there is no need to touch the belt with your fingers and potentially contaminate its surface. The 1 Xpression Carbon is supplied with both felt and cork turntable mats, as well as an acrylic dust cover.

The new tonearm that is fitted to the deck is the main improvement upon the previous model. It is a 9in single-piece carbon fibre tonearm design supported by sapphire thrust pads. Around the yoke is a heavyweight metal C-shaped structure, which is similar to that found on the company's Evolution tonearms. This structure is designed to take any resonance away from the arm tube and also decouple the arm from the plinth to prevent any external vibrations from reaching the arm tube. The arm tube at the cartridge end has a finger-lift neatly designedinto the one-piece construction. Bias adjustment is by a small weight suspended from a wire hoop in a nylon thread, which is connected to the arm by looping the end of the thread over a little pillar that has three grooves on it, corresponding to different stylus forces. The centre groove is used for a stylus force of 1.8g as recommended for the supplied cartridge. The arm height is changeable to enable the vertical



Here's to blue. Black and Bordeaux red are also available

tracking angle or VTA to be adjusted if required. Also, the arm tube is able to be rotated slightly in the yoke assembly to enable azimuth to be adjusted, should this be necessary. However, the VTA and azimuth are factory set for the supplied cartridge and I find that both of these parameters are set correctly. The only real adjustment required is to set the stylus force after the counterbalance weight has been fitted to the tonearm stub.

This new arm is equipped with a new Ortofon 2M Silver moving magnet cartridge, which is fitted with a 2M Ortofon Red profile stylus, and the internal generator coils are made from silver. The signal from this cartridge is taken to a terminal block on the rear of the deck that is fitted with a pair of RCA phono sockets and an earth binding post. A set of dual phono leads with a separate earth wire is included.

The deck is shipped partially disassembled and carefully packaged for safe transport. Assembly is simply a job of removing a couple of transit screws from the motor mount, inserting the sub-platter into the bearing, fitting the belt and placing the main platter onto the sub-platter. The nylon thread of the bias weight is threaded through the wire hoop and looped onto the middle groove of the arm pillar (for the 1.8g stylus force

recommended for the supplied Ortofon 2M Silver cartridge). Finally, the counterbalance weight is pushed onto the arm stub.

The instructions then describe how to set the tracking force to 1.8g using the markings on the counterweight, but I prefer to use a digital stylus force balance to do this, which is far more accurate. The instructions then suggest checking the azimuth and VTA, but as mentioned previously, I found these to be satisfactory.

After setting up the turntable according to the manufacturer's instructions, I attempt to quantify the deck's performance using my Vinyl Essentials test record. With this, I am able to measure both the tracking ability of the cartridge and the tonearm/cartridge resonant frequency. In order to check the tracking ability a tone is recorded with increasing amplitude, ranging from 40 microns to 100 microns in 10 micron steps. When the cartridge starts to mistrack, a very clear buzzing noise is heard. With this deck, the cartridge only starts to break up at 80 microns, which is a very satisfactory result. Track six of this record has sub-sonic tones in bands going from 6Hz to 16Hz in 2Hz steps, modulated with an audible tone. When the arm goes into resonance, the audible tone starts to warble and you can actually see the cartridge wobbling at resonance! This

test shows that the resonance is between 10Hz and 12Hz, which is ideal. If the resonance is around 14Hz, this is too close to a real-world signal, such as a very low organ note. If it is below about 6Hz, the resonance will produce sub-sonic noise where the harmonics are likely to interfere with the audio frequencies. All is well, so I now proceed with the listening tests.

Sound quality

Starting off with Vivaldi's *Concerti Op.* 6 performed by I Musici on Philips 9500 438, I find the 1 Xpression incredibly easy to listen to. The performance is rounded and crisp and

Everything sounds crystal clear with no trace of anything being masked

the allegros are buoyant and sprightly. Even though the solo violinist – Pina Carmirelli – was 64 when the recording was made in 1978, you can imagine her bouncing around the stage while playing!

A slight criticism is that the strings sound a little edgy in comparison to what I am used to hearing with this performance. I am, however, listening to this recording using the supplied cork mat, but exchanging it with the



Q&AHeinz Lichtenegger CEO and founder of Pro-Ject Audio



NR: The Pro-Ject Xpression series of turntables has certainly stood the test of time. What is it about this range that has made it so successful over the years?

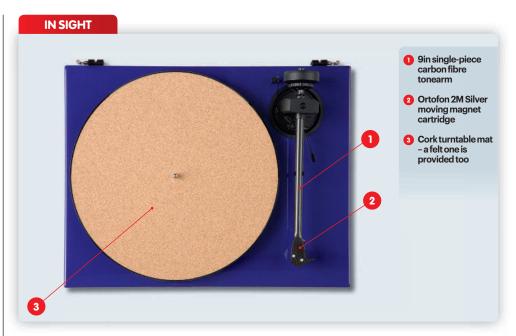
HL: The Xpression has many things going for it. First, the design: it's a simple, but extremely good performing turntable. Most of the production costs go into the quality of the components and not in the design. In many other products, the philosophy can often be the other way round, but this is what has helped us at Pro-Ject grow over the last 20 years. Second, the Xpression has always been aimed at customers who don't necessarily have the money for high-end hi-fi, but take their sound seriously. Finally, though our concept is to make great affordable turntables, we do take care with our designs - and the Xpression has always looked nice on top of a hi-fi rack; now it does even more with our three stylish finishes!

Can you tell me a bit more about the new AC motor and how it differs from the previous model?

The new AC motor actually uses the same technology as we have had in the past, as our production and testing techniques have improved so much over the years to produce a range of motors that offer phenomenal value for money. What we have done is improved the way we mount/isolate the motor on/from the plinth. Also, all our new turntables have a low-power DC power supply and an electronic board under the plinth, which generates pure AC for the motor. This makes our motors much quieter and better than ever before.

The Ortofon 2M Silver is a really impressive cartridge – is it available to buy separately?

We are very impressed with the performance of the Ortofon 2M Silver. We are working with local markets to see if this can be made available separately, but there is nothing set yet.



felt one seems to tone down this edginess and I, therefore, prefer the sound when using the felt mat.

Keeping with Vivaldi, but changing the genre somewhat, I move onto *The Four Seasons* in Jazz as performed by the Raymond Fol Big Band (a superb 1965 stereo recording on Philips 842.125). The allegros positively sparkle with excitement and energy and all the largos and adagios have a captivating musicality. Comparing the cork mat to the felt mat, the strings sound more natural without detracting from the overall excitement of the performance.

Next to spin is a digital master solo harpsichord recording on Archiv 415 493-1 of J S Bach's *Six Partitas* BWV 825-830 played by Trevor Pinnock. This makes delightful listening, but sometimes the harmonics of each note during loud passages sound a little muddy. However, this slight criticism does not detract from the overall performance and once again, this is cleaned up slightly by replacing the cork mat with the felt one.

For pulling out all the stops with a full orchestra and chorus, I slip on a recording of Carl Orff's *Carmina Burana* performed by the London Symphony Orchestra and Chorus conducted by Andre Previn – a half-speed Mobile Fidelity Sound Lab master recording on the Angel/EMI label MFSL 1-506. I am impressed that, even when the orchestra and chorus are letting rip in the first movement, the tinkling of the triangle is clearly heard in the background.

Side 2 of Laurent Garnier's *Tales of a Kleptomaniac* has a massive techo bass that can often swamp the triangle on the left. Clearly, the

cartridge and tonearm are working in perfect harmony as there's no trace of anything being masked. The bass certainly packs a punch and is well controlled, although not quite as extended in the very low registers.

Conclusion

To summarise, the Pro-Ject 1 Xpression Carbon turntable is a great performer that includes everything you need to make good use of the MM phono input of your amplifier, or indeed one of the external phono preamps reviewed in our *Group Test*, starting on page 24.

In my setup, I find that I prefer the performance with the felt mat rather than the cork one fitted, but this will very much depend on your particular setup and preferences.

As you would expect, the turntable, tonearm and cartridge combination are perfectly matched for each other and, as a result, the sound is well controlled and very musical. At this price point, Pro-Ject has a real winner on its hands •



The Pro-Ject compares well to the similarly priced Rega RP3 with the optional Elvs 2 cartridge fitted. Both decks require removal of the main platter and a manual shift of the belt to change speeds. I prefer the glass platter of the RP3, but there is no denying the performance of the metal Pro-Ject platter with the supplied felt mat fitted.

The Pro-Ject is fitted with a new carbon-fibre arm and the RP3 has the RB303 tonearm, which has a great reputation. There's a definite synergy between the carbon-fibre arm and the Ortofon 2M Silver and the Ortofon sounds a bit more sophisticated than the Elys 2, which makes the Pro-Ject a real winner for me.



Objects of Objects of



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White fantastic

The Octave 6 loudspeakers are rather different to their rivals at the price, but **Ed Selley** sees the potential

or nearly 40 years Morel has been quietly and confidently going about the business of making speakers in a way that is different to more mainstream competitors. The Israel-based concern has a wide variety of speakers ranging from conventional box designs to sub-sat packages all the way to custom install and car audio products. Almost all feature elements that are unique. Different is one thing, but is it better?

The Octave 6s tested here are firmly in the middle of the Morel box

The Octaves are extremely hard to provoke into any form of aggression

speaker lineup sitting below the more expensive Sopran and gloriously named Fat Lady range topper. The small range comprises a floorstander and the standmount you see here. The Octaves have been a Morel range for well over a decade and the 6s are the latest incarnation. Slightly confusingly, Morel also offers the Octave Signature range, which although visually similar is not the same as the Octave 6 models and represents a different price point.

The Octaves are superficially conventional two-way standmounts, but there are some elements of the design that are somewhat novel. The first is the cabinet, both in terms of the shape and the materials used. With the recent rise in lacquered finished speakers it looks more normal than it might have done a few years ago, but the finish is the result of a bespoke polymer applied to the MDF and is intended to aid the damping and resonance of the cabinet. This means that internally they have no damping, relying

instead on the polymer. The form factor is also unusual. The Morels are only 30cm tall including the tweeter housing, but considerably deeper (and deeper still when the substantial speaker terminals are taken into account), which gives them a very distinctive appearance. The enclosures are rear ported and the ports are arranged to sit exactly on axis with the bass driver.

The drivers themselves are also unique. Morel produces its own drivers inhouse (and indeed sells them as separate line items) and the ones in the Octaves have been designed specifically for them. The mid bass driver is a 6in unit made from what Morel describes as DPC (Damped Polymer Composite). This uses a fairly hefty 3in voice coil of aluminium wrapped around a titanium core powered by a hybrid neodymium and ferrite magnet. The partnering tweeter is a 28mm soft dome unit, which is also bespoke. The crossover that joins them is derived from the Fat Lady unit and is set out to offer the best integration possible while also keeping the number of components in the signal path down. To this end, the Octaves only support single wiring.

Both drivers are kept rather well hidden. This is because the Octaves are fitted with metal grilles that are mounted to the cabinet and are a awkward to remove. Combined with the distinctive cabinet form and the very bright white finish you have a pair of speakers that won't be to everybody's taste. That said, I rather like them. These are speakers that are going to make a visual statement rather than blend in, but in the flesh they look rather smart and the fit and finish is of a very high standard.

Some care will need to be taken in partnering them, however. The sensitivity is given as 89dB/W and Morel describes them as: "amplifier

DETAILS

PRODUCT Morel Octave 6

TYPE

Two-way standmount loudspeaker

WEIGHT

(WxHxD) 190 x 300 x 340mm

- FEATURES

 Bespoke 28mm soft dome tweeter • 6in composite mid bass driver
- Quoted

impedance: 4ohms
• Quoted frequency
response: 50Hz18kHz at +/- 1.5dB **DISTRIBUTOR**LEARS International

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friendly", but impedance is claimed at a firm 40hms and in use the Octave 6s don't feel that sensitive. I test them with Naim's burly Supernait 2 and the equally potent Audio Analogue Verdi Cento and both work well, but are called upon to deliver a fair amount of their output. The Morels are also fairly sensitive to positioning. The large rear ports can interact with rear walls if they are placed less than 20cm from them. With this attended to and some toe-in, they can really start to give a sense of their character and capability.

Sound quality

There are considerable abilities in the performance of the Morel Octave 6s. After a few days of running, they start to reveal some very admirable traits. For relatively small speakers, the bass performance is genuinely excellent. Morel claims 50Hz at +/-1.5dB (and rather more at +/-3dB) and this feels entirely believable in use. Furthermore, this is not some freak blip reached after an unpleasant recessed part of the frequency response, but the crest of a very even and thoroughly controlled response wave. If you provide the power amplification, the Morels will happily provide the impact.

Listen further and the even handedness across the frequency response becomes more and more impressive. The advantage of the drivers being built inhouse and

Metal 'Lotus' grilles are designed to be acoustically transparent



Q&AOren Mordechai R&D manager



ES: Are there any key technology features of the Octave series that have been present from the original model onwards?

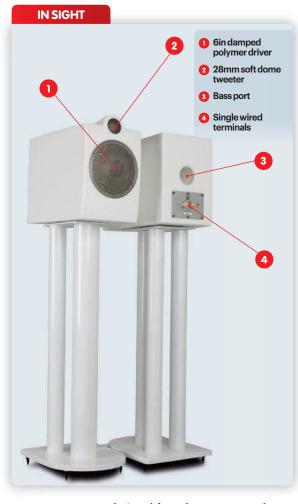
OM: Yes, many elements have been carried over – in the woofers we kept the giant 3in (75mm) Hexatech™ aluminium voice coil and External Voice Coil technology. The voice coil bobbin has changed from aluminium in previous models to titanium in the Octave 6 – improving accuracy and allowing exceptionally fast transient response. Morel also still employs the one-piece integrated dome and surround cone in the mid bass driver. The tweeter is also an improved version of the previous design.

What benefits do you feel that using a relatively short, but deep, cabinet confers?

Wave dispersion is made easier due to this type of design as there is a greater space between the membrane and the back of the cabinet allowing the returning waves to break up with no damping, but with partitions only. As a result the air flow is much better allowing the sound to be open and airy.

What is the thinking behind the fixed metal grilles used on the Octave 6?

The Lotus grille has a specific pattern of holes in different shapes and diameters engineered to minimise the 'horn' effect (high-frequency peak caused by the resonant frequency of multiple holes of the same size). Innovative metal processing enables the construction of a very thin nearly transparent grille that has minimal effects on the sound (in comparison to standard grilles), although we still believe removing it will make the speaker sound better. The tweeter also has a specially designed triangle so it is protected even without the Lotus grille.



HOW IT COMPARES

The Morels face no shortage of rivals at the £1.500 price point. Perhaps the closest and most capable rival is PMC's highly regarded twenty.21, which are £125 cheaper and available in a wood veneer. The PMC is one of the very few standmounts that can match the Morel's superb low-end extension thanks to their transmission line design. Where they differ is their behaviour in the upper registers. The PMCs are more explicit and can sound more exciting, but the Morels smoother and better integrated treble works well with less immaculate material. Choosing between them comes down to preference, but both are superbly talented.

designed from the outset to work with one another is readily apparent in their seamless handover and nigh-on perfect integration. The electronically enhanced orchestra of Daft Punk's *Tron Legacy* is presented with an assurance that considerably larger speakers can fail to achieve. There is no single point from the highest frequencies reproduced to the lowest that anything is being over emphasised or recessed and it is only because of it being at the extremity that the bass response stands out.

This even handedness does come at the expense of some fine detail that speakers with a less even presentation have an easier job of highlighting. The detail is generally there, but it doesn't leap out from the mix in the same way as some rivals. The result is performance that is accurate and balanced, but perhaps not as emotionally engaging as some rivals with more midrange emphasis. By the same token, the Octaves are extremely hard to provoke into any form of aggression or harshness even with levels pegged at their firmly antisocial highest.

This is a huge advantage for those of us who have favourite albums that

are not exactly the last word in recording quality. The Octaves pound through Unkle's War Stories with a power and agility that is bordering on the addictive, but manage to keep the compression and slightly harsh presentation firmly under control. Behind the neutrality are speakers with a willingness to rock and they are happiest with some tempo to the music you are asking them to play.

Conclusion

The performance with more relaxed music is unfailingly competent, but the very control of the Octaves could lead to accusations of them being slightly sterile. Unusually, this doesn't seem to change too significantly when swapping between the Naim and Audio Analogue amps. The valve preamp in the Verdi Cento lends a fractional midrange enhancement, but this is nowhere near as pronounced as it is in some other speakers at a similar price. The Audio Analogue manages to generate a wider soundstage with the Octaves, but although Morel claims that the Octave 6s have no sweet spot, I find the positioning that works in my listening room generates a definite - albeit fairly large - sweet spot where the speakers are at their best.

The Morels are individualistic speakers in all senses of the word. From the distinctive shape and appearance to the requirements on partnering electronics and positioning. Happily, this distinctiveness is underpinned by a confidence and raw ability that is hard to ignore. If you are limited in terms of space and prefer your music with a bit of drive to it, there are very few speakers of a similar size that can produce such an unfailingly powerful and poised performance. Some aspects of the design are undoubtedly unusual, but the end result is a very impressive pair of speakers •



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Blue note

Roksan's new amp sports apt-X Bluetooth to make life easier for those wanting to go wire free. **David Price** checks it out

ow time flies! Some 30 years ago, the genesis of a turntable started, one that was to put the Roksan name on everyone's lips by the late eighties. The product was superb, the company new and the future full of promise. What followed was a range of loudspeakers and then electronics including amplifiers and CD players. Now, some manufacturers suffer from vanity, or simply too much caffeine in their bloodstream and over reach themselves producing a wide product range when they had previously specialised in one particular area but Roksan did not make that mistake. Unusually, all its designs were done to a very high standard.

In the intervening years, we've seen Roksan building on these, and establishing several ranges of electronics, the current entry-level one being the Kandy K2 series,

launched some five years ago at the Bristol Hi-fi Show. The amplifier, originally selling for the princely sum of £750, wasn't the world's best looking around, but anyone who heard it in a well set-up system would be sold on it. Since then, in the space of just a few years, seismic changes have transformed the hi-fi world. The rise of computer audio was being talked about in 2009, but in 2014 it's actually here. We all now have at least one device, likely with an 'i' in front of its name that has music on it and the ability to beam it to the outside world in at least one way. Cables were enjoying their harvest years five years ago, but now the world is going wireless, with wi-fi and Bluetooth leading the charge.

While the former is ideal for computing and home networking, the latter is particularly well suited to portable devices, because it's cheap to

DETAILS

PRODUCT Roksan K2 BT

ORIGIN UK

TYPE Integrated amplifier

WEIGHT

14kg

DIMENSIONS (WxHxD) 432 x 102 x 380mm

FEATURES

- 5x line inputs
- 1x MM phono input apt-X Bluetooth compatible
- 2x preamplifier output • Quoted power: 150W RMS (8ohms)

DISTRIBUTOR

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implement and doesn't require lots of juice from a battery. Also, syncing it up is a doddle, with no annoying WEP passwords to play with. What stopped it being used for music until recently was its low data transmission rates, which permitted only seriously compressed digital audio. Now though we have apt-X, which is a bolton upgrade to Bluetooth that permits direct music streaming to any such enabled device, in high quality. Whereas Bluetooth's early forays into music sounded pretty dire, apt-X gives up to 24-bit/96kHz resolution digital audio, and is scalable, adaptive and lossless.

Recognising that the world is changing, Roksan has integrated this into its latest K2 amplifier. Confusingly it is still called the K2, but now it gets the BT suffix to recognise its Bluetooth functionality. However, that's not all. This is more than just chucking in a Bluetooth chip, as the amplifier has had some more work done inside. The power supply section has been stiffened up, with a new and very large 500VA toroidal transformer with five regulated supply rails coming off it. This is said to increase the damping factor, which will result in tighter bass, and Roksan adds that it has removed some unwanted noise from the mains, too. Some other small detail changes have been made to the



Art deco or retro sixties modernism? You decide...

circuit boards and relays. The chassis and case have been redesigned for better ventilation – the result is 150W per channel into 80hms claimed, and nearly twice that for 40hms.

The K2 BT is slightly odd looking to my eyes, but in a nice way. Its fascia has a certain visual charm – there's a touch of retro sixties modernism in the radiused end to the inset mirror trim section, indeed you might even call it slightly art deco. It has LEDs to indicate which of the five line (plus Bluetooth) inputs are in use, and there's also a moving magnet phono stage. Round the back, in addition to the socketry for the aforementioned, there are two sets of preamp outputs,

the usual loudspeaker binding posts and a socket for the small supplied Bluetooth antenna. The amp comes with Roksan's RMX111 learning remote control, a decent and functional device. Bluetooth syncs up easily, proving to have a range of around 15m in my house, which is half than the claimed maximum.

Sound quality

The last version of the K2 sounds great – it might not be the world's most detailed amplifier, but it has a wonderfully big-hearted nature that is bristling with enthusiasm, making any sort of music it plays a pleasure. This new BT version is even better, having all the musicality of its predecessor, but just a fraction more power, grip and overall refinement.

First and foremost, how does it sound via its new Bluetooth input? Well, the answer is not bad at all. In truth, you'd never choose this input over a high-quality CD player or DAC, but then again that's not quite the point of its inclusion on the new amp. With this feature, you get the ability to sync up your phone or tablet to your hi-fi in a very easy, fuss-free way - one that's a good deal easier than plugging in a cable to a fasciamounted minijack socket. You can then use your iPad, or whatever, to mete out the tunes as you do whatever you've got to do - from playing computer games to browsing the internet.

Rather than a high-end hi-fi sound, the K2 BT's Bluetooth connection gives an enjoyable and bouncy rendition of your music, devoid of any particular hardness or glare. In absolute terms it seems a little bass-light and the stereo imaging is pushed a little more between the two loudspeakers and out towards the listener. Flick to the same music file coming from the original disc source via a CD player, and you're soon

aware of there being more air and space and bass. Still, a wirelessly sent file is perfectly listenable, and outperforms many budget CD players I've heard. It's a great feature to have, and one that I suspect even many hardened audiophiles will find themselves using when they're sure no one's looking!

What of the other inputs? Through the line-level ins, the K2 BT is at its absolute best, and it is superb. I've heard practically every mid-price integrated around, and the Roksan gives absolutely nothing away to any of them. It has a wonderfully even tonality; it's not bright, screechy,

It's the seamless way that the bass melds with the midband that really delights

(what some would call) transistory, or any other unpleasant '-y'. Rather, it has a very sophisticated tone, bristling with detail, but never forward or intrusive. There are only four British brands doing this specific sort of sound right now, one of which is, of course, Roksan, the others being Creek, Rega and Arcam. Of the four smoothies, Roksan is the most animated sounding – it is this rare combination of couthness and uncompromising musicality that makes it so special.

Manix's One More Time is a vast slab of nineties-stylee drum'n'bass, with ultra-fast looped hi-hats and snare drums set behind sparse keyboards and female vocals, above some massive thumping sub-bass. Many amplifiers would fall apart trying to keep the bright-sounding midband honest while wheezing under the weight of the bassline, but the K2 BT is absolutely unfazed. It serves up vast tracts of very low frequencies as



REVIEWS ROKSAN K2 BT INTEGRATED AMPLIFIER £895

Q&A Tufan HashemiRoksan Audio managing director



DP: What were your design priorities for the new K2 BT?

TH: We have discovered a significant demand from customers who wish to use computers, phones and tablets as a music source. Satisfying this, along with further improving overall audiophile performance, was the brief. Our priority was to create an affordable, but brilliant integrated that would also be an extension of our daily use of Bluetooth.

Why fit Bluetooth, specifically?

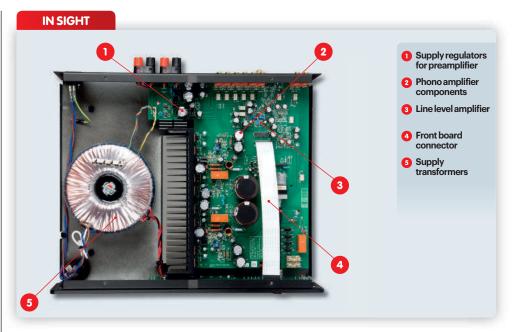
It's the easiest method of connectivity at present. We use it in our cars, headphones, phones and computers, and it's a technology that most people are familiar with. Plus, with the Oxygene series development we realised that Bluetooth in its latest new apt-X form can easily rival – and often better – other recognised audiophile standard wireless formats. The Bluetooth technology used in the K2BT is simply the most advanced and the best available today. It allows easy connectivity and produces the best sound possible from streaming.

What's the best quality you can get from the K2 BT's apt-X system?

We have 16-bit, 48kHz maximum, but we have set it at 44.1kHz as some computers have problems with 48kHz sampling rate. This is CD quality standard, of course, and is used in all CD players produced today. It is also higher than most recorded music in this format, especially when it comes to portable devices. Bluetooth technology in Roksan products performs its optimum high-quality performance when fed from uncompressed or lossless audio files, of course.

Can we expect any more new Roksan models this year?

We have many products under development with a focus on a combination of connectivity and audio performance. Soon you will also see DACs, streamers and more wireless products from Roksan including speakers. It goes without saying that we are also working on new vinyl replay related products too.



effortlessly as if it is playing whisperquiet classical guitar music. Better still, it isn't analytical or matter of fact – the Roksan seems to be having as much fun as the listener (ie me), whose thoughts begin to move to turning the music up still further...

It's the essential smoothness and civility of the K2 BT that means that you can do precisely this; my ears are telling me that this amplifier is neither harsh nor fuzzy sounding. Rather, it lets you hear right into the stereo soundstage, where it often hangs elements of the mix back quite a long way; at other times when called upon so to do, it throws them right at you.

The bass is great then, but it's the seamless way that it melds with the midband that delights; once again the Roksan is even and open and confident about the job in hand. Visioneers' Shine showcases this beautifully - its richness of tone allied to its speed, bass grip and midband insight gel beautifully. The shuffling rhythms of this track can throw some amplifiers off their feet, especially at higher volumes, but the K2 BT is solid as a rock and smooth as silk. The amplifier bubbles with energy, showing a lovely rhythmic gait and wonderful dynamic alacrity.

World of Twist's *The Lights* is a great integrated amplifier torture track. It starts off innocently enough, but builds up layer upon layer to end up as a dense patchwork of acoustic instruments and synthesisers. This amplifier proves totally up for the challenge, tracking the pulsating bass, crashing keyboard pads and guitar noodling with absolutely no complaint. The new K2 BT is really

rather impressive at soundstaging too, with a very expansive recreated acoustic, and instruments located within this with rifle-bolt precision. There are very few amplifiers that I can think of at this price that are so musically expressive yet architecturally correct.

Conclusion

There are two key points to be made about the new Roksan K2 BT. First, while Bluetooth is a very handy little bit of extra functionality, it is not the standout feature of this amplifier its superb sound quality is. Second, it's not the most attractive or ergonomically accomplished amplifier ever made, but as soon as you hear it you'll excuse it almost anything. With this in mind, I'd recommend anyone with around £1,000 and in the market for a modern music-making machine to hear it. But whatever you do, don't sit there all day playing tunes from your iPhone - because when you feed it with a decent source it really begins to sing •



Costing £750, Creek's Evolution 50A is probably the Roksan K2 BT's biggest rival. It's very smooth and even sounding, rather like the Roksan, It's possibly a little less punchy and the bass isn't quite so barrel chested, and it's a little more relaxing and not quite so energetic. This is partly down to the Creek's power output, which is considerably lower than the Roksan's, but you'd never call it lacking. But it makes music in a very natural, charming and subtle way - giving the sort of performance you'd never have got five years ago at this price. It's also very flexible too, with the option of a tuner module, but no Bluetooth, An audition is a must for either.





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LOOK WISA WIRELESS SPEAKER & AUDIO NO WIRELESS SPEAKER & WIRE

Could a new wireless transmission standard spell the end for speaker cable? **Adrian Justins** is your guide to the exciting world of WiSA

o most hi-fi enthusiasts loudspeakers and speaker cable are inseparable – the idea that one could operate without the other is almost unthinkable. But speaker cables are a nuisance, being stubborn to control and considered by most of us to be visually unappealing trailed around the home. Cables often have to be hidden behind walls, under floors or along skirting boards, challenging our DIY skills.

Wireless speakers are nothing new but when Bang & Olufsen recently launched its BeoLab 17 speaker it marked an historic day for the wireless speaker industry causing AV and hi-fi enthusiasts to prick up their audiophile ears. The BeoLab 17 was the first product to go on sale with the endorsement of the Wireless Speaker and Audio association (WiSA), a newly formed group with a unique mission to promote the standardisation of high-fidelity, cable-less audio transmission.

So far wireless speakers have been limited to listening to compressed music streamed from devices such as smartphones, tablets and computers. AirPlay and Bluetooth in particular have fuelled massive growth in the sales of wirelessly connected speakers, but neither of these support hi-res files and both are prone to being unreliable, especially when faced with interference.

Proprietary systems such as Sonos' and Pure's Jongo offer a ring-fenced solution to multi-room streaming and they integrate with online music subscription services but, like AirPlay, they require a home network and are intended to work with computers and portable devices rather than hi-fi or home cinema sources (although Sonos does offer a TV soundbar solution). WiSA has set its sights on the higher end of the market, offering the ability to stream uncompressed HD audio at native sampling rates up to 24-bit/96kHz. Its goal is to become the

defacto standard for wireless audio, and to be as recognisable and easily understood as HDMI and USB. This is no easy task given the complexities of contemporary home entertainment devices, and that's before you try and take the wires out of the equation. Speaker cables and their connections can be visually assessed by consumers for their physical properties, but wireless connections require a huge leap of faith. But there is no standard for cables and for WiSA, establishing a proven standard would give it an advantage over cables in terms of performance and

WiSA is a compelling proposition for those that want to ditch the cables

durability, which can vary with cables depending on their construction.

An essential requirement, therefore, for WiSA is establishing the belief that it is truly robust and able to withstand potential interference. Analogue wireless transmission systems are notoriously subject to interference while digital ones can hardly claim immunity. Who hasn't heard annoying clicks, hiss and drop outs when using a mobile phone, or even AirPlay and Bluetooth?

WiSA's solution is partly to avoid the popular digital audio frequencies around 2GHz used by wi-fi, Bluetooth, baby monitors and microwave ovens. Instead it uses a set of frequencies between 5.2 and 5.8GHz, which were for weather and military radar applications and recently became available for commercial use.

WiSA further minimises the likelihood of interference by requiring its transmitters

to constantly seek out and use a totally unoccupied channel. The system uses Dynamic Frequency Selection (DFS), continuously scanning 15 channels and in the case of interference, jumping directly to a clear channel without losing any audio information. WiSA rules state that a channel must be clear for one minute before use and cannot be reused for 30 minutes after a conflict is detected. Due to the strict access rules there are only a few systems that operate in the DFS band and audio is ideally suited for DFS operation since it requires a steady stream of data rather than high-speed bursts. Another handy bonus is that WiSA-compliant audio does not interfere with existing networks so that wi-fi networks should not be adversely affected.

Another advantage of operating between 5.2 and 5.8GHz is that bandwidth is relatively abundant and there are fewer



errors due to interference so latency is very low at 5ms. However, in the case of communication errors, the system falls back on traditional recovery methods similar to those on CDs. These include: forward error correction; error concealment where missing (uncorrected) data is filled in a way that is unnoticeable; a play-out buffer, which allows longer concealment ability; and if all else fails, silence rather than noisy artifacts.

Keep it clean

WiSA compliant components are tested to ensure clean communications within a 100m² area even when interference is present. Frequency selection and correction must operate quickly and be free of noise.

WiSA signals do not require line of sight, but one key difference between WiSA and the likes of AirPlay and Bluetooth is that it offers reliability and quality over reachability. In other words, it can't go through walls so can't be used in a multi-room set-up, but WiSA is even looking into ways around that.

It's also looking at increasing the specification in terms of distance. The current WiSA Certification Test Specification (CTS) calls for a system to pass a minimum distanced test of 10m by 10m but the association knows from experience that a system will transmit and receive much longer distances. As such, it believes there is a big

market beyond the home waiting to be exploited. WiSA president Jim Venable told me: "We had a prototype system from one of our members set up in a ballroom at InfoComm that measured 60 feet by 40 feet with a 20 feet high ceiling along with about 150 people in attendance. The speakers were pushed against the walls and it worked just fine. We are currently looking to extend the specification to a distance of 100m line of sight for the commercial/pro market, but that won't be finalised until sometime next year."

Of course, severing the physical link between speakers and the source requires a significant alteration to the functions of the various components. The speakers can no longer remain passive, but must be actively powered (thus requiring a power source) and must have a receiver built-in. The player or amplifier must also feature a signal decoder and a transmitter, although the latter can be a separate unit. The transmitter must accept sample rates of 44.1, 48, 96 and 192kHz, it must be able to locate the speakers and the listener. The receiver must select the correct output, provide coefficient tables for making the correct crossover, and adjust the sample rate, output levels and delays. It receives decoded sound from the transmitter and delivers the relevant information for each channel as a PCM signal. Digital crossovers then split the signal

WISA PRODUCTS

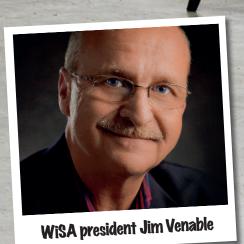
At launch WiSA is focussing its attention principally on the audio visual sector. The first speakers out of the traps are Bang & Olufsen's BeoLab 17, a compact model featuring dual drivers (one 6in midrange/bass driver and one 3/4in dome tweeter), individually powered by 160W amplifiers. These can be used as a stereo pair (see other box out) or in a multi-channel configuration, optionally with the distinctive BeoLab 19 subwoofer, which also boasts dual 160W drivers in the shape of two 8in woofers. Composed of an exceptionally rigid polyhedron that comprises 12 regular pentagon, unlike most subs, the BeoLab 19 is designed not to be hidden away behind the sofa, intentionally catching and reflecting the light. It uses Adaptive Bass Linearisation (ABL), which automatically responds to extreme peaks by reducing bass throughput. The same technology has been used on the BeoLab 18, a column speaker featuring 21 vertical lamellas and proprietary tuning. All three products can be used in a wired setup as well as wireless.

These three speakers fall within the umbrella of what Bang & Olufsen is calling its Immaculate Wireless Sound concept, effectively the Danish company's more exciting name for WiSA.

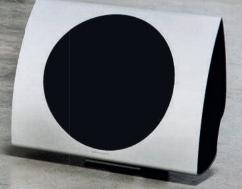


The first HD audio player on the market with WiSA status comes from an unlikely source, namely Sharp, who has been absent from high-end audio since the mid-seventies. The company's universal WiSA player, which can spin Blu-rays, DVDs, CDs and multimedia files including WAV, FLAC, DSD, WMA, MP3, MKV was voted a CES Innovation 2014 Design and Engineering Award Honoree and will go on sale (in the US at least, the company has yet to announce its intention to sell the deck in Europe) soon.

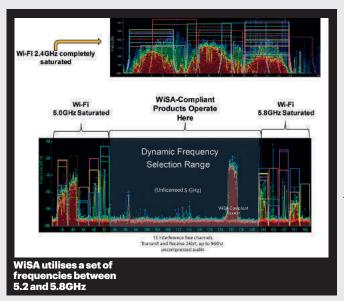
Also expected soon is an audio hub from Hansong, which connects by wires to a CD player, Blu-ray, cable/satellite box, or video gaming console and beams HD audio to WiSA wireless speakers. It also includes Bluetooth connectivity for smartphones, which allows users to stream music from their smartphone to the WiSA transmitter then onto the WiSA speakers.



"The big guys tend to come in and exploit a market once it's established rather than nurture it"



FEATURE WISA



according to the number and type of drivers, each of which has its own Class D amplifier.

WiSA's interoperability requirement dictates that a consumer can buy WiSA products from different manufacturers without worrying about compatibility between makes, so you could have, say, an Onkyo deck and a set of Paradigm speakers. Scaleability is another requirement, allowing enthusiasts to add additional speakers to a stereo system in order to create a multichannel one or change speakers to a larger or smaller size. Regardless of the speaker make, parameters such as phase and networking issues including discovery, addressing, and protocol must be taken care of automatically.

Setting the standard

The WiSA standard allows for channel assignment and speaker positioning to be made either automatically in the case of more expensive systems, otherwise by using a smartphone app or onscreen. Speaker positions can be changed by dragging icons with the transmitter automatically assigning channels and determining the distance between speakers. From there, the components correct for volume and the delay in the room. The listener position can also be changed and the system instantly adapts by again changing the volume and delay for all of the speakers.

It's not quite plug and play, but does offer a more affordable entry to a WiSA system than

WISA MEMBERS:



more fully featured speakers that use ultrasonic transducers (or pingers). Where each speaker contains a pinger, speaker distances are measured to all of the other speakers. This automatically maps the locations of the speakers and their channel assignments just by turning on the system. With the addition of another pinger to an optional WiSA-compliant remote control, the listener position can also be determined automatically. The

transmitter, which never contains a pinger, can also support manual setup.

Products built without the ultrasonic transducers do not require line of sight, but to take advantage of the sweet spot location and auto calibration features, line of sight is required. In other words, consumers are expected to be at least a little bit savvy about the limitations of the technology.

In terms of multi-channel support there is currently a limit of eight channels, although the maximum configuration is 7.4, with four subs sharing one channel. The WiSA roadmap calls for increasing the number of channels and for an increase in the bit-rates – no dates have been set for either.

From a standing start in 2011 WiSA has seen its membership grow rapidly, and the

WiSA signals do not require line of sight and offer reliability and quality over reachability

association now numbers over 20 members including the likes of Accusound, Amber, Accent Ceton, Dali, Gibson, Onkyo, Nyne, TEAC, Paradigm, Pioneer, Polk Audio, Definitive Technology and Sharp. So far, none of the world's biggest consumer electronics companies such as Samsung, Sony and Panasonic have shown interest, but Venable says: "The big guys tend to come in and exploit a market once it's established rather than nurture it." He expects the big guns to get on board in due course.

WiSA recently opened an authorised test centre in Sunnyvale, California, where members can submit products for accreditation. The association has plans to establish four further centres, three in China and one in South Korea.

The driving force behind WiSA is Silicon Image, a US-based technology company that has its fingers in a number of popular

PROMISES, PROMISES

B&O suggests pairing its speakers with one of its BeoPlay 11 screens, which feature a built-in WiSA transmitter. For a TV, AV receiver or music system of another brand, it suggests its BeoLab Transmitter 1. "Just attach the little white box to the main source of the desired product, and you're ready to start," says its website. But there's a problem controlling the volume as the speakers don't have a remote control and nor does the transmitter. I hook up a Samsung 46F8000 TV to the transmitter using the screen's Toslink and am able to wirelessly connect to a pair of BeoLab 17 speakers. The volume on the TV's optical output is set to its max and can't be altered so my ears are only just able to bear the phenomenal power output of the BeoLab 17s. The Transmitter's only other inputs are USB and RJ45 sockets so B&O's solution is to supply me with the Playmaker, which has a variable gain and acts an intermediary streaming device, connecting by AirPlay or analogue line-in to portable devices and by RJ45 to the BeoLab Transmitter. Hooked up to an iPhone, this provides a convoluted way of listening to the speakers and being able to control the volume. To connect to a TV I will need to use an Apple AirPort Express, which has a digital optical audio input as well as variable gain control.

This all feels a million miles away from the core tenets of WiSA and its promise of pain-free high-resolution audio enjoyment. Maybe a little more clarity is called for on the part of those involved with promoting this exciting new technology, which has undeniable potential.



transmission standards including HDMI, MHL and DVI. HDMI has recently been the subject of some confusion and controversy following the launch of the new 4K or Ultra HD video standard. The problem has been that the transmission standard failed to keep up with the manufacturing, resulting in a number of 4K screens being sold with HDMI 1.4 sockets that are unable to accept 4K. Manufacturers have offered different solutions including hardware and firmware upgrades, but some screens look likely to become redundant once 4K broadcasts start. Doubtless, the HDMI 2.0 debacle will die down and arguably the decision of TV makers to press ahead before the standard was agreed was not the fault of Silicon Image, but understandably WiSA wasn't exactly shouting from the rooftops about its HDMI connection, no pun intended.

Of course, HDMI is an essential component of any HD screen, player or receiver whereas wireless speakers will always remain an option. The important thing, though, is that thanks to WiSA, that option now exists in what has the potential to be a compelling enough proposition for those who do want to ditch the cables •



Lightning does strike twice.



Legend has it that the NAD 3020 brought true hi-fi sound to music lovers the world over, stunning millions by sounding bigger and way more powerful than it had any right to. NAD now introduces the D 3020 Hybrid Digital Amplifier, a completely modern take on the original NAD 3020 for the digital audiophile. Using the latest lightning fast digital technology, wireless streaming with aptX Bluetooth, an unique implementation of NAD PowerDrive™, and hybrid digital architecture, the D 3020 represents the same game-changing innovation that raised the original 3020 to cult status.

The D 3020 is no accident. Lightning really does strike twice.

HEART+SOUL YOU CAN HEAR

Reader review

We've read your reviews and drawn up our shortlist, now take a look at one of the entries that impressed our judging panel

Competition details
Back in the July issue we launched a unique
competition giving you the chance to do what we
do - write about hi-fi. We asked you to put together
1,000 words about your favourite system and why it means so much to you. The lucky winners will get the chance to write for HFC in a future issue...



System builder

Building the perfect setup doesn't have to be about collecting the most expensive kit that money can buy

rticles on the subject of great systems usually tell a tale of constant upgrades from humble beginnings until the owner has a high-end system that many of us can only dream of. This piece is a little different, as it describes how musical satisfaction can still be achieved using modest equipment plus a little ingenuity.

Before I come to my system as it is right now, here is a little background. Like most music lovers I worked long and hard, to build a system that gave me huge amounts of pleasure, namely a Linn LP12 with Ittok tonearm, feeding a Quad 77 pre and power combo, which drove a pair of Mission 750LE loudspeakers. Digital delights came via another Quad piece, a 77



CD player. This system was my pride and joy, and gave my wife and I many years of musical enjoyment until redundancy hit, thanks to the recession. A hi-fi is useless without a home, so with a heavy heart off it went to Preloved and Gumtree.

Win the chance to become a Hi-Fi Choice reviewer!

Back to basics

Luckily employment was eventually found, and thoughts turned to rebuilding a separates system, as our budget home-cinema system was pretty poor at music reproduction. My salary was not what it used to be, and even a budget system purchased new would have broken the bank, so the secondhand path was followed. After several months scouring Freecycle, various classified sites, and a number

WRITINGCOMPETITION

of local secondhand shops, I finally assembled a system that made listening to music a pleasure again.

The heart of the system is a Cambridge Audio 640A integrated amplifier, picked up for under £40. With it's detailed and involving sound, plus extensive inputs, it's a fine budget amplifier for a small-room system. The 640A is fed by a classic Marantz CD63II KI-Signature courtesy of a local car boot sale. I knew from experience that this machine could still hold its head high against many current £500 CD spinners, so at £25 it was a no-brainer. My wife and I's

My wife and I love our music through this modest collection of kit

beloved records are played on a Technics SL-1210 MkII. I was looking for a Rega 3, or perhaps a Pro-Ject Debut, but when I saw this on Freecycle I had to have it. It was free, so I had nothing to lose. Despite being dismissed as a DJ deck, the 1210 is a beautifully built hi-fi turntable that is a delight to use. The Cambridge amplifier lacks a phono stage, so a matching 640P MM/MC phono stage was pressed into service. Loudspeakers had to be purchased new, and we chose a pair of Dali Zensor 1's, based upon both their refined sound and wife-friendly looks. Wisely I had kept hold of my Mission speaker stands, along with the equipment rack, plus in my cable box I found a selection of Nordost interconnects and QED speaker wire to hook it all together.

And the verdict is...

Changing the cartridge to Audio-Technica's AT32E proved to be a revelation

So how does this collection of gear sound? Fabulous in a word! Music from both CD and vinyl is involving to listen to. Bass is tuneful and surprisingly full, considering the size of the Dalis. The midrange is smooth and detailed, while the treble is clean

and clear. Any faults are those of omission rather than the system doing anything glaringly wrong. The bass could be deeper, the soundstage could be wider, and vinyl performance could be a little more refined. At first the performance from the Technics was a little too clinical; very detailed, but a little harsh, especially in the higher frequencies. I fashioned a pair of cork mats, and sandwiched the stock rubber mat between them, and this resulted in a much sweeter treble, and gave far superior integration to the music.

A change of cartridge to an unused Audio-Technica AT32E, in place of an old Linn K9, also helped towards a smoother sound. The final tweak was to make an isolation platform from kitchen worktop supported on some sorbothane feet.

Our musical tastes are predominantly rock, from Rival Sons through to Nick Drake, via prog old and new, with a smattering of cheesy pop (I love Abba...). This system copes equally as well with the slashing power of The Who as it does with the prog intricacies of The Tangent, the AOR harmonies of Styx, or the smart wordplay of Dylan.

ABOUT MIKE

Mike's love of hi-fi began at an early age. He was fascinated by how music could come from a black disc via a collection of boxes and so started building a system in his teens. Now, 30 years on, it's still evolving. He's a vinyl fan, but has a huge collection of CDs too, and tells us that both formats give excellent results. He enjoys nothing more than relaxing after work with a cold beer and some glorious music (and who can argue with that?). His collection is large and varied, but is mainly rock music from the sixties through to the present day, covering artists such as The Beatles, Dylan and Led Zeppelin, along with more contemporary acts like Touchstone, Rival Sons, The Tangent, The Temperance Movement, and his all-time favourite vocalist Heather Findlay.

Perfect partnership

So do I still aspire to owning a high-end system again one day? Of course I do, but the system I have right now is so well sorted that part of me is loath to change it, and when I eventually do achieve audio perfection, will it really be as much fun as this? My wife and I love our music through this modest collection of equipment, and in doing so our lives are enriched. If that makes a hi-fi system great, then this is a truly great hi-fi system ●

Pieced together with love this is the perfect setup



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Hi-fichoices



YOUR LETTERS & QUESTIONS ANSWERED

THIS MONTH



ED SELLEY

EXPERTISE: REVIEWERFor the best part of 10 years, Ed was developing and supporting

was developing and supporting products from some of the biggest names in audio. He enjoys blogging about his favourite tunes, too.



NEVILLE ROBERTS

EXPERTISE: ENGINEER

Retired NHS director, electronics engineer and physicist Neville is very much into valve technology. He's a classical music lover and serious vinyl junkie.



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.



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.



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 1973 MG Midget.

Email us at letters@hifichoice.co.uk **or write to:** *Hi-Fi Choice* Letters, AVTech 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

≥ Big in Japan

I live near Brussels and have a question that's been on my mind for some time. I don't know if you are familiar with Accuphase, a relatively small Japanese manufacturer of high-end (or even very high-end) hi-fi equipment? It makes some of the world's best amplifiers and CD players and is quite popular on the continent. I have read reviews of its products in French, German and Dutch hi-fi magazines. Strangely enough I haven't read the first word about Accuphase in any British hi-fi magazine. I don't read them all, of course. But nevertheless, I find that rather strange. I wonder if you could tell me why that is? Just being curious, that's all. Thank you very much for your time.

Rart

DP: Hi Bart, Accuphase is indeed a fine purveyor of high-end hi-fi separates, but in the United Kingdom, the market for this sort of kit is small and there is intense

competition for magazine column inches from other brands. I get the sense that its UK distributor, RT Services, already sells the kit to a loyal constituency of existing customers, but a review of the Accuphase DP510 CD player/DAC did appear in our sister magazine *Hi-Fi News* and recently featured in their Yearbook 2013.

ES: There is more than one way to sell a piece of hi-fi equipment

Why doesn't Accuphase get mentioned in UK hi-fi magazines?

and sadly for people like me who are suckers for a pair of VU meters, in the UK Accuphase takes a route to market that doesn't always involve magazines. That being said, the network of dealers that sell the brand in the UK is extremely knowledgeable and passionate about Accuphase, so customers are not going to be short of help or information.

Weakest link

I hope that you might be able to help me. I'm well past retirement age, but despite not hearing as well as I used to, I still enjoy listening to my extensive CD collection.

Living in a small flat, I use headphones – Sennheiser HD 700s – and a Lehmann Black Cube phono amplifier. My CD player is an Arcam CD82.

I think the latter is the weak link in the chain. I'm looking for more clarity, verve and perhaps excitement, but without any tiresome 'in yer face' affect, and not losing the musicality.

I have had thoughts about switching to an Audiolab or Naim player relying on reviews in the hi-fi press only.

My musical tastes include Pink Floyd, Massive Attack, Enigma and Annie Lennox in the main.

Your advice and suggestions would be warmly welcomed, but please bear in mind my funds are quite restricted.

Mr J Philpot, King's Lynn

DP: I agree that your venerable Arcam CD82 is the weakest link in the chain, but I am not sure that the Audiolab 8200CD – to which you refer – would be dramatically better. It would be better for sure, but the scale of the upgrade wouldn't be quite as huge as you'd hope for. That's why I'd save my pennies and go for a Bel Canto CD2 (£2,699), which is a seismic shift away from your Arcam. It's very big hearted, full and musical – much

more so than the Arcam – and is upgradeable with various power supply options. Moreover, it has an excellent CD mechanism, so as your system progresses over time you can use it as a top-flight disc transport to work with the very best DACs available.

ES: If funds are restricted and the Arcam still spins discs a treat, why not add a DAC? Something like Audiolab's peerless 8200DAC would provide a significant performance boost, but even Cambridge Audio's bargain DacMagic Plus might be a useful step forward, too. Both would also allow you to dabble in computer audio as well if you fancy going down that route.

➤ Keep it simple

I must take issue and say how frustrated and disappointed I was when I read Patrick Cleasby's review of the Cyrus Stream Xa (October Issue). The large paraphrase stating: "Makes CD material sound nearly as good as high-res music does" had me intrigued and eager to find out more. The problem is, though, I find the whole streaming subject rather confusing, daunting and at times hard to fathom. But I was determined to read through the review to see what made this piece of equipment worthy of the highlighted statement. Maybe this would be the product to tempt me to investigate further into streaming etc. I got to what is essentially the









Unprecedented winners, two years running ...hear why





heart of any review, namely sound quality and god knows what happened! Patrick went into what appears to be a concerted attempt to bewilder and bamboozle any reader that isn't fortunate enough to have a degree in electronic engineering or nuclear physics!

In the first few paragraphs of the so-called sound quality segment of the review we get the following terms and phrases: Synology DS413 raid, Logitech media server, flaky LMS UPnP plugin, QNAP TS-469, 16/44.1 FLAC, Twonky, 24-96... and so on it went!

This for me rendered the whole review pointless and I just lost interest, which is a shame as maybe it's a great product and worthy of further investigation. But a review like this littered with this type of unknown jargon must turn so many people off. I see that Patrick is described as a 'Tech Geek' on the intro to the Letters page, and while that may be a fair description of him, you must remember that not all of your readers are, and quite possibly the majority are not!

I read most of the reviews in the October issue and noticed a vast difference in David Price's, Andrew Simpson's and others regarding how they comment on sound quality in their reviews. They describe tone, smoothness, sharpness, big bass, little bass, great detail, slightly masked detail, etc. This is far more informative and useful to us... your poor 'non tech geeky' readers who simply need some pointers as to if something is worthy of an audition.

Can I ask that the review of this product is re-visited maybe to present a more informative and relevant sound quality segment? And for future reference surely the tech/geeky type info needs to be where it belongs... in the wider context of the review. Leave the sound quality section of the review to describe just that, the sound quality.

Dave 'NOT a tech geek' Mayer

C• Hi Dave on re-reading the

PC: Hi Dave, on re-reading the review I take your point about the first paragraph as this is where most of these terms were

Not all of your readers are 'geeks' that understand all this jargon

dropped. A lot of this arose due to a wrestle with different results from different sources. However I do then go on to describe the listening experience with a varied selection of recordings.

I have had feedback that some readers like the fact I enumerate the various input options I use. I am first and foremost a music lover, and if I think something worthy of an audition I say so. Believe it or not, though, I do try to temper my techy excesses. I

will continue to try! Maybe we should provide a primer, though – what you describe as unknown jargon is common parlance in the hardcore areas of the internet where I hang out...

LD: Hi Dave, thank you for writing to us with your feedback to October's Cyrus Stream Xa review. We endeavour to publish understandable and jargon-free reviews that are accessible to all in clear and concise terms. This particular review clearly slipped through our net, and regrettably it failed to tackle the complexities of streaming in our usual plain English and easy to understand way. Look out for a more friendly version of this review uploaded to the hifichoice.co.uk site shortly.

≥ Tape that

My Goodmans SCD100 tape deck, which used to work perfectly, will not fully erase the previous material when on record. I have cleaned the heads, and the slide switch under the printed circuit board, but to no avail. Has anybody got any bright ideas about what to try next? (other than throw it in the skip!). It still works perfectly if I use blank tapes.

Roy Privett

NR: Hi Roy, The Goodmans SCD100 is a great deck and I believe it was made for Goodmans by none other than Nakamichi. In fact, it is a badge-engineered Nakamichi 500, so it has a pretty good pedigree and I would be reluctant to consign it to the skip if at all possible! I am assuming that the problem is equal on both channels (indicating that this is

≥ Screw loose?

I was pleased to read Derek Gooding's letter (HFC December 2013) in support of some of my observations regarding Dealer Systems and I thank Ed Selley for responding so positively to two reader's views.

I was surprised by Neville's somewhat unhelpful comments suggesting that *HFC* could specify every nut, screw and bolt used in systems, which evades both mine and Derek's observations.

None of us can easily change our listening rooms or reproduce the exact conditions of the listening test. Neither is it easy to arrange home trials of a wide selection of different components.

But we can test and perhaps buy the speaker cables and interconnects used and thus approximate the results reported in *HFC* – if we know what the cables are.

Keep up the good work! Richard Vass, Gloucester

NR: Hello Richard. Actually, I very much agree with your view that no-one can easily reproduce the exact conditions of listening tests. I didn't intend to suggest that HFC could specify every nut, screw and bolt used in systems, but I was trying to make the point that cables are in fact only one of many influencing factors. As I said, installing the one item under review in a known system helps us to identify the differences brought about by that one item and this enables us to describe its particular attributes as independently of other variables as possible.





≥ Is it right for me?

I just read the review of T+A Criterion 210S loudspeaker and hope you can help me. In Norway I live far from the store selling T+A, so it's difficult to hear them.

Would it be possible for someone that has heard them to give me a little more detail on how the speakers sound? I listen to many types of music, mostly bad recordings of hard rock, such as Metallica, Heart, Uriah Heep, Judas Priest, old Helloween. These recordings NEVER sound good on a high-end speaker to my ears. It sounds bright and sharp, almost bass-free and my ears get tired very fast. Is the Criterion 210S a lot more revealing on bad recordings than many other speakers?

At first these speakers should be a lot more easy to fit in 'normal' living rooms than other speakers. But in the review I read that the speakers should be placed a minimum of 1m from the back wall and out from corners. Is this really so important? I thought that the bass construction in these speakers should prevent these types of problems.

And a last thing: Do you think the speaker will fit to the new McIntosh MA8000? This amplifier has an equaliser that I like a lot. I can just turn down treble (10k) on the amplifier if the recording sounds too bright?

Hope you can try to help me and find out if Criterion could be a speaker for me!

Aage Bo, Norway

DP: Having reviewed this very speaker not so long ago, I would restate that it needs to be a good distance out into the room, otherwise it will over power the bass. It is a very big, powerful and revealing design that needs a good source and a large room. It veers on the forensic side, so by the sound of your requirements, it wouldn't be ideal. You'd get a large-scale, high-octane presentation, but the speakers would also show how bad the recordings are.

Spendor's D7 would be far better; it has a softer, sweeter, more benign sound that gets deeper into the music and concerns itself less with recording quality. Although less physical, it is actually more fun to listen to, in my view. You'll still get plenty of power and scale, but the D7 will be less likely to set off your room's resonant modes. I found that the Spendor could go pretty close to a back wall without too much complaint.



not a head mis-alignment issue) and given that you have cleaned the switches, I suspect the power supply filter capacitors are possible culprits. Electrolytics can go leaky after many years, especially if not used for some time, and they can pull the DC supply rail down. This could mean the erase head is not getting a sufficient drive current to erase the tape properly. Check the 12V and 15V rails to see if the power supply has a problem. You can download a copy of the service manual, which includes the circuit diagram, from www. hifiengine.com for free if you register. It has the manual for the Nakamichi 500 - 29 pages of everything you ever wanted to know but were afraid to ask, so don't give up just yet!

As: Your letter has reminded me that I have a similar-looking Akai CS-34D top-loading tape deck hibernating in the loft, that I really should wake up one of these days. But back to your predicament: when recording, it

My Goodmans tape deck won't record properly any more!

may be worth checking if there's more of the previous material that's not being erased in one channel than the other. And if you're able to see the erase head in action near the cassette reel as it passes over it, check to see if it's square on and making good

contact. As it could be the erase head's azimuth is slightly out, which you may be able to finely adjust. It's also worth demagnetising the heads if you haven't in a while (see DP's reply).

That said, thanks to the rise of MP3 and digital music, there are plenty of more modern decks on the used market for peanuts. A quick look on eBay reveals a range of quality three-head machines from the likes of Denon and Technics for well under £100, with direct drive variants from the latter, so finding another deck to replace your Goodmans shouldn't be too costly.

DP: There's one more thing you need to try before more drastic remedies are called for –

demagnetising it (as Andrew has already hinted). Look on eBay and search for a mains-powered 'tape demagnetiser'; you'll find umpteen, all around a tenner each. You then need to demagnetise the erase and record/replay heads, which won't take more than a minute and then see if the problem is still there. Excessively magnetised heads can cause them not to function properly, and not erasing properly is a classic sign. If this fails, then it's either a problem with the erase head itself, or the electronics that drive it. Either way, you'll have to find a local electrical repair shop, but the repairs shouldn't cost too much. Don't skip it, you'll regret it later!

≥ System addict

I am a music lover and am looking to put together an audio playback system (pure music playback and not home theater) for my room of size 19ft x 13ft (approx. 250ft2). I'll place the amplifier and CD player (or media player) on a rack on top of which I'll place a flat panel TV. The TV will remain switched off whenever I listen to music. On either side of the TV I'll place a speaker. So, the distance between the speakers will be approximately 9ft and from the front line of the two speakers, my sitting position will be approximately 12ft.

Based on reviews on the internet and in magazines, I have shortlisted a few integrated stereo amplifiers and floor standing speakers.

Integrated stereo amplifiers: Cambridge Audio Azur 351A, Azur 651A; Denon PMA-710, PMA-720, PMA-1510, PMA 1520; Magnat MA700; Marantz PM6004, PM6005, PM7004; NAD C316BEE, C326BEE, C356BEE; Onkyo A-9030, A-9050, A-9070; Roksan Kandy K2; Rotel RA-1520, RA-06, RA-10 and Yamaha A-S500, A-S700.

Floorstanding speakers: B&W 685, 684, 683; Dali Ikon 6, Lektor 6, Zensor 5; ELAC 187, 189; Focal Chorus 714, 716; Jamo C605, C607; JBL Studio 580; KEF Q300, IQ5SE; Monitor Audio Silver RX6, Bronze BR5; Mordaunt-Short Aviano 6, Mezzo 6; PSB





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HA1 headphone amplifier

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Could you please suggest a few suitable combinations of amplifiers and speakers from the above lists or otherwise that would be suitable? I wish to profusely thank you in advance for helping me out to reach a decision.

Anurag, by email

DP: Hi Anurag, here goes... As a general rule, Denon and Yamaha amps have a quite 'matter of fact', clean and dry sound, so you'd be wanting a slightly warmer, fuller loudspeaker such as Tannoy's Revolution DC6T. The Marantz. NAD and Roksan amps are slightly sweeter and smoother, so these would best suit driersounding speakers like the ELAC, Focal, Monitor Audio and Wharfedale ranges. The Cambridge Audio, Onkyo and Rotel electronics are a little more 'in the middle', maybe ever so slightly on the warmer side.

Talking specifics, I'd go for the Roksan Kandy K2 - in my view it is the best amplifier of the lot, with a very musical and inviting sound and quite a rich, fulsome tonality that flatters the somewhat dry-sounding breed of modern loudspeakers we now have. This would go nicely with the Monitor Audio Silver RX6 if you want insight, clarity and punch, whereas the Tannoy Revolutions would be a little lighter, wider and more expansive, making music in a breezy, friendly way.

ES: There's a lot of potential systems, but I have heard and enjoyed the Cambridge Audio 651A with both the Focal 716 and Dali Lektor range. Equally, Denon's 720AE is a benign and talented amp that should work well with a variety of speakers.



Letter of the month

PRIZE WINNER

Cold cuts

We all know the detrimental effects of high/excessive temperatures on vinyl records, but what are the effects of low temperatures?

I have a timber-built shed in which I would like to store part of my record collection. It is completely damp-proof. Its construction is redwood shiplap and I could possibly install extra insulation.

The records would be stored vertically on suitable shelving, as recommended, but I am concerned that the tempreatures may be quite low during the winter months. I would appreciate your comments please.

Steve Hawkins, by email

NR: Well, Steve, as far as I am aware, cold is not going to be a problem, provided that the temperature changes are slow. Rapid changes in temperature can cause warping and possible damage, but if the transition to a very low temperature (and back up again) is gradual, then there shouldn't be any problems. I have a friend who in the past kept the master collection of all the records from a particular music publisher in a damp-proof, but unheated building at the bottom of the garden! As with your collection, they were stored vertically on proper shelving for many years and suffered no ill effects.

DP: Vinyl records are made from polyvinyl chloride and this is a pretty stable substance that is more resilient to unsympathetic storage than any other analogue media, like tape for example. Still, you need to keep it in between about 5° and 15°C for long-term storage, and in moderate relative humidity (roughly 50%) ideally. It shouldn't be a disaster if you stray from these parameters a bit, because there are other factors that are more important.

The most vital of these are that your records sit standing up like a book, with relatively light sideways pressure – rather than being stacked on top of one another. Also, you should clean them and then insert them into fresh polythene-lined inner sleeves – old paper inners abrade the surface of the disc whenever you slide it in or out, thanks to dirt and grime trapped inside. I also use PVC outers, to protect the jackets. Good luck with your 'vinyl shed' – I think I am going to have borrow that idea if I don't manage to reduce my visits to the local record shop!

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Hammer to fall

Record collecting has become big business, and while it's good that 'the old black stuff' is still popular **Simon Berkovitch** wonders if some are missing the point

hen the gavel hit the rostrum for lot 226 at Bonhams' Entertainment Memorabilia auction in December, a copy of The Beatles' 1968 LP – known to everybody as *The White Album* – was

sold for £2,750 (including premium) – well above its estimated sale price and not bad for a 45-year-old album.

This was no ordinary copy – as those that read the *HFC Yearbook* will know. Lot 226 was a super-low-numbered mono UK pressing of *The White Album* with a one-off cover. Or, as Bonhams describes it: "The Beatles: The 'White Album', No. 0000018, with mis-constructed cover... the gatefold incorrectly constructed with seams on the outside, *The BEATLES* on the inside right, the spine text to the back... complete with black inners, poster and four colour prints."

Bidding started at £1,000. There wasn't much interest in the room – it's arguable that the lot's wording may have had negative connotations for some. After a handful of bids from those present, the battle for lot 226 was slugged out between an internet and telephone bidder, eventually selling to the former.

Lot 226 wasn't the most expensive Fab Four lot of the day, however. Another copy – number 40 – fetched £2,500; a fully autographed *Please Please Me* LP went for £9,000; and a similarly scribed *With The Beatles* was

Vinyl still reigns supreme as an emotive format, despite limitations

sold for £15,000. While these figures tell us little we don't already know about the passion that drives more extreme

Beatles collectors, they shed light on a pattern in the world of vinyl collecting in general – albums by classic artists are increasingly viewed as investments.

With the identity of lot 226's winning bidder unknown, we can never know their motivations. But, it's a fair assumption that this record will never be played. Instead, Number 18 will most likely be placed into an archive, a private collection or library.

Unfortunately, some incredibly rare records are destined to be no longer listened to – in the same way that some fantastic art is no longer gazed upon and incredible cars are never driven. All of these items instead end up in collections – itemised, categorised, alphabetised and ultimately sanitised by their archive status. In becoming financial investments, their original purpose is lost. And in the case of lot 226, the brilliant music in its grooves is never heard. Although the music of *The White Album* is widely available to anyone, you get my point – thank

goodness for those that upload mega-rare, out-of-print albums online in their entirety.

I'm not arguing against investing in vinyl as an alternative pension pot, but you have to be canny in what you select. On eBay, original first pressings of albums by artists like David Bowie, Black Sabbath, Pink Floyd and, naturally, The Beatles have seen prices escalate in recent years, largely thanks to the site's ever-expanding

Global Shipping Program. As the demand for 'mint', 'one-play' or 'archive quality' copies increases and the vinyl revival shows no sign of being a passing fad, snapping up or holding onto such LPs isn't the daftest idea – if you have the level of knowledge and patience that the world of record collecting demands, that is.



Will this superrare Beatles album be archived away never to be played again?

For the record

I guess I inhabit that world. I buy records. I occasionally sell them, too. After badgering my mum for my first LP in the seventies – Geoff Love and his Orchestra's *Star Wars And Other Space Themes* – I've been fascinated by vinyl. I have a fair few records, but nowhere near the amount I used to own – I've moved house too often for that. They've soundtracked some joyous times and not so great ones, too. But they've never been objects to be tracked down, ticked off and then filed away, archived. My records are to be constantly used and enjoyed – just like Number 18 clearly had been by its previous owners. I hope they gained as much pleasure from their copy of *The White Album* as I do from my version. I suspect they got more out of it than its new owner will.

Passion for sound is what unites all of us. Passion for a particular *conduit* of sound is of similar importance to me. As a new generation of music lovers are discovering, vinyl still reigns supreme as an emotive format, despite arguable limitations of sound quality. To quote one of the 20th Century's great philosophers – Lemmy from Motörhead – perhaps "the chase is better than the catch" for purchasers of super-rare vinyl ephemera, with the music itself coming a poor second.

Not in my world – or in yours, I suspect – it doesn't. Thanks, mum ullet





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The future's bright

Futurologist **David Price** looks into his crystal ball and predicts that 10 years from now it won't all be about manned spaceflights to Mars or the latest Apple iDevices!

hen I was a child back in the seventies, I obsessed on 'the year two thousand', seeing it as an emblematic turning point, after which we'd all be living in 'the future'. At the time, it

felt like there was an Apollo space mission launching every month, and we all shared a sense of wonderment and hope that the onward march of technology would turn all our lives into something we'd never imagined before.

The arrival on TV in 1974 of Gerry Anderson's *Space* 1999 only confirmed this – by the end of the twentieth century we'd have bases on the moon with all nations working for the good of humankind. And the delivery mechanism would be technology – computers would hold the key, along with orange boiler suits and facial hair!

It's now 40 years on, and where are we now? The fact that I got excited recently by China landing an unmanned probe on the moon shows the gap between my youthful dreams of the future, and present-day reality. This saddens the eight-year old schoolboy in me; I grew up during the Space Race and feel cheated that it was never fully run. Or was it – perhaps it took place in inner space, not outer?

If we want to look at where our development has gone, we should look at things closer to home, like the computer I am writing these words on. While the schoolboy in me is still gutted we're not flying Eagle Transporters and zapping

Computing power will transform the future more than any mission to Mars

aliens, maybe he should be marvelling that my Apple MacBook Pro is able to provide computing power in excess of every

NASA computer in the Kennedy Space Center in 1969. The amazing integration of electronic circuitry is surely no less impressive than those grandiose engineering projects like putting men on the moon?

This sort of computing power is now on sale for pennies. For example, the new £30 Datawind tablet was originally developed for third-world countries, but still sports a 1GHz processor when the faster computers on sale in the seventies were a paltry 1MHz. In a way, this is as profound as moon bases, yet somehow harder to fathom. Cheap, powerful hardware means we can do practically anything with software. For example, the Datawind can be purposed for playing or controlling music with a level of sophistication unimaginable just a decade ago.

This dramatic ramping up of our computing power will transform the next 10 years more than any mission to Mars. Nowadays, new 'things' don't come about from the endeavours of multinationals, like they used to. In the old

days, Sony or Philips would send its men in white coats off to a research facility, only to appear blinking into the sunlight a few years later with the way we'd all be listening to music in the future. But software doesn't require such actions any more and this is surely one of the most important developments of the new century.



The future DP dreamt of hasn't happened, but in many ways it's been bettered

Now, music is suddenly disappearing into the ether – it's either on a virtual cloud or on your hard drive under the stairs, flying around your home network. And in 10 years expect virtually all your physical media – from music to movies to magazines – to have disappeared into cyberspace, yet be instantly accessible from any number of gadgets yet to be invented. The term 'smart home' is used too often by property developers, futurologists and people with fashionable glasses, but in a few years it will gain traction as people want everything from their TV to their bath and fridge controlled by their iPad. That fifties American dream of full automation is becoming a reality.

Back to the future

Of course, this is going to have an effect on the way we listen to music too – indeed for many people it will mean the end of what we call 'hi-fi'. There's no separate section of a MacBook Pro to exclusively deal with music, so why should your house's central computer have one? Rather, every form of media – from television and video phones to computer games and music – will begin to arrive via the same route. If people want separate hi-fi, then it will have to be fully compliant and controllable by one of the house control protocols we haven't invented yet!

There's a crumb of comfort for us old-fashioned, living-in-the-past types. With so many of our boxes having migrated to a small single control centre under the stairs, there will be more room for old-fashioned books and LPs. Some people will never give up on physical media, and indeed it may well become more special and coveted. Who'd have thought that in 2024, maybe the only things on display in your living room will be a big stack of vinyl? Maybe the future is bright, after all! •



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New sensation

Are you an early adopter desperate to get your hands on the next big thing? There's nothing wrong with that, argues **David Vivian**, it's just not necessarily for him...

know quite a few early adopters. I admire them. They're front foot sort of people, centre of mass tilted slightly forward in readiness to consume anything perceived as moving the game on, whatever the game happens to be. Apple exploited this layer of human desire early on and has built its billions by making people fear the mockery and derision of their 'friends' should they be unwilling to sleep outside an Apple store in a snow storm to bag the next iPhone upgrade the second the doors open on day one.

But even if it's just 'keeping up with the Joneses' by another name, early adopters deserve better treatment than that. Enviably, they seem to disprove Steely Dan's contention that you can't buy a thrill. For these fortunate souls, the act of ending weeks, months or even years of fevered anticipation by exchanging money for the next big thing is just that: a thrill. Maybe they're trying to recapture a fondly remembered Christmas morning feeling. Maybe it's the belief that new, by definition, must be better than old. Maybe it's the geeky manifestation of a simple shopping addiction.

For all of us who like listening to music on high-fidelity equipment, opportunities to dive in at first flush of a new format or technology have been a constant ever since Thomas Edison first recorded himself on a phonograph

Maybe they're trying to recapture that Christmas morning feeling

cylinder – but perhaps never more so than over the past three decades, which have witnessed the 'digital revolution'

in all its evolving manifestations. Do the people who sold their LPs when CDs came along and then sold their CDs to welcome the streamed, downloaded and Cloud-stored age of non-physical media have any regrets? I guess not. Out with the old, in with the new. It's a brutal mantra, but if you're going to surf the cutting edge, there's no room for sentimentality. Why waste time with has-been technology when there's a shiny new one to enjoy?

Thing can only get better

I entirely get this. As long as you're comfortable with the idea that things can only get better, the desire to be at the front of the queue is as understandable as the subsequent advocacy of 'the new enlightenment' and dismissal of the superseded. The logical imperative that propels people down this doubt-free path is unquestionable. All I can do is wave them on their way and wish them well. Oh that I shared their excitement in early doors future tech.

I am not an early adopter – more of a slow accumulator and discarder. I don't have a streamer. I don't listen to internet radio. I gave my SACD player to my son-in-law and my DVD Audio player to a charity shop. The last outboard DAC I owned was an Arcam Black Box. Will I buy



The excitement when Apple launches new kit is similar to when HFC goes on sale

a streamer in the future and spend a lot of time scouring the internet for genuine hi-res downloads? Probably not. Or maybe. I like the idea of hi-res downloads and I'm sure the odd one or two sound absolutely splendid when given the ministrations of a state-of-the-art megabuck system. Then again, I've heard ordinary CDs, of which I have a sizeable collection, sound absolutely splendid on a good one-box player pulling its weight in a skillfully sussed system. And I'd rather have a CD player as part of a musically well-balanced combo that makes all my CDs sound good rather than a few hi-res downloads of music I may not particularly like that sound stunningly natural.

Not that I've got anything against downloads. My 80GB iPod Classic is jam-packed with them (mostly ripped from CDs) and it's what I listen to much of the time when I'm working. Connected to the internal DAC of my Musical Fidelity KW250S via a Cambridge Audio digital dock it sounds excellent, bettered only by my old 16-bit Arcam Alpha CD player (playing through the MF's analogue input), which I love to pieces and wouldn't swap for the best streamer on the market.

I'm not going to trot out all the stuff about interacting with physical media. It's a while since I've owned a record player (though I still have about 500 LPs) and I don't miss the turntable etiquette. Placing a CD in a tray is best performed quickly while thinking about something else. A lot of nonsense is talked about the tactile delights of interacting with your music media, though getting off your bum once in a while is probably a good thing.

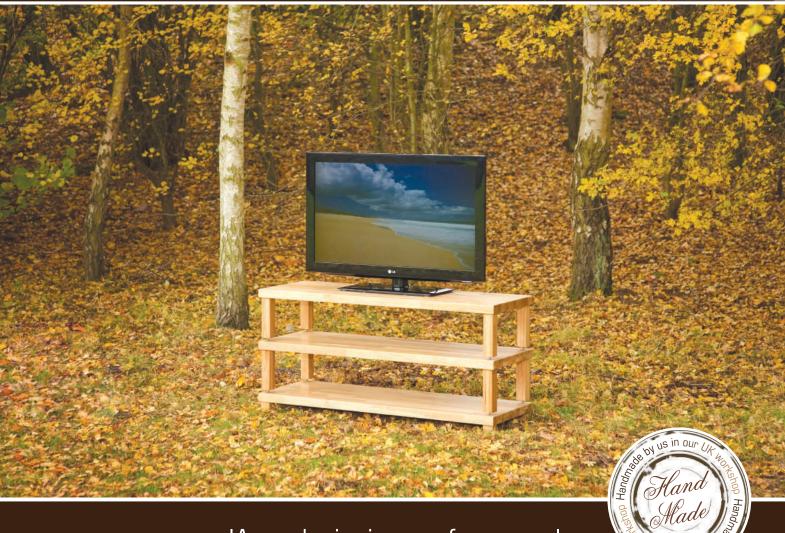
I suppose what I'm saying is this: if, like me, you're comfortable with tried and trusted old tech, don't feel in any hurry to change. A system on which you can enjoy all your music is always going to trump one that's been configured to extract the maximum fidelity from a handful of specialist downloads. The beauty of 'new' is that it never goes away. It's ready when you are •





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Look who's back...

Sony is making a welcome return to high-end hi-fi with some serious separates, but can it give us the format that could make all the difference? Jason Kennedy investigates

t the IFA show Sony announced a small range of products that carry a Hi-Res badge and are designed to play music files including those encoded in DSD, the digital codec behind

Sony's SACD format. The HAP-Z1ES HDD player and TA-A1ES amplifier in this range are the most ambitious pieces of electronics from the brand for some time. They have the ES suffix to indicate their hardcore qualifications and cost a fraction less than £2,000 apiece. There was a precedent of sorts in the form of two high-end loudspeakers launched in the US over the past couple of years, the biggest of which being the SS-AR1 at \$27,000. Can't think why they haven't launched them over here.

The new Sony electronics are beautifully put together and seriously built, the amp is dual mono throughout and the player has separate transformers for digital and analogue sections, relay switching and four DACs per channel. The HAP-Z1ES has a 1TB onboard hard drive that you load from your PC via wireless link, usefully it will auto update as you add to the library on the PC, so it acts like a back up. You can drive it with apps for both iOS and Android and add extra storage on a USB connected drive. But it is not a network streamer and it seems odd to be connected to the network for the purpose of music loading, but not streaming. Sony is of the impression that

Sadly, Sony's Audio division appears to have little influence on the Music division concept. Even

the less a computer is involved the easier it is for people to get their heads around a though you have to have your music on a computer in the first place.

The HAP-Z1ES has two systems onboard, which are designed to improve the sound of compressed files, one called DSEE that can be found on a range of Sony products and another dubbed DSD Remastering Engine. This is unique to this HDD player and is a form of upsampler based on studies into the nature of the time domain behaviour of musical notes. Essentially it's a complex algorithm that attempts to reconstruct the timbre of each note and effectively rebuild a compressed signal. We have seen this before, notably in Wadia's Digimaster and on a broader scale with Pioneer's Legato Link, both were designed to fill in the gaps in the time domain, and both worked quite well. That was in the CD era, now that we have formats at higher and lower resolutions Sony is attempting to improve results with the most popular among them. But will people who buy MP3 downloads be prepared to spend big money to improve their sound?



The biggest barrier to success according to Sony's Eric Kingdon is explaining the concept of hi-res to the man on the street. Sony tried to do this with SACD as did Pioneer with DVD-Audio, neither of which made much headway. I suspect it is on a hiding to nothing- if you are not interested in sound quality in the first place, chances are you won't be bothered about better sound quality.

The HAP-Z1ES looks like a return to Sony's hi-fi glory days

Internal affairs

Sony should be targeting audiophiles and the current frenzy for all things DSD. It needs to capitalise on the popularity of DSD within high-end circles, but is hampered by the fact that sister company Sony Music does not sell its catalogue in the DSD format. The great irony of the HAP-Z1ES is that it has been developed to show off the potential of DSD yet it's not possible to rip the DSD data from an SACD with current technology and nor can you buy music in this format. With the right generation of Playstation it's possible to get the DSD off of an SACD, but that's hardly going to support broad acceptance of the format. Unfortunately Sony's Audio division appears to have little influence over what the Music division makes available. This much was apparent at the launch of SACD when the label was slow to put back catalogue out in that format. There's a lack of joined-up thinking within the corporation that is clearly very frustrating for those trying to promote its audiophile credentials and get the DSD message out to the world.

If the music business could figure out that audiophiles are not out to rip them off, but are prepared to pay for high quality it could open up a revenue stream that is not dominated by iTunes. Linn is attempting to do this and making some headway with Universal, but it's not interested in DSD because its players don't support it.

Nonetheless it's heartening to see a former giant of the high end coming back to the fray, few other companies have the resources that it does and a genuine interest in high fidelity to match. If we could get access to our favourite music on the codec it developed specifically for the purpose of archiving Sony Music's remarkable back catalogue then everyone would be a winner •



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ORGINALLY DESIGNED FOR use in military aerospace applications, Kontak Audio Technologies has produced a CFC-free electronics cleaning solution that is specifically for audio systems.

The manufacturer notes that it is important to use the cleaner on new connectors as the manufacturing process can leave a residue of silicon oil that dries on their surface. The connectors are often stored in boxes for months before being purchased, resulting in further contamination.

Being highly volatile, the cleaner evaporates rapidly and so it's recommended that you remake the connection immediately after use. It is supplied in a metal bottle and comes with a set of pipe cleaners.

I try it on a number of connectors, including mains plugs, none of which has been cleaned for quite some time. The difference is very noticeable indeed – cleaning up the sound! It is as though a veil has been removed from in front of my loudspeakers and the music has greater detail and is more transparent and open.

The cleaner is very simple to apply and leaves no observable residue. Best of all, using it yields noticeable audible improvements.

VERDICT

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Servisol

Super 10 Switch Cleaning Lubricant

PRICE: £4.57 CONTACT: 01278 727200 WEBSITE: crcind.com

THIS LUBRICANT HAS been on the market for quite a few years. Back in the days when I was working as an electronics engineer, I found a quick squirt of Servisol restored a tarnished relay contact to clean health and silenced the noisiest of volume controls when applied to the track of the potentiometer.

Super 10 is an aerosol product designed for cleaning switches and contacts. It offers a combination of high purity electrical cleaning and mechanical lubrication for contacts, switches and relays. It is particularly useful on plugs and sockets that are in frequent use. It removes grease, tarnish, oxidisation and other contamination from contact surfaces and leaves a protective and conductive lubricating film. All this, according to Servisol, cuts the voltage drop between contacts by increasing

the surface contact area and thus reducing resistance. The residual film resists drying and the attraction of dust. Furthermore, it eliminates contact bounce on switches and stops the damage that can be caused by micro-arcing between contacts. As a result, it improves the current flow and protects against wear.

It is applied directly onto the components to be treated. After spraying, leave for about 5 minutes to allow the solvent vapours to disperse before operating the equipment.

I apply the Servisol by spraying it onto some connectors that have been sitting around for quite a while. After treatment, I immediately notice more punch and clarity to the music.

The cleaner can be directed into the smallest of parts using the tiny flexible tube that fits onto the nozzle. The result is instant sonic benefits.







A superb value for money product that's easy to apply and does what it says on the can







Dust and corrosion get in everywhere and that can mean degradation in sound quality from your audio system. An imperfect contact can result in resistance occurring between plug and socket. This resistance is not necessarily equal between positive and negative excursions of the audio signal – in other words, rectification! Furthermore, the resistance can be intermittent and result in noise being generated at the point of contact.

Plugging and unplugging can help keep contacts clean, but while you are doing that, it's worthwhile applying some sort of cleaner/lubricant to remove surface contaminants and oxidisation, which helps to ensure a good connection. This cleaner must not, of course, damage any of the plastic parts or other fittings. The four products here are designed for the job and can be applied safely to a wide variety of connectors.

Blue Horizon

Clean-IT Contact Cleaner

PRICE: £19.95 CONTACT: 01276 501392 WEBSITE: bluehorizonideas.com

IN ORDER TO maintain the integrity of the signal throughout your audio system, it is vital to ensure the best possible connection between components. This is where Clean-IT comes in.

Clean-IT has been developed for use with audio and AV equipment. It features a fast-acting deoxidising solution that cleans, conditions, lubricates and preserves the surfaces of connectors, thus improving the conductivity of all contacts. It is recommended for use on all surfaces that are susceptible to oxidation or corrosion. Even brand-new hi-fi and home cinema components benefit from their contacts being cleaned, as the connectors are often machined using silicon oil, which is left to dry on after the manufacturing process - and this has a degrading effect on conductivity. Clean-IT is suitable for use on all metal connections,

including nickel, copper, rhodium, silver and gold.

An applicator brush and cloth are supplied with each bottle of the product. I find the brush to be most suitable for use on audio plugs and inside sockets, whereas the cloth is best for cleaning fuses and mains plugs. Using the applicator or the cloth where appropriate, I apply the Clean-IT solution onto a variety of metal contact surfaces that are used to make an electrical connection between cables and audio components. This includes RCA phono connectors, speaker cable banana plug, sockets, spade connectors, binding posts, headphone jacks, mains plugs and fuses. After use, I find audible improvements across the spectrum, ranging from very subtle when used with new connectors to quite significant when applied to older connectors.



VERDICT

Comes with a brush and a cloth and offers an effective clean with noticeable sonic benefit



Caig DeoxIT D5

D00/11/ D0

PRICE: £16.95 CONTACT: 01539 797300 WEBSITE: russandrews.com

NO TEST OF contact cleaners would be complete without including DeoxIT D5, manufactured by Caig Laboratories. DeoxIT D5 is one of a range of cleaners for various types of contacts and specialist applications, including plated contacts, and D5 is the general purpose treatment for all metal contacts. It is specifically designed for cleaning surface oxides from mains plugs, interconnect and speaker cable connectors, as well as from moving parts such as volume controls.

It's designed to dissolve corrosion that has built up on connectors by dissolving oxides and sulphides that form on metal contact surfaces. It improves the contact between the surfaces and thereby reducing contact resistance. It also provides a degree of on-going protection by leaving a thin organic layer that coats and protects

the metal while special additives prevent the dissolved oxides from re-attacking the metal. By keeping these oxides in suspension, the additives help any oxides to be dispersed during the action of plugging and unplugging.

The DeoxIT D5 aerosol can is supplied with a flexible tube that fits into a small recess built into the nozzle, enabling it to be directed into the intricate parts of a plug or socket. When I spray the D5 onto an ageing phono plug that has seen better days and is prone to noise when moved, I find that the noise completely disappears clearly demonstrating that the cleaner performs its job well.

As the product can be directed onto where it is needed, only a small amount is used on each application. This makes it very good value as one can will last for many years.



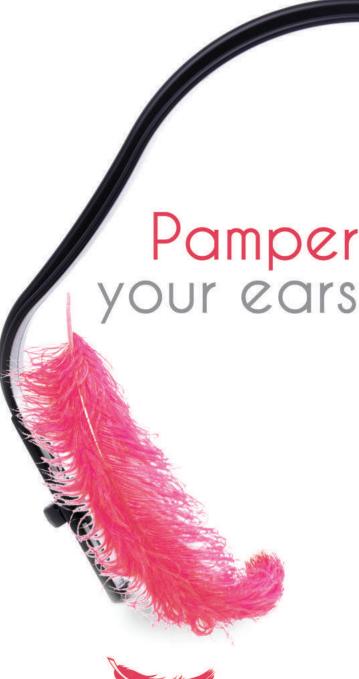


VERDICT

Simple spray-on product that works really well and is a worthwhile investment



van den Hul®





Official van den Hul UK distributor

Unit 15 Kenyon Forge, Kenyon Street Birmingham B18 6AR phone: 0121 212 9288 email: info@flamingoaudio.co.uk web: www.flamingoaudio.co.uk

Flamingo Audio Dealer Network

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ANALOGUE SEDUCTION, Cambridgeshire, PE 1TF Tel:0173 335 0878, www.analogueseduction.net

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CHESHIRE AUDIO, Cheshire, CW1 5AL Tel:0127 058 0734, www.cheshireaudio.co.uk

CRAIG HI-FI LTD, Herts., AL9 7NT Tel:0170 726 7188, www.spatialonline.co.uk

CUSTOM CABLE SERVICE, Surrey, KT3 4BY Tel:0208 942 9124, www.custom-cable.co.uk

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EMPORIUM HIFI, Wales, SA14 9NF Tel:0155 475 0262, www.emporiumhifi.com

ERIC WILEY, West Yorkshire, WF10 5BS Tel:0197 755 6774, www.ericwiley.co.uk

FUTURESHOP LTD, Herts., WD6 2BW Tel:020 8905 1555, www.futureshop.co.uk

HIFI SOUND LTD, Stockton on Tees, TS18 1BZ Tel:0845 601 9390, www.hifisound.co.uk

HUDDERSFIELD HI-FI, West Yorkshire, HD I 2PT/ Tel:0148 442 4000, www.audiovation.co.uk

INSPIRE HI-FI, Derbyshire, S43 3QE Tel:0124 647 2222, www.inspirehifi.co.uk

JORDAN ACOUSTICS, Dorset BH23 6BB, Tel:01202 911886, www.jordanacoustics.co

MIDLAND AUDIO EXCHANGE, Worcestershire DY9 9TD, Tel:01562731100, www.midlandaudiox-change.co.ul

MOTH GROUP, Bedfordshire, MK45 3HT Tel:01234 741152, www.britishaudio.co.u

PAUL GREEN HI-FI LTD, Bath, BA1 3JN Tel:0122 531 6197, www.paulgreenhifi.co.uk

PHASE3 HIFI, West Sussex BN11 4HW, Tel: 01903 245577, www.phase3hifi.co.uk

PROGRESSIVE AUDIO LTD, Kent, ME8 8QY Tel:01634 389004, www.progressiveaudio.co.uk

RAYLEIGH HI-FI, Essex, SS6 7EA Tel:01268 779762, www.rayleighhifi.com

SENSO SYSTEMS, Cornwall, TR1 2LS Tel:0187 227 3215, www.senso-systems.co.uk

STONE AUDIO UK LTD., Dorset BH 16 6FE, Tel:01202 630066, www.stoneaudio.co.uk

TAVISTOCK AUDIO, Devon, PL 19 ODE Tel:0182 261 8940, www.tavistockaudio.co.uk

THE MUSIC ROOM OF GLASGOW LTD, Glasgow, G3 6AX Tel:0141 333 9700, www.music-room.com

ZOUCH AUDIO LTD, Leicestershire, LE65 1BQ Tel:01530 414128, www.zouchaudio.co.uk



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

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

DETAILS

PRODUCT Cable loom

Netherlands

Interconnect/ speaker cable

• Interconnect: Interconnect:
silver-plated copper
with Hulliflex jacket
Speaker cable:
silver-plated copper
and carbon hybrid
speaker cable with
Hulliflex jacket
Prices:

Prices: rconnect interconnect £130/1m, speaker cable £20 per metre unterminated

DISTRIBUTOR Flamingo Audio 07833 955014

EBSITE andenhul.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

The CS-122 Hybrid is an updated no halogens. 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.

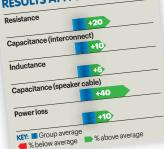
Soundstage width isn't as good as some here though; this is where the

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' guise 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 1.0 µm/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 n.4monin/m, ruriner 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 •

Fi Choice

OUR VERDICT SOUND QUALITY



LIKE: Very musical, engaging sound; open and detailed DISLIKE: Slightly

constrained stage **WE SAY:** Superb value cable loom, one that's an essential audition





35



King of spin?

Now largely forgotten, Linn's mid-eighties Axis turntable attempted to give much of the sound of the Sondek at half the cost. **David Price** remembers

t is 1986, and the world is going Compact Disc crazy. So what does Linn Products do? Denounce the demon digital disc and launch a new turntable that promises much of the performance of its hallowed LP12 at half the price, that's what. Oh, and it's also far easier to use and set up, and even has – shock horror for Linn lovers – the ability to switch speeds between 33 and 45rpm electronically!

The £299 Axis was the right turntable, about three years too late. By this point, the market was already moving away from vinyl. Half a decade previously, the new mid-price Linn would have wowed the world and made people wonder if they put something special in the water, up in Glasgow. But by the latter half of the eighties, vinylistas were generally beginning to think about upgrading to bigger and better turntables from their Duals and Regas, and didn't quite see why they should buy something that wasn't the best.

The Linn Sondek LP12 was, of course, an excellent deck; some feel it to be overrated, others are in awe of it, but there's no denying that in the eighties it was mightily popular. The Axis never achieved the same sort of following, because it sat in the middle of the road, so to speak. Rearing up in the slow lane was the excellent Rega Planar 3, which sounded far better than it had a right to and in the fast lane was the LP12. The poor old Axis

It has a mastertape sort of ease, an unflappability and sense of control

got buffeted by both passing it by, never quite managing to get fully into its stride.

Still, that's irrelevant to secondhand bargain spotters, a quarter of a century later. Nowadays, the Axis is a pleasing-sounding deck built to better standards than a Rega, while barely costing more than one secondhand. Indeed, the princely sum of about £200 will get you a very good example, and give sort of performance equivalent to today's £600 Rega P3-24. Oh, and it's pretty rare and exclusive too – so what's not to like?

Inside out

It's a handsome looking deck, if you can pardon the eighties-tastic grey painted top plate. The little Linn has aged more gracefully than many turntables of that period, and even today looks like a competent, well made product that must have cost a few bob. The black veneered Medite plinth is a lot less substantial than the LP12's real wood affair, but is neatly presented, as is the dark grey top board, which again is no stainless Sondek affair. Physically it's a little more slender-bodied than the LP12 (with dimensions of 445 x 349 x 140mm), and a lot lighter (at 8kg).

The Axis' 12in diecast aluminium platter doesn't compare well to its bigger brother at just 1.5kg, but unlike Regas of the day at least it sports a sub-platter made out of the same metal. Linn took care to machine it well and accurately balance it, so while it's not the most illustrious platter you'll ever see on a record deck, at least the metalwork is well done. A felt mat sits on top, a thinner affair than the LP12, and the motor drives the inner platter via a stock Linn LP12 belt, which is to say it's a flat, precision-ground neoprene rubber affair.

The single-point bearing looks quite similar to the LP12's internally, although it isn't as classy. Again, however, that's not to say it's cheap and nasty, because its thrust pad is top quality steel that is machined, hardened, ground and lapped to a mirror finish. This sits on the top plate, but the motor is connected to an internal subchassis decoupled from the plinth by internal silicone rubber mounts.

The 24-pole AC synchronous motor was described by Linn back in the day as 'high torque', but this is a little generous, in my view. Still, it seems just about up to the job, and is usefully aided by an intelligent power supply. An electronic Class A design, it has a stall detect circuit that monitors the load on the motor from start up and reduces the power supply to the motor once the correct speed has been achieved. It also increases it when circumstances dictate, such as when asked to start up or spin up to 45rpm; the extra power is shown by either the red '33' or green '45' LEDs glowing brighter periodically. Back in 1986 I remember LP12 owners wondering why the 'cheap' Linn deck had easy, push-button 45 capability while they had to fiddle with the confounded 45rpm adaptor!

The tonearm initially fitted to the Axis was the LVX+, which was basically a bought-in Japanese OEM arm that was made to Linn's specifications. It was a decent bit of kit, but it had been around in various guises since the late seventies and had been rather eclipsed by the Rega RB300 - which in truth was less expensive, but far better. Still, the LVX was nice to handle, with its air of delicate precision. You get the impression that they were very consistently produced, which was more than could be said for some rival pickups of the day. Its slim black-painted alloy armtube and

modest bearings didn't predispose it to low compliance moving coil cartridges terribly well, but it did the job well enough with decent moving magnets like Linn's own K9.

Proof of the pudding

Listening to the Axis 25 years after it was launched, you can't help being impressed by the sound. Overall, it's a refined and sophisticated sounding design, one that if you're used to budget turntables seems 'high end' down to its last atom. It presents the music in an engaging way, yet displays a sort of nonchalant ease in how it does it. If you've never heard a high-end deck like the LP12, anyone living with the Axis would wonder just how it could be bettered. It's nicely tuneful too, and this feeds into a detailed midband with a pleasingly rhythmic flow to the proceedings. Treble is smooth and sweet, and the overall effect is of a refined, sophisticated black plastic spinner.

What the Axis doesn't do is set the stage on fire. It can't quite muster the sort of truly dynamic, powerful sound that the LP12 – and rival superdecks – is capable of. By comparison, while the Axis sounds 'nice', it doesn't convey the emotional impact and the visceral speed of a recording in quite the same way as more expensive decks. Effectively then, the Axis sits bang in the middle – sonically – between budget turntables and 'super decks', showing how carefully Linn voiced it. If you've lived with an LP12, the Axis will always sound a bit flat.

Conversely though, if you've only ever had a budget turntable like a lower ranking Rega or Pro-Ject, welcome to a world of hitherto unknown pleasures. The stability of the Axis is what you notice, compared to cheaper decks – it has much more

BUYING

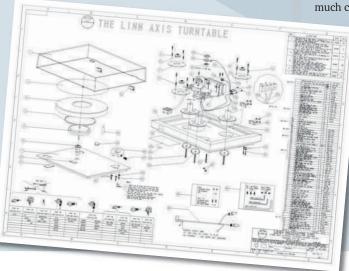
As with any secondhand turntable, condition is everything. These are delicate mechanical instruments that do wear out, but if they're treated gently they'll last a long time – especially a quality product from Linn. So when you're buying, get the best you can. Obviously, you can check the condition of the main bearing, but there's normally a trail of clues to follow before that – for example, is the plinth damaged, the top-plate scratched, etc. That gives a general picture about how the deck has been handled. Also, look for play in the main bearings in the tonearm; the arm shouldn't rattle around when you're handling it. The power supply has been known to give problems, with stories of mains surges spontaneously starting the motor and cooking the active power supply, so users should switch the deck off at the mains when not in use. For top performance, flush out the main turntable bearing with cotton buds dipped in a solvent such as white spirit, then refill with fully synthetic oil – Redline's 5W30 works superbly. Buy the deck a new belt direct from Linn (don't get a cheapo imitation) and clean all the contact points (pulley, inner platter etc) with isopropyl alcohol.

of a mastertape sort of ease, an unflappability and general sense of control. This is aided by careful placement; the Axis likes a light, rigid wallshelf that is well away from vibrations. It has internal rubber suspension, but it's nowhere near as effective as the LP12's sprung system, so it makes disproportionate performance gains when it's given a helping hand and kept well away from vibration.

Later Axis turntables got the Linn Akito tonearm fitted; this was effectively a clean sheet design with a thicker, stronger armtube and upgraded bearing assembly. It gives the deck a more powerful, dynamic and authoritative sound, with more detail. Listening to a late Axis shows just how the LVX+ sits on dynamics and blurs transients. Still, don't dismiss the earlier version, it's still a nice thing to set ears on, and is much cheaper to buy even now.

Billed as 'Son of Sondek' and with unenviable task of being Linn's second ever turntable design the Axis always had much to live up to. It never was as good as its LP12 big brother, but the Axis was still a fine piece of kit that was well made and finished, consummately easy to set up and use, and very pleasing to listen to. These days, earlier decks can be had for under £200, which makes them copper-bottomed analogue bargains. Overlook them at your peril •

The schematics that were provided with Axis turntables



Divine intervention

Divine Audio offers very reasonably priced systems, but **Ed Selley** discovers that needn't mean they are ordinary

estled on the outskirts of the Midlands town of Desborough, Divine Audio is a dealer that has its own specific way of doing things. Founded by owner Tim Chorlton in 2004 in response to the rather fragmented portfolio of dealers he visited, the store has evolved a very distinctive collection of brands of its own. Originally, it operated out of a conventional retail premises, but moved to the present location as Tim realised that dealerships are more destination stores than walk in ones.

Divine Audio is different to many of the dealers that feature in this piece in that the company has a very strong portfolio at a price point lower than is often the case. This mixes well-known brands with some more unusual offerings. What is significant about this is that although the individual components are less expensive, this hasn't stopped Tim and his team from being extremely ambitious. The company maintains a strong online presence and has moved into distribution by recently becoming the brand Rogue Audio. As if this wasn't bold enough, Divine Audio is even moving into manufacturing as we shall see in one of the three systems I asked Tim to demonstrate as an overview of the company's ethos

GRADO LABS ZENNHEISER. audio-technica

THE EXPERTS



Unit 7-8 Pipewell Rd Desborough Northamptonshire NN14 2SW 01536 762211, divineaudio.co.uk

pioneer.eu/uk monitoraudio.co.uk kef.com ekcoaudio.com croftacoustics.co.uk pmc-speakers.com divineaudio.co.uk/analogue-works.html







Till the Sky Turns Lossless FLAC



Violator CD



Big TV Vinyl

System 1 – Pioneering spirit

OUR FIRST SYSTEM combines two mainstays of affordable hi-fi into a streaming offering at a very keen price. The combination of Japanese electronics and slimline British speakers looks smart and functionality is impressive, too.

Pioneer's two-channel presence has grown considerably in recent years. The N-50 network audio player is the larger of the two models in the range and offers 192kHz-capable streaming across the major formats as well as some useful convenience features like AirPlay and app control via smartphone or tablet.

The matching A-50 amplifier is essentially the same substantial Class D amplifier from the flagship A-70 that did well in the November issue amplifier *Group Test*, but

A system that is stronger than its already capable components

without the digital inputs of the larger amp. Both units are beautifully assembled – you can pay a great deal more for equipment that doesn't feel as solid as these two do.

Partnering the Pioneers is Monitor Audio's BX5. The smallest floorstander in the Monitor Audio range, the BX5 makes use of two of the company's proprietary 5.25in C-CAM mid bass drivers matched with a 25mm tweeter. These are accommodated in a slim 85cm-tall cabinet that gives the BX5 a very compact footprint. When you compare their dimensions to most similarly priced standmounts and when you take into account the stands you would need for them, the BX5 is one of the most space efficient speakers out there. Like the Pioneers, the build is top notch.

Surprise surprise!

There is more to this system than neat aesthetics and chunky chassis, though. A few bars of Ray LaMontagne's *You Can Bring Me Flowers* reveals that although this a fairly compact system, the scale of the performance is convincing and unambiguously real. The low-end extension from the BX5 is genuinely surprising, it seems almost surreal

that such a small speaker can produce bass that has visceral weight to it that is felt in the chest as well as heard. The presentation is spacious and manages to convincingly fill the space between the speakers and expand beyond them, too.

The performance with hi-res audio is equally accomplished and it is interesting to see how effectively this very reasonably priced system demolishes the notion that you need to spend a fortune to realise the benefits of the medium. The tonal accuracy that it lends to Get the Blessing's OCDC is seriously impressive - close your eyes and the suspension of disbelief that the sound is the result of musicians rather than electronics is far easier than you might expect. The rasping saxophone in particular has a presence that is something you simply don't associate with such sanely priced electronics. Sure it is easy to make allowances, the demo room at Divine is hardly the most cavernous of spaces and fairly well damped - which makes the task slightly easier - but I doubt this system would suddenly lose these basic abilities if you parked it in a normal lounge.

More importantly, this a system that has a sense of fun and timing to it that means that when you want it to monster its way through Scratch Massive's Communion it will with a boisterousness and energy that really makes the album come alive. The relationship between the speakers and electronics comes into focus with this more aggressive recording, too. The slight smoothness and warmth from the Pioneer duo ensures that the Monitor Audios play to their strengths without tipping over into harshness or aggression. The result is a system that is genuinely stronger than the already capable components that go into it and an effortless demonstration of just how good a collection of electronics you can assemble for an entirely sensible price. It sets an extremely high benchmark.

- MONITOR AUDIO BRONZE BX5 LOUDSPEAKERS £499
- 2 PIONEER N-50 NETWORK AUDIO PLAYER £399
- O PIONEER A-50 INTEGRATED AMP £499
 SUPRA PLY 3.4 3M PAIR
 SPEAKER CABLE £90
 SUPRA EFF-ISL 1M PAIR
 INTERCONNECTS £90
 SUPRA LO RAD 1.5 POWER
 CORD 1.5M £47.20 EACH

TOTAL SYSTEM PRICE: £1,671.40





DEALER SYSTEMSDIVINE AUDIO

System 2 - Ekco location

THIS SYSTEM IS an elegant demonstration of Tim's ability to sniff out the unusual even at the price points Divine Audio specialises in. What you see here is a duo of electronics from a manufacturer whose existence had been completely unknown to me at the start of the day (and yet comes from an unexpectedly familiar source) anchored by a pair of speakers from a rather better-known brand.

The electronics are the EV55SE and EV55DP integrated valve amp and valve output CD player from Ekco. This is not exactly a household name, but the origin of the brand is more familiar than you'd expect. Ekco is part of the International Audio Group of Quad and Wharfedale fame and although the range only comprises these two models, the IAG characteristics of bomb proof build and ultra competitive price are in attendance.

The amplifier is fitted with a quartet of KT88 valves and allows for switching between triode and ultra linear modes depending on the sensitivity of the speakers. The matching CD player is also fitted with a trio of digital inputs and a pair of analogue outputs making it suitable for use in fairly sophisticated setups.

Howdy partner

Partnering the Ekcos is the KEF R500. The smallest of three floorstanders in what is a very sizeable range, the R500 is nonetheless still a fairly hefty speaker and stands over a metre tall. The driver compliment is similar to the smaller Monitor Audio in the first system, comprising a pair of 5.25in aluminium bass drivers and a 25mm aluminium bass driver. The R500 mounts the tweeter in classic KEF fashion, in the centre of a dedicated 5in midrange driver.

The R Series represents some of the most handsome speakers it has made in a while and the rosewood finish of the system pair is an admirably close match to the wood sides on the Ekcos. While the second system is a little bulkier than the first, it is still hardly likely to present a challenge for a normal-sized lounge to accommodate. And, of course, it glows in low light, which shouldn't delight me after all these years, but somehow still does.

It might glow, but this system is

more than a stereotypical valve show. Starting off with the wonderful Stag's Bellow by Martha Tilston - a recording that demands good control over bass and the ability to open up the dense and heavily layered instrumentals. The Ekcos are completely unfazed by these requirements and give the speakers an impressively detailed and even handed performance. The most immediately arresting attribute this system demonstrates is how even handed it is across the full frequency range. As you might expect, the midrange is wonderful with an effortless three dimensionality and tonal richness to it, but what is more surprising is how effortlessly this feeds into a detailed and smooth top end that gives Tilston's vocals realism and presence without tipping over into harshness or aggression.

The biggest surprise is with the bass, though. Depeche Mode's Violator positively pounds along with a control and sense of attack that is often beyond affordable valve amps. This suggests that the output transformers in the EV55SE are a cut above what you might expect to find in an amp at the price. The sheer head-nodding joy that this ensemble brings to Personal Jesus is a real pleasure and for the duration of the piece I have no coherent notes at all, which suggests that more than anything this is a system that gets to the heart as much as it does the head. It is as happy with a driving bass line as it is on safer ground for a valve amp.

Once again though, this is a system with genuine real-world ability. The digital inputs on the CD player lend it a useful flexibility and the full remote control of the Ekco units make them no harder to live with than comparably priced solid-state equipment. They combine with the KEFs to produce a system that brings all the benefits of valve systems with pretty much none of the drawbacks. I suspect that we'll be hearing more from Ekco in the future.

- **1** KEF R500 LOUDSPEAKER **£1,500**
- 2 EKCO EV55SE INTEGRATED
- 3 EKCO EV55DP DIGITAL MUSIC PLAYER €1,499

MUSIC PLAYER £1,499

QUAD QL-900 SPEAKER CABLE

QUAD QA-900
INTERCONNECT £199

KEMP HI POWER CORD

TOTAL SYSTEM PRICE: £5,456





System 3 – Give me the works

THE FINAL SYSTEM breaks new ground for *Dealer Systems*. The source is a turntable that has been designed and built entirely inhouse. It is partnered by two brands I've heard and loved before, but never used in partnership together. How does this work out?

The Analogue Works Turntable One is a deft two-fingered salute to the idea that the UK is losing its touch at manufacturing. This neat design is evolved from the ideas of the late Tom Fletcher, the man behind many of the Nottingham Analogue range. Tim has taken these ideas to produce a turntable from components that aren't just British, but come from the local area. The deck is completed by Origin Live Alliance Tonearm and London Decca Maroon cartridge.

Partnering the turntable is a pre/power combination from Croft. The 25R Pre valve preamp and matching 7R hybrid preamp are classic Croft with their twin volume controls and clever use of valves and mosfets. The pairing is unashamedly minimalist, but importantly for a turntable-fronted system the preamp includes a good-quality phono stage.

The speakers come courtesy of PMC, the twenty.23 is the smallest floorstander in the range and takes the PMC trademarks we know and love and puts them in a cabinet that adds a little touch of domestic acceptability to the overall design. The system as a whole is still impressively compact, but there is a sense that these units trade off a little domestic convenience for sheer sonic ability.

A kind of magic

After a minute of The White Lies *Big TV* it becomes clear that this is a very capable partnership. The soaring vocals and driving basslines are handled effortlessly and the result is cohesive in a way that is rarely achieved by throwing money at the problem. The relationship between the Crofts and the PMCs is one of almost perfect synergy. The Crofts are beautifully composed and

almost completely unflappable and they keep the PMCs under a tight leash, ensuring that they sound detailed and lively rather than bright with vocals that leap out of the soundstage. At the same time, the low-end punch of the PMCs gives this system a weight and authority that is unusual from speakers so small.

The star of the show is the Analogue Works, though. The performance is pitch perfect with a propulsive energy that gives everything it plays an emotional engagement. The Decca Maroon doesn't disappoint either. Given the support it needs from the Origin Live, it rewards with a sound that is unfailingly and wonderfully compelling. In all senses of the word it is unshowy, but delivers a musical message that most of the competition can't get close to. With Four Tet's Love Cry this is a turntable combination that is completely at home with the dense layers of the track, which are unpicked and presented as a mighty wall of undulating sound. If you buy this system, you might as well sell your CDs now.

The most exciting thing about this system is that even though it is unique – an overused term but for once accurate here – it is still priced at a level that makes it accessible to more people than almost any third system that has graced our *Dealer Systems* feature in recent history – I have had entry-level dealer systems that cost more than this. That something this special is available at such a price is something we should all be very excited about.

- 1 PMC TWENTY.23 LOUDSPEAKERS £2,300
- 2 ANALOGUE WORKS TURNTABLE 1 £799
- 3 ORIGIN LIVE ALLIANCE TONEARM WITH ANALOGUE WORKS CABLE UPGRADE £395
- 4 LONDON DECCA MAROON CARTRIDGE £497
- S CROFT 25R PRE AMPLIFIER £1,400
- 3 CROFT 7R POWER AMPLIFIER €1,400 SUPRA QUADRAX 3M PAIR

SPEAKER CABLE £200 SUPRA EFF-ISL 1M PAIR

INTERCONNECTS £200

SUPRA LO RAD 2.5 POWER CORD 1.5M £53.90 EACH

TOTAL SYSTEM PRICE: £7,298.80







Divine Audio might be ambitious, but based on my day it has every right to be confident about its portfolio and plans for the future. These three systems are an elegant riposte to the idea that interesting things are only happening in the upper reaches of hi-fi pricing.

The balancing of familiar brands with ones that are more unusual is perfectly handled and the move into distribution looks like a shrewd one, and I hope we will see more of Rogue Audio as a result.

It is the Analogue Works project that really sets Divine Audio apart from the

norm, though. Building a turntable from locally sourced parts at a sensible price would be achievement enough. That it sounds as beautifully sorted as it does really is the icing on the cake and I hope that it meets the success that it so richly deserves.



Shoegaze

Simon Berkovitch puts the (effects) pedal to the metal as he invites you to kneel and pray in the cathedral of sound that was early nineties UK psychedelia

wirling, droning guitar riffs, ethereal vocals, banks of effects pedals, a keen sense of melody, an inventive use of technology to realise "cathedrals of sound". All of these components are vital to Shoegaze – a strand of adventurous UK alternative rock that spanned the late eighties to the early nineties before Britpop wielded its retro scythe.

The neo-psychedelic genre's name was coined by the music press in response to the relative on-stage inactivity of musicians making this blurry music – musicians struggling to see how to work their phalanx of effects

pedals in the dry ice and strobe haze that typified many a gig.

Groups such as Cocteau Twins, The Jesus and Mary Chain and Spacemen 3 are all cited as influences on the genre - as well as adventurous sixties pop, minimalism and Krautrock - but it was My Bloody Valentine nailing its black-hole heavy live sound on record - 1988's You Made Me Realise; Year Zero for Shoegaze – that provided young groups such as Ride, Pale Saints, Chapterhouse and Slowdive with the map to sonic nirvana. Other key acts of the era – such as Verve - may not have taken MBV's template, but they certainly shared the band's

passion for creating hazy contemporary psychedelia.

This wasn't the only mindbending UK guitar movement in the early nineties, however. While Shoegaze was largely introverted, its mutant sibling Madchester was extrovert – and cocky enough to cross over into the mainstream, despite the often experimental nature of its production and remixes.

By the mid-nineties, Britpop marked a return to conventional song structures and sounds. But some of Britpop's key groups were clearly influenced by Shoegaze. Blur's early material highlight guitarist Graham Coxon's love of effects pedals.

Blur also shared a bill with My Bloody Valentine on the 1992 Rollercoaster tour – that also included noiseniks The Jesus and Mary Chain and Dinosaur Jr. Similarly, early Suede B-sides are also very 'gaze – albeit in a more aggressive, glam style.

In recent years, The Brian Jonestown Massacre tipped their hat to the scene and bands such as The Horrors and Deerhunter have been tagged with the label NuGaze. And with the return of My Bloody Valentine both on stage and on record – with the *m b v* album, which sent older indie kids into rapture – it appears that the scene is celebrating itself all over again.

My Bloody Valentine

Original architects of the sonic cathedral and incorrigible perfectionists

Indeniably the main influence on the effects pedal-wielding armies that formed in their wake, My Bloody Valentine are precursors to the scene, forming in early eighties Dublin around the nucleus of guitarist Kevin Shields and drummer Colm Ó Cíosóig.

By the time they signed with Creation Records in 1988 – the label synonymous with many of the classic Shoegaze releases, as well as home to fine releases by Primal Scream – the jangly indiepop of *Sunny Sundae Smile* and *Strawberry Wine* had given way to a much more brutal, but no less beautiful, sound.

The groundbreaking, tremoloheavy *You Made Me Realise* EP was a revelation, notorious for the title track's middle section – a glorious descent into one-chord distortion that carved the air for 15 minutes during live performances of the song.

You Made Me Realise was the starter; MBV's debut full-length

album Isn't Anything, also released in 1988, was the main course. Peaking at the top spot on the independent charts, this was a direct influence on many young guitar bands – notable listeners included Ride, Pale Saints and Chapterhouse. Single Feed Me With Your Kiss added another future classic to the

A direct influence on many young guitar bands

band's reverse-reverb and feedback-heavy songbook.

Isn't Anything was recorded in two weeks. 1991's follow-up, the peerless Loveless took two years and nearly brought Creation to its knees. A testament to Shields' obsessive perfectionism, it was well worth the hardship: Loveless is a magnificent, inventive album, playing the studio as an instrument and making it one of pop's most adventurous moments.

If it's feedback you're after this should fit the bill



Verve

Reaching for the stars before rock classicism took over proceedings

he lack of the definitive article here is significant. Before the anthemic post-Oasis hit singles *Bitter Sweet Symphony* and *The Drugs Don't Work*, and 1997's *Urban Hymns*, The Verve were simply Verve – and a looser, more out-there proposition.

In terms of presentation, the early nineties incarnation of the band were the polar opposite of Shoegaze – gaunt, space cadet singer Richard Ashcroft's ecstatic stage persona was a far cry from a shy, contemplative frontman – but, sonically speaking, their early singles share much common ground with many of the genre's key acts.

In guitarist Nick McCabe, Verve had its own Kevin Shields. A fan of John Martyn's Echoplex workouts, McCabe's distinctive style helped elevate Verve above their contemporaries. Debut single *All in the Mind* contains the template for their bipolar sound: Stooges-informed,

riff-heavy rockers sat alongside delicate, ambient tracks.

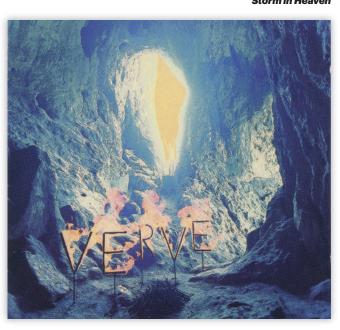
Much of Verve's elongated compositions – such as the early nineties' nods to Krautrock *She's A Superstar* and *Gravity Grave* – evolved from extended jam sessions. This approach was refined for their debut album

In Nick McCabe, Verve had its own Kevin Shields

with The Stone Roses and Radiohead producer John Leckie drenching the shorter songs in plenty of delay and echo to eerie, spacey effect.

During this period, Verve toured with the up-and-coming Oasis as support. The seeds of rock classicism were sewn and the psychedelic baby quickly went out with the bathwater – a tale reminiscent of Pink Floyd's voyage into the mainstream.

Verve's 1993 debut album A Storm in Heaven



Ride

Aglorious blend of noise rock and The Byrds

Before Alan McGee's
Creation Records – the
label to which three out of our
four main profiled artists were
signed – hit pay-dirt with
Oasis, hopes were high for
Ride to be the first group to
place a flag of independence
in the charts.

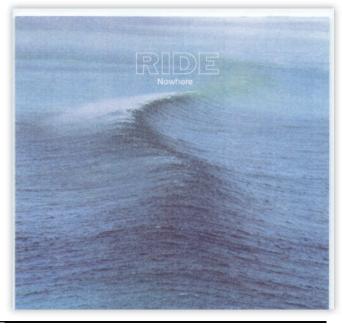
Forming in Oxford in 1988, the group released an infectious trio of single releases during 1990 that showed influences of My Bloody Valentine, House of Love, The Stone Roses and Sonic Youth, but had an ecstatic sound all of their own. *Like A Daydream* from *Play –* a top 40 hit – is the high point of these early records – a blend of the noise rock of MBV and the sophisticated melodic pop of *Eight Miles High-*era Byrds.

Although dismissive of the Shoegaze moniker, the band's debut album *Nowhere* is regarded as a classic of the genre, with its marriage of

chiming, effects-heavy guitars, propulsive bass, clattering drums and dreamy vocals.

Although 1992's follow-up album *Going Blank Again* had

its moments, subsequent albums saw Ride losing direction and splintering, the promise of the group's early records unfulfilled.



SHOPPING LIST

From Shoegaze to noise pop to neo-psychedelia, here are eight platters on which the effects pedal ruled supreme.



The Jesus and Mary Chain Psychocandy Feedback. Noise. Pedals. Pop tunes. Big hair. Frowns. Black clothes. Truly the godfathers of the scene.



Loop Black Sun Krautrock meets Shoegaze on a killer cover of Can's Mother Sky. Loop have recently reformed to much acclaim.



Chapterhouse Whirlpool True next-gen gazers: it sounds like they heard Isn't Anything and decided to invest in some pedals for



Moose
Cool Breeze
Lumped into
the scene due
to some heavy
pedal pushing,
but Suzanne is
nonetheless a
cracking tune.



The Telescopes Flying Like its sleeve, the great four-track EP Flying was shimmering, shiny neo-psych, early nineties vintage.



The Boo Radleys Everything's Alright Forever Takes the noise and wash of Shoegaze but keeps the C86 indie sound bubbling under.



Spiritualized Lazer Guided Melodies The more successful branch of the Spacemen 3 line where gospel met cinematic space rock.



Levitation Coppelia EP The House of Love's guitarslinger Terry Bickers' psych-prog pop project often hinted at real greatness.

Slowdive

Brian Eno collaborators who showed sophistication beyond their years

ot everyone was in thrall of Shoegaze – certainly not the Manic Street Preachers. To quote their guitarist Richie Edwards: "We will always hate Slowdive more than Hitler."

For Shoegaze's detractors, Slowdive are the whipping boys (and girl) – and certainly the group to face the fiercest backlash when the carnival of Britpop arrived on the scene.

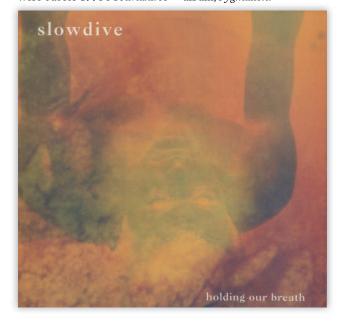
Formed in 1989 by Rachel Goswell and Neil Halsted (also of Mojave 3), Slowdive may have been teenagers when they were signed to Creation Records, but their initial releases showed sophistication beyond their years.

The most ambient of the key Shoegaze groups – who collaborated with Brian Eno on second album *Souvlaki* – Slowdive's debut album *Just For A Day* came with an irresistible call to arms – a sticker reading: "Like a

mind-altering substance, without the risk."

While *Just For A Day* drew a muted critical response, knives were out for 1993's *Souvlaki*. A

disastrous US tour prompted the group's retreat into more abstract realms and Creation dropped them after their final album, *Pygmalion*.



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Musicreviews



THE EARLY SEVENTIES found Eric Clapton in a sorry state. Disillusioned with rock stardom, wearied by ear-shredding 20 minute guitar solos and uncertain what musical direction to take, he sank into heroin addiction. After hitting rock bottom, he eventually cleaned up and by 1974 was ready to return with his first studio album in four years. 461 Ocean Boulevard presented a much-changed Clapton to the world and divided his fans. To some his laidback mellowness lacked ambition and was a criminal abdication of his role as a heavy rock guitar god. But those with more discerning tastes welcomed the tightly structured songs and hailed a career highlight and his version of Bob Marley's I Shot The Sheriff gave him his first number one single. The follow up, 1975's There's One In Every Crowd was recorded in Jamaica with the same musicians and cut from similar cloth and was followed that same year by the live album EC

Was Here. This six-disc set presents those three original albums, all recorded within a fertile 15-month period, as a trilogy, augmented by 29 bonus tracks, including studio out takes, additional live material and a famous session recorded in summer 74 with the American bluesman Freddie King. 5.1 surround sound and quadrophonic mixes of the two studio albums complete the package.

The attempt to break with his past and forge a new musical identity was a confusing and contradictory process, but it led ultimately to some of the most coherent music of Clapton's career. The sound of him resolutely burying the 'old' Eric Clapton and trying on different musical personas to see what fits is fascinating, from the reggae-lite of I Shot The Sheriff and Swing Low Sweet Chariot to the JJ Cale-influenced Steady Rollin' Man and Little Rachel, via the Beatlesque High influenced by his close friendship with George Harrison and the

lovely Let It Grow, unintentionally influenced by Led Zeppelin's Stairway To Heaven

The live material was recorded with the same American studio band and mixes news songs with a Cream/Blind Faith/Derek & The Dominos 'greatest hits' selection with old favourites such as Layla, Badge, Crossroads and Presence Of The Lord given a loping groove more in keeping with his new style. Although the guitar playing on his own studio recordings is understated, his technical virtuosity remained intact, as we hear on the brilliant Gambling Woman Blues, a previously unreleased 22 minute-long jam from the Freddie King sessions.

The 5:1 mixes of the two studio albums are particularly sparkling. In retrospect, a remarkable creative renaissance that both rescued his career and produced some of the warmest and most rewarding music he ever made. **NW**

, Cooder

1970-87

11 CD box set

BEFORE HE BECAME a world music convert and began working with African and Cuban musicians, Cooder was the godfather of what we now call 'Americana'. This 11-disc set compiles all of the albums he made during his first golden age, an extraordinary journey that spans blues, folk, r&b, gospel, jazz, country, rock, Tex-Mex and Hawaiian styles. In effect, it's an encyclopaedic primer in indigenous American roots music, arcane but never academic, and always played with intuitive good taste.

Cooder was only an average singer, but any vocal shortcomings are more than compensated by his virtuosic guitar playing. His 1979 album Bop 'Til You Drop (included here) was the first digital recording in pop. Interestingly, today it sounds decidedly clunky, while the warmth of earlier analogue albums has stood the test of time so that the likes of Into The Purple Valley (1972) and Chicken Skin Music (1976) sound as fresh today as when they were originally recorded. NW

MUSICREVIEWS



Zara McFarlane If You Knew Her



Brownswood



Vangelis Heaven and Hell



Remastered CD

Esoteric

THE SECOND ALBUM from this young, London-based jazz chanteuse is a confident affair. Her voice is deliciously clear, combining jazz chops with a soulful tinge that owes a lot to Nina Simone, but with a purity of tone that evokes Roberta Flack's early jazz material or Abbey Lincoln's work with Max Roach. If the first album was the sound of a young woman discovering her voice within with a standard jazz framework, this one puts more focus on the songs, with varying arrangements for each. Eight of the 11 tunes here are written by Zara, and many foreground her voice with only minimal, but highly effective accompaniment. DO

FIRST RELEASED IN 1975, Heaven and Hell remains Vangelis' most enduring work, a landmark recording in which electronic, classical, choral and ambient influences combined with a prog-rock aesthetic to create an expansive aural feast with a dynamic range that runs seamlessly from the ethereal to the bombastic. Now remastered under the supervision of the Greek composer, many of the motifs he went on to develop in film-scores such as Chariots of Fire and Blade Runner had their first exposure here, but are explored more expansively than the constraints of the silver screen permitted. NW

HOT PICK



Do you agree with our reviewers? Decide for yourself and listen to some of this month's tunes at www.hifichoice.co.uk

Rebecca Ferguson

Freedom

RCA/Syco

X FACTOR CONTESTANTS shouldn't be as good as Rebecca Ferguson. Her's is a deeply heartfelt voice, able to convey rare depths passion, empathy and longing. No small feat for a runner up. She tends to stick to r&b themes of men lost and found, but with a healthy dose of self-worth and inner strength shining through the vulnerability. Her second album features a series of pop soul songs all co-written by the lady herself and it's every bit as strong as her first. The arrangements are polished and give her voice plenty of room to breathe. Standouts include the pumping rhythms of the single I Hope, the quiet defiance of My Freedom and the surging soul power of Fake Smile. **DO**

AUDIOFILE VINYL



Tijuana Moods

180g vinyl

RCA/Speakers Corner



RECORDED IN 1957

Tijuana Moods sounds as vibrant now as it must have done then. Its five numbers are Minaus' take on Mexican folk music of the time and you will

recognise many of the themes, but it's the spirit and dynamics of the playing that make this a stand out album. It features alto player Shafi Hadi, listed as Curtis Porter, Jimmy Knepper on trombone and Bill Triglia on piano in an ensemble that was nine strong if you include the voice, and castanets, of Ysabel Morel and Lonnie Elder. They

make a glorious sound thanks to superb playing and some spot on composition, it opens with a take on Dizzy Gillespie's Woody'n'You, which Mingus calls Dizzy Moods, this followed by Ysabel's Table Dance. It's where the castanets come into their own and "includes the far out strip tease". This is one of those jazz classics where the main man has pushed his musicians to ever greater heights of technical and expressive playing by giving them truly inspiring, uplifting music to play and working them till they got it down. Pressed on vinyl with the attention to detail that Speakers Corner lavishes on its work, Tijuana Moods is a masterpiece that no self respecting music lover should be without. JK



HIGH RESOLUTION DOWNLOADS



Ed Harcourt Back Into The Woods



FLAC 24-bit/48kHz

Society Of Sound

RECORDED IN JUST six hours at Abbey Road, this is the sound of mercurial English troubadour Ed Harcourt getting back to basics. There's plenty of natural reverb in the room and the sparse instrumentation allows it plenty of room to breathe especially on classic-in-waiting The Cusp And The Wane. Other delights include the gentle orchestral flourishes of Hey Little Bruiser and the Jeff Buckley-esque Murmur In My Heart. **DO**



Get The Blessing Lope & Antilope



FLAC 24-bit/48kHz

Naim Label

THIS FOURTH ALBUM from Bristol's jazz ragamuffins finds them settling into a more lyrical style. There's still plenty of grit in the harmolodic oyster with nearly all the songs arising from improvisations at a disused pottery. The spare location affords plenty of space for the drums/bass/trumpet/sax line up abetted by electronic effects to coalesce and separate, to float over and to tunnel through the effervescent, in-the-moment melodies. DO



Each Brandenburg is scored for different combos of instruments

Bach

The Six Brandenburg Concertos The Dunedin Consort; John Butt



CDK 430 2 SACDs (CD Compatible) Linn Records

JOHN BUTT AND the Dunedin Consort deliver a lively and very musical account of Bach's Brandenburgs. Unlike some performances, which set out to emphasise the bizarre and unusual aspects of the scoring, Butt tries to keep the more extreme details in check. He's aided by a well-balanced recording that sounds rich, warm, and detailed, yet transparent and clear. Each Brandenburg is scored for completely different combinations of instruments, so good modern performances, highlight and celebrate the huge variety of Bach's music. Common to all six works is the enthusiasm and vivacity of the playing, and it's that which makes it special. JH

Mascagni

CHAN 10789 CD

Mascagni

Orchestral works. Luciano Ganci - Tenor Filharmonica '900 del Teatro Regio Turino Gianandrea Noseda



Chandos

PIETRO MASCAGNI IS mainly famous for operas, so it's good to hear a selection of his music written for the concert hall. The works offered here include several world-premiere recordings of some shorter orchestral works. Although rarely performed, the music is delightful and well-crafted, being melodic, atmospheric, and warmly romantic. The Ave Maria for tenor and orchestra, is an arrangement of the famous Intermezzo from Cavalleria Rusticana. The recording is smooth, open and well balanced, setting the orchestra in a rich spacious acoustic that suits the music. Dynamic range is wide, but the climaxes expand comfortably and easily. JH

BLU-RAY DVD



Rush

Dolby Digital stereo & DTS-HD Master



Allegedly the world's least fashionable rock band, Rush continues to pull in the crowds, at least it did back in 2005 when this 30th anniversary tour took place. It's a big concert with

impressive lighting, a full, powerful sound and all the hits. Some are cobbled together as medleys, but all the key tracks are played in full. The extras include five interviews, the first with Geddy in '79 looking spotty and later ones that give some insight into their mindset. There is also a selection of vintage, mostly TV footage from the Anthem vault. JK



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01202 515474 or email: johnlangley17@talktalk.net

JK DAC32 little used. Giant killer battery-powered DAC gives stunning sound, huge dynamics, great bass and detail, with special USB cable included. USB in/phono out only. £360:

o7793 749178 or email: kingjuancho@yahoo.com (London).

LINN LP12 with SME 309 Magnesium tonearm and Goldring elite cartridge: £950, will split. Pro-Ject phono box SE: £50. TDL Studio 0.5 speakers with plinths: £160: 020 8847 4796 (West London).

NAD M51 DAC/pre-amp £1,100 (£1,500 new.) Cambridge Blu-ray player 650BD £150. Theta Intrepid power amp £1,400. All immaculate: 07722 871945 or email: martin.summers@ ymail.com (SW London).

RUSS ANDREWS Signature Powerkords x2, 1m length. Wattgate 350I AG IEC Plug (RRP £440) £300 each or £290 collected. Mint condition, smoke-free environment: 01902 884694 or email jukey39@yahoo. co.uk (Dudley).

GRAVES Audio (GA) Coalesce Balanced XLR Interconnects. Excellent condition, extremely high-quality interconnect. Cryogenetically treated copper, In original presentation box. (£380 new) £160 ONO. Contact me for photos. AT (@)-Tunes SB+Audiophile Streamer. Two-box, very high-end version of Logitech Squeezebox 3. Huge power supply and very highquality DAC. Sounds superb



Looking for a deck to spin your old vinyl on? Look no further than this Pro-Ject RPM 5 bargain...

and in excellent condition. (£1,000 new) £350 ONO: 02380 601515 or email: bridgens11@btinternet.com (Eastleigh, Hants).

CLARITY 09 high mass turntable with Rega RB1000 arm made by Claro Audio. Three years old, mint condition, boxed (£2,100) £950, good reviews: **07905** 348812.

KEFLS3/5A Reference Series, Rosewood, near mint, including manuals. Rogers ABI Bass Extenders, Rosewood, excellent condition £1,500. Buyer collects: 01371850665 (Essex).

NAIM LNAC 82 x2 Hi-Caps: **01623 230472 (Notts).**

GARRARD four-speed stereo sound record player in mahogany with Elac speakers, £40:

07775 958325 (Leeds).

CYRUS 781 speakers + Nextel Stands £320, Music Tools Entasis h50 Speaker Stands £410. Vitus SP102 phono stage £12,500 ONO - superb performer/unmatched. Audience AU 24e 1.5m RCAInterconnect £525, Audience AU24 Powercord 3m £795. Nordost Heimdall RCA o.6m X2 £280 each. Isotek Power Cord Premium Mains Cable 1.5m X2 £50 each. XLO HTP1 RCA 1m £35, Cyrus bi-wire speaker cable 2.5m £30. Signal 7080 RCA interconnect 2x 1m£30, Signal 7081 RCA

interconnect 1x 1m RCA set £25, 1x 1m RCA single £15, 1x 2.1m RCA set £35: 01825 841104 or email: mark. hanna@virgin.net.

KUDOS X2 speakers £700. Naim Nait XS amplifier with sonic bliss PSU and Flashback Cables Y Performance cable £700. Both boxed in excellent condition: 07791339784 (Nottingham).

YAMAHA AX863SE7.2 AV Amp with KEF 5005 6.1 surround sound system with REL acoustics quake sub-woofer. Excellent Condition. Boxed with manuals. £400 ONO:

01772 719653 (Preston).

QUAD 22 + 2 MA II valve mono amplifiers unboxed/ unused since Quad service and 22 tone capacitor modification Sept 2010. With invoices, mains lead and 2-pin Bulgin plug. £795: 07747 63 69 65 (Wiltshire).

NAIM Naitsi and CD5i boxed with manuals, Din interconnects and remotes. Plus 2x 3m of NACA5 speaker leads with Naim connector plugs. All lovingly looked after in beautiful condition, four years old £900 ONO, prefer buyer collects: 01572 822251 or email:stevefloweris@yahoo. co.uk (Rutland).

POWER supply for Class A amplifiers, self contained, suits John Linsley Hood's or any low-power Class A amplifier, £279. Pair of used SEAS 10 in drivers, £99:

BUYING TIPS 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!

Reader Classified ads HHTChoice

0207 499 8729.

KIMBER KCAG interconnect, o.5m length, ultraplate phono plugs, deep cryogenic and super burn in enhancements. Mint condition (RRP£602)£300 or £295 if collected:

01902 884694, email: jukey39@yahoo.co.uk.

REGA RS3 speakers for sale. Excellent condition, cherry finish. £375. Buyer to collect: 07940 659 384 or email: davidwhatley9@gmail.com (Brighton).

WANTED Linn Lingo Mk
1 (shoebox size) PSU for
LP12, must be in good
working and aesthetic order
and come complete with
internal interface board,
switch, interconnect and
power lead: 01159894266 or
email hanumike@gmail.com
(Nottingham).

RADFORD STA25 series 3-valve power amplifier. It has been cherished by myself for the last 15 years. I am reluctantly downsizing hence low £900 OVNO. Silver High Breed Epitome 8 interconnects with phonos £50: 02476 679165 or email: davidhirst244@02.co.uk.

THORENS TD160S with Rega RB202 arm, in very good condition, arm has ISO Stub End £300 ONO. Please email for photo set & pick up address: o7806658731 or email: wrighto8jonathan@hotmail.com (Leicestershire).

DYNAVECTOR P₇₅ phono amp MM/MC. Excellent record reproduction £110: **01903 260310 (Sussex).**

MERIDIAN 588 CD player. Very low hours (been in its box most of its life), XLR and RCA outputs. Can demo £875: 07973 426291 (Birmingham).

200 Hi-Fi magazine for sale. *Hi-fi Choice, Hi-Fi News, Hi-Fi World* £120 ONO Buyer collects: **01484 427426** (West Yorkshire).

MISSION 751 standmount speakers, rosewood finish, good condition but not boxed, complete with manual. Prefer buyer to collect. Ideal for mediumsized room £25:

o1908 645353 (Bletchley).

MANA ACOUSTICS six-tier equipment rack £350. One turntable with reference

top £250. Two power supply tables £50 each. Buyer to collect: **07860 155521** (Middlesex).

REGA ear headphone amp, black, boxed £80. 5 x 1m Chord Silver Siren interconnects £25 each or 5 for £100: 07936 518220 (Swansea).

NAIM X2 Hi-Caps, Naim NAC 82, Naim SBL speakers (walnut finish):

01623 230472 (Notts).

WANTED single tannoy GRF corner cabinet with silver duel concentric cone, walnut finish. Cash waiting, will travel: **07983 722880** (**Bristol**).

PURE Power P700 mains regeneration unit, three years old £600 ONO.
Rega Plannar 3, Acos-type arm, spare headshell with Ortofon VMS 20E MkII. Turntable needs attention £50: **01652 640088** (Lincolnshire).

KUZMA STABI S/Stogi S/ Martin Bastin digital supply. New. Mint. (£3,350) £1,500. Croft Charisma X preamp. MM input. Separate power supply. Re-valved. VGC (£3,750) £1,000: 01453 519700 (Gloucestershire).

MAGNAPLANAR SMGA speakers for sale, one owner from new, great di pole sound, too big for new flat £125: email: bernkarm@yahoo.co.uk (Essex).

LFD NC SE integrated amplifier (number 187). Gun metal grey finish, mint condition, one year old, very little use. Have original box, packaging and user leaflet (£4,500) £2,250 ONO excludes postage: +353 87219 4900 (Co. Antrim).

ROKSAN XPlatinum preamp PR15B-black,remote, manual and boxed, 1 owner excellent condition. 5 line ins including 2 XLRs (1 for A/V) plus 1 tape in/out and 2 twin pair outputs (phono + xlr)!!! f1.200 ONO:

o7812 935242 or email: dubmaster@talktalk.net (Surrev).

ARCAM A85 integrated and P85 power amp in silver with oak finished PMC TB2s that have had the '+' tweeter upgrade. £600 ONO: **01795** 522448 **oremail:**

reynolds853@hotmail.co.uk

ATC SCM 11 black, 18 months old, mint, little use, 4yrwarranty, original packaging, documents, cash £750 (£1,150) buyer collects. Atacama stands £45. REL Quake sub £75: 07733 428736 or email: gill@gillbrears.plus.com (Huddersfield).

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

DYNAUDIO Excite X₁6 Speakers £300 ono (£1000+ new). Dark cherry real wood veneer. Includes Apollo speaker stands - floor spikes, welded construction and filled with silver sand, plus bungs for rear ports. Four years old, but treated well and in good condition, no boxes. Minor cosmetic blemishes to the underside of one speaker and the side of another. Will deliver within a 30 mile radius otherwise buyer collects: 01489 582325 or email: lowtherman1@gmail.com

(Fareham, Hants).

MONITOR AUDIO R270HD
Floor standing slim
speakers piano black
lacquer 12 months old
£350. Monitor Audio
Bronze BXW10 Subwoofer
walnut £250 both excellent
condition: 07800 606892
or email: schandler@dopag,
co.uk (Worcestershire).

CHORD Epic Twin speaker

YOUR DETAILS

cable, 3m pair bananas (£293), £140. Chord Chorus 2i/cs, 1m RCA (£280), £120, Chord Cadenza VEE i/cs, 1m RCA (£200), £100 or £325 for the Chord set. Audioquest CV-6 (with 32V/dBs battery) speaker cable, 10ft pair bananas (£400), £140, Audioquest King Cobrai/cs, 1m RCA(£215), £105, o.8m RCA (£95) or £295 for the Audioquest set. Van den Hul The First Ultimate 2 i/c, o.6m RCA (£250),£110). All VGC and in original packaging:

07772 711432 or email: richard.schofield@kcl.ac.uk (Bucks).

LEHMANNAUDIO

Rhinelander headphone amplifier, the critically acclaimed amp, only a few months old in perfect condition, complete with manual, £199: 01303 863424 (Kent).

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: **075011 30403 (Southampton).**

SPENDOR A5 compact column loudspeakers, black, unmarked, boxed, exquisite sound £1,100: 01952 728773 (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@nttworld.com

LINN LP12, fluted corner braced plinth, full Cirkus Upgrade, latest laminated Armboard and Lingo Power Supply. Fully loaded bearing with red cap so ready to go. In excellent condition with original boxes and internal packaging, together with set up instructions for the LP12 plus the Lingo manual. £765. Linn Ittok LVII Tonearm in very fine condition - only marks are on the headshell where the cartridge has been fitted. Bearings are beautifully smooth. Comes complete with accessories and Linn packaging. Serial number is 5021438. £450: 0121 7041188 or email: boballen@ sky.com (Solihull, West Mids).

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

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Focal

Spirit Classic headphones

HEADPHONES HAVE TAKEN

over the audio world for all but the cognoscenti (that's us, we know about sound). And the well established hi-fi brands have all been scrambling to get on the band wagon too, even brands that have previously not been involved with domestic audio are getting in on the act; I even saw some Marshall branded headphones in a Paul Smith store the other day!

Focal got its first headphone to market a couple of years ago, that was the Spirit, late last year it added two more models, the Spirit Pro and Spirit Classic. The latter is an audiophile version of the Classic with higher build and, its claimed, sound quality than the standard Spirit. The two models are very similar in appearance, but when you put them side by side the Classic looks positively deluxe with its leather padding and brushed aluminium metalwork. It also has larger and thus more comfortable ear pads and a pair of connecting cables in the box, one with an inline remote the other for home listening. The latter is a chunky OFC type and 4m long, so you don't have to sit right next to the source.

Beauty on the inside

Under the slick exterior it has matched 40mm drive units that employ Mylar cones with a titanium dome. As with the other Focal cans the Classic is a closed-back type. This may be designed for the audiophile, but Focal understands that even they leave the house once in while. I like the finish, which is described as hot chocolate metallic and I like the memory foam in the earpads and headband, it genuinely enhances long-term comfort and that's worth having in a headphone.

I start off listening with a Russ Andrews HP-1 headphone amplifier connected to a Resolution Audio Cantata in music streaming mode, out of interest I contrast the Classic with the standard Spirit headphone. The newer and more expensive model has a similar character, but greater clarity and a much more



distinct sense of timing, it offers up vocal inflections and tonal depth with considerable ease. The balance is still on the warm side, but this doesn't get in the way of the music and you can close your eyes and immerse yourself in the sound rather more easily than is possible with the base Spirit. The closed-back nature means that the soundstage is kept in your head and external noises are not so obtrusive. If you do all your listening at home, however, the more expansive sound of an open-back design might appeal.

The Classic is very involving with a good piece of music, Joni Mitchell's Free Man In Paris has plenty of verve and feeling with the excellent musicianship clear to enjoy. Out of interest I compare the Focal with the MartinLogan Mikros 90, this is a smaller on-ear design that has very clear mids and highs, but lacks warmth by contrast. It's a balance that emphasises detail and assists timing, but is less appealing overall. Back with the Classic and moving on to Cornelius' Fit Song it immediately becomes apparent that this tune had been written for headphones, the lively use of panning works superbly on the Focals, they are fast despite their relaxed presentation.

I also try this headphone with an AudioQuest Dragonfly DAC/ headphone amp, a USB stick-sized device that has a USB plug at one end and a 3.5mm headphone jack at the other. This proves to be a better tonal match to the Classic, it's clarity in the high frequencies making for a faster and more dynamic overall result that means chamber tracks like *La Folia* (Gregorio Paniagua) have a greater sense of space and there's plenty of tonal variety on offer from the early instruments.

That's the spirit

Using the same source with a MacBook Air laptop, I contrast the Classic with Bowers & Wilkins P7, this has greater clarity through the upper mid that benefits cymbals and seems to bring greater roundness to bass notes. The Focal, however, has the upper hand when it comes to pace, it sounds a little veiled, but this doesn't detract from its ability to reproduce the more interesting and engaging aspects of the music. Playing Weather Report's Birdland I home in on Jaco Pastorius' beautiful fretless bass and once again wonder what he would have been doing today if he were still alive.

The Spirit Classic is a headphone that's worthy of the Focal name, its closed-back nature makes it suitable for use on the move, but its resolution and timing with an effortless but musically arresting style mean it warrants your full attention in any environment. **JK**





Your listening room and a jet engine - what problem do they share?



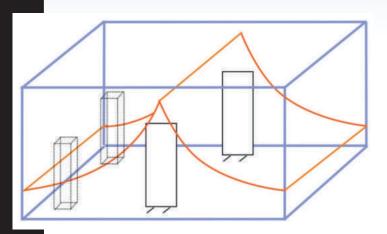
Both cause a lot of unwanted noise but they're treatable with thousands of carefully calculated holes.

In the Airbus jet engine the front compressor noise is cut down with a special micro-perforated lining for the air intake.

In your listening room "old" sound waves that slop from end to end, and side to side - like water in a fish tank that's moved - can be quietened in a similar way.

All the time you are listening the speakers project "new" sound into a space still filled with music from a few milliseconds before. New and old **intermodulate** and your room destroys an amazing amount of fine detail.

You are propagating "new" music signals into "old" air. Think of the interference between fresh waves that break on a beach and meet the previous retreating wave.



Air movement reaches peak **velocity** in the middle of the room (only end-to-end shown here) where the panels are most effective

The solution – When you energise the room with a music signal thousands of carefully-calculated micro-perforations in the **LeadingEdge** panels create turbulence as the air, slopping to and fro between walls, passes over their surfaces.

We hear air pressure changes as excess bass at the room boundaries, where the air is at zero particle velocity and maximum pressure change. It reaches maximum velocity (and zero pressure change!) in the centre of the room where the perforations create aerodynamic drag and the panels absorb this velocity energy into an internal honeycomb.

This principle of creating aerodynamic drag, that removes unwanted energy across the spectrum, is far more effective than using conventional foam-filled panels that work only at narrow frequency bands.

Significantly, drag increases with the square of the velocity – when the velocity doubles, the drag increases four times!

In this way, the LeadingEdge panels are "reactive" - the more unwanted energy bouncing round the room, the more effective they become.

Visitors to our rooms at shows this year were truly astonished as we played music and first covered then uncovered the panels.

There were spontaneous reactions like "Wow" and "That's amazing!"

Panels are available in different sizes and three standard finishes: Cherry, White, and Light Oak though almost any finish can be ordered to match décor.

Thousands of micro-

perforations create "aerodynamic drag" to absorb energy

But you say, "I couldn't possibly fit those into my living room." Perhaps not free-standing ones but had you considered they can be wall-mounted and become part of the room design, even a feature with a beautiful, rich veneer finish?

An ideal solution is to place panels on the ceiling, where

they absorb energy from all directions. In this room with 60% glass windows and hardwood floors the panels are a feature, with recessed lighting. The result is a quiet, comfortable room despite all those hard surfaces.



Customers say we make some of the best sounds in our studio they have ever heard, so you know we can do the same in your home. Our advice takes account of your best components and guides you where change is needed, in stages you can afford.

You avoid expensive mistakes, enjoy music and save money in the long run. Just listen and you'll know

CD: Accustic Arts, Bel Canto, dCS, Gamut, Resolution Audio, Vertex AQ dac-1. Vinyl: Aesthetix, Clearaudio, Graham, Spiral Groove, Transfiguration. Tuners: Magnum Dynalab. Amplifiers: Accustic Arts, Aesthetix, Bel Canto, CAT, Gamut, Sonneteer, Storm Audio, VTL. Loudspeakers: Avalon, Gamut, Kawero!, NEAT, Totem. Cables: Chord Co., DNM, Nordost, Siltech, Tellurium, VertexAQ. Mains: Aletheia, Vertex AQ. Supports: Arcici, Black Ravioli, Hi-Fi Racks, Leading Edge, Stands Unique, Vertex AQ

> www.rightnote.co.uk 01225 874728



Sony

NWZ-F886 portable media player

WHEN THE FIRST Walkman cassette player went on sale in 1979 I lusted after it almost as much as I did Debbie Harry. Then everything went digital and Sony forgot that the reason the Walkman sold so well was because it was the best player of a universal format. The first network Walkmans weren't compatible with MP3 files, but Sony changed tack and embraced MP3, and the Walkman re-emerged - as did Blondie - so that both enjoyed moderate success albeit, both a shadow of their former selves. Fast forward to today and the tide may look high for MP3, which is good news for audiophiles.

The NWZ-F886 joins a handful of other decent hi-res media players including Astell&Kern's AK120 (HFC 375) and the FiiO X3 (on test next month). Although called a Network Walkman, it feels like a smartphone stripped of its telephony, like an iPod Touch compared with an iPhone. It runs on version 4.1 (aka Jelly Bean) of Google's Android operating system and offers compatibility with WAV, AIFF, FLAC and ALAC files up to 24-bit/192kHz as well as sporting an S-Master HX digital amplifier, which Sony claims will reduce noise and distortion and is optimised for HD tracks. Lower bit-rate files are boosted by so-called Digital Sound Enhancement Engine (DSEE) HX technology. Another nice digital trick is built-in noise reduction that (only) works with the supplied in-ear headphones.

Thanks for the memory

There are 32GB of built-in flash memory, which provides enough capacity for around 180 tracks of approx four minutes duration each at 24/192. Drop that to 96kHz and the capacity rises to 350. Up against the first cassette Walkman in terms of quality and quantity it is like a Lindt Lindor factory compared with a Nestle Milkybar.

Battery life takes a hi-res hit, diminishing from a claimed 35 hours for MP3 files to approximately





26 hours with 24-bit/96kHz files. The energy-sapping, 4in screen at least switches off within a minute of inactivity and basic operation is still possible using the play/pause, FF, RW and volume buttons along one of the Walkman's 8mm-wide edges. To copy music over from a computer you hook up the player via USB and run the supplied software. Using a Mac this is a simple process that lets you drag and drop from within iTunes.

All tracks then appear in various folders in the Music app on the Walkman's home screen as songs, playlists, albums etc. Select a song and you can swipe left to see comprehensive metadata including bit-rate, bit depth and sampling rate. The screen's 854 x 480-pixel resolution isn't as detailed as an iPhone 5, but is nonetheless sparklingly clear and reasonably responsive. Operation involves a lot of icon pressing and some are so small it's sometimes possible to accidentally select the wrong one.

Getting down to the nitty gritty, the NWZ-F886 does a superb job sonically with the supplied earphones. With the EQ set flat, Claire Martin's 24/192 I'm Gonna Laugh You Right Out Of My Life is detailed and smoother than an otter in Speedos. The tonality is neither bright nor warm, but totally neutral with Martin's spine-chillingly husky vocals

combining sumptuously with Richard Rodney Bennett's deftly tinkled ivories. The electric guitar in Meshell Ndegeocello's 24/96 Please Don't Let Me Be Misunderstood shimmers sublimely, perfectly complimenting the haunting keyboards and seductive vocals.

Hi res-tafarian

The utterly familiar sound of Bob Marley singing *Could You Be Loved* is proof of how beneficial hi-res audio is to portable music, the 24/96 download from Linn is a simple blend of percussion, guitar and haunting vocals that reveals a rhythm and energy that makes the MP3 version sound utterly flat and unengaging. I make the mistake of trying the ClearAudio+ option, which supposedly widens the stereo and boosts lows and highs. The result is an excessive thud to the bass, which niggles uncomfortably.

Switching to standard resolution there's no hiding the drop off in clarity, with *I Miss The Tokyo Skyline* by the Manic Street Preachers simply not yielding as much detail. Still, standard-resolution stuff is on a par with an Apple iPhone 5.

I'm not a huge fan of the Sony's fiddly operating system and the capacity is an annoyance, but both are forgivable in the face of such awesomely good performance. **AJ**

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SNAKE RIVER AUDIO CABLES

"All I can say is that I'm deeply impressed with these Signature SRA cables, and would certainly use them myself. They're among the most naturalsounding and 'musical' cables I've ever listened to:" Jimmy Hughes.

PURIST AUDIO DESIGN CABLES

"These are good cables. So good in fact, I started this review thinking they were the Proteus Provectus that cost ten times as much as the Genesis cables." Alan Sircom.

Analysis Plus, Voodoo Reference, Townshend Audio, Stealth Audio are just some of our Hi End Cable Brands that take your system to a new level. We also supply an impressive range of electronics from companies such as; Electrocompaniet, Astin Trew, Townshend, Bel Canto and Usher Audio, to name but a few.

So for free advice, great products and a service that aims to put the emotion back into your music, why not call us at Mackenzie Hi Fi on 07905 362545 or check out the website www.mackenziehifi.com



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Crystal Acoustics

MIC-30 in-ear headphones

A RELATIVELY NEW addition to the range of high-quality in-ear headphones from Crystal Acoustics are the MIC-30s, which are aimed at Android users. Like the rest of Crystal Acoustics new range, the MIC-30s are targeting consumers who are looking for a cost-effective headphone upgrade to complement their smartphone or tablet. The MIC-30 come packed with a selection of five different sizes of soft silicon ear tips and a sturdy zip-up portable case for storage. These eartips include ones with double and triple stage isolation, which helps reduce interference from extraneous external sounds. The choice of size will affect the bass response in particular, as well as comfort, so a little trial and error testing will be required.

Like other earphones in the range, the MIC-30 features a high-quality

aluminium construction, a hands-free microphone and a triple-button remote control, which will control an Android smartphone. The earphones are fitted with an elegant and sturdy 1.2m flat cable to avoid kinks and annoying tangles that are common to earphone cables. This flat cable works well and you simply have to give them a shake and their ready for use.

Testing testing, 123

During testing, I discover that the centre button on the remote is used to pause and play the music on my Android smartphone. Additionally, by pressing the button twice, you can skip to the next track.

In use, the 7mm drivers produce an open and detailed sound that is not harsh or unpleasant. As with most in-ear headphones, the bass is not very extended, but is nevertheless pleasant and careful placement of the



earphones in your ears results in a very acceptable sound. The imaging is very good as well, with instruments spread out evenly and not sounding constrained between your ears. The midrange is warm and vocals are very clear and easy to listen to. Overall, the lovely treble and clean midrange deliver all the emotion and detail you could hope for at the price. NR

DETAILS PRICE £20 020 81337066 crystalaudiovideo.

OUR VERDICT ****

Russ Andrews

PowerBlock & UltraPurifierBlock with UltraSockets



DETAILS

PowerBlock: £695, **UltraPurifierBlock** with UltraSockets:

CONTACT 01539 797300 russandrews.com

OUR VERDICT ****

UltraPurifierBlock ranges of mains extensions are fitted with MegaClamp spike protection and come with a variety of options, including built-in mains conditioners and high-quality 13A UK mains sockets. The sockets are upside-down relative to the conventional orientation of a UK mains plug, making it easy to plug in hanging mains leads. For the mains input, the Blocks are fitted with a 16A IEC socket, allowing you to choose your own cable for connection to the wall socket. They also have a 16A IEC outlet to allow for a second Block to be daisy chained if required.

BOTH THE POWERBLOCK and

Standard PowerBlocks are fitted with high-quality MK sockets that are treated with DeoxIT contact enhancer, but the two here are fitted with UltraSockets, which use very high

pressure contacts that have also been treated with DeoxIT. The difference between the two PowerBlocks is that the UltraPurifierBlock also features a parallel mains filter designed to produce in excess of 80dB of mains noise reduction. Additionally, the filter components in this unit help to reduce any imbalance in the mains supply caused by other kit.

Socket to me

The UltraSockets are beautifully made and clamp the mains plugs well. They are worthy of the extra cost over the standard MK socket. The socket shutters slide effortlessly away when the earth pin is inserted, which reflects the quality of these sockets.

But the greatest improvements are evident with the UltraPurifierBlocks. I also have an UltraPurifierBlock fitted

with standard sockets, against which I am able to compare the two new UltraSocket versions. When testing, both of the UltraPurifierBlocks that include the parallel mains filter demonstrate a noticeable improvement. As well as eliminating clicks and pops from mains-borne interference, the UltraPurifierBlocks also push the noise floor down, resulting in a cleaner and more pure sound compared to a standard mains extension block.

Both PowerBlocks are top quality, but if it is within your budget, the UltraPurifierBlock is most definitely the way to go! NR







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ResonessenceHerus headphone DAC

GIVEN THAT MANY people use their PCs or Macs for playing music, inquisitive minds may be wondering why there are not more products like this dinky little USB-powered headphone DAC. It is a small, beautifully finished device that plugs into your USB socket, whereupon it practically takes over its audio activities. Using asynchronous USB protocol, it reclocks the digital audio datastream to its very precise built-in ticker, and then grabs it out, converts it to analogue and amplifies enough to be used by a decent pair of hi-fi headphones. Effectively then, it turns your PC into a pretty serious way of playing back high-quality digital audio although you will ideally also need a good software player to get the best

Herus is a Latin word for master or lord, indicating the manufacturer's view of it as a no holds barred, top quality headphone DAC. The build quality certainly reinforces such an impression - the few similar devices I've tried in the past have all come in plastic boxes that appear to have come from the RadioSpares catalogue, but this is a thick chunk of (63 x 32 x 19mm) alloy that's been hollowed out to house the electronics and socketry. For once, here's a portable headphone amp that ergonomically and aesthetically doesn't disgrace a serious computer and headphone combination.

from it, such as JRiver or Audirvana.

Jack of all trades

The presence of a 6.35mm jack shows this isn't designed for babies; only large, hard-to-drive hi-fi headphones need apply! On the other end, a USB 'B' socket links to your computer and powers the Herus. In addition to PCM at up to 24/352.8, the unit also supports DSD64 and DSD128. The company claims it can put out 2.4V RMS into headphones from 600ohms to 32ohms, which is a healthy amount; I don't have any problems getting decent and stable volume levels with the tricky load that is the Philips Fidelio L2. Inside is an





ES9010 2M DAC chipset that works natively on Mac, and via the Thesycon USB 2.0 Audio driver for Windows. This is said to run Resonessence's own custom code and Asynchronous algorithms in the Cypress USB interface chip.

One clever trick is the 32-bit volume control; proprietary digital volume controls can be nasty, but the company has taken the trouble to do its own. On connection to the computer, Herus will register itself as being able to control the volume internally, with the playback software sending control commands to the ESS 9010-2M DAC chip. This works perfectly with Audirvana.

Despite its small dimensions, it manages to produce high sound levels into all the headphones I try it with and absolutely no sense of strain with any of them. But this isn't the sole benefit of this little box, as it is the sense of assuredness and quiet confidence that it gives to all types of music, that really makes it worthwhile. Even at lower volumes, you notice how this little widget adds weight to the bass. For example, bass guitar notes on The Specials' Gangsters are firmer and deeper, and don't have the breathless quality that you get from the stock MacBook Pro sound system. But that doesn't mean the Herus slows them down, or adds any undue inertia; rather, they're

super supple and bouncy, and that makes the song romp along.

Across the midband, we get a very clean digital sound; it doesn't seem warm and sumptuous, but by the same token there's apparently vanishingly low distortion - the result being that we get a wide and squeaky-clean window on to the soundstage. Paul McCartney's Band on the Run at 24/96 is conveyed with crispness and clarity, without an ounce of grain or grit. The Herus gives a finely etched and subtle sound, stripped of the digital 'mush' that you get with stock computer soundcards. This extends right up to the high treble, which is smooth, sparkly and atmospheric – turning your computer into something that sounds really special.

What's the catch?

The only downside is the price, which adds a healthy chunk of money to any headphone playback system, let alone a computer one. £299 buys you some respectable phones and for the Herus to pay its way you really need to be using top-notch cans; its benefits will be lost to a £50 pair. If you have the funds this gets a firm thumbs up – and who knows, maybe one day they can dream up a cheaper model without the niche DSD compatibility to give it mass appeal. **DP**



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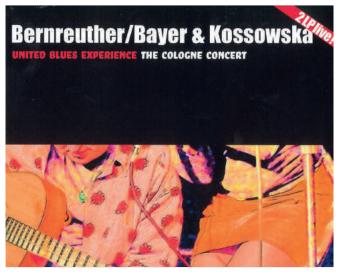
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Roth Audio OLi RA2 speakers

AT WHAT POINT does a revision become a completely new range? That's the question posed by Roth Audio's OLi speaker lineup. The new 'RA' models are visually almost completely different to the older OLi speakers and you have to look fairly closely to see that certain features like the woven mid bass drivers and soft dome tweeters have been carried over – albeit with a new black finish – from the older models. This compliments the new black finish of the range, which is pleasantly contemporary.

The RA2s are the larger of two standmounts in the range and are built around a 5.25in mid bass driver and a 1in soft dome tweeter. The real story is what has been done to gel these drivers together. The range has been voiced by Richard Allen, formally of EB Acoustics and Arkaydis and has been designed with a view to working at their best when close to walls - a logical enough decision given their small size and real-world pricing. This voicing also means that the RA2s are amenable to being wall mounted, which the rear panel is fitted for and in an unexpected piece of generosity, Roth also provides the wall mounts for this.

Back to black

The appearance of the RA2s is minimalist, but none the worse for it. Although there is a great deal of black going on with the overall design, the Roths manage to avoid looking too austere. The matt finish (that might more positively be described as 'satin') is fairly contemporary and looks smarter than the 'wood' that some rivals have to endure. These are also probably the least expensive speakers I've seen to use magnetic tabs to hold the grille in place. They come across as reasonably well assembled and the cabinet seems to be fairly well damped, but it does feel a little lightweight and it is probably just as well that the RA2s are supplied with adhesive rubber feet as they can be moved around on the stand by some of the more



OUR VERDICT



robust types of speaker cables if you don't use them. The terminals are usefully substantial, though.

Connected to a Naim Supernait 2 to act as an absolute reference, the RA2s show some interesting and likeable qualities from the outset. The first is that the voicing allows for placement right up against a wall if required. The rear port doesn't seem to be in any way affected by the proximity to the wall, which augers well for the wall mounts. Part of this ability is down to the fact that the RA2s aren't the weightiest performer going. Roth makes no bold claims about a lower frequency response and puts them at 65Hz, which means that these aren't the speakers to rearrange your internal organs, although the effect on placement is very positive.

The Roths also manage to overcome the lightweight low end because the rest of the frequency response is extremely well integrated and manages to balance good detail retrieval with sufficient refinement to avoid coming across as thin or bright. Turn All Memory To White Noise by Laki Mera is well handled and the Roths manage to unpick the densely layered sound into a cohesive and easy to follow performance. The handling of more traditional vocals is good too. Terry Callier's What Colour Is Love? Is rich and believable with impressive presence to it. Across a

wide variety of music, the Roths manage to sound lively and engaging – conveying the musical message in a way that overcomes some of their on-paper limitations.

Know your limits

The small size of the Roths does have some limitations on the soundstage. Even with a degree of toe in, they don't completely fill the gap between them and even compared to some speakers at the same price point they can seem a little constrained if used in a larger room. This is partly down to the limited sensitivity of the design, which means they do prefer a reasonable amount of power. For desktop use or other near field applications, though, this is less likely to be an issue and the engagement and musicality generally wins out.

The result is speakers that balance a sensible asking price, combining decent build and appearance with a performance that is usually enjoyable and well balanced. Spending more money will allow you to reap a higher level of performance, particularly in terms of the bass extension and the soundstage available to you, but for the very reasonable asking price these are capable little speakers that warrant an audition. **ES**





QNKTC

AB-1.2 USB DAC

THIS CATCHILY ENTITLED

'Quantisation Noise Killed The Cat' DAC is the hardware embodiment of an open-source Audio Widget project, started by a group of tech geeks who wanted to make an excellent, but affordable way to play hi-res files. The Norwegian designer Børge Strand-Bergesen assures people that it has nothing to do with eighties fop popsters Curiosity Killed The Cat!

It's interesting then, inasmuch as it is a hi-fi product that has its roots in the computer world. We're seeing this more, as mainstream audio gets progressively more 'digital' and music itself gets ever closer to computers in the way that it is sold.

The AB-1.2 USB has the third version of the analogue board, and plays hi-res audio (up to 24/192) from Windows, Linux and OS X computers. Inside are good basic building blocks for a budget DAC - the very respectable Asahi Kasei AKM4430 DAC (the excellent £3,650 LongDog DAC - HFC 377 – uses similar), Golledge crystal oscillators running at $\tilde{22.5792}$ and 24.576MHz (giving multiples of 44.1 and 48kHz), and an Atmel AVR32 general-purpose MCU programmed in open source C. Rather like the Raspberry Pi PC, this DAC has been designed with experimentation in mind, so you're effectively buying a whole world of fun if you're that way inclined!

You got the look

It's very nicely finished, considering the modest £110 price. A single LED tells you it's on, and round the back you get decent quality gold-plated phono sockets, but they're a little recessed - which may present problems with chunky RCA plugs. The unit is powered from the computer's USB feed, which isn't ideal, but the maker says there is the option of modifying the power supply. Oh, and you bring your own USB cable; it needs to be USB 2.0 mini-B type. It has built-in drivers for USB Audio Class 1 mode (UAC1, up to 24/48), but if you want the full 24/192 smash (in UAC2) then



you'll have to download drivers for Windows; Mac and Linux are supported. The LED glows green for UAC1, red for UAC2, and there's a rear switch to toggle between modes.

Hooked up to a MacBook Pro running the latest version of Audirvana and feeding a Creek Destiny 2 and MAD MyClapton speakers, the QNKTC makes a surprisingly nice noise. With a product of unknown provenance such as this, I am expecting the grinding, searing sound of cheap components remorselessly nailing themselves to my cranium, as I bravely try to endure a few minutes of music before retreating to the kitchen for glass of water and an Aspirin. Actually, things couldn't be more different, as I find myself rather mesmerised by Art of Noise's beautiful Moments In Love. There's no point getting a hi-res version of this, as it was recorded on a mid-eighties Sony digital recorder running at 44.056kHz, but you wouldn't know it. The sound is best described as clean - but not in a sterile, antiseptic way. Rather, it is smooth, spacious and well textured, and this is completely unexpected given its very modest price.

Compared to the Audiolab M-DAC (at almost six times the price, *HFC* 368), there's a slight lack of low-level detail and it doesn't give you the last few percent of the song's dynamics.

But on the other hand, the Audiolab doesn't quite have the tonal smoothness and sweetness; in an attempt to render every last bit of data off the file, it sometimes sounds more gravelly than the rather suave QNKTC. Still, Herbie Hancock's Rock It at 24/96 shows that the Norwegian DAC is tonally quite 'well lit'; it's never harsh, but you get the sense of a crisp autumn morning with brilliant sunshine throwing everything into sharp relief. If you match it with forward ancillaries, it's not going to sound as balanced as the bassier, punchier Audiolab.

Contrast and compare

Compared to the likes of Musical Fidelity's V90-DAC (HFC 374, £199), the QNKTC stands up very well; if anything it is more open and less processed sounding, with a nice fluid rhythmic gait and a sense that it steps back from the music, letting it flow through your computer and out to your speakers. Again, it's not a completely comparable product, as it doesn't have coaxial or optical digital inputs; the MF is a more versatile, jack-of-all-trades. Overall then, if USB is your only game in town and you're on a tight budget, the QNKTC DAC is an excellent product to consider – a perfect example of how tweakiness and geekiness can raise hi-fi's game. DP

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Sonos

Play:1 wireless speaker

FOR NEARLY 10 years Sonos has been synonymous with wireless audio. The US-based company believes in a world without wires (speaker wires at least), selling a range of active speakers that are designed for multi-room and home cinema use. The Play:1 joins the larger Play:3 and Play:5 models, as Sonos' smallest and most affordable speaker yet.

Relatively affordable it may be, but the Play:1 remains a premium priced product for a wireless speaker, especially if (as it ought to be) stereo is a priority and you want a second unit to form a pair. And then there's the additional cost of the Sonos Bridge, a small unit with an Ethernet input that can connect wirelessly to the Play:1. This is required if you want to cut out the Ethernet connection from the speaker to the router. The Bridge costs £39, but at least if you take the alternative wired option only one speaker has to be hooked up to the router by cable, the second one in a pair (or more) can connect wirelessly to the first.

At 16cm high,12cm across and weighing under 2kg the Play:1 is compact enough to easily move from place to place, but it requires mains power so isn't really intended for carrying around the house. In fact, the Sonos ecosystem positively encourages you to buy multiple speakers for use in different rooms. The number of speakers you can connect to a Bridge is limited by the bandwidth and range of your router, and Sonos says you can easily have a dozen or so Play speakers scattered around your mansion.

Play away

The Play:1 has been designed from the bench up, with new drive units and carefully matched amplification (although power output claims are never given). A new motor design allows the mid/woofer to throw an extra 7mm, resulting in a total extrusion of 14mm (double the typical extrusion). The same driver is used on the tweeter, which can handle lower frequencies than a





normal tweeter, so that the crossover is 1.8kHz instead of 3.5 to 4kHz. Sonos claims that in addition to deep bass this lower cross-over benefits off-axis performance.

The speakers are available with either a white or black lid and despite lacking visual excitement there's no denying their build quality. At the rear is an Ethernet jack, on top are a play/pause button and volume rockers. Most of the time you can simply use the Sonos Control app on a smartphone, tablet, Mac or PC.

Set up is a straightforward process, with the app automatically seeking the speaker and configuring it. The app has been improved so that you can change locations (eg from home to office) without the need to reset the controller. It also integrates nicely with online subscription services such as Spotify, Deezer, Napster, Last.fm, Rdio and NAS drives. Even Amazon Cloud Player works brilliantly. Sonos Favourites lets you quickly access internet radio stations, artists and playlists from subscription services, but not from the music library stored on the playback device (eg iPhone 5).

Another refinement introduced on the Play:1 is that the play button lets you walk through your front door, press play and the speaker(s) instantly resume playing whatever song was in the playlist when you left home. Quickly double pressing the button advances the playlist to the next track. Sonos spent a lot time working on the responsiveness of the player so that a portion of each song in the queue is cached for instantaneous playback, which then transitions to the live stream.

Play time

Sonically, the stereo pair really belt out the bass, for example with Rodriguez's I Wonder and Public Service Broadcasting's Spitfire. For some, the low-end output may be too much, although mids and trebles are still delivered with impressive clarity - Demis Roussos' operatic vocals in the Four Horseman by Aphrodite's Child effortlessly fill my Victorian terraced living room. Sound dispersion is good too, with the twinkling chimes seeming to flutter down from above. Crank the volume right up and despite an impressive lack of distortion the sound feels oppressive and soon becomes tiring, especially the higher frequencies. Sonos will playback lossless compressed hi-res FLAC and ALAC files, but not uncompressed AIFF and WAVs.

Sonos has certainly delivered in terms of bass and the overall sound is mightily impressive for the size. A single speaker is much harder to recommend than a pair, even for use in a small to medium sized room. **AJ**

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Discover IsoTek

Nine Audio Vega headphones

OF COURSE, WHAT we've all been waiting for here in the hi-fi world is another pair of budget headphones, isn't it? Pardon the cynicism; it's just that all the trade information organisations are telling us that the world has gone bonkers for them and so a number of manufacturers have jumped on the bandwagon. Right now, sales in this sector are so strong that it's not a case of if a brand is going to do headphones, it is when!

The market leader, just in case you hadn't noticed is Beats. Dr Dre seems to have captured the pulse of the audio buying public. He has managed to do what only very few others do, which is sell a good product for the price of a truly great one. This leaves a space for equally 'good', but cheaper products to come in, basking in the reflected glory of the lead brand, in the hope of hoovering up some of the sales.

This pretty much describes these Nine Audio cans. Indeed, you'd think the people behind this new name had its eyes on this very prize, as these headphones aren't dramatically dissimilar in general design, aesthetics, build quality or indeed sound. Rather, it is the price that's a key differentiating factor - as you can buy an iPod nano with the change you'll save compared to the Beats! For £60, they're well put together - nothing remarkable, but far less fragile feeling than many. My only caveat is that the black polished plastic earcups may not remain in their original pristine state as long as you may wish; for this reason the white and red option may be the one to go for, as it won't show scratches as easily.

Gonna make you sweat

The earcups get the usual vinyl-covered foam padding, it's a little sweaty with extended listening, but you can pay £750 for a pair of Stax and have the same problem. The connecting cord feels slightly rubberised, so it doesn't make – and feed in – nasty noises to the headphones themselves. It has the usual iPod remote button and





microphone built in, and gold-plated 3.5mm minijacks either end. The headphones themselves have two minijack sockets, which means you can plug the cables in to either the left or the right side – a jolly nice touch for any southpaws.

The 40mm drivers are said to be 'custom engineered', and sport the usual neodymium magnets, and appear mounted in closed enclosures. This gives what Nine Audio calls "passive noise isolation", which is true enough, but it also means the headphones should have a tighter, tauter bass, at the expense of a little bit of efficiency. Quoted sensitivity is 110dB and impedance is 32ohms; overall frequency response is put at 100Hz to 10kHz. I find the Vegas fairly easily driven by a range of devices, including an iPod nano and iPad - although for hi-fi use a decent headphone amplifier is no bad thing.

Given the slightly plasticky feel and the out-of-nowhere nature of this new brand, I didn't hold out high hopes for the sonics. But as it transpires, they sound really rather good for the price. Although I wouldn't have them above any decent £300 design, I've heard several £150 phones that don't really do better. The Vegas have an enjoyably honest and direct sound that is fun to listen to and doesn't offer up any obvious unpleasant vices. Its sins are more those of omission, rather than those of adding unpleasant sibilance or grain. The

result is cheap and cheerful with a satisfying sound.

Serious headphone types will never regard these as satisfactory, but then they're likely to be using £800 Sennheisers or suchlike. In absolute terms, treble is a little veiled – as the specs show it rolls off quite early - and is a little unsophisticated too in absolute terms, but again it's inoffensive and that's the main thing at this price. The midband is nice and energetic, with decent detailing and a genuinely bouncy and rhythmic gait devoid of hardness or grain. Bass is big and animated, without overpowering. When She Smiles by Plantlife bounces along with the percussion syncopating nicely with the keyboard work and vocals.

Vegas baby!

Overall then, the Vega is ideal for portable work – it's pretty obvious that it has been designed to sit on the end of a smartphone and/or iDevice and this is where it shines. In this role, it has a sound that's just as good as trendier branded products that cost an arm and a leg. And yes, it also partners a budget hi-fi system or all-in-one nicely, showing an instinctive love of music. Offering very good sound per pound, it's well worth considering if you can handle the shame of wearing headphones that don't have the brand-of-the-year written all over them! DP



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HiFi World, July 2013





Andrew Simpson casts his expert eye over his pick of the best hi-fi websites and online content



PRIMARE GETS PREENED

As a doyen of chic Scandinavian audio, Primare has been flying Sweden's hi-fi flag for decades with its sleek, minimalist separates. So it's only fitting that its website got a makeover to give it a look and feel more in keeping with its hardware.

What's nice about the site is how its content is focussed on quality, not quantity. Pages of marketing jargon are thankfully absent and

Folded Motion Tweeter Technology - MartinLogan

Flemming Johannsen. "Our digital strategy includes launching short video clips of

product presentations and features from

partners around the globe, along with

software updates and more." A peek at

Primare's YouTube channels shows that this

is already underway via a step-by-step video

guide to updating its amplifier and streamer

firmware. Producers of lengthy text guides

should take note at youtu.be/v8x-VQ4r5Ts.

So far so good, but what about



NEW TIDE FOR JRIVER

Due to its lack of FLAC support and its inherent issues when trying to pipe a 'clean' audio signal out from a Window's based PC, iTunes isn't the music software of choice for many hi-fi fans.

Step forward JRiver Media Center with its user-friendly interface allowing you to store, interrogate and output music unfettered by your PC. JRiver recently released a wealth of updates as part of its MC19 software, including real-time DSD output, volume levelling and enhanced audio analysis tools. There's also a stable version for Mac with a Linux version in development.

For a one-off \$50 payment, JRiver is great value when you consider how it turns your PC into a serious hi-fi source. You can download a month's free trial and pre-MC19 software can be upgraded for \$27.

TWEETER TUTORIAL

As we audiophiles know, tweeters come in many forms outside of regular dome types. MarginLogan has been breaking the speaker-making mould for over 30 years with its range of electrostatic hybrids, more recently the company has applied its knowhow to develop its new thin film 'Folded Motion' tweeters, which are designed to work within more traditional cabinet shapes. To help you get to grips with how this accordion-like tech works, ML has posted a brilliant short explanatory film on its YouTube channel, complete with dynamic diagrams and interviews.

Want to know more about the different types of tweeters but too afraid to ask? Fear not as Wikipedia has a page dedicated to the many varieties used in modern speakers at en.wikipedia.org/wiki/Tweeter.

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Photos from GrandPrix Shanghai International Audio Show 2013 in China bit.

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CUSTOM-CABLE (@TALKCUSTOMCABLE)

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PERREAUX AUDIO (@PERREAUXAUDIO) Have you got your first reflection points

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THE SOUND GALLERY (@THESOUNDGALLERY)

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Cold weather getting you down? Just add

#24hoursofhappy - Pharrell Williams has posted the first ever 24hr music video 24hoursofhappy.com

CHATTER



Christmas came early with Linn Record's 24-Bits of Christmas giveaway. Each December day, Linn released a free 24-bit

studio master track for users to download in a 24 hour period, an audiophile advent calendar. See what was on offer at linn.co.uk/ christmas.

Transcriptors has been tweeting some stunning pics of its soon to be released T6 turntable in recent months, alongside past landmark products. Follow @Transcriptors.

Thinking of investing in a Rega deck, DAC or speakers with your left over Christmas beer vouchers? Explore Rega's products via a selection of videos on The Sound Organisation's YouTube channel: youtube.com/ The Sound organisation



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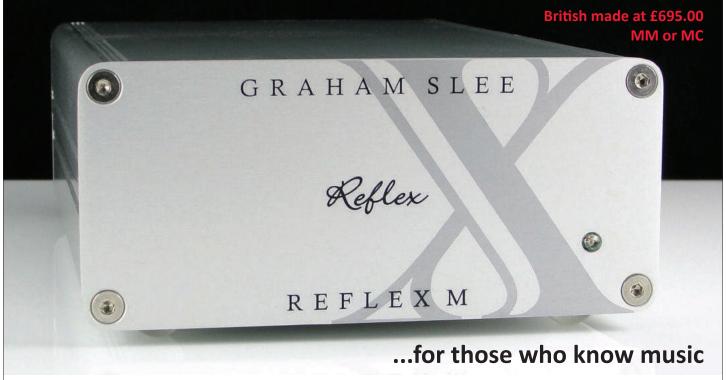
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HEAD TURNERS



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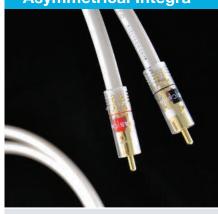
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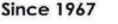
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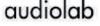
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WE HEAR...

REMEMBER NYTECH? READERS OF A CERTAIN age will. It was a quirky, eccentric and really rather innovative Bristolbased company that made some truly special-sounding transistor amplifiers and receivers in the seventies and eighties. It is commonly known that some of the company's DNA 'seeped' into Heed Audio products, but our spies tell us that other Nytech genes are now about to resurface in a new range of electronics, to be debuted at the forthcoming Bristol Hi-Fi Show (21-23 February). If true - and our research suggests that it very much is - this should spice up the British specialist hi-fi sector good and proper. The West Country awaits ...

THE HEADPHONE WORLD IS NOW AN EVEN larger place, after the recent launch of JBL's new Synchros S700. Made from light diecast aluminium, woven cordura and steel, and trimmed in leather, it is a feature-packed design in the modern idiom with iDevice connectivity and active DSP to provide a powerful sound. Look out for a review soon.

ANOTHER EIGHTIES NAME THAT MEANS A LOT to audiophiles of a certain age is Claymore. The Inca Tech amplifier, designed by Colin Wonfor, was one of the least solid state-sounding devices of its day, at a time when the fashion was for screechy, forward-sounding black boxes. The Claymore is back, but this time under the Tellurium Q brand the company for which Colin designs. We hear he's put his heart and soul into this neat full Class A amplifier, which shares nothing with the original amplifier apart from parentage. It's a bit more expensive than the original though, reputed to be selling for just over £3,000. It should be good, but you'll be able to find out if it lives up to expectations in next month's Hi-Fi Choice.

THROUGH THE PAST, SMARTLY...



HI-FI CHOICE ISSUE 55 FEBRUARY 1988

Back in the early days of HFC, when editor Paul Messenger decided to do a roundup of turntables and tonearms he really didn't mess around. The result was a whopping great 44 pages dedicated to

some 49 turntables and 25 tonearms. As impressive as this seems, Paul was still not happy and used his intro page to have a pop at those manufacturers too slack to get their kit into the office in time to participate. Meanwhile, some smaller manufacturers opted not to provide a review sample of their pride and joy for fear that: "A favourable review could create embarrassing demand" that they would not be able to cope with. There was also the rather thorny issue of the Automation Sciences Pierre Lurné turntable that was "blown up"...

This being a leap year, we had an extra day to endure Kylie Minogue sitting at the top of the UK pop charts with her worldwide breakthrough hit İ Should Be So Lucky. A tune of choice for audiophiles and teenyboppers alike, it was the only event of significance apart from the Winter Olympics in Calgary. Both left us feeling cold...



HI-FI CHOICE ISSUE 163 FEBRUARY 1997

Jump forward nine years and editor Stan Vincent has swapped the turntable group test for a roundup of CD players. While not pulling in quite as many as Paul Messenger, an impressive 20 decks is certainly not to be

sniffed at. With prices ranging from £139 to £3,290 Stan saw the purpose of the test as: "An attempt to answer the eternal question... Is hi-fi really worth that much money?" The answer will come as no real surprise to regular readers, as Stan pointed out: "Regrettably, the answer is, it may be, but our findings indicate that a high price is no guarantee of quality. All you can be sure of is something that looks big, metallic and macho..."

Neither big, metallic or macho, the first ever

adult sheep to be cloned - the infamous Dolly was unveiled to the world by scientists in Roslin, Scotland. Meanwhile across the pond, the Spice Girls became the first British female group to have a US number one with their debut single, David Bowie was given a star on the Walk of Fame in Hollywood and Michael Jackson's first son was born. His name, Michael Jackson JR...



DESERT ISLAND DISCS

This month **James Luce** from Acoustic Energy chooses four of his favourite long players...



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recording of grungy

Southern rock



JOAN ARMATRADING THE VERY BEST O While trying to avoid compilations, this wonderfully wellrecorded, varied and at times soulful collection has been amongst my test discs forever!



THE CURE

GREATEST HITS (ACOUSTIC) This acoustic version has a lovely intimate yet dynamic quality to it. I know, it's another compilation!



GUNS 'N' ROSES APPETITE FOR DESTRUCTION Hearing (and feeling) the kick drum on the opening of Paradise City on a huge system is probably what first got me into hi-fi.



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Distributed in the UK by Seymour Distribution Ltd.



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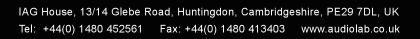
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