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WELCOME...

SCHOICE AUGUST 2009 ISSUE 322

Future Publishing Ltd, 2 Balcombe Street, London NW1 6NW 2 +44 (0)20 7042 4000



I've just got back from an action-packed Munich show, which I'm happily prepared to admit was the best one to date. Open, light and airy (apart from the oppressive tobacco smoke!) the MOC venue is a great place to showcase high-end hi-fi, making the antiquated practice of shoe-horning the stuff into smelly hotel rooms seem just as ridiculous as it is. Lets hope for change.

With lots of budget airlines flying over to Munich and a good train service from the airport, attending this increasingly important show is straightforward and affordable, and then there's the beer... The sheer amount of new product launches, key movers and shakers in attendance and the audiophile eyecandy, means I can warmly recommend it for 2010.

Dan George Editor

WHY WE ARE NO.1 FOR HI-FI...

- Since 1975, Hi-Fi Choice has delivered the world's most thorough, most reliable no-nonsense guide to buying high-performance hi-fi.
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A former Hi-Fi Choice editor, Paul has been writing about his beloved hi-fi hobby for more than 30 years. In that time he has become one of the world's most respected scribes, and he is undoubtedly the UK's foremost loudspeaker reviewer.



JIMMY HUGHES

With more than 40 years as an enthusiast under his belt, Jimmy is one of the country's best-known hi-fi experts. His knowledge of system-matching, hi-fi-tweaking and record-collecting is unmatched in the industry.



RICHARD BLACK

Richard is a professional musician and recording engineer and a highly knowledgeable hi-fi analyst to boot. He has a knack for writing about complicated subjects in a readable way – and he only writes for *Hi-Fi Choice*.



MALCOLM **STEWARD**

Former editor of Hi-Fi Review magazine, Malcolm was one of the best-known and most outspoken reviewers of the 1980s and 1990s. He currently edits hi-fi industry bible The British Audio Journal and also writes exclusively for Hi-Fi Choice.



ALVIN GOLD

Alvin has been writing about his obsession for more than 25 years. In that time he has contributed his encyclopedic knowledge to almost every hi-fi periodical you can think of (and several more besides). He is widely regarded as one of Britain's finest hi-fi reviewers.



JASON KENNEDY

Jason Kennedy was a former editor of Hi-Fi Choice and spent an incredible 17 years on the title. Now he's back as HFC's Operations Editor, ensuring that things run smoothly whilst continuing to review and contribute to the UK's best hi-fi title.



DOMINIC TODD

A highly experienced journalist, Dominic's sharp ears and retail experience are a valuable mix for Hi-Fi Choice. Each month, Dom dispenses priceless second-hand buying advice that will save you time, money and a lot of legwork.

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😸 Limited Edition: 30th Anniversary Digital Masterpiece...



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

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NR1

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PB1i

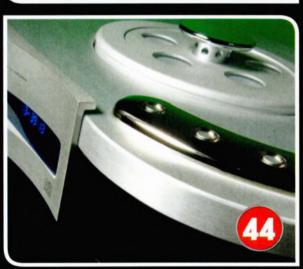
The impact, dynamics and sheer scale of the latest addition to the award winning series is breathtaking. Those looking for razor sharp imaging and a gripping presentation in a slim line aspect should look no further than the PBII



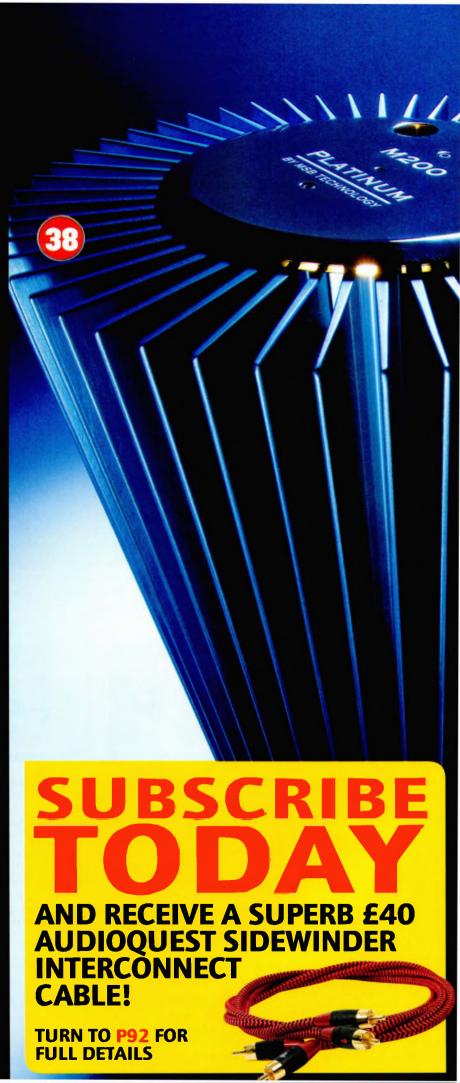
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Chris Martens The Absolute Sound 2007 Editors Choice Awards

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Ag-12 (DIN/RCA)



Ag-12-L(L-DIN/RCA)



Ag-12-R4 (RCA/RCA)





"I don' t know if the Furutech Ag-12 is the best phono cable on the market, but it's the best I've heard, a fact made all the more meaningful by its mid-level price. It's one of the phono cables to beat, and it's affordable to boot."

Marc Mickelson, Soundstage.com Reviewes Choice Award

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CAMBRIDGE AUDIO AZUR 550 AND 650 RANGE .:

New amplifiers and CD players complete the new Cambridge Audio Azur range

Cambridge Audio has replaced its 540 and 640 range of amps and CD players with all-new 550 and 650 models. Distinguished by brushed-aluminium front panels and a ground-up re-design by the London-based design team, there are two new integrated amplifiers in the 550A and 650A and the same quantity of CD players, dubbed 550C and 650C.

The key change to the amplifiers is a revision of the output stage using improved Sanken output transistors. This is claimed to lower thermal modulation effects, while allowing the speaker to drive 'almost any speaker'.

The 550A offers 60 watts per channel, while the 650A (pictured) ups this to 75 (both into eight ohms). Both amps are backed up with an oversize toroidal transformer, but the more powerful model has separate taps for each channel, as well as separate rectifiers and power supplies to make it effectively dual-mono. Cambridge has also used an ALPs film potentiometer for the volume control that is said to improve imaging, as well as the resolution of low-level detail. Attention has also been paid to the CAP5 protection system which has been re-tuned to

produce a 'greater dynamic envelope' without compromising on overload protection. Inputs run to six line ins plus a front-panel MP3 player mini-jack. Outputs include pre-out, two record outs and twin speaker terminals.

The key development in the 550C and 650C CD players is the use of an in-house servo system called S3, which drives a dedicated audio transport. Cambridge's third-generation servo is an all-new double-sided, surface-mount chipset that has been tuned with sound quality as the goal. The 'brain' of the player is a ARM7 processor running custom code, which allows for maximum information retrieval and low jitter.

Both players benefit from displaying CD-Text data on appropriately encoded discs and for those that like to tweak, there are two filter options offering sharp or slow roll-off. The main difference between the two machines is that the 650C (pictured) is fully dual-differential, so that it can produce a genuinely balanced output, while the 550C has a three-pole output, but both run virtual earthing to minimise noise.

Price £300 (550A); £350 (650A); £280 (550C); £330 (650C)

Due now 20845 090 2288 www.cambridge-audio.com





Definition is an outstanding new range of audiophile loudspeakers from Tannoy. Designed to get the very best from stereo music in the home, Definition distils and refines Tannoy's eight decades of loudspeaker expertise into a design of unrivalled performance value and stunning aesthetics.

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fundamental dynamics of music yet majoring on the finest
instrumental detail, Definition defines the art of sound.





⊘ NEWS

ROTEL 15 SERIES .::

New range of hi-fi separates from Rotel has an enviable diversity

Rotel has followed up its 15 series home cinema components with a range of new stereo components that replace the 10 series as the company's top-dogs. Seeking to regain the high ground that Rotel enjoyed in the nineties, the 15 series takes component selection very seriously, and looks very sleek in brushed-aluminium metalwork.

Rotel was a front-runner with UK design and far-eastern manufacture in its heyday and the approach continues inasmuch as the building blocks of the circuitry are put together in Japan, but the tuning is done over here by Robert Burn – who looks after Rotel for distributor Bowers and Wilkins. The team has put its expertise into creating a new CD player with a slotloading mechanism, the first example of its kind from the company, but not the first in this sector – an honour that belongs to Cyrus.

With the RCD-1520, Rotel has taken the unusual step of minimising surface mount (SMD) components on the circuit board on the premise that its engineers spend 'countless hours' tweaking components to achieve the best end result. Other companies are of the opinion that SMD is a good thing because it minimises component size and thus signal path length, but the proof, as ever, will be in the listening.

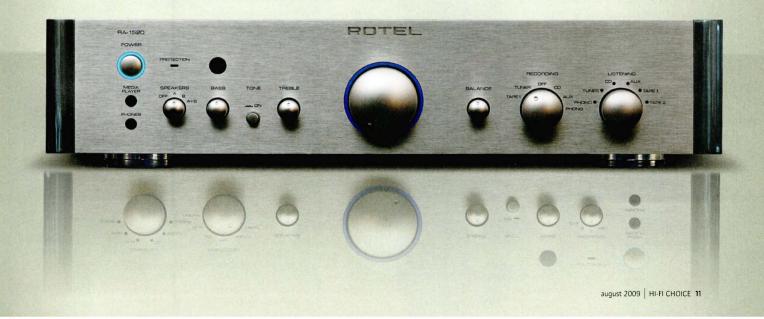
This is the first Rotel CD player to use a Wolfson DAC, a choice that Arcam has been keen on for some time and one that also appears in the new Cambridge 550C and 650C players also announced this month. But, unlike Cambridge, Rotel doesn't divulge precisely which chip has been

selected. Further features include MP3 playback and UK-designed resistors and capacitors. One omission, however, is HDCD decoding which could be found in its predecessor.

The RA-1520 integrated amp is a 60-watt design with an MM phono input alongside five line inputs and a front-panel mini-jack input for an MP3 player. Defeatable tone controls and a headphone jack complete the external picture. Inside, the amp has the luxury of made-in-the-UK T-Network capacitors, as designed by DNM himself: Dennis Morecroft.

The RC-1550 preamplifier is built into the same chassis and thus offers the same features allied to a more 'sophisticated' preamp section. It's natural partner is the nicely finished RB-1552 power amp. This delivers 130 watts a side and uses UK-built, slit-foil capacitors.

The top-end pre/power pairing is the RC-1580/RB-1582, which combines a preamp described as 'a different beast entirely' to its sibling, due to extra inputs including one with unity gain, an MM/MC phono stage and higher component quality. The RB-1582 appears to be a higher-powered version of the RB-1552 with a 200-watt output. Readers can expect an exclusive, in-depth review of the new CD player with the RC-1580/RB-1582 pre/power in the next issue.



audiofile ...:

⊘ NEWS



The DCD-510AE CD player and PMA-510AE integrated amplifier are the latest entry-level additions to Denon's Advanced Evolution series. The PMA-510AE amp produces 45 watts per channel and features high-current, single push-pull circuitry in a design in which Denon has focused on accuracy and detail. Denon has concentrated its budget on the areas-it feels most benefit overall sound, so there are gas relays in the CD and phono input switches to minimise noise, a large-capacity block capacitor in the power supply and carbon resistors at critical points in the circuit. The DCD-510AE CD player has had its PCB designed to provide protection from radiation and to keep impedances down. It has a 24-bit/192kHz DAC and will playback MP3 and WMA files from CD-R/RW. Both components are available in premium silver or black.

Price £230 (DCD-510AE): £250 (PMA-510AE) Due now 201753 680568 www.denon.co.uk

HECO CELAN XT

German loudspeaker maker Heco has produced the Celan XT range as a replacement for its Celan models. Consisting of three floorstanders, a standmount and an active subwoofer, the Celan XT range is a refinement of its predecessor and retains its high sensitivity and use of bigger drive units. Distinctive Kraft paper cones made from a mixture of long-fibre pulp and wool are employed for mid and bass duties and soft-dome tweeters cover the treble.

The cabinets are asymmetrically shaped and heavily braced with reflex ports are made out of aluminium and bolted to the speaker. Integral plinths on the floorstanders are fitted with either spike or polymer feet and the crossovers use OFC wiring and MKT capacitors. The entire range retains the option to increase the treble output of their predecessors.

Price from £700 Due now 12 01822 612449 www.heco-audio.de



WILSON AUDIO SASHA W/P ***

Wilson Audio has introduced Sasha W/P, a successor to its

WATT/Puppy System 8 loudspeaker. Sasha builds upon the System 8 with considerably reinforced panelling on the WATT top section, which houses the mid and treble drivers. The crossover for the whole system is now in the Puppy bass section and the extension in the bottom end has been extended to 20Hz (-3dB room average response). The mid driver is a simplified version of the midrange in Wilson's Alexandria X-2 with a cellulose fibre/paper composite cone. The tweeter is an inverted metal dome. but Wilson does not disclose its exact nature. It does say that great effort has been put into reducing reflections behind the dome. The bass drivers feature magnets which are twice the size of those in the System 8 in an attempt to increase the speed and linearity

of the bass.





ELECTROCOMPANIET ECR 1

Electrocompaniet's ECR 1 tuner is capable of receiving FM, DAB and internet radio in one box. In its base form, the ECR 1 is an RDS FM tuner but it can be turned into a multi-format device by adding plug-in modules for DAB and Internet radio. It features a 24-bit/192kHz DAC and sample

rate converter, which as well as being used by on-board digital sources, can be accessed via three S/PDIF digital inputs. In keeping with the company's Classic line components, the tuner has a fully balanced analogue output stage which feeds balanced and single-ended connectors.

Electrocompaniet has recently joined forces with Audio-T, which means that its products will be available from 23 shops around the country.

Price £tba Due now 201865 759020

www.electrocompaniet.no

SONY X SERIES WALKMAN

Sony is calling its new X series the 'best-ever' Walkman. The new MP3/MP4 Walkman has a plethora of features intended to improve music and video on the move. These include a three-inch OLED touchscreen, S-Master digital amplifier, Clear Audio technology, digital noise-cancelling, open format support and wi-fi connectivity. The latter allowing YouTube streaming and direct downloading of podcasts and internet browsing – a process that you can access via a control interface that combines buttons with a touch-screen. The digital noise cancelling is achieved with

screen. The digital noise cancelling is achieved with the supplied EX headphones and has three settings for different situations. Audio format support includes MP3, AAC, WMA and, most importantly, linear PCM. At present, the X Series is available

in 16 and 32GB versions. **Price £209** (16GB); £279 (32GB)

Due now **2** 08705 111999

⊕ www.somµ.co.uk



HEADROOM ULTRA DESKTOP ..:

US headphone specialist Headroom has come up with the most ambitious incarnations of its compact desktop amp and DAC in the Ultra series. With a 6x6-inch (15cm square) footprint, the Balanced Ultra Desktop amp is a headphone amp and preamplifier that, as the name suggests, has balanced operation and offers two XLR combo jacks. These can be used to drive two pairs of headphones, or combined for one pair of true balanced headphones – usually models have been modified by

third parties (including Headroom) to operate this way.

The UltraDAC uses an ES9008 Sabre DAC to produce a 'virtually jitter-free' result from digital signals coming via coax, Toslink and USB connections. The analogue output has four regulators in its power supply and offers balanced and single-ended connections to the outside world.

Price \$1,299 (UltraDAC); \$1,699 (Ultra Amp) **Due** now
■ 001 406 587 9466

www.headphone.com



Soundbites

ATLAS has created its most ambitious cable yet in the Asimi. Using Ohno continuous casting with a pure silver conductor and PTFE foam dielectric, Asimi is available in SE and balanced forms and costs £2,500 for a metre pair.

2 01563 572666

SENNHEISER has B&O in its sights with a range of three metal-bodied in-ear phones, which are optimsed for iPod and contain miniaturised hi-fi technology. The Style II models are said to be Sennheisers best in-ears under £100. Prices start at £40 for the MX 95 VC.

WIREWORLD has released 16 new cables in its Series 6 range. Series 6 interconnects use DNA technology and a new plug, while speaker cables come in two flavours, Eclipse Reference with Diagonal DNA and standard DNA in a round jacket. Digital cables are designed to minimize jitter. Prices start at £130 for Oasis analogue interconnect.

2 020 8991 9200



WADRASPIRE is using what it calls Tension Technology in its new Sunoko-Vent TT equipment rack. 'Unsurpassed signal-to-noise-ratio, information retrieval and dynamics', is the claim – which is not bad for a rack. Prices start from £200 per shelf.
☑ 01179 863228



MUSICAL FIDELITY'S AMS50 power amplifier is the biggest 50-watt example of its kind the company has made. Fully balanced and fully class A in operation, it is big because of the massive heatsinks

massive heatsink required to stop it cooking itself. With low feedback and a bridged design the AMS50 retails for F9 900

2 020 8900 2866

ERRATUM: Our review of the Cairn Diablo amplifier in the July issue lost its last two lines, the final sentence should have read: "We also had good results with simple ballad-like material and oddball ensembles: but in this price range we feel more all-round assurance is called for'.

audiofile SHOW REPORT

High End, Munich

Ovator S-600

This year's High End show was the best yet for audiophiles. **Dan George** reports on the highlights of this audio fest. 2. Naim Audio's

igh End is fast becoming the most important hi-fi show in Europe. Most of the big-name hi-fi brands can be found exhibiting and many choose the May event to launch new product. This year's show saw launches from Naim, Marantz, PMC,

Cambridge Audio and KEF to name but a few. Last year's show was the most successful in the event's history, too; visitor numbers were up seven per cent year on year and the show occupied a substantial 18,500 square metres of floor space. Despite the economic clouds, this year's High End was even bigger. Trade visitors were up an incredible 18 per cent and public attendance broke new records. If there was any doubt about the health of hi-fi and the high end in general, Munich's show had the answer.

Cambridge Audio launched its new Azur 650 series of electronics complete with new-look casework (see p9). Cambridge's technical director, Matthew Bramble, was on-hand to describe the technical changes made to the comprehensive new lineup, which includes the 650C CD player, 650A integrated amplifier and available late summer, the 650T DAB+/FM/AM tuner. Revisions to the amp include a new output stage, plus a larger transformer taking power to 75 watts. The CD player features tweaked Wolfson DACs operating in dual-differential mode for improved imaging.

Naim Audio was showing a radical new floorstander based on Naim's version of NXT's Balanced Mode Radiator (BMR) drive unit technology, where a single driver covers the mid and high-frequency range - crucially negating the need for a

The first model in a new speaker range from PMC was launched at High End. The Fact 8 (£4,600) is a slender floorstander that retains the company's well-regarded advanced transmission line system (ATL), but also incorporates a set of audiophile-grade switches allowing users to tailor the speaker's frequency response. The system has been designed says PMC, to overcome the sonic issues introduced by room acoustics and loudspeaker ancillaries.

Blade loudspeaker - a carbonfibre and balsa wood-constructed technical tour de force. Although not officially for sale, the striking system showcases the Kent-based company's engineering know-how. The floorstander uses the tenth-generation of KEF's Uni-Q driver array, coupled with four symmetrically arranged, side-firing 250mm bass drivers that KEF says offer 'phenomenal and undistorted bass extension.'

4.PMC's new switchable Fact 8

7. Magico V2: the new

sliced bread?

3. Stunning: No 53 monoblocks

A much-talked-about American speaker brand drawing the crowds at High End was Magico. The company had already impressed HFC staff at January's CES show and did so again with the flagship M5 speakers, which it had on demo. At the more affordable end, it also had the £18,000 V2 floorstander (pictured) - an entry-level model due for







an exclusive review in *Hi-Fi Choice* in a couple of months' time

Danish hi-fi expert **Gryphon** had a number of new products on display, including the new Atilla integrated amplifier. The 100-watt dual-mono amp is expected to sell for £7,000 in the UK and has a fittingly high-end fit and finish. The amp is said to offer 'extreme user friendliness' from its a menu-driven interface. A 'huge and well-managed power supply' helps deliver the sonic goods. Expect a review soon.

Keith Martin of former IsoTek fame was at Munich with his new outfit **Blue Horizon**. It showed a new cable burn-in accelerator at £695 (Proburn), which has been designed to ensure audio cables perform at their peak. Said to offer several months' worth of conditioning for your audio cables from just one day's treatment, the new Proburn should be right up *HFC* cable-testing expert Richard Black's street.

Italy's **Diapason** has a new luxury standmount called Astera (£6,250). Based on a paper cone with a unique Nextel coating, the speaker is said to offer low distortion by minimising cone break-up. The striking speaker has a luxurious cabinet made from 40 staves of seasoned solid walnut. Contact Diapason's distributor UKD if you'd like a pair.

EAT was turning heads with an enormous two-part turntable called the Forte. Its magnetic feet are said to guarantee close to 100 per cent isolation and it also boats a two-part platter that it claims reduces energy flow. The motor is housed in a standalone, decoupled unit and we suspect the super-heavy chassis to be a two-man lift!

Lindemann was showing its powerful 160-watt integrated amplifier from the 800 series, the 882. Weighing in at a chunky 20kg the dual-mono amp offers fully balanced inputs and outputs as well as three inputs on RCA. Outstanding signal linearity is promised from its push/pull output stage.

Trickle-down technology from Triangle's Grand Concert SW2 was the main feature of the company's new Magellan Quatour SE floorstander (pictured). Priced at around 13,000 euros, the 45kg, luxury three-way boasts the same machined-aluminium tweeter, as used in the big Grand Concert SW2. Offering a claimed 90dB sensitivity, it should prove easy to drive, too.

Czech manufacturer **Pro-Ject** had a huge stand with a comprehensive selection of

turntables and electronics. From its everexpanding Box Series of compact desktop audio came the new the CD Box and CD Box II (pictured). It also showed a number of new turntables including the new Xperience Classic, Juke Box Espirit and the popular RPM 1.3 Genie (pictured) in stunning red.

Ahead of its summer 2009 launch, **IsoTek** showed its new Aquarius mainsconditioning unit. The new six-way device will replace the GII Mini Sub, which first arrived back in 2001. Aquarius will also use two medium and two high-current sockets for high-power applications. Benefits include a number of key enhancements over its predecessor, plus trickle-down technology from IsoTek's top-end Titan and Nova power conditioners. £895 has been mooted as the price, which includes a high-end mains lead.

After his recent visit to London (see page 19) Marantz's brand ambassador Ken Ishiwata gave another great demo at Munich. This year, visitors got the chance to manhandle his KI Pearls – an SACD player and integrated amplifier Ken has designed to celebrate his 30th anniversary with Marantz. Only 500 of each product have been made. Available from September, they should be priced at £2.500 each.





audiofile



Richard Black

Richard Black is a professional musician, recording engineer and a highly knowledgeable hi-fi analyst to boot. He writes about hi-fi exclusively for HFC

Technology

Dissecting the transistor



Above: The many faces of the transistor. Top: (left to right), single transistors for small-signal, medium-power and high-power use. Bottom: several billion transistors in an SD memory card.'

"...it is possible to have quite a big effect on the output with just a small change in the input – the definition of amplification."

n past columns we've looked at the inner workings of various components, but not yet the commonest one in modern electronics, the transistor. It's true that an analogue-based hi-fi can still be made without a single transistor in it (use valves), but most systems contain plenty of transistors, alone ('discrete') or by the hundred in integrated circuits.

The basic transistor is a three-terminal component, the three terminals being effectively in, out and common - in other words, put some sort of input signal between in and common and the output is defined between out and common. Obviously there's a little more to it than that, because the transistor doesn't actually generate electricity so you need a few components connected to it and some sort of power supply somewhere: but given those initial conditions, the transistor functions as described. It's very similar to the triode valve in basic operation. In a valve, electrons fly around in space under the influence of electric fields, while in a transistor they move within a solid 'semiconductor'

As the name implies, a semiconductor is neither a full conductor like solid metal, nor a true insulator. Its resistance to electrical current flow is affected by electrical fields, which are set up in a transistor by the voltage which is applied between in and common. Now this is all rather abstruse stuff, but the useful bit comes in because it is possible to have quite a big effect on the output with just a small change in the input – the definition of amplification. By extension, it's also possible to use the transistor as a sort of switch, which is what happens when the change in input is big enough to drive the output from one available extreme to the

other. Switching operation is what goes on in digital circuits.

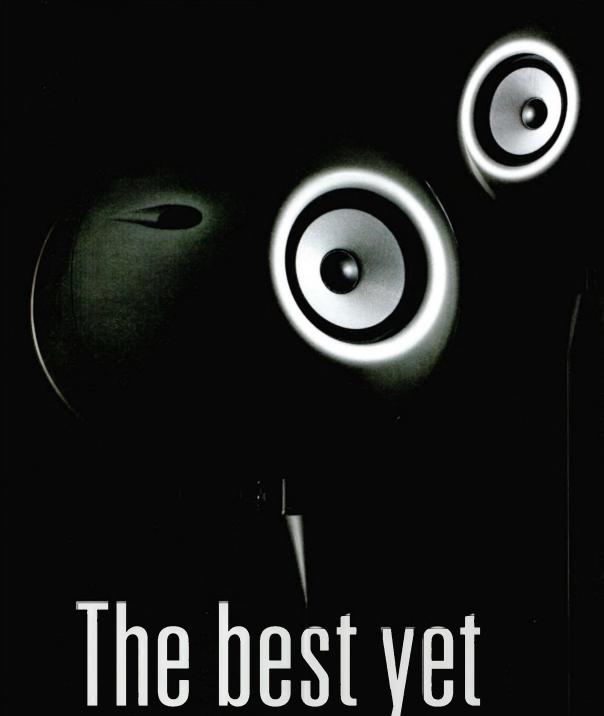
When a transistor is being used to amplify analogue audio signals, input and output signals must be kept within the linear operating area of the device. That word 'linear' is crucial. Obviously we want an amplifying circuit to be fundamentally linear, or what comes out will be a garbled representation of what went in.

Transistors fall into two categories, too: 'bipolar' and 'field-effect' (FET equals Field-Effect Transistor, MOSFET equals Metal-Oxide Semiconductor FET) and there's plenty of discussion about the pros and cons of each.

What's more, there are some pretty important differences between smallsignal transistors, intended for preamplifier-type functions and power devices designed to provide tens or hundred of watts to drive loudspeakers. The former type tend to operate much faster and have much higher useful gain. They are also more linear. In the end, with any amplifying component of any technology, there is always a compromise between the amount of gain it provides and how linearly that gain is applied. By adding just one resistor to a basic transistor or valve amplifying circuit, a trick called 'degeneration' is employed to reduce gain and improve linearity.

In the end, it really is a case of how each circuit is put together: the individual amplifying component is just one piece of the puzzle. So next time someone talks to you about 'MOSFET sound', just remember than nine times out of ten, what they actually mean is 'the sound of the Hitachi MOSFET application note circuit'! HFC





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RobLane

Rob Lane has been writing about hi fi and AV for 15 years and is the publisher of HCD magazine (www.hcdmag.com), Europe's leading hi fi, AV and custom install trade journal

High-end integration

Can hi-fi truly play a part in custom installations?

"It was only a few years ago that the phrase 'hi-fi' began to be seen by many in the consumer electronics industry as a tad moribund." t a recent launch at London's The Ivy restaurant, Marantz invited the UK's hi-fi journalist cognoscenti to come together in congratulating Ken Ishiwata – one of the most influential personalities in high-end audio – on 30 years of service.

As well as raising a glass to Ken, the event was intended as a launch-pad for Marantz's new, super high-end, super-exclusive (only 500 worldwide!) SACD player and integrated amp, the KI Pearl. If the KI Pearl is not quite representative of the high-end (not many products are that exclusive), it is an indicator of how this sector of the hi-fi industry is flourishing.

It was only a few years ago that the phase 'hi-fi' began to be seen by many in the consumer electronics (CE) industry as a tad moribund. Traditional hi-fi manufacturers embraced home cinema and introduced wave upon wave of cinema amps and surround sound speaker packages.

But the reality is that home cinema is only part of the story. A quick glance at the website of Cl organisation CEDIA – www.cedia.co.uk – is very revealing: "CEDIA is an organisation of experienced companies involved in... the process by which your home electronics are integrated."

There's no mention of home cinema here. CI, of course, takes in hi-fi (two-channel or otherwise) and all other relevant electronics, such as lighting control, security, air conditioning etc. The CI market has helped to champion the kind of highend equipment that complements, while transcending kit that has become synonymous with the iPod generation.

The most obvious is Imerge's SoundServer range. A world-first when launched in the '90s as the M1000, it was ahead of its time. The problem was that, back then, installations weren't geared to hi-fi. This meant that relying heavily on audio distribution systems being put in place, the M1000 often sounded decidedly low-end: ceiling speakers for 'background music' didn't really do

the product – or the hi-fi aspect of the installation – justice.

Thankfully, the market soon realised that the SoundServer sounds much better when connected to high-end hi-fi. Charlie Mertz of Imerge explains: "Bespoke audiophile circuitry was then designed and produced for the SoundServer. The fact that it could record and play uncompressed files was a bonus."

Interestingly, Marantz was one of a handful of hi-fi companies that became an OEM for Imerge's XiVA server, Cyrus and Linn included. The iPod may have changed the way many of us listen to music, but people have started to demand better quality sound to accompany the iPod music 'method'.

"Look at all the CI brands these days that produce distributed AV systems: most of them are using high-end circuitry," says Charlie.

"In-ceiling speakers have improved dramatically, in wall-speakers now defy belief in their capabilities; the hi-fi experience is back thanks to companies such as Imerge embracing the latest and greatest technologies."

Indeed, many of the high-end products being developed for CI are hi-fi first and foremost, including a host of multi-zone systems – NuVo's Grand Concerto, DF Solutions Base, SpeakerCraft's MODE and Opus' 500 Series, to name but four.

Hi-fi's high-end is now comfortably integrated within the burgeoning CI industry, with products such as the Imerge SoundServer and Marantz's KI Pearl more easily accommodated than in previous years.

I'd love to know how many of the 500 Pearls end up within custom installations. And it would be equally fascinating to discover how many of The lvy's regulars approach CEDIA members this year for their own bespoke home cinema – with high-end hi-fi integrated, of course...! HFC



Above: Marantz's new KI Pearl SACD/ CD player and integrated amplifier

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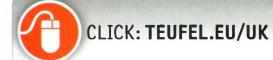
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PaulMessenger

Paul Messenger is a former editor of Hi-Fi Choice and has been writing about his favourite hobby for more than 30 years

Electric Avenue

Why mains electricity is more influential now than ever before

"My own spur went in twenty years ago using cheap high capacity cooker cable, because there wasn't any alternative back in the 1980s."

ver since cables first became a hi-fi issue way back in the 1970s, attention has focused on interconnects and speaker cables. That may well have made good sense back then, when mains electricity was relatively pure and unpolluted and the RF (radio frequency) spectrum far less busy than it is today.

Nowadays I'm coming to the conclusion, based on my essentially Naim-oriented experience at least, that mains electricity and the way our hi-fi systems deal with it may well have become significantly more important than the cables that connect up the components.

Mains electricity matters because, ultimately, it's the source of all the energy that powers our systems and over the last thirty years, as our hi-fi systems have steadily improved, so the mains quality has been progressively deteriorating.

Anyone who plugs a high-quality hi-fi system into a regular household ring main may well not get its full performance potential, as such a system will probably benefit from being fed from its own dedicated spur (or ring). It's not going to cost a fortune to get an electrician to fit one, and many I've spoken to wish they'd done so as soon as they'd moved in.

Whether it's worth using exotic cable here I simply cannot say. My own spur went in twenty years ago using cheap, high-capacity cooker cable, because there wasn't any obvious alternative back in the 1980s. But the system is still very sensitive to downstream mains changes, so it's obviously doing a decent job. Incidentally, I'm using a circuit-breaker rather than a fuse to protect the spur, largely because I don't like fuses.

Other ways of avoiding fuses at the hi-fi end of the spur include avoiding fused 13-amp plugs. The old round-pin 15-ampers, or the German Schukos, for example, both offer good-quality, high-current mains connection without putting fuses in the way, though I've no idea how either sit with the UK's often Draconian (and frequently

stupid) H&S authorities (and care not one jot either). Even with an unnecessarily fused 13-amp plug in the way, I've still found it possible to make quite dramatic changes in sound quality, using numerous usually mutually exclusive techniques of wildly varying prices.

Not all the commercial offerings have been successful in my system. Simple filters might help clean up the sound, but they can also rob it of excitement, involvement and drama. The underlying key seems to be to strike a balance between keeping the source impedance of the mains as low as possible (and hence the speed and dramatic impact of the music), while also removing as much of the mains interference as possible (which seems to lower the noise floor).

Generally, I regard the former as of prime importance and have had very good results using simple mains distribution systems such as the Powerigel from Naim's German distributor Music Line and the more flexible Schuko-based kit from Phonosophie.

However, an interesting alternative is the balanced mains supply approach, which several operations are currently pursuing. I've tried a Ben Duncan version from the Moth Group using a large 3kVA toroid transformer and this certainly lowered the noise floor without any apparent adverse effects on the dynamics. However, it did tend to hum loudly at times, so needs to be tucked away from the hi-fi room, preferably close to the consumer unit.

Although I've heard good reports of PS Audio's clever Power Plant Premier supply, I've yet to try it for myself. However, it's certainly more affordable than the expensive kit from Synergistic Research. A Tesla Powercell, plus two or three Hologram mains cables could easily cost five figures. Trouble is, in the context of my Naim system, this could actually be money well spent. Yes, it's that good, and I'm going to hate it when it's time to give the stuff back. HFC



Above: Isotek's new Aquarius mains conditioner. So new, in fact, Paul's not tried it yet. Expect a review soon

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Alvin Gold

Alvin Gold began writing about hi-fi more than 25 years ago and has since become one of the most internationally renowned reviewers in the field

Market moves

The surprising resilience of the high-end hi-fi world

"The low end has long been a commodity purchase you buy at your local supermarket or high street electronics outlet."

have in front of me a rather depressing press release from Pioneer, which forecasts a record annual loss for fiscal 2009. Depressing, not because it doesn't set out a strategy for the future, but because it echoes so closely measures taken by others in a comparable position. Their workforce has been reduced by 5,900 to 36,900 at the end of 2008, with a further 10,000 reduction in permanent and temporary staff to come. Pioneer recently pulled the plug on its plasma screen production, by common consent the best available.

Most people prefer LCD to plasma on cost grounds, despite its clear inferiority. The other great strength of the Pioneer group in the past was its optical disc division. Pioneer recognised early on that the future lay with optical disc.

But it seems that despite many innovative products over the years since I first heard that message at Pioneer's company headquarters, Pioneer just wasn't big enough or powerful enough to survive long-term in that business. In optical disc, Pioneer is 'looking closely at a possible joint venture' the release says. Other areas of activity will be DJ equipment and car electronics. The only good news for HFC readers is that Pioneer will continue to develop home audio, but as Pioneer-watchers will already know, the current range is pitifully threadbare compared to what they used to offer. In its day that included innovative CD players, DVD recorders (some with 88.2kHz sampling, setting the tone for future developments), cassette decks - and some excellent speakers under the TAD umbrella, a highquality brand that has never had the recognition

In many ways the Pioneer story parallels that of other companies. Yamaha and (recently) Marantz, for example, have withdrawn from their projector business, in part because of the weakness of the US market, though both continue with high-quality audio. The Harman group is not exactly in rude health, either. The long-promised new Revel

speaker range, which I first heard three years ago at CES, has yet to materialise in the UK and the Mark Levinson brand has also gone quiet. The problems seem to have been triggered by the retirement of Sidney Harman as the Harman group CEO. Mark Levinson is important here because in its heyday, it was probably the finest hi-fi brand in the world, for engineering, sound quality and just about any other parameter except, perhaps, reliability. These days you're more likely to see the name Mark Levinson on cheapo products from the LG stable, though these have nothing whatever to do with the original Mark Levinson company.

Right now, high-fidelity is in the doldrums. You knew this, of course. Industry as a whole and the British economy generally, are in the doldrums, but don't think this means that business in the high-fidelity sector has ceased. As I know from my daily contacts with the movers and shakers of the industry, the really surprising thing is that there is still a significant market for high end. With a few exceptions, distributors and manufacturers with a good story to tell, with the right products and who understand the gentle arts of marketing, are continuing to find demand for their products. They may be working harder to make sales than was once the case, but on the whole they're surviving surprisingly well.

Mainstream mid-market hi-fi is definitely performing less well. The low end has long been a commodity purchase you buy at your local supermarket or high street electronics outlet. These areas of the market are suffering in the current recessionary environment. But the high-quality end of the market still has legs, even though some of the bigger producers, who are heavily dependent on the USA's even flatter market are going through rough times. Quality continues to count for something. **HFC**



Above: Back to its audio roots? Pioneer's excellent S-2EX-W speaker (reviewed in HFC 320)



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EQUIPMENT REVIEWS

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ULTIMATE GROUP TES

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OUR RATINGS EXPLAINED

Star ratings for various different criteria, like sound quality and value for money

', nor an s we liked p to the job of y recomment you name impower, the

17 Mkil M. which has excellent build and e a very good impression in HFC 243. At same price there's also the Cyrus 7, a ng all-rounder in a compact case. 'ter trying the Heart with the standard s we switched over to the Siemens grade, a comparison somewhat muddled by le fact that it was a cold for hot swap - the chart been on for several days with the

Our overall conclusion after a livelier. frough. The Siemens-equipped player has an in snappier sound with better timing that es with dense material with remarkable fidence and easi. It even seems to be

Top. (an find rivilised players for the money. But few combine dynamics with fine timing skills as effectively as this. HFC Jason Kennedy

VERDICT

The things we like most about the product

> The things we think could be better

The product's final score. All criteria are taken into account but the emphasis is on performance. Components scoring more than four stars may qualify for an HFC Award Badge

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Box of tricks

State-of-the-art PWM design charts the future of digital amplification

PRODUCT Lyngdorf Millennium Mk IV

TYPE Integrated amplifier

PRICE £10.995

KEY FEATURES Size (WxHxD): 45x14.5x44.5cm ○ Weight: 35.4kg ○ Power output: 150 watts (8 ohms), 300 watts (4 Ohms) Digital inputs: 4x (1x optical) Digital outputs: 2x (XLR balanced) Frequency response: 20Hz - 20kHz (-0dB/-0.2dB) Remote control

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or a long time now the white elephant in the room has been Class D digital amplification. In many ways Class D has been seen as the natural future for driving loudspeakers, in much the same way that electricity is the obvious fuel for powering cars. Unfortunately, the results have been almost equally ambivalent in both cases.

Digital amplifiers run cooler, consume less power and consequently, are greener than traditional amplification, which have to be good things and with most music sources starting life as digital once they hit the microphone, it makes obvious sense to preserve the music signal in digital form as long as possible to avoid degradation. But so far, at least, digital amplification in its many and varied forms has not been a conspicuous success sonically and is generally confined to the lower shelves powering cheap integrated systems and their ilk, where simplicity and low cost are the key attractions.

Here, perhaps, is an exception to the rule, arguably the most striking example of its kind to date. The original and, so far, one of the few truly serious high-quality digital amplifiers was

the TacT Millennium, which due to structural changes within the company has been transmogrified into the virtually identicallooking and functionally similar Lyngdorf Millennium, now in its fourth iteration.

filter consisting of an inductor and a capacitor to roll away the very high-frequency digital noise above 60kHz that would otherwise pollute the loudspeaker feed

Uniquely, the volume control does not

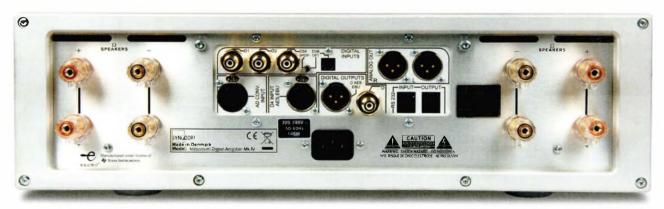
"Digital amplifiers run cooler, consume less power and are consequently greener than traditional amplification..."

Ouite how to describe the Millennium IV is moot. It drives loudspeakers and has a volume control, which qualifies it as an integrated amplifier. But it won't handle analogue inputs without external assistance (described later), and in its basic form as reviewed here, it is more of a power amplifier with an on-board D/A convertor than an integrated amplifier, albeit one that has its own volume control.

The Millennium has been around in one form or another since as far back as 1998 - more than a decade ago. But Lyngdorf claims it is one of the few truly digital amplifiers and there are good reasons why this is the case (see PWM on page 28). Most digital amplifiers are only part digital, in some cases because they use a digital architecture for only part of the audio chain. Lyngdorf's enabling digital technology called Equibit, is digital from input through to output - in fact as standard the Millennium cannot even accept an analogue signal input and at the loudspeaker end of the chain, the signal remains digital until the very final stage. This involves a simple 12dB/octave

attenuate the audio signal, which would reduce resolution. Over most of its range, all it does is to control the voltage from the power supply output stage at anything upwards of three volts output, which corresponds to 19 on the volume dial. This simple, elegant solution means that the volume control is not in the signal path. Anything above this level and below the maximum output of 58 volts is handled with full 24-bit precision, with the system clock set at 352.8kHz, high enough not to interfere with the audio. At very low levels - where power supply attenuation is no longer possible - the resolution of the signal is reduced, but the volume level through the speakers is very low by that point, so the impact on the audio is negligible. By the same token, there is no amplification of the audio signal either, which eliminates another whole set of problems.

The Millennium is extremely heavy at over 30kg, with a carcass milled from aluminium. which means it is stable and non-resonant and, therefore, provides suitable screening for





We spoke with Peter Lyngdorf, chairman of AudioNord International retail, which includes the HFK retail and distribution chain, DALI and Lyngdorf Audio



HFC: What technical features mark the Millennium out as special and where does

PL: In 1998 Texas Instruments wanted to buy the core technology developed by Toccata Industries that was first implemented in the TacT Millennium. It was duly bought by them in the year 2000, with a letter of intent that we would work together in Copenhagen, which is how it has worked since.

What marked the Millennium out was the configuration of the power supply and the volume control. In essence the Millennium is just a high-power digital-to-analogue convertor, which provides the necessary voltage and current, but does not provide amplification in the usual sense because the PWM section operates at such high power.

Why does this matter?

The volume control has nothing to do with the signal and is not in the audio signal path, it simply regulates a DC-DC converter in the power supply. There is no feedback loop, so that distortion residuals at the output do not vary with frequency.

Describe the history of the Millennium in

Compared to the original, the Mk III and IV included external buffer for parametric equalisation and we included the software to add extra power amplifiers as part of the design

The Mk 1 and II included very slight modifications to the TacT Millennium power supply and some added digital gain. The first versions only went as far as parity gain. The Mk III included parametric equalisation and a digital crossover. The current Mk 1V is a total rework of the design for performance. It is quite a revolution in layout

How would you describe its major sonic qualities?

It is the only product of its type that doesn't damage the sound. There is no feedback or feedforward, simply a mathematical conversion. The voltage stays the same, and the Millennium is completely time-coherent. The first time I heard a production-ready unit was in 1997, during a Frankfurt hi fi show. We set one up for background music, but I found I had to sit down and listen. It was simply beautiful.

■ the high-frequency circuits inside the case and to prevent radio frequency noise pick-up. It is beautifully built, with Swiss watch-precision and superbly finished, but until it is connected to its host system under power, there is no external indication of what it is.

There are a number of sockets around the back and controls on the front panel, few of which will be familiar even to practiced amplifier-watchers. The massive volume control works through two sets of ball bearings, and can be spun freely, though the gearing of the control is very low: you may need several spins of the control to find the level you want. In the centre of the control is a simple display window, which shows such information as the power status, volume and selected input

Sharing the front panel are digital input and analogue input selectors (the latter is not accessible with the amplifier in standard form as reviewed). On the back panel are four digital inputs (one optical), bi-wire speaker outputs, XLR balanced outputs and sockets for connecting the accessory digital preamplifier and RoomPerfect module (see opposite). A remote control handset is also supplied.

This is an exceptional amplifier and one that turned out to be very hard to fault using the usual criteria. The word transparency is often used to describe amplifiers (and other components) which are not readily identifiable when working, which don't have an obvious aural signature and this is true of the Millennium Mk IV in more ways than one.

SOUND QUALITY

First, it is literally transparent: there is no sense of anyone pulling the strings behind the scenes. There is nothing manipulated in the way it sounds, or that points to any distortion signature that we could identify. Tonally, it isn't warm or cold, it just is. Better still, this is one of the most seamless amplifiers we have ever encountered for its consistency across a broad volume envelope. With the loudspeakers available to us – Monitor Audio Platinum PL300, Mordaunt-Short Performance 6LE and Sonus faber Liuto Monitors – the system remained very flat (ie neutral) tonally and completely in command. So far as we could

PWM AMPLIFICATION

The Millennium belongs to a class of digital amplifiers that use PWM - Pulse Width Modulation - these employ variable-width, high-frequency pulses to represent the level (amplitude) of the analogue data, with short pulses representing low-level signals and vice-versa. In most such amplifiers, a feedback arrangement from the output to the input controls the oscillator, but this requires an analogue input, which in effect means that it is an analogue amplifier, albeit with digital leanings, which introduces a range of nonlinearities and distortions. In addition, the loudspeaker's tweeter can be self-biased by the PWM signals at high volume levels, introducing another class of non-linearities.

In the case of the Millennium, the PWM converter is achieved without using feedback, which is an inherently more complex process that makes special demands of the power supply, output stage and reconstruction filter, and particular care over PCM to PWM conversion. Inherent to the Millennium is a fixed switching frequency, which is therefore independent of signal changes, which means a more consistent distortion residual. Because the reconstruction filter operates at fixed frequency, the low pass output filter can be very simple and benign.

tell, it sounds consistent at any volume level within the compass of the speakers.

Bass quality is unusual. It's powerful, with a strong measure of authority and drive, but most of all the bass is taut, tuneful and agile. The amplifier sounds much the same at all volume levels, with nothing obvious to indicate that it was running out of steam. Which is exactly what you'd expect from the product description. But, in part, because the amplifier is so consistent, we found it was possible to drive at least some loudspeakers beyond their comfort level, the Sonus faber Liuto Monitor, for example.

There is one postscript to this. On the whole the amplifier doesn't sound bright or harsh,



but there were occasions with some loudspeakers when the sound became slightly exposed; the sort of situation which with other amplifiers might have been best accommodated with a slight reduction in treble level. In this case, unless the room DSP module is available (and it wasn't for this test), turning the volume down by a decibel or so is enough to calm the response, with no noticeable impact on detail. With other amplifiers this trick often results in a noticeable loss of precision.

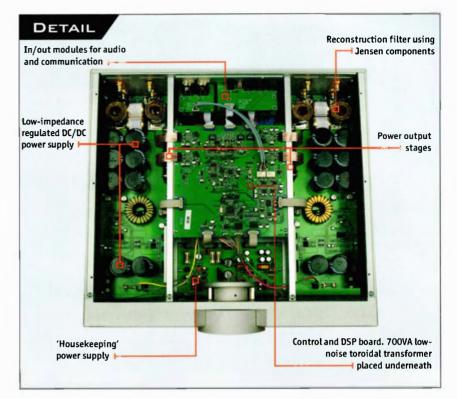
If there is a single word that could be used to encapsulate the Millennium Mk IV's ability, it would have to be discipline. No matter what is playing, it sounds consistent as described earlier, finely detailed and, above all, as tight as a drum. Most of all there is no slackness in the sound and also none of the slight texturing that is usually part and parcel of solid-state amplification, or the loss of definition that is often found with valve amplifiers.

The only caveats that should be borne in mind are its obvious functional limitations. which we have identified earlier and certain physical shortcomings that don't amount to much, but which may prove irritating. One is the lack of any indication that the unit is under

ROOMPERFECT

There is more to the Millennium Mk IV than just powering loudspeakers. Built into the guts of the machine is the option to add a digital crossover and a second power amplifier (for systems that use separate bass drivers or a subwoofer). or to provide shelving filters or other forms of filtering, such as parametric equalisation. This can be addressed using a computer and the filter algorithms can be up updated or replaced as required via the computer connection.

This is a manually adjusted filter, albeit one with plenty of settings, but for those interested in this option there is an alternative, which is to use the more sophisticated and more highly automated microphone assisted set-up. This works hand in glove with the DPA-1 add-on unit, for which you can expect to pay around £6,000. This unit has two functions. First it is a digital preamplifier with analogue (single ended and balanced) and digital inputs. Outputs are available in single-ended and balanced as well as in digital form. The DPA-1 also functions as a sophisticated and powerful room equaliser, which uses a technology that Lyngdorf calls RoomPerfect and is designed to correct the response for off-centre listening positions, or to cater for wall-proximity effects.



"If there is a single word that could be used to encapsulate the Millennium Mk IV's ability, that word would have to be discipline."

power, as there is no panel illumination at all unless the input is correctly selected and identified by the amplifier. A pair of handles on the rear panel would have made handling such a heavy lump easier. On the other hand, the free-spinning, ball race-assisted level control more than makes up for any perceived limitations. We're not convinced that the ultra-slow volume gearing can be justified, but it invested the unit with an exquisitely tactile feel unmatched by any other amplifier in our experience.

Implicit in the amplifier topology developed for the Millennium, there is a degree of mild interaction with loudspeaker impedance. In most cases you can expect a half decibel or so variation across the audio band, depending on the impedance plot, but this was not identifiable with any of the three speaker models used for this test. According to Lyngdorf, even loudspeakers with quite punishing behaviour, such as Martin Logan (many of whose models are nominally eight ohms, but drop down to one ohm or less at high frequencies) still match well, though we weren't able to confirm this. Many valve amplifiers and some solid-state analogue amplifiers behave similarly, usually without troubling consequences.

This is an exceptional amplifier, which is authoritative and thoroughly musical in practice. It's excellent with high-resolution speakers for extended listening and this is the first digital amplifier for which we've been able to make this claim. Anyone interested, who is not in the Lyngdorf's financial league, should look at the much cheaper TDA2200, which has many of the same design features and which includes a full DSP section for room/speaker equalisation. HFC

Alvin Gold



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Led Zappelin

Is this revolutionary tweakery from Russ Andrews just science fiction?

PRODUCT Russ Andrews Zapperator

TYPE Interference absorber

PRICE £161 per pair

f there's one thing we have come to expect on a regular basis in audio, it's surprising new products from Russ Andrews Accessories. The Lancashire purveyor and inventor of all manner of tweakeries seems to have an inexhaustible fund of previously untried ideas for bits and bobs to improve our sound systems. This little device appears as a small plastic box with two flying leads, each terminated in piggy-back banana plugs (spade terminals available as an option). You plug them into the back of your loudspeakers, then plug the speaker cables into the back end of the plugs. The claim is that the Zapperator absorbs radio-frequency interference which is picked up by the loudspeakers, reducing noise 'in the amplifier/loudspeaker interface'

Andrews isn't enormously forthcoming about the precise configuration of the circuit in each Zapperator, describing it simply as a 'highquality Zobel network'. A Zobel network can be various things, but in audio it's usually a simple network consisting of a resistor and a capacitor in series, connected between the output of an amplifier and ground and intended to help stabilise the amplifier at high frequencies. The Zapperator circuit is encapsulated in black resin, but we were able to see and identify a few components,

including a resistor and a couple of capacitors, all apparently normal industrial parts.

What we can't see is how the Zapperator can either absorb or block very much RF. Andrews claims that loudspeakers can act as an RF antenna and, to the extent that they include some lengths of unscreened wire, that's certainly true. In order to absorb this, the Zapperator would have to present a low impedance at radio frequencies, but its impedance is, in fact, moderate. It will cut interference levels a little, but not massively.

seemed to give rise to small changes in tonality and imaging - the former typically became the minutest shade mellower, while the latter simply shifted a little: a bit like moving the chairs of an orchestra a couple of feet one way or another. Perceptible, yes, if one listens in quick succession to 'before' and 'after' conditions, but not necessarily an improvement and not really important either, as both versions were plausible and enjoyable.

We would hesitate to dismiss the Zapperator as wishful thinking or placebo

"We hesitate to dismiss the Zapperator, but we can't get very worked up about its changes in any of the systems we tried."

SOUND QUALITY

We tried the Zapperators with various combinations of amp and speaker, the speakers being from ATC, Spendor and Bowers and Wilkins, while amplifiers included a Cambridge Audio Azur 840A, Exposure 3010 and various more or less current models from NAD, Harman/Kardon and EAR. Cables ranged from Kimber and Wireworld to QED and various custom configurations.

The first thing we would like to make clear is that in no case did the Zapperators make the sound worse in any definable way. On the other hand, most of the time we were not convinced that they made much of a difference at all. To the extent they did, they

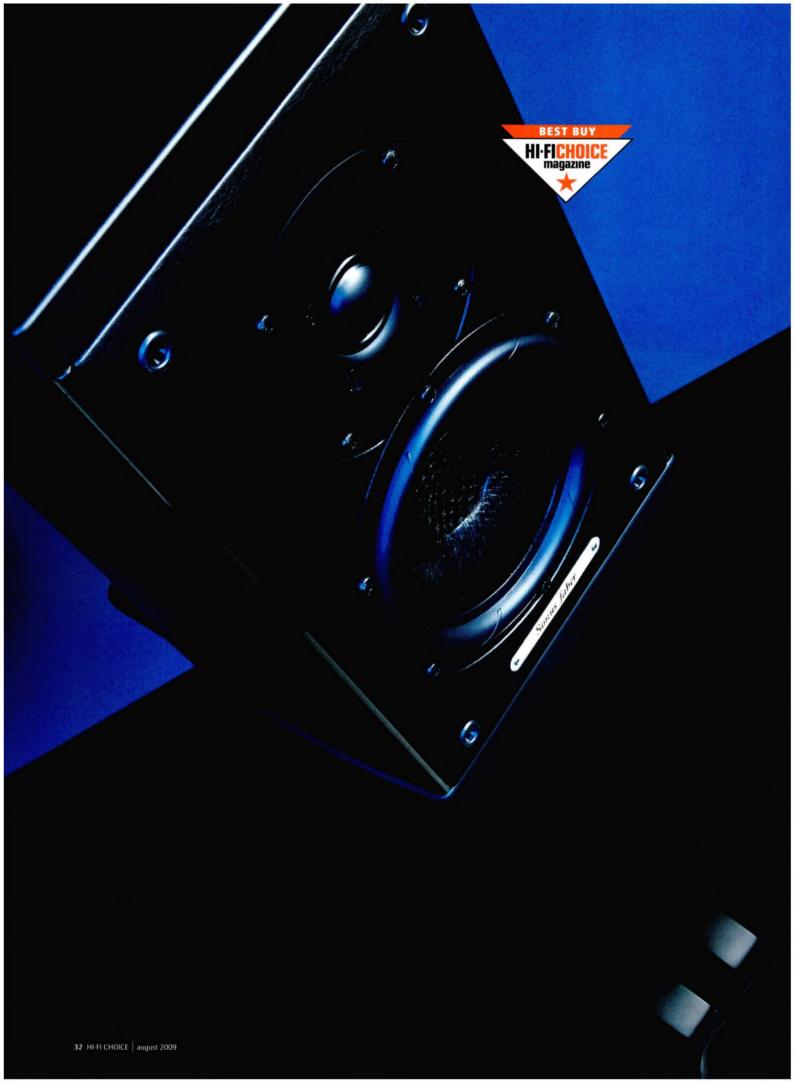
effect, but we can't get very worked up about its changes in any of the various systems where we tried it.

In addition, we don't necessarily accept that radio-frequency interference is the only explanation for its effects. The muchdiscussed concept of 'impedance matching' could also play a part, making the combined load of cable, speaker and Zapperator look less threatening to the amplifier at frequencies high above the audio band. Various experiments have suggested that RFI is more of a problem in common mode, which is not affected by the Zapperator in any case ferrite clamps are more applicable here. HFC

Richard Black







Retro faber

Update of the Concertino Domus compact formula goes back to basics

PRODUCT Sonus faber Liuto Monitor

TYPE Standmount loudspeaker

PRICE £1,700 per pair, (stands £550 per pair)

KEY FEATURES Size (WxHxD): 18.5x 35 x 33.5cm (height on stand: 101.8 cm) Weight: 7.5kg Drivers: 25mm fabric-dome tweeter, 150mm polypropylene fabric mid/bass Sensitivity: 89d8 Power handling: 50 watts • Frequency response - 55Hz - 25kHz • Enclosure: hardwood, leather coverings on baffle and rear

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he Liuto (Italian for lute) range consists of three models: the Monitor reviewed here, a floorstanding variant, the Liuto Tower, plus a speaker called the Smart, which can be rotated for use as a general purpose or surround speaker. Liuto replaces the Domus models and apart from the compact Toy range, is Sonus faber's entry-level offering.

Our Liuto was supplied with a pair of pedestal stands, made from wood with bolts supplied to fix the speakers and stands securely together. The stands have a wide footprint and come with carpet-piercing spikes.

Technically, this is a conventional design but it is a painstaking one with more than a hint of retro, in the time-honoured Sonus faber tradition. The supposedly lute-like shape that gives the speaker its name is intended to form a well-damped internal cavity, largely free of internal resonant modes

The front panel is made from what can only be described as an amorphous material and then externally clad in leather - a Sonus faber organic-looking and more elegant. The finish is described as a combination of goffered black (a unique texture that provides a better grip when handling) and high-gloss, piano-black lacquer. The remaining panels are matt black.

It should also be said that build quality and general fit and finish are of an undeniably high standard and this applies to the stands as much as to the speakers. This said, construction of the stands appears to have more to do with expedience than engineering integrity, which is disappointing considering that they cost £550 per pair.

Our test subject is a two-way vertically oriented design clearly intended for stand mounting, though at a pinch it could be shelfmounted. The mid/bass unit has a 150mm thermo-set, moulded polypropylene textile cone and this is crossed-over at 3.5kHz to a 25mm fabric-dome tweeter, similar to the units used on earlier Sonus faber models. Bass tuning is by a rear-facing reflex port and the crossover is described as a non-resonant second-order design (12dB/octave), with phase characteristics designed for optimal space/time performance, but this echoes the claims made for virtually any crossover network.

A skim through the numbers tells a story of a loudspeaker that is modestly sensitive -86dB/watt at one metre is about as good as you can reasonably expect from a speaker this size with any pretensions to useful bass output. Although the 55Hz bass limit given in the specifications is not that impressive,

"Technically, this is a conventional design, with more than a hint of retro, in the timehonoured Sonus faber tradition."

trademark, which helps damp the baffle and reduce secondary radiation. The narrow rear panel appears to be made from the same material and the main side panel has a curved section, again for resonance control and to improve panel stiffness. Compared to the Concertino, its predecessor in the Domus range, the Liuto Monitor is slimmer, more

subjectively, at least, the Liuto is more fully formed than you might expect. Impedance is eight ohms and the Liuto is said to be capable of handling up to 150 watts, all of which seems perfectly believable

SOUND QUALITY

To be frank, we were not impressed on the first

hearing. The Liuto Monitor sounded a little dull to our jaded ears, preconditioned perhaps, by the more upfront performance of other speakers available at the time. Certainly it lacked electricity initially, but equally, it was also fresh out of the box and, therefore, probably not fully up to scratch.

As is usual with Hi-Fi Choice's in-depth reviews, we gave the speaker an extended run-in period and listened critically over a long review time-frame, allowing time to bed-in. Even from the start, though, there were indications that the Liuto had a neutrality and transparency that was out of the ordinary.

Sure enough, the picture improved after more running-in, but in the event, this wasn't really the main issue, which is related more



closely to musical programme content.

The turning point was the arrival of some remastered Esoteric-branded discs originally from the Decca archive, which will be covered in more detail in a future issue of *Hi-Fi Choice* (you can read about them now at: teac.com/esoteric/software.html). This is historical analogue material, beautifully remastered that helps to highlight some of the best qualities of the Liuto Monitor. And if you want to take from this sensitivity to programme content a mute criticism of the Liuto, then so be it, but it's certainly not the whole story.

If you think you are beginning to see a pattern here and that there is some special synergy between the Liuto and analogue source material, then think again. First, although the Esoteric discs were sourced from analogue masters, they were encoded and played as SACDs. Second, the main amplifier used for this test is the remarkable and wholly digital Lyngdorf (reviewed on page 26). There is certainly synergy at play here, but it is not limited to anything as simple minded as any supposed superiority of analogue over digital.

This is a remarkably music-friendly loudspeaker. And, although it doesn't impress initially for its balls or its fiery temperament, it has something else going for it. The Esoteric SACDs, of course, are far from the only discs to show what's going on; they were simply the first to convincingly illustrate the qualities that

LIUTO RANGE

The Monitor is the smallest model in Sonus faber's new Liuto range. Its stablemates are the Liuto Tower, a threeway floorstander and the Liuto Smart, an L/C/R-type speaker. The Tower is a decent-size speaker standing just over a metre tall, with an aluminium and magnesium-coned 220mm bass driver that features a 'coaxial anti-compressor' said to remove cavity resonance. This augments the polypropylene textile mid/bass cone and soft-dome tweeter seen on the Monitor. The Tower offers a sensitivity of 89dB for a nominal eight ohm impedance, so assuming that the metal cone doesn't complicate things, it shouldn't offer a particularly challenging load. However, these are revealing speakers and quality will always be an issue where amplification is concerned.

The adaptable Smart is designed to be used in stereo and multichannel systems, it's 532mm-wide or high depending on how you want to orient it. Because it's conventionally shaped without the lute profile of the other Liutos the side panels are decoupled in order to control resonance and standing waves.



"...a friendly loudspeaker, although it doesn't impress for its balls or its fiery temperament, it has something else going for it."

lay under the skin. Without being especially demonstrative, there is a graceful musicality about this speaker that marks it out as special.

There is a hint of extreme treble output loss – probably no more than half a decibel or so at the upper limit of hearing – but the result is a speaker that sometimes speaks softly and one which has a particularly fine singing voice. We discovered this with favourite recordings such as Jennifer Warnes Famous Blue Raincoat, as well as a Brahms and Mahler lieder recording from a recent BBC Music Magazine covermount disc.

In the best sense this is a speaker that is easy on the ear. At first there were suggestions of boxiness, but they dissipated quickly enough, leaving a quality that if it underlined anything, was the passion of fine music-making. We are also impressed with the Liuto's fine voicing at the low frequency end of the spectrum. Of course it is no bass demon, but is voiced in such a way that any objective lack of real bass goes practically unnoticed. The Liuto Monitor has a full, muscular voice and it projects a well-scaled image, with a natural sense of image placement.

All said and done, the Liuto Monitor could still be a hard proposition to sell. It is a small

loudspeaker that costs quite a lot of money. Enough money, in fact, to buy any number of decent-quality floorstanding loudspeakers with deeper bass, higher maximum output levels and greater sensitivity.

It is not the tightest or most dynamic speaker in its class, nor does it offer the super sharp imagery of many recent high-tech designs.

But, there's no doubt that the Liuto Monitor is one of the most relaxed and, above all, one of the most musical in its class. **HFC**

Alvin Gold





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Devil in the detail

This ground-breaking interconnect converts digital audio to analogue audio

PRODUCT Devilsound USB DAC

TYPE USB interconnect (with built-in DAC)

PRICE F235

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ow and then, a product comes along that's such a good idea it seems remarkable that no one thought of it before. Or, perhaps, someone did think of it, but it was marketed so badly that it never caught on. Whatever the truth of the matter, it's now irrelevant as the Devilsound is, as far as we know, the first-ever cable to accept digital audio at one end and output analogue audio at the other! And in a nutshell that is all it does.

The trick would be impossible with regular S/PDIF digits, but a USB socket has extra pins in it that allow it to transmit DC power to connected devices. Devilsound's ingenuity was in devising a circuit and its housing, small enough to sit in the cable, supported only by the analogue leads (which are short - just a handspan long, while the digital part is a couple of metres) and low enough in power consumption to operate from the five volt supply provided by the USB socket on your computer.

Because five volts isn't really much to play with, and certainly not enough to allow output levels of the usual 2V RMS variety that are typical of practically all CD players, the DAC

incorporates some quite sophisticated powersupply conversion to give higher voltages internally. These are then regulated down so that sensitive circuits are operating from a cleaner and more stable supply than the aforementioned five volts.. The digital receiver is one of the 'SpAct' family from Burr-Brown, while actual conversion to analogue is done by a pair of Analog Devices chips.

That's pretty standard stuff, but a twist is provided here by the avoidance of digital filtering - and there's not much analogue

DAC is interesting, not least because sonically it is everything the Cambridge isn't. Yes, they both reproduce recognisably the same piece of music, but where the Cambridge is neutral almost to a fault, this one is quite highly characterised. And the character is one which it's hard not to like

That's certainly true with any lively and/or rough-edged musical style. There's just spadefuls of get-up-and-go in the sound and a rhythmic verve that many folks would willingly spend a lot more than £235 to achieve. Drum

"...there's not much analogue filtering, so this is effectively a filter-free DAC which allows a lot of aliasing to occur."

filtering either, so this is effectively a filter-free DAC which allows a lot of aliasing to occur. Technically that gives it a measured distortion figure of about 2 per cent, but the distortion is all ultrasonic. Within the audio band, performance is pretty good, with just a little noise and a hint of jitter to comment on.

SOUND QUALITY

At this price, the DAC market is currently dominated by the Cambridge Audio DacMagic, on which we recently heaped extravagant praise (HFC 316). Apart from the obvious difference in practical aspects, the Devilsound

kits and electric guitars just bounce along, while close-miked vocals are immediate, communicative and highly convincing

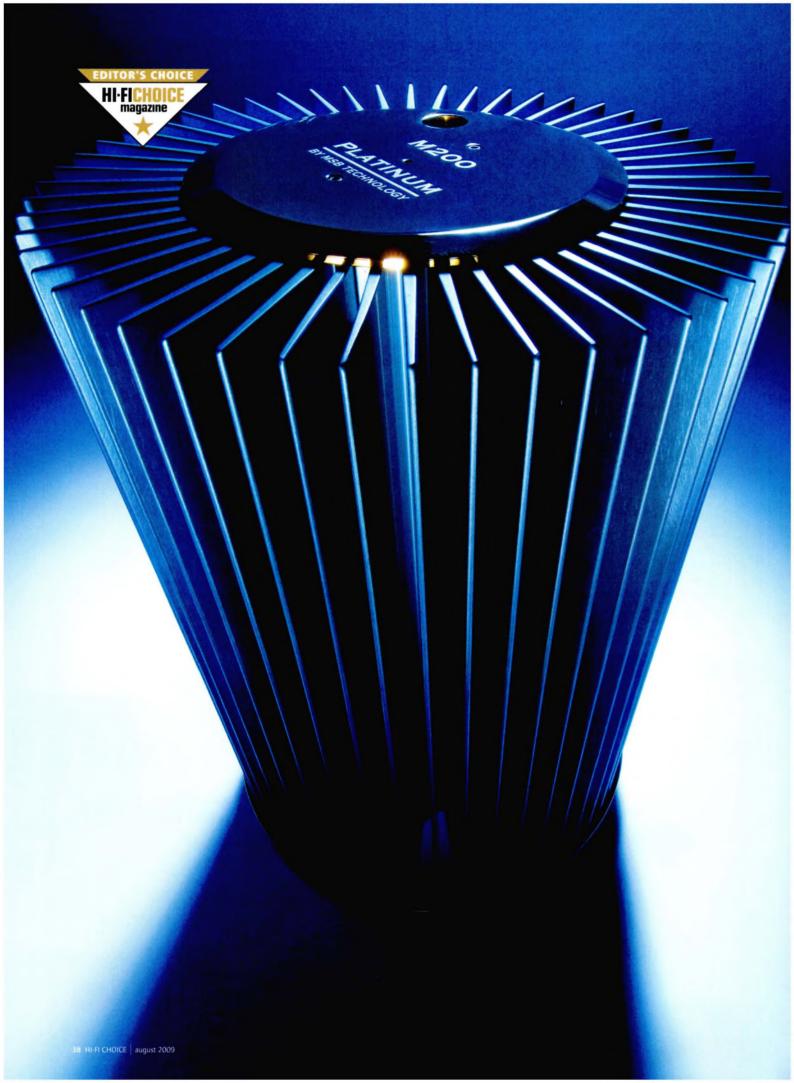
That's the plus side. The minus is more to do with classical music and, in general, more melodic, smoother, styles - especially those recorded simply in a natural ambience. Under these circumstances, the sound is much less assured and seems rather restricted spatially in both dimensions.

Interestingly, we were a touch disappointed when we tried MP3-derived material in any style, but if, you wish to use your computer as a proper audiophile server, you may well find this to be a little gem. HFC

Richard Black







Hot stuff

MSB's Platinum is, quite simply, the best amplifier we've ever heard

PRODUCT MSB Platinum M200

TYPE Power amolifier

PRICE £13,656 per pair

KEY FEATURES Size (WxHxD): 0x46x30cm ○ Weight: 41kg ○ Rated power: 200/400/800 watts (8/4/2 ohms) O Inputs: 1x XLR (balanced), 1x RCA (single-ended) Sero feedback throughout - global or local Balanced design throughout

CONTACT © 07842 126218 @ www.msbtech.com

ho the heck is MSB? And how come they've come up with such a strange, yet wonderful amplifier? The company based in Aptos, California, has been around since 1986. Although it does make and sell a certain amount of high-end hi-fi equipment, it has never been particularly pro-active in marketing. Furthermore, a good part of its work has involved working as consultants on specific engineering projects for other brands - work that naturally tends not find its way onto the formal CV.

Most of MSB's activities are concerned with various digital audio techniques and its website claims a whole succession of 'firsts' in the gradual development of different digital formats and techniques over the years. The current product portfolio includes a considerable and indeed somewhat confusing collection of DACs, ADCs, upgrade packages and suchlike, nearly all related to digital audio. The iLink looks particularly interesting, for its potential ability to turn an iPod into a high quality music server (see page 41)

This M200 Platinum monoblock power amplifier is one of relatively few analogue components in the catalogue and MSB describes it as, 'built out of desperation'. The blurb continues: 'Designing the Platinum DACs, we found there was not an amplifier available that could let us hear everything that our DAC is capable of...we needed a Reference amplifier and that is what we built!'

That seems as good a reason as any for embarking on a project to design and build an amplifier. The questions that need to be answered are why a digital audio specialist thinks it can create a superior analogue amplifier and what original thinking it can bring to the party.

The answers are seen clearly enough in the amplifier itself. The M200 Platinum is unusual in a number of respects, some more obvious than others. To start with there's the cylindrical shape. Perfectly logical in its way, but ill-suited to mounting on the usual equipment rack. It's not unique in this respect; ironically, the last standalone power amplifier we reviewed in this very journal was Musical Fidelity's similarly cylindrical 550K Supercharger amplifier (HFC-

on the floor, a circular gilt cradle is supplied, with tri-cone coupling to the floor and some foam damping for the heatsinks.

In order to keep all the signal paths short, the amplifier proper is deliberately contained within a tight space in the middle of the column, above the very generous power supply components (dual 600-watt transformers plus 220,000uF capacitance). A section within the cooling fins is cut away to accommodate the

"The shape might be a little unconventional, but the build and the price put it firmly in the high-end category of amplification."

301). However, other than the shape and the need to place them on the floor, these two amplifiers are very different. Whereas the Musical Fidelity cost £3,000 per pair and weighed 12kg each, this MSB device is an altogether more substantial device, weighing some 40kg each and costing £13,656 per pair (recently and substantially increased due to the drop in the international value of sterling). Furthermore, it delivers 200 plus watts into eight ohms and can double this into lower impedance loads.

The M200 Platinum is, therefore, a very serious amplifier indeed. The shape might be a little unconventional, but the build and the price put it firmly into the 'highend' category of amplification nowhere near as costly as some of America's more pretentious offerings, but at least as costly as any UK solid-state devices

The finish is unconventional, too, though undeniably attractive in its own rather individual way, dominated by the considerable area of metallic-anodised blue heatsinking that surrounds the gilded amplifier section. And because it's probably going to sit

inputs (balanced XLR or single-ended phono plus IEC mains) and outputs (one pair of highquality 4mm socket/binders). A switch is used to select between the inputs, the balanced





We spoke with Larry Gullman, General Manager of MSB about the Platinum M200



HFC: We gather your prime purpose in creating the M200 was to help you hear the performance of your DACs more clearly. Did the design work include much listening, or was it largely based on theory and modelling?

LG: The process was quite a bit different than most companies would follow for several reasons. First, we had never sold an amplifier before and did not intend to self one in the future. Secondly, we had no market considerations, price points or features to contend with early on. Just the best sound we could get. We scoured the literature and put together all the best ideas we could find.

Although we did not create any ground-breaking new technology, as intrepid novice amp designers we put together proven elements in a new way. Then the listening began. Once the amp worked, all further design and refinement was based exclusively on listening. When finished we were so pleased that we decided to produce the amp for sale, with no changes or compromises to accommodate the marketing process.

The M200 has several interesting features including its lack of feedback and the close proximity of all the active elements, including the power supply. Can you rate these in order of importance?

The feedback issue is critical. By definition, an amplifier is behind if it does not start correcting a problem until the problem is detected on the output, so we knew right from the beginning that feedback was not an option. To create a stable design without feedback, we did all we could, including placing the elements close together to accomplish it.

A power amp that's too hot to touch even when it's switched off is a little impractical! Do you have any firm plans to create a more user-friendly amplifier?

It's not quite a bad as you make it sound.

Let me explain. Half of the heat produced by this amplifier is from the input stage. This is one of the key design elements of our design. We have options here that can reduce the power in half with no audible effect, but the output power with a two ohm load would be limited

to the power at four ohms, namely 400 watts. This is a factory option that can be selected for temperature sensitive applications, cutting the total heat load by 25 per cent.

The other half of the heat load is from the output stage and it is performance related. Bipolar devices perform better the hotter they are, so we have the option to set the bias for maximum and minimum bias and thus temperature. This setting cuts the output stage heat in half and thus the whole amplifier heat output by 25 per cent. The difference in comparison to the other amplifiers we were using was minor, but we could hear the difference, hence the two bias settings.

The bias setting is currently a factory setting, so the customer can order the amplifier either way. We normally ship the amplifier in the low power mode, but your samples were specially ordered to be the best they could be. In other words they were set for 'full power', so keep the air-conditioning on!

Can you indeed create a more userfriendly amplifier without compromising the sound quality?

We are considering adding a bias switch to the amplifier at some future time to allow the customer the option of reducing power during times of non-critical listening. They can also be ordered with limited output current, although that is not the standard configuration. The other way the temperature can be controlled is with voltage. A lower voltage rail means less power and heat with no real compromise in sound quality.

During our listening tests we found the bias setting clearly audible, but did not find the voltage level to be. A 10 per cent reduction in voltage rails would equate to about a 30 per cent reduction in heat and no performance change for most speakers. And there is the hitch: many users want the power, some need it but most do not. Unfortunately there is no reliable or simple way for us to change the voltage rails. It would require a transformer change. An external transformer lowering the AC power would do the trick.

We understand that most of the waste heat comes from the driver stage. Does this mean you're pushing the driver stage harder than usual, and the output stage correspondingly less hard?

As I said earlier, the driver stage is class A and includes all the voltage gain. The output stage is AB with only current gain. It's this unusual configuration that gets the best out of both stages.

■ one having a +22dB/+28dB gain option. The actual on/off selection is done by a removable toggle switch in the top surface next to an indicator LED – a curious approach that does, at least, prevent the amplifiers being accidentally switched off – though to stop it getting hot, the mains must be physically disconnected!

The amplifier topology is fully balanced throughout and uses accurate current-mirror circuitry designed by MSB. That, in turn, allowed the amplifier to be designed without any feedback at all (global or local), to the considerable benefit of the phase response. Bi-polar transistors are also used throughout.

The heatsinks might dominate the appearance but they need to. The one practical problem with this amplifier is that it runs very hot. Not because it's a traditional Class A design, which it is not, but rather because the input stage operates in Class A and is actually responsible for half the generated heat. Each of these monoblocks generates around 250 watts of waste heat, even when it's in standby. And even when it's merely left plugged into the mains!

As a laboratory tool for the prime purpose of developing MSB's DACs, such a consideration matters little; for the hi-fi person whose amps are in regular use day in and out, it's a more serious issue, especially for those without air conditioning and/or concerned about energy consumption.

We asked MSB whether it would be possible to create an amplifier without the practical handicap of so much wasted heat and it seems that some such options are theoretically available. Some power could be saved by halving that used by the input stage, though



this would limit the maximum power available into two ohms to 400 watts. More could be saved by reducing the output stage bias. Indeed, a lower bias setting is normally used, though our samples were shipped with the high bias setting, giving a marginal improvement in sound quality. Clearly a rather more user-friendly variation on the M200 theme is at least feasible.

Since no balanced-output preamp was available, the M200s were only tried in singleended mode, fed on this occasion from Naim NAC552 and XTC Pre-1 preamps

SOUND QUALITY

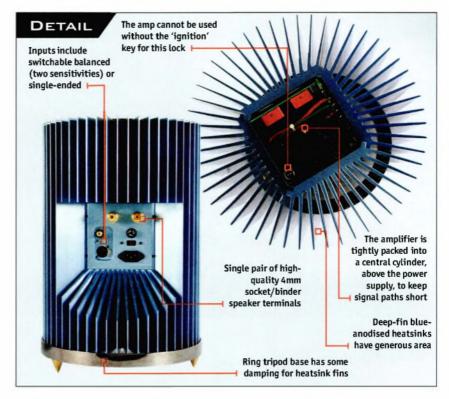
It's quite difficult to discuss the sound of an amplifier that is, quite simply, the best that we've heard to date. The purpose of a power amplifier is to amplify the source and drive the speakers and the ideal example should add no character or 'sonic signature' of its own.

That does indeed seem to be the case with this M200 Platinum. One could describe it as sounding absolutely wonderful, but that, perhaps, is the same as saying it doesn't sound at all. It simply amplifies the signal, across a wide bandwidth and dynamic range, accurately, precisely and without any apparent discernible character of its own.

Everyone's familiar with the alternative stereotype characters of valve/thermionic and transistor/solid-state amplification: the former

MSB ILINK PREVIEW

MSB was the first hi-fi company to realise that the humble iPod has the potential to be a serious music server. At last year's Heathrow show it used one to demonstrate a system including the M200 amps. In order to get it to perform at this level MSB modifies iPods so that they produce a genuine S/PDIF digital output from the standard docking socket. The modded player is combined with an iLink dock and the pair deliver a digital signal via AES/EBU and coax outputs. Put that signal into a decent DAC (MSB makes some of the most decent around in its Platinum range) and you have sound quality that competes with dedicated CD transports head on. Not being the sort of company that rests on its laurels MSB recently updated the iLink to upsample its output to 176.4kHz and this has improved results. In our review of the other serious iPod dock on the market, Wadia's 170iTransport. we found that the MSB is a considerably better source when hi-res music files are used. We will be reviewing the MSB iLink in the October issue (HFC 324).



"It's quite difficult to discuss the sound of an amplifier that is, quite simply, the best that we've heard to date."

with its delicious midrange, alongside some limitations towards the frequency extremes; the latter with its superior bandwidth and power delivery. The M200 Platinum somehow seems to supply most of the better characteristics of both approaches. It might not have quite the romantic midband liquidity of the very best valve designs, but there's no sign of the thickening or congestion that tends to characterise solid-state devices.

There's certainly no particular sweetness here, real or artificial, but neither is there any harshness. Rather the sound delivered by the M200 seems fundamentally neutral and uncannily consistent, irrespective of the type of music played or its complexity. When asked to rock hard, they rocked hard; asked to deliver the subtle textures of orchestral strings, they handled this beautifully too.

This was wholly apparent using our current reference speakers, a pair of essentially neutral PMC IB2is, which are notable for their wide bandwidth and dynamic range. Furthermore, these monoblocks proved equally impressive when used across the rather more modest speakers assembled for this month's Ultimate Group Test (see page 56).

In fact, results were so impressive we took the unusual step of bringing in Rehdeko 175s. Although they're far from neutral, they're still the 'fastest' speakers we've heard and possibly the most critical of amplification. A little to our surprise, their partnership with the M200s was excellent, which only served to confirm our suspicions that this is one of the very finest power amplifiers on the planet. The practical considerations of excessive heat output, plus some mechanical hum remain something of a deterrent, but are, at least, potentially soluble. HFC

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Valvelicious!

The Mini Droplet CD player from Consonance has a performance to match its looks

PRODUCT Consonance Mini Droplet CDP3.1 Linear

TYPE CD player

PRICE £1.995

KEY FEATURES Size (WxHxD): 15x43x35cm Weight: 15kg
 Digital input: 1x coaxial
 Digital output: 1x coaxial O Non-oversampling O E88CC valve output ODAC: TDA1543 multibit ORemote control

CONTACT № 01273 608332 # www.aliumaudio.com

n a world of 'me too' CD players Opera Consonance's Droplet models stand out. Not only because of their curvy shape and distinct finish, but because they use valves and avoid oversampling. The Mini Droplet is as different on the inside as it is on the outside, which as we discovered in our review is indeed unusual.

Opera Consonance is based in Beijing and run by Eric Shi Hui Liu, an optical engineer who started out building valve amps on his kitchen table. Opera was the first Chinese manufacturer of turntables and tonearms and today makes everything the stereo enthusiast requires, except for cartridges.

The Mini Droplet CDP3.1 Linear is so-called because there is also larger Droplet CDP5.0 which looks very similar, but uses a relatively conventional 24-bit/192kHz DAC chip. The Mini Droplet is described as Linear because it is a non-oversampling (NOS) player with only gentle output filtering - an approach favoured by some fashionable names in the business and one which seems to be particularly popular among glass-audio aficionados. Typically, filterless DACs use

relatively old-school converters and this one's no different: it employs four Philips TDA 1543 16-bit chips and offers a choice of sampling rates on top of the standard 44.1, these are two- and four-times and can be switched with the remote, albeit only when the player is stopped. So you can run the Droplet NOS or not, to taste.

To say the Mini Droplet is attractively designed and finished is an understatement. Just look at it! It's one of only a handful of visually exciting CD players on the market and is a joy to own and interact with. It's base is made from piano black-lacquered MDF and the This chunky lump is hewn from aluminium and acrylic and removing it reveals a puck which magnetically clamps the disc. So putting on a disc is only marginally less a kerfuffle than your average turntable. In fact, a clamp-less turntable is probably easier to use! But so long as you have somewhere to put the lid it's pretty painless and brings a degree of vinyl-like interaction, it also means there's no drawer mechanism to eventually go wrong. Underneath the player are three tubular legs with squash balls in their ends, a neat isolation technique albeit one that may not last as long as the rest of the player.

"The Mini Droplet is as different on the inside as it is on the outside, which as we discovered is indeed unusual."

top plate is a hefty slab of aluminium; the two joined together by an aluminium frame for the display and carbon fibre posts. Peer through the Droplet's vented sides carefully enough and you will see the E88CC double-triode valve that drives the output stage. This player's predecessor had a solid-state output, but this proved so unpopular with distributor Alium Audio's dealers that it was changed, which says something about the strength of association between NOS and valves.

Once you have taken in the radical styling of the casework you can't help noticing the huge lid that covers the transport mechanism.

Connections are single-ended and include digital in and outputs, while the soon-to-bebanished front red switch, switches the digital input on and off. You can also switch the digital input in with the chunky aluminium remote; the FA button does the input while the FB changes sample rate. There are no track numbers, but this is a nicely made and very stylish handset for the price. The analogue outputs are non-variable and deliver a peak output of 2.5 volts, which is a bit more than standard, but not uncommonly so.

SOUND QUALITY

We put the Mini Droplet in place of our reference player - the Resolution Audio Opus 21 - and placed some Guru QM10s into the mix. Radiohead's In Rainbows got aired through the new Cyrus 8 XPd amplifier (see review next issue) and the Mini Droplet instantly gave some impressive results. The MD changes the balance from our familiar source and just as obviously, the stereo presentation, but it does nothing to undermine the appeal of the music. Just to make sure that nothing was amiss we took the digital output from the player and put it through the Cyrus 8 XPd's digital input. The result was in much



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 ■ the same ballpark as the analogue output from our Resolution Audio reference player, so it was clear that the valve output stage is making the biggest tonal difference.

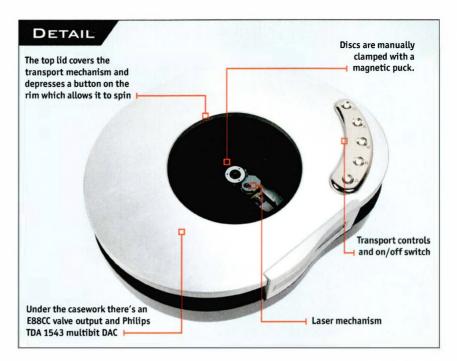
The balance variation is not subtle, there is a curtailing of frequency extremes which means that the bass is devoid of serious weight and the treble lacks a sense of 'air' and as a result, you can't hear the shape of a concert venue so clearly. The upper bass is on the full side and the midrange shines forth, characteristics which are not unheard of with valve-driven components, but aren't usually so obvious with CD players.

Moving over to the more neutral hands of Bowers and Wilkins' 802D speakers and the extra resolve of Bryston's BP-16/2B SST2 pre/power amplification, the degree of tonal variation is slightly tempered and it becomes apparent that the MD does something quite beguiling with the discs its spins. It brings a degree of fluidity to the music that is very rare with digital sources. This is clearly something to do with the remarkable transparency that valves have through the midband, but we've had plenty of glasspowered CD players in the past that are not in this league, so the NOS DAC has to be a contributing factor, too. The extent to which it puts the music before the sound is extremely powerful. You soon cease to be concerned about issues of neutrality and get sucked into the performance being played.

The idiosyncratic nature of the presentation is obvious when a familiar disc starts up, there

NON-OVERSAMPLING

The appeal of non-overampling DACs lies in the less is more audio ideal, the fewer components there are in the signal path the more of the signal should get through. The NOS DAC was conceived by Ryohei Kusunoki in 1996. He wanted to find a way of avoiding time smear in digital audio and, therefore, considered the digital filter to be the biggest cause of this problem. As it's the digital filter that does the over oversampling, he built a DAC that did away with it altogether and used an analogue filter after the DAC. Some companies offer NOS DACs with no filtering at all, an approach that can cause problems with some amplifiers. Consonance uses a gentle analogue filter. A number of high-end electronics makers including Audio Note UK, 47 Labs and AMR incorporate NOS DACs in their products, but the Mini Droplet is the least expensive example that we have come across so far. There are, however, a few relatively inexpensive NOS DACs on the market should you want to experiment.



"The extent to which it puts the music before the sound is extremely powerful. You soon get sucked into the performance..."

is a strong sense that the imaging is amiss and this is evident when you move over to a more conventional player. We pulled in a Bryston BCD-1 which gives distinctly better bass extension and a precise sense of space and depth, making the MD sound positively vaque in terms of imaging and relaxed in respect of timing. But, and it's a big but, the less conventional player brings a musical integrity to the result that is extremely powerful.

Put on something with an emotional message and that comes through in no uncertain terms; Gillian Welch brought a lump to our throats with the song The 14th of April, the quality of which was so enthralling that it was very difficult to hit the stop button once another track was allowed to follow. The Mini Droplet certainly does timing and imaging in its own way, but the more hi-fi aspects of the sound are not emphasised. The way in which it presents digital music is more 'analogue' than most readers could imagine.

So if you're looking for the highest resolution for your money you'd probably be better off



with another CD player, but if its emotional connection that you crave, then this is a very desirable proposition, especially if you're more of an analogue lover than a digital one.

The Mini Droplet is a bit like a Linn LP12 turntable: it's not a precise and neutral transcriptor of the signal, but it gets to the heart of the music in a way that so many more 'accurate' players don't. The sound will inevitably suit some material more than others. Hard rock and dub fans might be disappointed. But, if your tastes are more discerning and refined, it could well be the most affordable route to CD nirvana. HFC

Jason Kennedy



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Updated classic

Some new features are incorporated into an old favourite

PRODUCT Grado SR60i

TYPE Headphone (open-back)

PRICE £100

CONTACT 20 01279 501111 # www.gradolabs.com

rado has been making headphones for a long time now and some of the models in the catalogue have been there for a significant portion of the company's history. Just occasionally something gets changed, however, and recently the company introduced a 'improved' version of the classic SR60 model - hence the 'i' suffix. Thus the company's long-standing starter model now sports a new driver diaphragm and slightly revised housing, which is claimed to reduce transient distortions. It also has a new design of foam earpad, which we voted an improvement in comfort immediately.

Like all Grado headphones, this is an openback model which relies on rear-venting of the diaphragm to reduce both the frequency of bass resonance and its severity, the aim being to give extended and clear bass. At the top end of the spectrum, controlling distortion and resonance is down to the design of the diaphragm itself and to this end Grado makes a point of 'de-stressing' the diaphragm. The motor driving the diaphragm uses high-purity copper wire and neodymium magnets and the impedance of 32 ohms makes this model suitable for both home and mobile use - it

won't go quite as loud as most in-ear types with a portable player, but satisfying levels can still be achieved. The usual combination of 3.5mm jack-plug and 6.3mm adaptor is provided, both gold-plated, of course.

Grado's usual simple headband is still used, though it seemed slightly more comfortable to us than of old. The cable is very soft and

mentioning that competing models show this effect in far greater measure. Grado's own GS1000 avoids it, but at ten times the price!

That's all specifics, though. In musical terms this is a highly successful model which is equally at home in rock, unaccompanied voice, piano and full orchestra. It has a happy knack of getting the musical message across in such

"...this is a highly capable headphone. It is very revealing and has one of the most satisfying tonal balances we've heard..."

flexible and we are pleased to report that it gives practically no friction noise as it rubs against skin or clothing.

SOUND QUALITY

In many respects, this is a highly capable headphone. It is very revealing and has one of the most satisfying tonal balances we've heard in this price range. Headphone tonality can often take a bit of getting used to and does vary to some extent, depending on each listener's ears, but in general terms, this model has a largely neutral midrange and a very good bass; extended but not over-emphasised.

Treble is a little coloured, with some exaggeration of the range in which vocal sibilants lie. This also makes background noise stand out rather more, but it's worth

a way as to make one forget about any specific strengths or weaknesses. Just about the only recording we tried that made us wish for a little more insight was a very tricky one of violin and piano, where the instruments seemed slightly homogenised. However, known tricky tracks such as Dance the Night Away by The Mavericks were revealed in considerable detail and with excellent drive and pace

Most successful of all was choral music, as many headphones trip up here, merging the voices together and losing focus. Not the SR60i, though, which positively revelled in the demands and gave us some of the best image depth we've heard short of very high-end models. We're delighted with the changes Grado has made. It gives a very respectable model a significant leg-up, making it a strong recommendation in its category. HFC

Richard Black







Dynamic duo

The perfect partnership from NAD

PRODUCT NAD C545BEE and C326BEE

TYPE CD player and integrated amplifier

PRICE £350 (C545), £325 (C326)

KEY FEATURES (C545BEE) Size (WxHxD) 43.5x7x28.5cm Weight: 5kg Outputs 1x digital, analogue, optical O Formats: CD Audio, MP3, WMA (C326BEE) Size (WxHxD): 43.5x11.5x33.5cm • Weight: 7kg Rated power: 50 watts per channel (8 ohms) Inputs: 1x line, CD, tuner, aux, tape, Q Outputs: 1x headphones, tape, preamp, subwoofer, 2x speaker

CONTACT ☎ 01279 501111 ## www.nadelectronics.com

owadays manufacturers introduce new product lines and categories undreamed-of a decade ago. So it's always reassuring to find an old favourite remembering the roots from which it grew and NAD's continuing devotion to good oldfashioned budget stereo is admirable. Here we have two of the latest fruits of that devotion, presented in classic NAD style in graphite finish with simple, neatly laid-out front panels and moderate but not excessive feature sets.

The amplifier has seven line inputs (phono stages are a thing of the past on NAD integrated models, but the company continues to offer the classic and remarkably cheap £75 PP2 phono preamp), a tape output and separable pre and power amp stages, normally joined by a small link. One of the inputs, 'MP', is duplicated on the front panel as a 3.5mm stereo jack socket. Tone controls are defeatable, of course, and there's only a single set of speaker terminals, but a headphone socket is also provided.

At first sight, the C326 seems rather empty inside, or at any rate its circuit board is very

lightly populated. Removing a service panel from the bottom of the unit, however, reveals a wealth of surface-mounted components on the underside of the board. Almost all of these are discrete and it seems that NAD stands firm in its preference for discrete circuits over integrated - quite an achievement at this price. The top of the board carries a few more components, including regulators and, of course, the output transistors, which are mounted on a medium-size internal heatsink. There's an impressive number of wire links, which evidently are still cheaper than multilayer circuit boards. Inputs are selected by

class. We were also able to confirm NAD's claims of low distortion and wide bandwidth.

The CD player is straightforward, its one luxury being CD Text, which is available in full detail: Album Title, Track Title and Track Artist (Album Artist is not displayed by a single player or computer application we know of)

The display is nicely judged for size, font and brightness are a definite plus. Discs are loaded quite swiftly by the transport - a proper audio one which makes very little mechanical noise. Data is converted to analogue by a Burr-Brown chip followed by some unusually highperformance op-amps in the output filter/

"We measured about 65 watts from both channels together, over 90 watts from one channel and brief peaks of over 100 watts."

relays, while volume is adjusted by a motorised mechanical control, so problems with premature overload due to high-output sources are avoided

The power supply shows evidence of cost saving and the mains transformer is rather smaller than you'll find in most £500-ish amps. That's a fair compromise, though, and there's no question about the capability of this one to do what's promised: NAD's power specification of 'greater than 50 watts' is comfortably met. We measured about 65 watts from both channels together, over 90 watts from one channel and brief peaks of over 100 watts. making this one of the meatiest amps in its

buffer stages. As with the amp, assembly is smart despite the use of a plastic front panel and the top cover of the unit is a surprisingly thick piece of steel, less resonant than one might expect thanks partly to the way it rests internally on damping pads fitted to the transport mounting brackets.

SOUND QUALITY

We tried both units together as a matched pair, but also spent a fair bit of time trying each with various other electronics that we had on hand (all of which were of similar price or somewhat higher). It's fair to say that we started impressed and pretty much remained

The CD player is particularly good for the cash. As we've remarked before, the basic building blocks that go to make up CD players have advanced in price/performance ratio to the point where some very well specified parts are available to designers of ostensibly very modest kit. Sure, power supplies and fancy output stages still cost real money, but it's possible to do very well in a budget design, and NAD's very own Bjorn Erik Edvardsen (BEE) has not missed a trick: this is a very capable player. It is neutral and detailed,





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audio T audio Practical Hi-Fi

■ with a spacious yet precise soundstage that stays admirably stable through dynamic ebbs and flows. It also has plenty of rhythmic kick in its sound.

Actually the 'neutral' bit needs just a little qualification. In the bass there is a slightly hollow quality at times, a suggestion that control isn't absolute. At first we though this must be a function of the amp, but it stayed with the CD player when we switched amps and largely vanished when we used the C326 amp with other players. That apart, the C545's approach to tonality is very evenhanded and the midrange really is little short of exemplary. The very highest treble is a shade constricted when heard alongside the best that one can buy for around £500, but in isolation it isn't bothersome

There's no obvious musical preference, though we were particularly impressed with the player's showing on classical chamber music - a difficult genre that requires crisp treble but also excellent detail. In this case results were both believably solid and very melodious.

The amplifier fully maintains NAD's reputation for making fearless belters and as we would hope, it drove our usual ATC SCM20 speakers with little trouble (this model needs a fair bit of power, but beyond that is not actually a very difficult load - its impedance is no worse than moderate) but it also had a mighty good go at driving the notoriously tricky Bowers and Wilkins 803S, a currenthungry model that was never designed to

POWER IN THE LONG AND SHORT TERM

The C326BEE has a relatively small power transformer which is the main limitation on power output, at least over a scale of seconds upwards. In the short term, though, considerably more power is available. The reservoir capacitors will support delivery of over 100 watts into eight ohms and somewhere in excess of 150 watts into four ohms, for a few tens of milliseconds and this kind of timescale is typical of the sort of peaks occurring with uncompressed music, exactly the sort which needs high power to sound subjectively loud. Compressed tracks won't benefit half as much, but then they sound much louder anyway because the average level is higher.

The confident current delivery also helps, though this is more a function of the output stage design. High continuous power is inevitably an expensive commodity because it demands both big transformers and big heatsinks, typically the first and second most expensive components in any amp.



partner budget amps and can often reduce them to the electronic equivalent of tears. By contrast in this case, the C326 provides both brute force and subtlety, suggesting that with more likely matching speakers, it is in little danger of running aground.

We feel that the amp is not quite as neutral as the CD player and its tonal palette has a slight preference for the bottom half of the spectrum. We'd far rather have that than the reverse, though, especially when the bass is delivered with both panache and finesse. The very lowest tones of organ, piano and percussion are naturally a little less assured than one would expect from a dedicated power amp, say, and the precision with which the upper bass is handled also lags upmarket models by a small margin. But in its context the bass is really very fine and, as with the CD player, has a pleasing solidity to it.

Treble may be a shade recessed, but it too has considerable refinement, revealing clearly the differences between similar instruments in an ensemble, for instance, and making the most of delicate ambience cues



As a duo, these two really get on like a house on fire. The whole is distinctly more than the sum of the parts, in a way we don't always find with 'matching' components. For the modest asking price, these two provide a remarkably musical, but also analytical basis for a simple, high-quality system. HFC

Richard Black



STOCK CLEARANCE

Listed below is just a small selection of our clearance items. There is up to an incredible 70% off the original RRP on these end-of-line* hi-fi and home cinema separates, speakers and accessories. Stock is limited and when it's gone, it's gone so don't miss a chance to pick up a bargain!

RRIGHTON 01273 733338

Arcam FMJ AV9 Processor	£999.00
Arcam FMJ P7 Power Amplifier	£1,549.00
Arcam FMJ AV9/P7 Processor/Powe	er£1,999.00
Dali Suite 2.8 Speakers	£499.00
Spendor S3e Speakers	£599.00
Spendor S5e Speakers	£899.00
Spendor S6e Speakers	£1,199.00
Spendor S8e Speakers	£1,549.00
Spendor SR5 Surround Speaker	£349.00
Spendor C5e Centre Speaker	

BRISTOL 0117 974 3727

Arcam DiVA P1000 AV Power Amplifier	£699.0
In Focus IN82 DLP Projector	£1,949.0
KEF KHT2005.3 AV Speaker Package	£549.0
KEF Ref 201 Speakers (Inc Stands)	£2,529.0
Linn Chakra 5100 Power Amplifier	£899.0
Monitor Audio Bronze BR2 Speakers	£149.0
Monitor Audio GS20 Speakers	.£1,104.0
REL R-505 Sub Woofer	£649.0
REL T-2 Sub Woofer	£319.0
Spendor C5e Centre Speaker	£419.0

BROMLEY 020 8290 1988

Arcam Diva DV137 DVD Player£549.00
Arcam Logo Sub Woofer£299.00
Arcam Muso Speakers£99.00
Cyrus CD6s CD Player£349.00
Loewe Individual 26 Selection LCD TV£1,049.00
Loewe Individual Compose 46 HD+/TV .£3,045.00
Loewe Xelos A32 HD+ DR+ LCD TV£1,499.00
Q Acoustics 1000i AV Speaker Package£349.00
Teac CRH257i CD / DAB System£199.00
Teac Ref 300/III CD / DAB System£315.00

CHELSEA 020 7352 9456

Arcam DiVA AVP700 AV Processor	2939.00
Arcam DiVA P1000 AV Power Amplifier	.£1,104.00
Cyrus 6 vs2 Amplifier	£454.00
Cyrus Discmaster 8.0 DVD Player	£519.00
Denon DVD1940 DVD Player	£149.00
Denon DVD2930 DVD Player	£324.00
Monitor Audio Radius R225 Rear Spks	£129.00
Monitor Audio Silver In-Ceiling Speake	rs£89.00
Project X-Pack Turntable	£649.00
Sharp LX52XL2E LCD TV	£1,559.00

GUILDFORD 01483 536666

Linn Classik Movie DVD System	£1,399.0
Loewe Connect 37 DR+ LCD TV	£1,799.0
Loewe Cube 2 Motorised Stand	£979.0
Loewe Individual 40 DR+ LCD TV	£2,299.0
Loewe Spheros R37 LCD TV	£2,559.0
Loewe Xelos 26 LCD TV	£699.0
Marantz SA15 S1 SACD Player	£1,049.0
Meridian G51 Pre Receiver	£1,499.0
Meridian G55 AV Power Amplifier	£1,849.0
Spendor S8e Speakers	£1,539.0

HOLBORN 020 3837 7540

KEF KIT510 DVD System	£574.00
Marantz PM11 S1 Amplifier	£1,624.00
Marantz PM15 S1 Amplifier	2909.00
Marantz RC3001 Universal Remote	£194.00
Pioneer DCS370 DVD System	£199.00
Pioneer DVLX50 DVD Player	
QED HDMI 4x4 Matrix Switcher	
Roksan FR5 Speakers	£1.624.00
Roksan Kandy / III CD Player	
Spectral CL1552 Equipment Stand	

KINGSTON 020 8547 0713

Arcam FMJ P38 Power Amplifier	£549.00
Cyrus AV Master 8.0 AV Processor	£519.00
Cyrus Discmaster 8.0 DVD Player	£519.00
KEF KHT3005SE AV Speaker Package.	£1,039.00
KEF XQ10 Speakers	£454.00
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Loewe Xelos A32 DR+ 100 LCD TV	£1.124.00
Monitor Audio RS5 Speakers	
Panasonic TH42PZ81 Plasma TV	
Panasonic TH50PZ800 Plasma TV	

MANCHESTER 0161 831 7969

Arcam DIVA DV137 DVD Player	£499.00
Artcoustic Diablo Surround Speakers.	£634.00
Artcoustic C1 Centre Speaker	£374.00
Loewe Xelos 26 LCD TV	£729.00
Monitor Audio GS60 Speakers	.£1,699.00
Monitor Audio Radius R45 Rear Spks	£44.00
Revel S12 Surround Speakers	£214.00
Tivoli Model One Portable Radio	£59.00
Yamaha AS2000 Amplifier	.£1,199.00
Yamaha CDS2000 CD Player	

NORWICH BEEDS 787805

Audica CS-S1 Surround Speakers	£99.00
Creek Destiny Amplifier	£779.00
KEF KHT6000ACE Surround Speakers.	£159.00
Lexicon RT10 Universal Disc Player	£1,374.00
Musical Fidelity XT100 Amplifier	£584.00
ProAc D15 Speakers	£1,199.00
ProAc Response 1sc Speakers	£799.00
Spendor A5 Speakers	
Spendor SA1 Speakers (Inc Stands)	
Yamaha DVDS2500 DVD Player	

OXFORD 01865 241773

Primare A30.2 Power Amplifier	£599.00
Primare CD21 CD Player	£649.00
Primare CD31 CD Player	£1,299.00
Primare I21 Amplifier	£649.00
Primare Pre 30 Pre Amplifier	£749.00
Teac CRH257i CD/DAB System Inc S	pks£189.00
Teac RX1 DAB Radio	£49.00
Tivoli Model 3 AM/FM Clock Radio	£115.00
Tivoli Model 3 Speaker	£55.00
Yamaha DVDS1700 DVD Player	£199.00

SEVENDAKS 04722 ARBESS

Arcam DiVA AVP700 Processor	£899.00
Arcam FMJ T31 Tuner	£349.00
Bose 301 Speakers	£219.00
Bose LS48 / III DVD System	£2,799.00
KEF KHT5005.2 AV Speaker Package.	£899.00
Pioneer DVDLX50 DVD Player	£399.00
Primare DVD26 DVD Player	£499.00
Samsung PS50Q97HDX Plasma TV	£799.00
Seleco SVD500 CRT Projector	
Yamaha TX761DAB Tuner	

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Living Control RoomBox 6	£2,924.0
Marantz BD7003 Blu-Ray Player	£519.0
Marantz MM8003 Power Amplifier	£974.0
Project Debut III Phono USB Turntable.	£194.0
REL R-505 Sub Woofer	£749.0
Yamaha DVDS2700 DVD Player	£274.0

NOTTINGHAM 0115 911 2121

Harman Kardon AVR155 AV Receiver	£289.00
Harman Kardon TU970 DAB Tuner	£194.00
KEF iQ90 Speakers	£649.00
KEF KHT1005. AV Speaker System	£324.00
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Monitor Audio Bronze BR2 Speakers	£149.00
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Monitor Audio Radius R270 Speakers.	£249.00
Musical Fidelity A1008 Amplifier	£1,949.00
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Acoustic Energy Aegis Evo 3 Speakers.	£174.00
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B&W XT2 Speakers	£519.00
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Onkyo DRS501 DVD Receiver	£324.00
Spendor C5 Centre Speaker	£489.00
Spendor C5.2 Centre Speaker	£484.00
Spendor SR5 Surround Speaker	£549.00
Sunfire True EQ Sub Woofer	£1,099.00
Yamaha RXN600D AV Receiver	£299.00

SOUTHAMPTON 023 8033 777

KEF KIT510 DVD System	£599.00
Marantz CD6002 CD Player	£209.00
Marantz PM11 S2 Amplifier	£2,144.00
Marantz PM15 S1 Amplifier	£699.00
Marantz VP15 S1 DLP Projector	£3,499.00
Mordaunt Short Mezzo 6 Speakers	
Pioneer PDXZ9 CD System	£399.00
Quad 99 Power Amplifier	£389.00
Sonos ZP100 Zone Player	
Vamaha RDS2900 Rlu-Ray Player	

TUNBRIDGE WELLS 01892 53154

Arcam DiVA DV137 DVD Player	£599.00
Arcam FMJ P7 Power Amplifier	£1,839.00
Cyrus CD6s CD Player	£349.00
Denon AVR3806 AV Receiver	£499.00
DVDO i-Scan VP50 Video Scaler	£1,559.00
KEF KIT200 DVD System	€649.00
Living Control Music Box 3 Server	
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Partington Dreadnought Broadside	
Vamaha CDPHD1500 CD/HDD Record	

*Some items are ex-display but all are sold with full warranty. These products are only available from the stores listed and are subject to availability - please confirm before travelling. All prices were correct at time of going to press. End-of-line and dearance offers are not available in conjunction with any other offer or promotion. Advert valid until 31/07/2009, E&OE.

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A Harman Kardon HD 990 CD player and HK 990 amplifier worth £1,550

Harman Kardon has well and truly put itself back on the two-channel map with the HD 990 and HK 990 pairing. In *HFC* 321 we awarded each component five stars overall, enough to garner Best Buy badge recognition. The HK 990 integrated is a very clever piece of kit: it uses DSP chips to offer room correction and digital tone control, while at the same time offering a pure analogue signal path for maximum sound quality. It's hugely powerful, too – the 150-watt specification being easily exceeded on our test bench and offers more digital and analogue inputs than you can shake a remote at. The HD 990 CD player also has a digital input, alongside a matching output, as well as an HRS link for sending a clock signal to the HK 990, ensuring that jitter doesn't undermine the digital interface between the two. Alternatively you can use the balanced and single-ended analogue outputs.

For more information go to: www.harmankardon.com

For your chance to win this fabulous pair just answer the question below.

OUESTION:

What is the clock link on these components called A: HRH B: HRT C: HRS

HOW TO ENTER

For your chance to win, text **HK A, B** or **C** to **87474** or visit **www.futurecomps.co.uk/hk** and follow the instructions, leaving your selected answer and details where prompted:

Terms And Conditions

To enter the Harman Kardon competition, you can either (a) text your answer to 8747M at any time between 25 June, 2009 and 22 July 2009, or (b) enter online at www.futurecomps.co.uk/hk with your entity being mere wed between 25 June, 2009 and 22 July 2009. By sending your entry you agree to these competition rules and you confirm you are happy to review defaults of future offers and promotions from future Publishing Limited and carefully selected third parties. If you do not want to receive information relating to future offers and promotions, pease include the word \$100 Part he end of your possel entry. Texts will be charged at \$1.00 puls you standard network tariff rate. By taking part in a Competition, you agree to be bound by the Competition Rules, which are summarised below but can be viewed in full at wows futurenctions. Competition rules as a fatter of the properties of the properties of delivery. Entries must be submitted by an individual find via any agree or you make a your limits and unless otherwise standed are limited to one per household. The Company reserves the right in its sold activation to substitute any prize with rash or a prize of compatible value. Unless otherwise standed are interested to one per household. The Company reserves the given in the properties of the Company reserves the limited by an individual into via any agree or your summary and unless otherwise standed are limited to one per household. The Company reserves the report of the competition of any properties control in the competition of the competition of all purposes. All relies will become the property of the Company on mercification of the competition of the competition of all purposes. All relies will become the property of the Company on mercification of the competition of the

GROUP TEST & LAB REPORTS: PAUL MESSENGER

FLOORSTANDERS

Six stunning, upmarket floorstanders are put through HFC's Ultimate Group Test

his month's loudspeaker group test covers a relatively costly segment of the market, the prices per pair ranging from £1,467 up to £2,300. All six are floorstanders and partly as a result their similarities often seem greater than their differences.

All are clad in good-quality, real-wood veneer (although this is a costly extra with the Amphion) and some include high-gloss black in their option list. Half include two drivers, while the other half have three, though none are three-way designs – rather we've got four two-ways and two, two-and-a-half-ways. Even the total main driver area is remarkably similar across the group.

All stand between 90cm and 100cm tall and most weigh close to 17kg (though the Amphion turns the scales to a considerably more substantial 25kg).

One could, perhaps, subdivide them into small (Audio Physic, Dynaudio), medium (Kudos, Rega) and large (Amphion, PMC), though in truth the differences are not large. All have ports of some sort, although the Rega and PMC have transmission lines between driver and port.

Three of our subjects are from British firms, alongside one each from Denmark, Finland and Germany. Although it's virtually impossible to pin down actual sources of component manufacture these days, we reckon that most – perhaps all – of these speakers were predominately manufactured in their home countries.

One very positive feature, again shared by every one of our subjects here, yet only occasionally encountered at lower price points, is that proper attention has been paid to floor coupling and – for the most part – physical stability. Only the Dynaudio fails to improve on an inherently very modest stability – although there's a plinth that provides secure spike fixing, it doesn't extend a rather small footprint.

It's interesting, and possibly significant, to note that only two of the six have multiple terminals and both of these (PMC, Rega) are from UK sources. There was a time, not so long ago, when it seemed almost mandatory to fit speakers with twin terminal pairs, primarily to provide a bi-wiring option. The debate for and against bi-wiring is

long, involved, full of speculation and much too complex to cover here, but perhaps we're starting to seeing a return to simple single-pair speaker wiring. **HFC**

EQUIPMENT USED

- Naim CDS 3/555PS CD player
- Linn Sondek LP12 (modified)/Rega RB1000/Soundsmith Strain Gauge turntable/arm/cartridge
- (S) Magnum Dynalab MD 106T tuner
- Naim NAC552, XTC PRE-1 preamps
- Naim NAP500, MSB M200 Platinum power amps
- Cables from Chord Company, Vertex AQ, Phonosophie, Synergistic Research and Naim.
- Equipment supports from Mana, Vertex AQ, Naim, Townshend

MUSIC USED

- O Alison Krauss: Forget About it
- Ennio Morricone: The Soundtracks
- Various artists: Heartworn Highway
 Mavis Staples: We'll Never Turn Back
- Laurie Anderson: Mr. Heartbreak
- Sibelius Symphonies (Maazel VPO)

BBC Radios 3 and 4 were also used extensively during the tests





LISTENING TESTS

Loudspeaker listening poses an altogether more complex set of problems from those involved in assessing components further up the hi-fi chain. Loudspeakers vary dramatically in size, type and tonal balance and also interact strongly and often unpredictably with the room, according to where they're placed. The fatal difficulty facing sequential unsighted loudspeaker presentations is the strong tendency to judge each example according to how its balance differs from the model that preceded it. Accordingly, extended hands-on listening sessions were adopted, giving proper scope to adjust to the inevitable changes in balance and also to experiment with the positioning of different models.

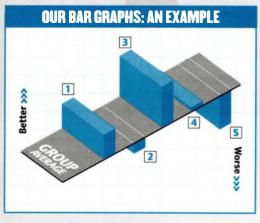
LAB TESTS

The speakers were tested under in-room conditions, in order to be as representative as possible of real world operating conditions. The test equipment used was a Neutrik Audiograph analogue signal generator with synchronised pen recorder. This was used to plot the far-field in-room averaged response traces, as well as the impedance plots, which provide the core of the measurement work. Pair-matching was also checked at one metre.

No other magazine offers an equivalent test and listening programme for comparative tests.

LAB REPORTS: THE BAR GRAPH

- 1) Sensitivity: Sensitivity is a measure of how loud a speaker will go for a given voltage from the amplifier. It's scaled to 2.83V at 1 metre, a figure that can be misleading, as loudspeaker sensitivity can vary quite significantly across the audio range and because lower impedance speakers extract more current and hence power from an amplifier than higher impedance examples.
- **2] Bass extension:** To replicate 'real world' conditions, our figure represents the averaged bass roll-off frequency at -6dB ref the broad midband, measured across the far field for a stereo pair in a 4.3x2.6x5.5m room
- **3] Ease of drive:** Lower impedance designs are theoretically harder to drive, but they also tend to have higher sensitivities, which reduces their voltage requirement for a given level of loudness.
- **4] Overall frequency balance:** The overall broad frequency response trends do much to define the character of a speaker, although true neutrality is the obvious goal
- **5] Response smoothness:** The small scale smoothness has much to do with the delicacy of the sound, and its ability to deliver subtle harmonic shading.





Is this truly the finest, most musically credible amplifier yet produced?

You may think that, but I couldn't possibly comment...

I'll leave that to this magazine. I'll tell you this though: for the first time in years (and I do mean years) I return to my demo room after everyone's gone home – just to sit and play music. The Lyngdorf CD1 into the extraordinary Lyngdorf TDA i 2200 true digital amplifier, using LFD Hybrid RC speaker cable into the Somervell Round-One and Bi-polar passives loudspeakers...

...a truly beautiful, wonderful, magnificent and exquisite experience – and I don't often say that.



The Lyngdorf Millennium MkIV true digital amplifier

- "The best amplifier I have ever encountered, a new standard in musical excellence" The Absolute Sound
- " ... it played immediately so transparent, detailed and precise that we expected the end was near for transistorized amplifiers" **Stereoplay**
- "The sound is absolutely addictive, in many ways better than anything we have heard before " HiFi Choice
- "The sheer fidelity of the Millennium is immediately superior to any analog gear we have ever heard, including the best LP's! This was probably the biggest surprise during our first listening session" **HiFi & Elektronik (DK)**
- "The Millennium is far freer of electronic character than any analog device I have encountered." The Absolute Sound.

Lyngdorf at Stereonow:

- Millennium MkIV
- RP-1 Room Processor with Room Perfect correction
- TDAi 2200 (true digital amplifier)
- CD-1 CD player
- the full Lyngdorf 2.2 system Hmm, nice!

Anyway, are you still searching for the perfect sound?

Okay, let's tell it like it really is. The inescapable and (for most makers, flat-earthers and associated oddities) unpalatable truth is this: when you listen to your hifi, over half of what you hear will be created by the acoustics of your listening room. This fundamental problem affects any system and is the reason why good components simply don't give good sound in most rooms. Lyngdorf audio systems reduce the distortion that rooms create from a typical 20db to less than 2db.

And here's another fact. Lyngdorf electronics are also unique in providing an unbroken digital signal from your source to your loudspeakers removing the distortion and noise that is inherent in analogue designs.

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AMPHION ARGON 3L

£2,300 per pair № 01623 517000 @ www.amphion.fi
Substantial floorstander has much in common with the Argon 2

relatively new brand on the scene,
Amphion operates out of the heart of
Finland. Its particular USP is the use of
waveguides to load its tweeters, for a number
of very good reasons.

A waveguide is a species of horn with a truncated throat and a very wide flare. First, Amphion claims that it increases the efficiency at the bottom end of the tweeter pass-band and, therefore, allows the crossover point to be lowered, to around 1.2kHz. Secondly, it helps match up the acoustic sizes of the bass/mid and treble drivers. Thirdly, by recessing the tweeter proper with respect to the front panel, its voice-coil-to-listener distance becomes similar to that of the cone driver, improving the time-alignment and simplifying the crossover transition.

Although details of the brand new Argon 3L are still sparse, it appears to have a great deal in common with the Argon 2 Anniversary (see review in HFC 317). Both appear to share the same drive units and crossover network, but the key difference is that the 3L is a very substantial floorstander, whereas the 2 is a much smaller standmount.

While there's no question you get a much



larger, very handsome and exceptionally solid enclosure here – and consequently superior bass performance – the extra cost is considerable. Whereas the Argon 2 price was £1,200-£1,400, this Argon 3L costs nearly twice that at £2,300-£2,600. The justification is that enclosures are the most expensive part of a speaker and floorstanding enclosures need much more substantial engineering to match the performance of a standmount enclosure. It is, therefore, very significant that the Argon 3L weighs nearly 50 per cent more than the others in this *Ultimate Group Test*.

Like all Amphions it has super-clean, sharp-edged Scandinavian lines, very much in the Art Deco tradition. No overall grille was supplied, but the tweeter is well protected by its own grille and position: deep down the black-coloured waveguide. The speaker comes complete with a proper plinth that improves the overall stability, enhances the appearance, and securely locates the spikes.

The SEAS-sourced tweeter has a 25mm titanium-dome diaphragm, while the 165mm bass/mid driver has a 115mm metal cone surrounding a fixed 'bullet' pole extension. A single pair of high-quality WBT terminals is fitted, below a large diameter rear port and foam bungs are supplied to block the ports if preferred.

SOUND QUALITY

Although it's clearly best to keep these speakers well clear of walls, if the bungs are used, some close-to-wall proximity will probably be acceptable. Interestingly, even though there is some bass excess, because it remains clean with no apparent overhang it doesn't seem to pose any sort of problem subjectively. If anything, it is something of a bonus adding weight and scale rather than unwanted thickening or thump.

That heftily engineered and notably quiet enclosure is one of this design's hallmarks, as are the essentially pistonic metal diaphragms. Together these give the Argon 3L a distinctive character – smooth, clean, neutral and very well controlled, with a wide dynamic range as a consequence of the low enclosure noise floor. As a result, it sounds a little less 'busy' than some of the alternatives and a little less dynamically demonstrative, too, but the fine accuracy and coherence are their own reward.

Coloration is low, especially through the bass region, though voices do have a hint of nasality. Focus is very good, so images have a welcome solidity and good perspectives. **HFC**

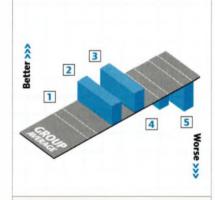


LAB REPORT

The Argon 3L measures rather well. The treble is exceptionally smooth and flat, while the upper mid (700Hz-1kHz) is slightly prominent. However, the enthusiastic port output – tuned here to a relatively low 33Hz – does give a significant excess (averaging around +4dB) between 25Hz and 60Hz, even with the speakers well clear of walls. Bungs are supplied to block the ports if preferred and with these in place the frequency response holds within very impressive +/-4dB limits right across the audio band, albeit with an admittedly rather dry bass.

Sensitivity is a shade below average but in context, very acceptable as the bass output is generous and the amplifier load is very easy to drive, staying comfortably above 6 ohms throughout. The pair match of our samples was particularly close, though a slight enclosure resonance 'glitch' is visible at 190Hz.

HOW IT COMPARES



- 1] Sensitivity >> 0%
- 2] Bass extension >> +20%
- 3] Ease of drive >> +10%
- 4] Overall frequency balance >> -10%
- 51 Response smoothness >> -30%

SPECIFICATIONS	ICATIONS	
Measurement	Rated	Actual
Serisitivity @ 1m/283V	87dB	87dB
Impedance (nominal/ininimum)	8/ns	8/7 ohms
Estimated bass extension (-6dB)		20Hz





If music <u>really</u> matters...



AUDIO PHYSIC SITARA

£1,950 per pair 2 07738 714619 **www.audiophysic.de** Attractive floorstander from a well-respected German outfit

udio Physic is an upmarket German speaker specialist. Although the company has been trading successfully for more than twenty years, it has an undeservedly low profile in Britain, as distribution here hasn't seemed to be a major priority – a situation that may well change now that G-tech Audio has taken it on.

This Sitara is one of the less costly models in Audio Physic's portfolio and replaces the Spark (which we reviewed in *HFC* 271). At £1,950 per pair, the Sitara is £450 more than the Spark cost four years earlier, much of which is due to the appreciation of the Euro against the Pound over the interregnum.

A most attractive-looking speaker, it combines an unusually slim front with elegantly curved sides and a pronounced (seven degrees) backward tilt, to create a classy speaker that oozes elegant discretion. A spirit level is even included with the accessories. The curved sides – wider in the middle than at the front and back edges – should increase the panel stiffness and help avoid the parallel faces that create standing waves, while the backward tilt ought to assist mid-to-treble



time-alignment. Our samples came in a very smooth and attractive cherry real-wood veneer, one of seven alternative finishes available: five different woods, plus high-gloss black or white.

Four steel outriggers with plastic trim pieces are screwed into the bottom surface to extend the stability footprint and also provide secure spike-fixing. Thumbwheels act as lock-nuts here; interestingly (not to mention somewhat ironically), because these are made of plastic rather than metal, they're actually more secure and as a result, offer a much tighter fit – other manufacturers please take note!

There are three drive units in toto here – a 27mm soft-dome tweeter for the treble, plus two 135mm main drivers with cast alloy frames, 100mm plastic cones and large cylindrical central pole piece extensions. Though apparently identical, the latter pair operate in a two-and-a-half-way configuration, the lower unit just operating through the bass region up to 500Hz, while the upper main driver covers both the bass and midrange frequencies.

Driver output is supplemented by a rear port set well above a solitary pair of high-class WBT terminals that are mounted on a substantial alloy panel and deliberately mechanically decoupled.

SOUND QUALITY

The Sitara not only looks very elegant it sounds that way, too. It may not have the most dynamically vigorous sound around, but the overall quality is very well judged within the inevitable limitations imposed by the price and engineering constraints.

This is not a large loudspeaker and while many will regard that as a positive virtue in itself, it does mean there's some lack of weight and scale compared to larger and more muscular designs. What bass there is could be smoother, but it's attractively clean, lively and purposeful, so one is rarely conscious of its limitations.

The lower midband has a little too much warmth and a mild degree of texture thickening, but the upper mid and presence voicing is exceptionally well-judged. Here the Sitara sounds beautifully coherent, sweet and expressive, delivering well-focused stereo images with plenty of air, fine perspectives and an impressive freedom from boxy effects. The treble is also smooth and open without ever drawing unwelcome attention to itself. **HFC**



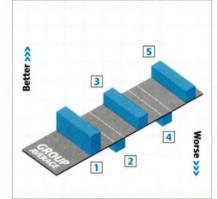
LAB REPORT

There's no disguising the close similarity between this new Sitara and the Spark. However, even though the two share similar enclosures and drive configurations, the Sitara clearly has a different crossover network and drive units.

Sensitivity is a generous 90-91dB and this is only mildly compromised by a load which stays above 4.5 ohms throughout. Though the pair match is close enough, the impedance trace of one of our pair showed a slight perturbation at around 120Hz, probably due to an enclosure resonance and slight lack of damping.

The Sitara delivers a decent overall in-room balance with the speakers well clear of walls, though the far-field averaged traces show a slightly strong and detached mid-bass and a further dip at 300-500Hz. Above that point all is smooth, flat and beautifully judged, with fine crossover transition.

HOW IT COMPARES



- 1] Sensitivity >> +20%
- 2) Bass extension >> -10%
- 3] Ease of drive >> +10%
- 4] Overall frequency balance >> -10%
- 5] Response smoothness >> +10%

SPECIFICATIONS		70.00
Measurement	Rated	Actual
Sensitivity @ 1 m/2 83V	89dB	90dB
Impedance (nominal/minimum)	4/ns	6/4 ohms
Estimated bass extension (-6dB)	ns	27Hz





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From left to top right: Avalon Evolution NP 2.0 Loudspeakers conrad-johnson ET-2 Pre-amplifier Karan Acoustic KA I 180 Integrated Amplifier Zanden 2500S CD Player

DYNAUDIO EXCITE X32

£1,790 per pair • 07970 074717 • www.dynaudio.com Super-slim floorstander is more radical than appearances suggest

ased firmly in Denmark with Danish engineers and a wide range of products that have become well established in ProAudio, in-car as well as hi-fi applications, Dynaudio is actually owned by German interests – a pan-European recipe that has proved very successful.

Although the Excite range was formally launched a year ago (essentially as a somewhat more upmarket replacement for the deservedly popular Audience line-up), this is its first appearance in *Hi-Fi Choice*. This X32 looks just like a Dynaudio, with classic styling hallmarks like the matt grey front baffle, but it does also represent quite a departure for the company, in ways that might not seem immediately obvious.

Coing back as far as this reviewer can recall, Dynaudio's main drive units have featured much larger-diameter voice coils than average, driving moulded, loaded-plastic (Magnesium Silicate Polymer) cone/dome diaphragms. It's an approach that offers plenty of extra thermal (though not extra excursion) power handling. However, the large and hence heavy coil also tends to compromise sensitivity somewhat, which may well be why Dynaudio has opted for a more conventional motor



structure, while retaining its usual features like the cast frame and MSP diaphragm.

For good or ill (quite possibly the latter), today's fashion strongly favours loudspeakers with very slim front panels and this was clearly in the mind of the X32's designer. The use of twin main drivers to achieve good cone area with a slim front view is common enough these days, but the X32 adopts a straight two-way approach rather than the two-and-a-half-way configuration commonly found elsewhere.

It's an exceptionally slim and discrete package – less than one metre tall and just 17 cms wide, with all four faces elegantly dressed in a choice of four high-class and very smoothly finished real wood veneers: maple, cherry (our samples), rosewood or black ash. The front panel is a chunky matt grey slab of MDF, nicely chamfered up the vertical edges, but may be covered up by a black fabric, full-height grille if preferred.

The only real criticism concerns the little plinth, which is the same size as the enclosure base. While this provides secure fastening for the spikes, it does nothing to increase the overall stability of a very small footprint. The other bad news concerns the price, as the current weakness of the pound has recently forced an increase from £1,557 up to £1,790 per pair.

The two 135mm main drivers each have 95mm mineral-loaded polymer cones with integral dust covers. The soft fabric/polymer tweeter has a 27mm dome and is positioned a little below seated ear-level. A single pair of terminals sits close to the floor underneath the reflex port.

SOUND QUALITY

For the most part the overall tonal balance is pretty good here. It doesn't have the smoothest sound around, but it does reproduce human voices very well indeed. A degree of presence restraint can sound a shade dull at low listening levels, but it does also allow the volume to be turned up quite high without sounding aggressive.

While the midband sounds clean and informative and the treble sweet and nicely judged, the bass is rather less convincing. It has a tendency to thump a bit with some material, textures are also rather vague and rhythmic reproduction lacks some well-needed precision and authority. Stereo images, however, are well formed and there's no obvious boxiness nor any significant midrange coloration. **HFC**



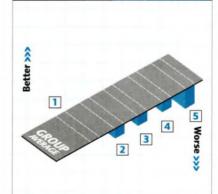
LAB REPORT

The Excite X32 is a brand new design, different from previous Dynaudio models. Coincidentally, even though this is a straight two-way, it has a similar size enclosure and driver disposition as the Audio Physic Sitara and has remarkably similar measurements. too.

Sensitivity is a decent 88dB, alongside a straightforward amplifier load that dips only briefly below 6 ohms. The pair-match is pretty good and port tuning at 42Hz ensures good in-room bass extension down to 25Hz.

Elsewhere, the overall far-field averaged frequency balance is pretty good, holding within +/-4dB from 60Hz right up to 18kHz. However, that overall trend ignores some significant unevenness: three distinct zones showing some relative lack of output - 70-120Hz, 300-550Hz and 1.3-3kHz, each of which will introduce a measure of character to the overall sound quality.

HOW IT COMPARES



- 1] Sensitivity >> 0%
- 2] Bass extension >> -10%
- 3] Ease of drive >> -10%
- 4] Overall frequency balance >> -10%
- 5] Response smoothness >> -20%

Rated	Actual
87dB	88dB
4/ns	7/5 ohms-
37Hz	27Hz
	87dB 4/ns





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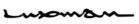














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KUDOS CARDEA C2

£1,950 per pair № 0845 601 9390 ● www.kudosaudio.com Floorstander that outperforms its C1 standmount equivalent

he Kudos name first came to our attention a few years back, as the maker of some of the best speaker stands around. Until quite recently, it was owned by Neat Acoustics, but became independent again about three years ago, adding loudspeakers and equipment stands to a growing product portfolio under the stewardship of designer Derek Gilligan.

The C2 speaker we're reviewing here is the floorstanding equivalent of the standmount C1 that we rated way back in *HFC* 304. It naturally costs rather more – around £500 more in fact, or nearly £900 more if you opt for the special rosenut wood veneer used in our review samples. However, the £1,950 asking price is not unreasonable in this *Ultimate Group Test* context, provided the performance is up to scratch.

This is a classic two-way floorstander. The sharp-edged enclosure is handsomely finished in a selection of very attractive 'book-matched' real-wood veneers, in walnut, cherry, sycamore or rosenut. Both drivers are flush-mounted into the front panel and if used, the 'teardrop' grille is held by magnets hidden beneath the veneer, instead of unsightly mounting lugs.

The enclosure is reflex-ported through its



base panel, so the port output is directed downwards into a gap created by spacers between the enclosure and a plinth. Perhaps, reflecting the company's speaker stand heritage, the latter is a proper and substantial piece of shaped and painted MDF, firmly bolted via metal spacing cylinders, substantially enhancing both the stability and the appearance and securely accommodating the spikes. The only cavil is that the lock-nuts are metal thumbwheels, which can't be properly tightened and, therefore, tend to loosen all too easily.

On the drive unit side of things, Kudos works with Norwegian specialist SEAS. The bass driver has a 180mm frame and a 120mm doped paper cone, while the tweeter here is the highly regarded 25mm fabric-dome Excel. A well-spaced high-quality terminal pair is mounted on a solid recessed board.

SOUND QUALITY

Sometimes you know straight away that you're dealing with something just a little bit special, and that is very much the case here. The C2 just sounds so 'right' straight from the off, demonstrating a neutral balance, wide dynamic range, fine coherence, good stereo imaging, and a reassuringly 'ballsy' bottom-end.

This design might not offer any dramatic technical solutions; rather it shows just what can be achieved by intelligently and carefully applying high-quality components with traditional techniques. One might argue that the C2 doesn't set the bar higher in any particular respect but that's actually the point, because those that do tend to fall down somewhere else. Rather, this design artfully balances all the variables to give a very superior all-round performance.

Certainly any enclosure coloration is very well controlled, while the voicing through the upper midrange is particularly convincing. In fact, it delivers just the right amount of emphasis to make voices clear and intelligible, yet with sufficient control to avoid significantly affecting the tonality or projection.

While focus is good, image height did seem a trifle constricted, perhaps because this is not a tall speaker. Amongst the C2's better features are its taut timing, along with a decent attempt at dynamic expression, while the mild unevenness shown in the measurements didn't seem to affect the sonic performance significantly. **HFC**

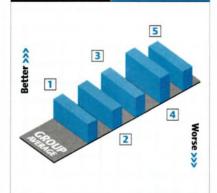


LAB REPORT

The Cardea C2 is essentially the C1 standmount ingredients packaged in a larger floorstanding enclosure (or vice-versa, of course). The commonality is clearly visible in impedance traces that differ only in the port tuning frequency (35Hz, rather than 48Hz for the C1).

The far-field in-room frequency response measurements show a clear advantage in favour of this floorstander, which not only delivers the anticipated advantage in bass extension, but also significantly and usefully improves the smoothness and overall neutrality. Indeed, barring a brief port- and room-mode-related peak around 50Hz, virtually the whole audio band, from 23Hz up to 20kHz, holds within an impressive +/-3dB window, as the C2 helps fill out the upper bass and lower midband, flatten out the upper midband (600Hz-1.8kHz) and smooth the crossover transition.

HOW IT COMPARES

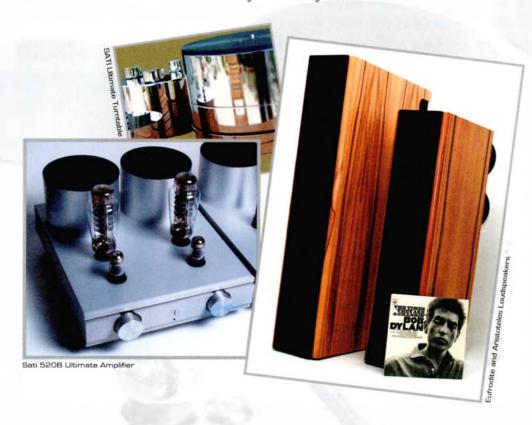


- 1] Sensitivity >> +20%
- 2] Bass extension >> +20%
- 3] Ease of drive >> +20%
- 4] Overall frequency balance >> +30%
- 5) Response smoothness >> +20%

SPECIFICATIONS		
Measurement	Rated	Actual
Sumitivity @ 1 m / 2 83V	88dB	89dB
Impedance (nominal/minimum)	8/ns	8/7 ohms
Estimated bass extension (-6dB)		23 Hz



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PMC FB1I

egun by two ex-BBC engineers in the late 1980s, PMC is quite a young company by hi-fi industry standards, and is unusual in having equal success in both domestic hi-fi and professional audio sectors. Still led by co-founder and designer Pete Thomas, the core philosophy throughout is the use of 'advanced transmission lines' (ATLs) to load the bass drive units.

Originally introduced some ten years ago, the FB1 was actually the company's first floorstander and although the design outline has remained exactly the same throughout, it has undergone a number of detail refinements and two specific revisions since then. In 2004 the '+' version changed the tweeter, crossover and internal damping and made upgrade kits available. In 2008 this latest FB1i version arrived, with even more extensive changes so much so that upgrading was no longer possible. There's a new 27mm soft fabric-dome tweeter (co-developed with SEAS) substantial improvements in crossover components, in the fit and finish of the cabinet and plinth and in the bass/mid drive unit.



It's a slim and quite tall two-way design with nicely rounded baffle edges, finished in a selection of high-quality real-wood veneers. A curvaceous black MDF plinth extends the footprint, providing secure accommodation for chunky floor-spikes and improving appearance and stability. Over the decade the price has increased somewhat, from the original £1,275 to £2,100 for the latest version – significantly ahead of inflation, but reflecting the cost of UK manufacturing, European components and the performance upgrades.

The folded, tapered transmission line is three metres long, making cabinet construction both complex and expensive, but also providing considerable stiffening for the enclosure side panels. It has long been debated exactly how a transmission line differs from other methods of loading, such as the almost ubiquitous reflex or the much rarer tuned column, both of which show similar impedance characteristics. There are similarities to be sure, but on balance, the ATL approach seems to offer superior rear radiation-absorption and rather broader tuning.

The main driver here has a 170mm cast alloy frame with a 125mm doped paper cone, while the new tweeter has a 27mm fabric dome.

Twin terminal pairs – conveniently close to the floor – provide the bi-wire/-amp option.

SOUND QUALITY

'Laid back but smooth with it', is a phrase that probably best sums up the character of the FB1i. Happily, this well-established but recently improved floorstander still shows that it can deliver the goods in our listening tests and while image perspectives are a little more distant than most, the overall sound is also smoother and sweeter than most of the competition. Focus is good and the stereo soundstage free from boxiness.

The bass is quite strong relatively speaking, but it's also impressively deep and even, with a welcome freedom from the sort of resonant mid-bass 'thump' and upper bass thickening too often encountered in medium-size speakers. The result is a big sound that brings plenty of weight and scale to the party, without unwanted exaggeration.

Although the new tweeter sounds clean and smooth, the top end is perhaps a shade obvious, while apart from a hint of nasality, the midrange has very little coloration. Since the overall tonal balance has a hint of 'loudness contour' character, the speaker is rather effective when playing at quiet levels. **HFC**

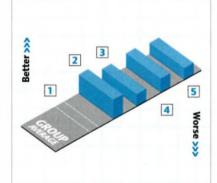


LAB REPORT

An early sample of this FB1i variation on the long-standing FB1 theme was reviewed alongside its three-way OB1i range-mate in HFC 311 and this return visit a year later provides an interesting comparison. Although the impedance is the same, the current sample has rather less midrange output than before and a slightly stronger treble.

Indeed the midrange here is smooth and flat but a shade recessed compared with the bass and the top end, while the bass itself is strong, reasonably even, and impressively deep. The overall response is very well ordered, though the net effect is to provide a slight 'loudness contour' effect, which will tend to favour low-level listening. Although the midrange sensitivity is a modest 87dB, the amplifier load is very easy to drive and bass extension very impressive, thanks to line/port tuning to a low 32Hz.

HOW IT COMPARES



- 1] Sensitivity >> 0%
- 2] Bass extension >> +20%
- 3] Ease of drive >> +10%
- 4] Overall frequency balance >> +15%
- 5] Response smoothness >> +10%

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	90dB	87dB
Impedance (nominal/minimum)	8/ns	8/6 ohms
Estimated bass extension (-6dB)	ns	20Hz



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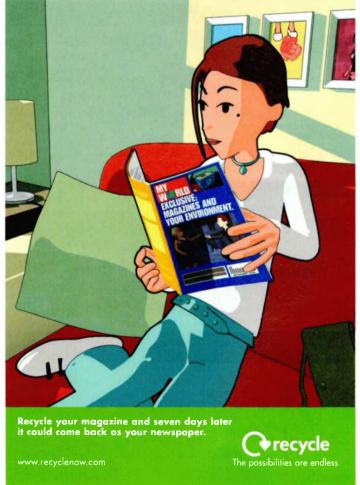
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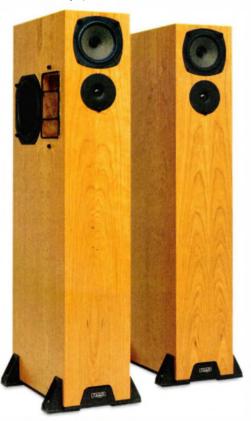
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Combines new developments in tweeter design and bass loading

nown originally for its fine value turntables, Rega has grown into one of Britain's oldest and most respected hi-ficompanys, adding electronics and speakers along the way. The firm originally launched its five-strong R-series speaker range back in 2004, so it was no surprise to find an upgraded RS collection coming onto the market in 2008. The baby RS1 did very well in our *Ultimate Group Test* in *HFC* 319 and for this review we're looking at the RS7, which currently sits at the top end of the new range.

One particularly impressive feature is that despite the four year interregnum, the price tag of £1,469 per pair is actually less than the £1,498 of its predecessor (due to the recent change in VAT rate). For the first time Rega is also offering its current speakers with the currently fashionable black piano lacquer finish, though this does carry a £150 premium.

Two key engineering features distinguish the new speakers from their predecessors. First, a radical new tweeter addresses the problem of reflections and cavity resonances created behind the dome diaphragm. The 19mm tweeter now has a 16mm-diameter hole through its pole piece, so the fabric dome effectively operates in free air and rearward



radiation passes through the motor into a generous cavity, shaped to avoid reflections. The other feature concerns using two dissimilar bass drivers, arranged in such a way that each helps reduce the fundamental resonance of the other.

Finished as standard in cherry wood veneer, the front view is exceptionally slim, but it's also unusually deep by way of compensation, ensuring fine fore'n'aft stability. Neat moulded outriggers improve the lateral stability and also provide reasonably secure spike-fixing, though as is often the case, the metal thumbwheel lock-nuts do loosen rather readily.

The three drive units are configured as a two-and-a-half-way, the bass-only driver operating alongside the smaller bass/mid driver, which then hands over to the tweeter. To keep the front slim, the 165mm bass driver is mounted on the side and the speaker pair is mirror imaged so you can choose to point them inwards or outwards. This bass driver has a 130mm paper cone and is loaded by a folded quarter-wave transmission line, which exits right next to the driver.

The small bass/mid driver has a 130mm frame, a 19mm voice coil and a 90mm paper cone. It's loaded by a sealed section at the top of the enclosure, just above the 19mm softdome tweeter. Twin terminal pairs are conveniently fitted close to the floor, as is a nice nameplate on the front.

SOUND QUALITY

The RS7 turns out to be something of a mixed bag, sonically speaking. The good news is that it does deliver an entertainingly coherent and dynamically quite vigorous performance. However, the top end here sounds (and measures) a little dull, especially in comparison to the miniature RS1 we recently examined. This is surprising, as speakers are usually balanced around a broad midband datum, so larger examples with more bass tend also to have more, rather than less, treble.

That slightly dull top end does tend to leave the upper mid sounding a little exposed and edgy, particularly when the volume is turned up high and this tends to be exacerbated by some lack of warmth lower down.

The side-mounted bass driver did give a curious lack of coherence when playing single-speaker mono, but it worked fine with two-speaker stereo and the 'inside' or 'outside' option brought worthwhile extra flexibility to the installation. **HFC**

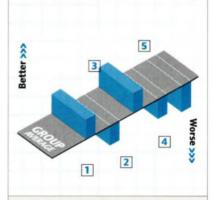


LAB REPORT

The RS7 might have the same overall configuration as its R7 predecessor, but the measurements show clearly that this is a significantly different loudspeaker and indeed that not all the changes are necessarily positive in nature.

The RS7's impedance looks easy to drive and the midband sensitivity is a useful 90dB, but the tonal balance (measured under far-field in-room averaged conditions), is rather less smooth overall. The bass here rolls off quite rapidly below 40Hz, while there's also some lack of relative output through the upper bass and lower midband (90-500Hz), whether the bass drivers are facing inwards or outwards. The treble level above 3.5kHz is also rather lacking, in contrast to its predecessor and also to the little RS1 standmount (which uses the same midrange and treble drivers).

HOW IT COMPARES



- 1] Sensitivity >> +20%
- 2] Bass extension >> -20%
- 3] Ease of drive >> +20%
- 4] Overall frequency balance >> -20%
- 5] Response smoothness >> -30%

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1 m/2.83V	89dB	90dB
Impedance (nominal/minimum)	6/ns	7/5 ohms
Estimated bass extension (-6dB)	ns	37Hz



CONCLUSIONS

From our six high-class speakers, there are three standout options for audiophiles

he participants in this Ultimate Group Test have so much in common, it's difficult to pick the metaphorical sheep from the goats. Indeed, apples from pears might be a better analogy, since each gave a pretty good account of itself, so individual preferences will be determined to a considerable extent by personal taste, in tonality, bass weight, price, styling, finish, or whatever.

The good news is that floor-

coupling arrangements do seem to be improving. Amongst our six, only the Dynaudio failed to extend the stability footprint. Thumbwheel lock-nuts avoid over-tightening, but the metal ones used by Rega and Kudos loosen all too easily. Audio Physic's clever nylon thumbwheels stay tight; so hopefully others will follow.

Although we've tried to keep up, prices are currently very volatile and those priced models from the three European firms do seem to have suffered rather from the appreciating Euro.

Looking at the specific models, then, the £1,467 Rega RS7 is clearly fine material value, but could have a more neutral tonality. The £1,790 Dynaudio Excite X32 is very discreet with good voicing, but lacked convincing bass.

At £1,950 both the Audio Physic Sitara and Kudos C2 are fine designs. The super-slim tilted-back Sitara stands out for sheer elegance, but the muscular neutrality made the Kudos the overall star of the show

The £2,100 PMC FB1i and the £2,300 Amphion Argon 3L deliver more than ample bass, in quality and quantity, though the difference in midrange character between the 'busier' paper cone and the 'cleaner' metal diaphragm is all too obvious. **HFC**

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HINTS AND TIPS

- >> Floor-coupling spikes should have tight lock-nuts, but don't over tighten these or you'll strip the socket threads
- >> Finding the right place to put the loudspeakers acoustically is very important. Do take time and trouble experimenting.
- >> Moving a speaker close to a wall will boost the mid-bass
- >> Expect speakers to improve over the first 100 hours or so.
- >> Use decent speaker cable, if you want your system to perform at its best.

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"A neutral tonal balance and class leading resolution... intricate beats and layered melodies, the ATC's unravel with ease. You know what we look for in Hi-Fi by now: timing, dynamics, soundstage, scale, well the ATC's have it all."

What HiFi - ATC SCM11

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What HiFi - ATC SCM19

Tivoli *iYiYi*

TYPE DAB/FM/internet radio

PRICE £280

CONTACT 201279 501111 @ www.tivoliaudio.com

ivoli is the company that practically reinvented the table radio and still maintains a strong presence in the field Recent models have also keenly embraced the iPod and this one clearly makes the little portable its focus. The name may be eccentric and the chassis design is reminiscent of a 1980s portable, but the function is straightforward – an all-in-one stereo system with an iPod dock, plus FM and

AM radio. There's a single line input and a recording output and the usual alarm clock functions, too. User convenience is aided by RDS on FM (though the limited display slightly reduces the attraction of this feature) and a remote control which, of course, also operates the iPod.

The built-in speakers are small, but output quite a healthy sound level. Their close proximity makes a bit of a mockery of true

stereo imagery unless your head is practically touching the unit, but there's a spacious effect which is pleasant enough. Most admirably, the sound is very clear (even off-axis) and energetic and communicates very well across the gamut of musical genres. With small units like this, that's very much the key to a successful performance, but in this case there is also a hint of audiophile refinement that puts a little gilt on the lily - detail is a step up from what one might expect from such a unit. There's plenty of grunt when needed for rock and the like, but it's with classical and other acoustic sounds where the iYiYi really stands out from other one-box systems. It's also quite forgiving of MP3 sound, making the most of even compressed tracks. HFC





Kimber *GQ24*

TYPE Interconnect (iPod-specific)

PRICE £52 (0.5m)

CONTACT № 0845 345 1550 ⊕ www.russandrews.com

f you don't need remote control but simply want the basic means of connecting your iPod to your main stereo system, this cable would appear to be the answer. Terminated at one end in an iDock-type connector and at the other in either basic phonos (as per quoted price), 'Ultraplate' phonos (£8 dearer), stereo mini-jack (£20 cheaper) or DIN plug, it takes the line-level output, which would normally feed a docking device and plumbs it directly

into any line input on your amplifier. The disadvantage of this is that the level is considerably lower than that from CD players etc. (battery operation restricts iPod output to about 0.75 volts instead of the usual 2 volts). However, any amp we've seen lately will have enough gain to deal with that and you'll soon get used to giving the volume knob a little flick up! The cable is Kimber's 'GyroQuadratic' four-conductor weave.

HI-FICHOICE magazine

In principle this should give pure sound from the iPod and in practice, we suggest this is borne out. It's always surprising just how good the sound can be from these little devices if sound is stored in lossless formats. Test tracks on an iPod Nano played through this lead, (adjusting volume to compensate) were impressive and very close to that of a good E500 CD player - (see HFC's Wadia 170iTransport review for more on iPod vs. CD in HFC 321 - Ed). Bass lacks a touch of definition and details are slightly vague at times, but both of those will only be compounded by adding extra electronics in the path. And on the whole, we feel that this is the way purists will choose to listen to iPod sources if MSB's c£2,000 iLink proves too costly. HFC



The Chord Co. *iChord*

TYPE Interconnect (RCA to mini-jack)

PRICE £49 (1m)

CONTACT № 01980 625700 @ www.chord.co.uk

ntended for general-purpose connection of portable music players, this lead is available with 3.5mm stereo mini-jack at one end and either phonos, another mini-jack or a DIN plug at the other. It is constructed using coaxial cable for each channel and is insulated in soft materials, making it very flexible — a useful attribute when connecting something weighing less than an ounce!

Connectors are good-quality, gold-plated types and assembly seems robust.

Unlike the Kimber cable, this one could be compared with 'giveaway' alternatives so as to get a clear idea of what the cable itself is doing. One might think that with a relatively low-resolution source it would be less critical what cables are used, but it's worth remembering that the resolution of portable players with uncompressed music can be excellent. In fact, if anything we found differences most marked when using MP3-encoded material, especially MP3s at a high

bitrate (160kbps and above). This avoids the most obvious degradations of data compression, but still leaves a few artefacts which seem slightly exaggerated by cheap and cheerful cables. This one, by contrast, has a very civilised sound with none of the edgy brightness that can affect cheapies and as a result, it draws much less attention to MP3 artefacts which are generally at high frequencies. With uncompressed music, its clean treble and very assured, solid bass are welcome compared with the roughness and slack impact of cheap cables. The only drawback is that output of most portables into their headphone socket (which is generally the only output) is very low about 0.3 volts maximum. HFC





Pure Avanti Flow

TYPE DAB/FM/internet radio

PRICE £280

CONTACT 2 0945 148 9001 **€** www.pure.com

e were drawn to this product by searching for iPod-compatible audio, but it would be a disservice to concentrate only on that functionality as this is one of the most comprehensive hi-fi products we've seen in a while. Setting up the Avanti is very easy to do and, of course, it gives full iPod docking functions, but it also offers both DAB and FM radio, a line input, and internet radio.

This last part is one of the fastest-expanding sources of music and Pure has taken it to heart and made its own internet radio hub, 'The Lounge', which acts as a focus for its 'Flow' products and, at the time of writing, lists 9,549 radio stations! You can scroll down a complete list on the Avanti's stunning display if you really want to, but you can also search by name – all or part. Arguably iPod is likely to

be the highest-quality source and hence the most demanding. It shows that the Avanti has a good, strong sound with a fair dose of refinement though its 'hi-fi' speakers. The tone controls are supplemented by a separate level control for the built-in subwoofer, and we found that it is worth adjusting this for different styles of music.

With more dynamic recordings a little more subwoofer helps coherence, but in bass-heavy rock it can prove too much of a good thing. With any music, though, there is a healthy amount of acoustic power on tap and Pure has done well to keep spurious rattles at bay. HFC Richard Black







Music Compression - friend or foe?

A remarkable thing has happened within a few short years. The music industry has become what must be one of the very few, alongside perhaps the food industry, to be driven downwards in relation to quality by consumer demand - and the majority of consumers are not even aware of it!

It is normal for an industry to try and improve on what has gone before. High definition TV's are an obvious upgrade from the previous standard. The computer industry constantly strives to provide faster processing speeds and larger memory capacity. However, it is the crossover of the computer industry with the music industry, the linking of the two, where things have started to go wrong. This is not to fault the computer industry, for speed and user convenience are the selling tools of its trade. Nor is the music industry inherently culpable, although it has largely acquiesced while complaining of lost revenues through illegal downloads. It is consumers that have driven quality down through a deepening, but blind, love affair with the MP3 and AAC formats and the ubiquitous iPod.

Falling Music Sales

I do not believe it is any coincidence that world-wide music sales tumbled in 2007 to their lowest level since 1985 and this is despite an overall far more affluent population than all those years ago. So why put the finger on MP3 & AAC (iTunes default format) and the iPod? It is not that they exist, nor resentment at their undoubted success. It is more the lack of knowledge on the part of consumers in what they are embracing and the hi-fi industry must shoulder its share of the blame. Both of these formats are compressed mediums, with different levels of compression. There is information irretrievably lost and they lack the full dynamic range. In short, they are inferior mediums in comparison to the standard CD format, let alone even higher resolution formats

now available (such as studio quality 24 bit, 96kHz FLAC files). The sad part is that convenience and 'music on the move' has helped to create a demand for these inferior substitutes and, what is even sadder, is that most users are not even aware of what they are missing.

There are still discerning people around who know how exciting and involving music can be, how it can deliver an emotional experience. Twenty years ago there were many hi-fi enthusiasts who enjoyed pursuing quality. It mattered which speaker leads were used, or the quality of the interconnects, or the rigidity provided by speaker stands. These still make a very significant difference but relatively few realise it now. The performing artists, musicians and sound engineers who strive to make the recording quality as high as possible must despair at the current trend.

Quality or Quantity?

When a friend's teenage son bought his first iPod, he was thrilled that it could store 2000 tracks. That this was at a low quality setting with a high degree of compression was not a relevant or indeed a cognitive factor. The maximum download quality for AAC is 320kbps. Most tracks are available at no better than 192kbps but many iPod users legally download at 128kbps, the most popular, or even 64kbps because either that's all that is available, or because they can store a greater number of tracks or, very often, because they're unaware of the difference. The cost is usually the same regardless. If you are jogging and using a cheap pair of in-ear headphones. you probably wouldn't greatly appreciate a high quality recording. But play back through a decent quality hi-fi and all you are doing is amplifying a very poor quality signal and the difference from, for example a full resolution CD (1.411kbps), is huge. The old maxim holds true - rubbish in, rubbish out.

The 80 Gigabyte iPod Classic is advertised as holding 20,000 songs (4MB per song). In comparison, a high quality music server will use approximately 500MB to store an

average CD (with say 10 tracks) at full resolution, a ratio of 10 or 12:1. It's no wonder that the music server, also a flexible computer based product, can reproduce music far more faithfully and far more enjoyably and is, therefore, more suitable as a prime listening source. The reality is that a generation is now growing up without recognising the loss and appears to be indifferent to quality, almost as if it's an irrelevance. This may be because so many have not heard the difference. Earlier generations enjoyed listening to 78rpm records until LP's came along. A cheap hi-fi stack system could be enjoyed until CD's came along (although a high quality record deck could, and still does, compete). The point is, once you've heard better, it's difficult to downgrade again.

So where do we go from here when many hi-fi systems feature an iPod docking station as standard? The future of quality music in the home is certainly not MP3 & AAC recordings because they are not suitable as a prime listening source. That is not what the formats were designed for. Download speeds are now far faster and computer hard drive memories far larger than a few years ago when these formats came into mass usage. Discerning music lovers using downloads will be listening to studio

quality FLAC files, or their equivalent. in the near future. The quality is so far removed from MP3 that the additional cost is easily outweighed. Even CD quality recordings are left behind. Vinyl has staged a strong comeback recently because it's still immensely enjoyable to listen to. However, technology doesn't stand still and it's therefore more important than ever that you seek out a specialist hi-fi dealer to set you on the right path.

Get Expert Advice

Specialist hi-fi manufacturers continue to try to make their products perform to the highest standards in any given price range. Specialist dealers, of which the ones listed on this page are amongst the very best in the UK, know how to choose the products that combine as a superb system and how to get the best out of it. However, it also needs the consumer to get listening again and to demand quality, to seek expert guidance on how to achieve the best performance at home and to have it expertly installed and set up.

If there's a price premium over an internet purchase by using a specialist dealer, it's probably a small one but it's unquestionably worth the difference.



QUALITY OR QUANTITY?..

Listed here are 20 OF THE BEST HI-FI **DEALERS IN THE** COUNTRY.

They have been selected because they are known to do an excellent job in guiding customers towards hi-fi that will give years of musical enjoyment and total satisfaction.

STAR QUALITIES VALUE FOR MONEY

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01245 265245

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Kingston-upon-

Thames INFIDELITY

9 High Street, Hampton Wick.

020 8943 3530

Rayleigh, Essex RAYLEIGH HI-FI 44a High Street.

01268 779762 Southend-on-Sea

RAYLEIGH HI-FI 132/4 London Road 01702 435255

Southampton

PHASE 3 HI-FI 37 Bedford Place 023 8022 8434

Worthing

PHASE 3 HI-FI 213-217 Tarring Road. 01903 245577

LONDON

GRAHAMS HI-FI 190a New North Road. 020 7226 5500

SW11

ORANGES & LEMONS 61/63 Webbs Road.

Battersea. 020 7924 2043

SOUTH WEST Rath

ALIDIENCE 14 Broad Street. 01225 333310

Exeter

GULLIFORD HI-FI 97 Sidwell Street. 01392 491194

MIDLANDS

Banbury OVERTURE

3 Church Lane. 01295 272158

Birmingham

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01922 493499

Birmingham MUSIC MATTERS 363 Hagley Road,

Edobaston. 0121 429 2811

Coventry

FRANK HARVEY 163 Spon Street. 024 7652 5200

Leicester CYMBIOSIS

6 Hotel Street 0116 262 3754

Nottingham

CASTLE SOUND & VISION

48/50 Maid Marian Way. 0115 9584404

NORTH Cheadle

THE AUDIO WORKS 14 Stockport Road. 0161 428 7887

Chester

ACOUSTICA 17 Hoole Road. 01244 344227

Gateshead

LINTONE AUDIO 7-11 Park Lane, Gateshead. 0191 477 4167

Sheffield

MOORGATE ACOUSTICS 184 Fitzwilliam Street. 0114 275 6048

York

SOUND ORGANISATION 2 Gillygate. 01904 627108

SCOTLAND Edinburgh

LOUD & CLEAR Bonnington Mill, 72 Newhaven Road. 0131 SSS 3963

Glasgow

LOUD & CLEAR 520 St Vincent St, Finnieston. 0141 221 0221





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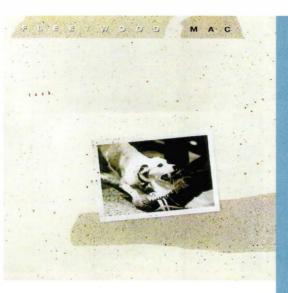


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Reviews by Alvin Gold, Jason Kennedy, Dave Oliver, Mark Prendergast, Phil Strongman and Nigel Williamson



TUSK Fleetwood Mac WEA/Reprise

"Tusk only managed a paltry four million sales in 1979, despite the high level of anticipation that had greeted its arrival" Words by Dave Oliver

Classic Album

Now considered a masterpiece, it took fans a long time to recognise the importance of **Tusk** by Fleetwood Mac

By 1979 Fleetwood Mac had comfortably transformed from being rootsy British blues minstrels to a bona fide globe-bestriding phenomenon. And it's all thanks to British members Mick Fleetwood and John and Christine McVie's canny recruitment of LA soft rock singer, songwriting couple Steve Nick and Lindsey Buckingham and their best-selling album ever, Rumours.

The band were famously fronts

The band were famously fractious during the recording of their most famous album in 1976, as the McVies' divorce came through and Buckingham and Nicks' relationship crumbled. If the album's success didn't exactly heal the wounds, it papered over the cracks to the extent that the band embarked on a massive promotional tour before knuckling down to record the follow-up in 1978.

No-one was expecting what they would emerge with – not their legion of new fans and certainly not their record company, Warner, who probably weren't particularly keen on the then unprecedented one million dollar recording bill either. Buckingham took the creative reigns for the majority of the production work, though the band's other songwriters contributed their fair share and the band reportedly blew a million dollars on the recording of the double album.

While on *Rumours* the songwriters had played off each others' strengths while writing about their weaknesses, *Tusk* saw them career off into their own personal spaces, with Stevie Nicks building on her floaty hippy persona with some bizarre imagery and flights of fancy, Christine McVie turning in some reliably sturdy pop rock tunesmithery and Lindsey Buckingham wandering who knows where, recording his songs mostly at his home studio with the aid of the USC Trojan Marching Band (on the title track), and firing out blasts of fuzzy rock-'n'-roll (The *Ledge*), country picking (*That's Enough For Me*), choral folk (*Walk A Thin Line*), and even a nod to the emerging new wave on *Not That Funny*.

It's a highly polished mosaic of a record, with contributions from three very distinctive songwriters, but it's Buckingham who dominates, not just because he contributed more of the songs, it's his painstaking production and arrangements that make *Tusk* even more distinctive. On first listen it sounds like fairly safe, almost bland, West Coast soft rock. But closer inspection reveals complex, often off-kilter arrangements, offsetting the songwriters' pop instincts with something altogether more enduring, if not so immediately palatable. It throws in everything but the kitchen sink — even original Mac acid casualty guitarist Peter Green turned up to contribute some keening guitar wails to McVie's *Brown Eyes*. And unlike *Rumours*, it doesn't really work as background music.

Fans didn't know what to make of it and stayed away in droves. Rumours sold over 12 million in its time at the top (and has since gone on to sell over 40 million), but Tusk only managed a paltry four million sales in 1979, despite the high level of anticipation that had greeted its arrival and the all-stops-pulled promotional campaign, which included an 18-month world tour. Bizarrely, in the UK, it hit the number one spot, a feat that Rumours, despite its gazillion sales, never quite managed.

Rumours is a rock record collection staple, every bit as popular as *Sgt Pepper* or *Pet Sounds*, but it's arguably *Tusk* that better stands up to repeated listening. Its pearls of brilliance nestling among swine-like filler take some rooting out, but reap rich rewards and eventually it comes to resemble Brian Wilson's abandoned *Smile* project for the Beach Boys, an incomplete gem, the product of one artist's twisted vision and a particular time and place that can never be repeated. **HFC**

ChoiceCuts

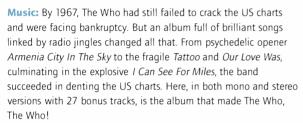


THE WHO SELL DE

D E L U X E Edition

THE WHO

The Who Sell Out Polydor/Universal www.polydor.co.uk



Sound: The original mono version actually sounds better than the stereo and given the range of audio sources here the compilers pull off an incomparable sonic rainbow. *MP*



TOM TOM CLUB



Tom Tom Club Universal CD www.umusic.co.uk

Music: Tom Tom Club were a Talking Heads spin-off who blended new wave, rap, pop, artlessly arty vocals and red-hot bass lines to startling effect in the early eighties. At the time, their music was much sampled by the likes of Grandmaster Flash – a 'tradition' continued into this century by Mariah Carey and others. It's lasted pretty damn well too with Wordy Rappinghood and Genuis of Love now sounding like bona fide classics. Their follow-up album Close To The Bone, is thrown in for good measure.

Sound: Voices and synths leap out you and at just the right level, while classic *Genuis Of Love* remains a 3D hi-fi treat on any half-decent system. *PS*



MOZART



Violin Concertos Nos1 and 3, Sinfonia Concertante

Scottish Chamber Orchestra, Louis Langrée (conductor) Virgin Classics www.virginclassics.com

Music: There is routine Mozart, the finer stuff and then there are the true masterpieces. This disc contains an example from all three categories. The first violin concerto is workmanlike and thinly orchestrated, while the third has a more developed and characteristically sophisticated structure. The real masterpiece is the *Sinfonia Concertante*, featuring violin and viola soloists in an intricate and exquisite dance against an orchestral backdrop that gives the piece a symphonic dimension.

Sound: Excellent performances in this spacious and airy recording, with a lyrical quality, fine timing and a deceptively easy quality. *AG*



WIND BAND CLASSICS



PASSAGGI

Joseph Schwantner • Stephen Michael Gryc Leslie Bassett • Joseph Turrin • Nebojsa Zivkovic

Joseph Alessi, Trombone • Benjamin Toth, Percussion The Hartt School Wind Ensemble • Glen Adsit



S M GRYC



Passaggi

Joseph Schwantner, Stephen Michael Gryc, Leslie Bassett The Hartt School Wind Ensemble, Glen Adsit (director) Naxos Wind Band Classics www.naxos.com

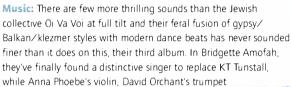
Music: These are contemporary works, in three cases the composers also produced the recordings on this disc. All of them have a strong woodwind content and prominent roles for percussion, especially in Joseph Schwantner's *Recoil* and in Nobojsa Zivkovics' *Tales From The Center Of The Earth*. At the other end of the scale, some of the music has an almost Brahms-like beauty and calm, notably Leslie Bassett's *Lullaby for Kirsten* and *Passaggi* itself, which doubles as the title of the album, by Stephen Michael Gryc.

Sound: A successful recording and well-engineered, especially in the percussive pieces where the tension is ramped up nicely. *AG*



OI VA VOI

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www.oi-va-voi.com



and Steve Levi's haunting clarinet weave an evocatively exotic spell. To love this record all you need is a pair of ears. Sound: A glossy, but subtle production by Bacon & Quarmby (Finley Quaye/Sugababes) gives the multicultural melting pot an entirely contemporary slant. NW





SPEECH DEBELLE

Speech Therapy Ninja Tune www.ninjatune.net



Music: This South London rapper says little about hard times in the hood, instead offering insightful examinations of relationships – with boyfriends, girlfriends, her errant father, her home town. She's backed not by drum machines and samples, but by a real band who blend light jazz with occasional rock and soul leanings. Single

The Key, includes a gorgeous clarinet refrain and Go Then, Bye cuts off a departing ex-lover with a putdown that's defiant and vulnerable at the same time.

Sound: Speech's soft-toned cadences recall Tracy Chapman, while her band sounds laid-back, but punchy. Overall, sound could have done with a degree more openness. *DO*





TONY ALLEN

Secret Agent World Circuit www.worldcircuit.co.uk



Music: The latest solo album from Afrobeat pioneer Tony Allen shakes off his patchy collaboration with Damon Albarn's *The Good, The Bad And The Queen* and returns to the funky excellence of 2006's *Lagos, No Shaking*. It doesn't have the urgency and drive of his work with Fela, but the band are on top form, his polyrhythmic flourishes never lose sight of the groove and it's clear that everyone involved is having a terrific time.

Sound: Recorded in Allen's home town of Lagos, there's a retro, analogue feel to the sound, which harks back to his seventies heyday with Fela Kuti, while creating a free-flowing funk groove that is timeless. *DO*



K'NAAN

Troubadour A&M Octone www.amoctone.com



Music: If 50 Cent and co. reckon they had it tough, they should listen to K'Naan's stories of a Somalian childhood spent dodging bullets on the war-torn streets of Mogadishu. Now resident in Canada, the African rapper's 2005 debut album won plaudits in world music and hip-hop circles alike. The follow-up is a brilliant concoction of incisive, socially-conscious rhymes, unusually melodic rapping and some great pop tunes, that place him firmly in the Fugees/Black Eyed Peas camp rather than hardcore hip-hop.

Sound: Sparkling clarity that seamlessly blends banging hip-hop beats alongside some storming stadium rock guitar from Metallica's Kirk Hammett. NW



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Choice Cuts



PHANTOM LIMB



Phantom Limb
Naim Edge 180g
www.thenaimlabel.com

Music: Phantom Limb is a five piece from Bristol that describe themselves as 'soul/rock/country'. The dominant force is Yolanda Quartey's spectacular soulful voice, one that's been favourably compared to Mavis Staples and been signed up for Massive Attack's next album. While their sound is reminiscent of others, it's hard to pinpoint precisely who and it's an amalgam that works extremely well. Sound: Recorded in Bristol and mastered at Abbey Road this is a great sounding slab of vinyl with broad bandwidth and decent dynamics. JK



ROBERT PETE WILLIAMS



With Big Joe Williams Storeyville/Pure Pleasure 180g www.purepleasurerecords.com

Music: Williams was an extraordinary guitar player and an idiosyncratic songwriter. He played six and 12 string acoustic and is accompanied on several tracks by Big Joe (no relation). His tuning and playing style were very much his own and despite not being in particularly strong voice at the age of 58, his vocals are imbued with a rare power and depth.

Sound: This is a good clean recording, if not the most dynamic. The guitar sounds a little soft, but the voice is well served. *JK*

HIGH-OUALITY AUDIO

MIKKEL PLOUG, SISSEL VERA PETTERSEN, JOACHIM BADENHORST

Equilibrium

SACD (stereo/multichannel hybrid disc) www.songlines.com

Music: An unusual combination of instruments and voice combine here to make a very distinct sound, at once Scandinavian in its use of space but infused with an otherworld-liness that is all its own. Ploug plays electric



and acoustic guitars, Petersen sings without words and plays soprano saxophone and electronics, while Badenhorst is on clarinets and tenor sax. The improvised music is rich in diversity and it's the voice that really sets it apart from standard jazz fare.

Sound: Recorded in Copehagen and mixed in Oslo's Rainbow Studio by Jan Erik Kongshaug, this is an immensely open and three-dimensional album that will show up any inclination to brightness in a system. JK



MAXIMILIANO MARTÍN & SCOTT MITCHELL

Vibraciones Del Alma

Works by Miguel Yuste, Henri Rabaud etc

SACD (stereo/multichannel hybrid disc) www.linnrecords.com

Music: These showpiece compositions from French, Spanish and other European composers give Martín and his accompanist full range to display their abilities in the face of some stiff technical challenges. This is a great disc if you want to hear what the clarinet



can do when fully extended and the music is generally notable for much more than merely the number of notes that are crammed in per square inch.

Sound: Recorded at the Royal Scottish Academy of Music & Drama, the recording is extremely lively, vivid and dynamic, with little if any indication of gain riding or any other obvious signs of engineering. *AG*



JOEL FAN

West Of The Sun Reference Recordings

HDCD (24-bit)

www.referencerecordings.com

Music: New Yorker Joel Fan's second solo piano release for Reference is subtitled Music of the Americas and brings together pieces as diverse as Argentinian bandoneon maestro Astor Piazolla's Flora's Game, Bostonian Mary Beach's Chopinesque Fireflies and African-American composer Margaret Bonds' Troubled



Water. The latter piece takes as its inspiration the negro spiritual Wade In The Water, but then twists it into a variety of shapes which Fan handles with virtuosic ease.

Sound: Recorded at George Lucas's Skywalker Sound studios, there is plenty of dynamic space to showcase the beautifully rich and vibrant tone of Fan's Steinway, which he exploits to the full with his precise, yet intuitive fingering. DO



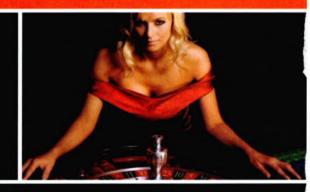








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Choice mail

The pick of this month's best letters

Write to: Letters, Hi-Fi Choice, Future Publishing Ltd, 2 Balcombe Street, London NW1 6NW. Or email your letters to jason.kennedy@futurenet.com

Creek confusion

I am looking at purchasing an analogue FM tuner and the Creek Evolution is on my list of tuners to audition. In the *Hi Fi Choic*e review in issue 308, the following comments were made in relation to the Creek, viz:

"...Listening to some choral music on Radio 3 (the one station that sometimes sounds better on DAB due to its wide dynamic range and higher DAB bitrate) was a good test. Because, even though it can sometimes sound quite



edgy on FM, the Evolution managed this difficult repertoire with ease and confidence...* What I would like clarified is the comment: "even though it can sound quite edgy on FM..." Do you mean that the Creek Evolution tuner can sometimes sound quite edgy on FM, or did you mean to say that choral music can sometimes sound quite edgy on FM? Sorry, but after reading these paragraphs many times, I am still unclear as to what you really meant.

Jon, via email

HFC Richard Black replies: What we meant is that choral music can sound a bit edgy on Radio 3 via FM, and not that the Creek makes it sound that way. In fact, we found the opposite – the Creek receiving Radio 3 on FM "with ease and confidence". So we would recommend that you keep the excellent Evolution tuner on your shortlist.

A cautionary tale of ripping

I use a PS3 (yes, that is a games machine) as a hard disc multimedia player. This started two years ago as I wanted to cut down my boxcount so the CD transport left and the DVD player exited as well. Now the PS3 sits in grand isolation feeding my DAC with lots of lovely 1s and Os

At first I planned to use the unit as a transport with the odd album ripped for background music on occasion. As time went on I listened more to the ripped files so I put in a bigger hard drive and started ripping more and more, until nearly 500 albums later my wonderful wife asked 'do we need all those CDs out still?' So here's the thing - I ripped everything into ATRAC, as an ex-MiniDisc user I didn't give it a moments thought. I should say that I am very happy with the results - so what's the issue? I like ATRAC, other devices (like my Blackberry) don't. Also it's not lossless, so changing the format can mean quality issues. The answer? I am currently re-ripping my CDs (one shelf at a time) into WAV and then copying them over to the PS3's hard drive, making sure they are all sorted and tagged with album art etc, and then deleting the

"...I wanted to cut down my box-count so the CD transport left and the DVD player exited as well. Now the PS3 sits in grand isolation..."

LETTER OF THE MONTH

Digital heretics

After reading Ivor J's letter (HFC 320), I feel that a new district is required in Hades to accommodate heretics who have chosen the digital path. I currently listen to most of my music via a Logitech Squeezebox Duet (WMA Lossless streamed from a PC), or as CDs played on my Arcam DV27A (a DVD player!). Furthermore, I thoroughly enjoy Blu-ray movie soundtracks, which can deliver amazing bandwidth. All the above sources come to life via my Arcam AV7, P9 and KEF Reference 3s. Am I condemned? Who cares?

I have been down the analogue route (including SME, Thorens, Ortofon etc), but

I like what I hear via digital means and I don't knock those who prefer otherwise. Perhaps that will be my salvation?

I am a subscriber to *Hi-Fi Choice* (I don't just read it whilst stood in WH Smith, or online) and have been for most of the years that it has been in publication.

P Shaw, via email

HFC That's the spirit, live in hi-fi heaven today and leave eternal damnation until tomorrow. Life's too short and music too broad to limit yourself to one format and while we respect those that espouse a single path to audio nirvana, hi-fi would be a dull thing if there were no variety.



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ATRAC file. I also back the PC up so I am secure from hard drive failures, have all the music I want available to listen to and move around across the various devices I now use.

Just wish I had done it this way the first time!

Nick Cooper, Wiltshire

HFC We would guess that it was the MiniDisc factor that lead you astray, as you have discovered it pays to use the best back up format that you can when going to so much trouble. You have gone to the opposite end of the spectrum with WAV which does not compress at all, it's a good thing that disk space is so affordable these days. It's interesting to see you using the PS3 as a music server, some even play SACDs we're told. With a good-quality DAC, transports

Good value?

Is the £115,000 Continuum Caliburn some kind of elaborate antipodean scam for extracting cash from the naïve and deluded? It beggars belief that any hi-fi component can cost this much, but it's even more mind

really can come in all shapes and sizes.



"Is the Continuum Caliburn some kind of elaborate Antipodean scam for extracting cash from the naive and deluded?"

boggling that it could be considered to be good value. In your review last month (*HFC* 320) this turntable garnered five stars for sound, features, build and value. What kind of value system do you work by? Sure it looks fantastic and I'm prepared to believe that it might sound pretty good, but ultimately it's a turntable – a piece kit that is based on a format created over 50 years ago and thus somewhat antiquated. Don't get me wrong, I like to read about crazy products like this, but try and put things in perspective with your ratings.

Brian Cannock, Lincs

HFC While the Continuum might be expensive it does give you the sort of build and engineering that is almost unheard of. As we pointed out this turntable sets a standard that has not been achieved elsewhere. It raises the bar and when you combine this pursuit of perfection with a small production run then you end up with a very high price. In truth it's very difficult to pin a value rating to a component like this. If you want the best and have the wherewithal then this might indeed represent good value, after all it has little in the way of serious competition.

Do you agree with Brian? Let us know – Email: jason.kennedy@futurenet.com

Arm sounding

My Audio Origami modified RB300 is 'sounding' through my speakers when tapped

with a finger, even tapping the cartridge body does the same. If I grip the shaft with one hand and tap with a fingernail the sound still comes out of the speakers only at a lower frequency.

Is this a common problem with the Rega, or should I not be experiencing this problem? The arm has two earth leads since Audio Origami re-wired it, one is connected to the phono stage and the other to the radiator earth.

I recently read an article which quoted the Regas as being non-ringing. Well mine is.

Ivor Jebson, (the cold North)

HFC The sound you are hearing is caused by the very sensitive coils in the cartridge amplifying the resonance in the tonearm that you create when you tap it. That is why the exact same thing happens when you tap the cartridge.

The degree to which this happens will depend to an extent on the cartridge being used, but it's in the nature of the beast that it will amplify resonance. However, as playing vinyl records does not involve knocking the arm or cartridge this is not a problem in normal use, it's the more subtle resonances in the system that interfere with the sound. The best way to cure them is with damping, as seen in the Townshend Rock turntables. All other things being equal it would be better if arm resonances of all varieties did not get into the signal path, but it's the nature of the resonances that counts.



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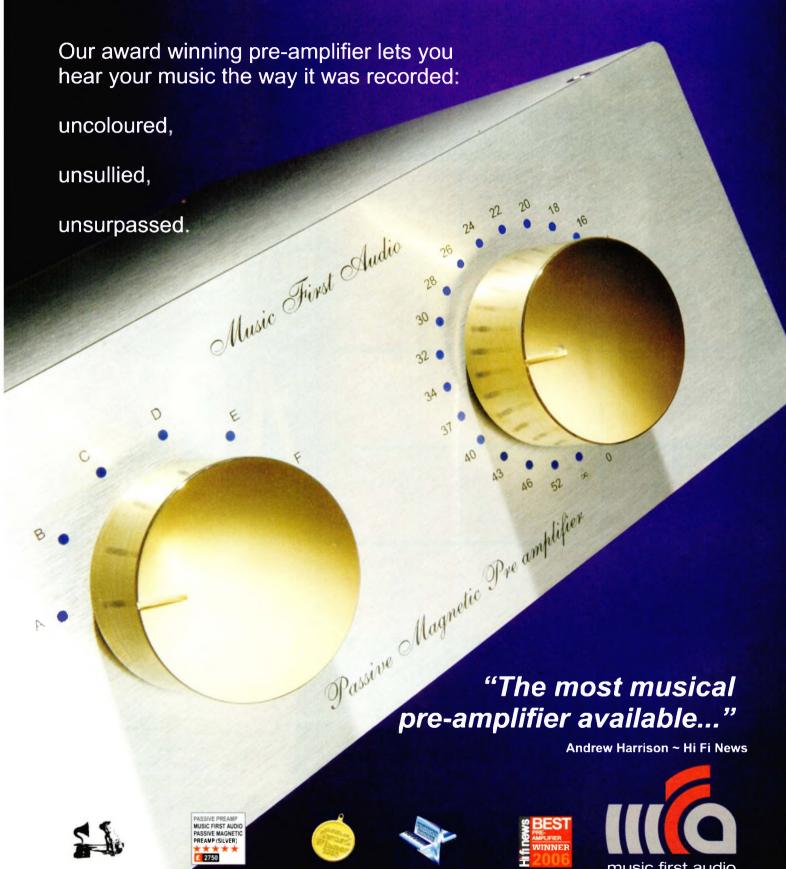
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Former editor of Hi-Fi
Review magazine Mal Former editor of Hi-Fi
Review magazine, Malcolm
was one of the best-known
and most outspoken
reviewers of the 1980s and
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only writes for Hi-Fi Choice.



Alvin has been writing about his obsession for more than 25 years. He has expertise across all product types and despite the photo is 'happy to be of service'.



Jason Kennedy was a former editor of a former editor of Hi-Fi Choice and spent an incredible 17 years on the btle. Now he's back as HIC's Operations Editor and loves giving advice.

Two into one

I'm seriously thinking of buying a Dynavox VR70E valve amp. I have only two sources: a turntable with Goldring Eroika MC cartridge and my CD player. The problem is the amp has only one input, so would a passive preamp be the solution or something else? I would also need a phono stage of some sort - any ideas?

One of the inputs must be phono compatible, not necessarily MM/MC. MM would be OK as I have a phono stage for my MC cartridge.

Simon Mannering, Austria

HFC The Dynavox VR70E is a single-input integrated valve amp. To make it compatible with your turntable and phono stage you should not need an MM input, because your phono stage should produce a line output. If you are using a head amp that merely amplifies the MC signal to MM level, then you would need a preamp with, as you say, an MM input. However, as head amps are relatively rare we'll assume that your phono stage does produce a line output that can be fed directly into the power amp or via passive preamp or similar. What you need is a simple two-way switch, something that QED makes in the form of the IX20 two-way input expander (£55). You will need an interconnect between this and the Dynavox, but it is still the least expensive way of achieving the result you are after.

ASKUS

Got a burning hi-fi question? Find the answer here...

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Desktop monitor

I enjoy working at a desk in my study (4x4 metres) listening to classical music. The desk faces and is against a large window. So there is no way I can put large speakers in front of me.

What speakers and speaker set-up would give me the best possible hi-fi sound? Ideally, the solution should be dynamic and detailed enough to manage symphonic pieces and have enough bass for cello solos.

I have been considering Bose Acoustimass 5 (reviews are bad) and other solutions more typical of home cinema (from KEF or Yamaha's sound projectors YSP range). I'm not convinced that any of these will work well for classical music and in my setting.

Alexis, London

HFC We would be inclined to go for a decent compact monitor, one that doesn't attempt to produce too much bass but concentrates on getting the mid and top right. A speaker with too much bass extension will sound boomy in your set-up and as symphonic music is quite demanding of any speaker, the key is to go for quality rather than quantity. You don't say what your source and amp is and given the location we are wondering if you might be using a PC as a source. If that is the case we can recommend the AVI ADM9 active loudspeaker. This is designed to work with PCs and has better pedigree than anything made by a peripherals company.

If on the other hand you already have a decent source and amplifier, there are a few



interesting options. We like the ATC SCM7, which needs decent power to drive it, but rewards with a highly detailed sound. Ruark's Sabre III is a more forgiving option that times very well and is hard not to enjoy. A more radical option is the highly engaging Guru QM10, which was designed to go up against the wall but would sound better with the curtains drawn.

Flavourless soup

My system consists of Primare electronics (CD 31 player and I30 amplifier), Triangle Altea ESW loudspeakers and Nordost Red Dawn cables (XLR interconnects and speaker cables). In the beginning the sound was awful, but after a hundred hours of break-in it improved a lot. However, after several hundred hours of listening the system never achieved the quality I heard in the showroom with Naim electronics.

The problem is that the sound is a little hard. aggressive and eventually fatiguing in the long- haul. There is a lack of naturalness, transparency and detail resolution, especially when the music gets busy and it's not always easy to differentiate the musical strands. I have the impression that someone threw all the ingredients of the soundtrack into a blender and the outcome is a homogenised, flavourless flat 'soup'. I have to admit, though, that the sound has a foot-tapping quality.

I think that the weak link is the loudspeakers. I would like more natural sound with detail, clarity and refinement. My shortlist includes the ProAc Studio 140, ATC SCM 40, Sonus faber Concert Domus, Wilson Benesch Square 2 and Spendor A6. I've heard all of the above except the Spendors. Unfortunately, we don't have many options in Greece, so I have to say that I heard the loudspeakers with broadly different electronics and that's why I'm asking your opinion. So if you were in my shoes which speakers would you choose?

My favourite kinds of music are jazz and world music, classical (mainly small-string ensembles) and a bit of good old rock.

Ioannis Minardos, Athens

Get up and go

I want to upgrade my CD player. It's a Rotel RCD-971 from about ten years ago, so it's impressive that it's still working at all, but I have a suspicion that something more up-to-date would do greater justice to my CD collection. The rest of my system is of a similar vintage, the amp is a Pioneer A300 Precision and the speakers are big old JPW ML1010s. The sound lacks energy and detail, but is not short on dynamics and it times fairly well, too, so what I'd like is a source that makes up for the system's shortcomings without undermining its strengths. What do you recommend?

Barry Wom, Merseyside

HFC That looks like a classic system of its era, but we can see why you are thinking about making some changes. We'd also agree that the

HFC Sorry to hear that your system does not live up to expectations. Looking at its make up we are inclined to point the finger of blame at the cables in the first instance. Triangle speakers do have a slightly forward balance, but not as much as Nordost cables and it's probably the combination that is causing the aggressive balance. Before you replace the speakers, change the speaker cable to Townshend Isolda DCT and the interconnect to the best Kimber Kables that you can afford, this combination will substantially calm the overall balance and give you significantly greater image solidity to boot.

Going active

I recently went active with my Linn Kolektor preamp, two LK85 power amps, Cenki CD player, Katan speakers, Rega Planar 3 and Linn K9 cartridge set-up which I am delighted with - going active has made a huge difference. However, as good as the Planar 3 is it cannot compete with the rest of the kit. So I am looking to replace the turntable and cartridge, ideally I would like a second-hand LP12, but would that outperform the rest of the set-up? I don't want to replace any of the other components. My budget is about £1,500 and the Kolektor has an MM cartridge input. Is it worth moving up to an MC cartridge via a phono amp or can the Kolektor be modified to take an MC cartridge? I have a very varied taste in music - anything from rock to opera - so I would like a good all-rounder.

John Howson, via email

HFC You are right in the assessment of the turntable, it will certainly be lagging behind the

source would be the place to start doing so. As luck would have it we are working on a CD player *Ultimate Group Test* for the next issue (*HFC* 323 on sale 23rd July), which includes six players priced between £400 and £1,100. This is the price range you should be looking at for a replacement for the Rotel. A couple of players worth checking include both the Cairn Tornado and Arcam's CD17. The former produces more dynamics and energy than you can shake a stick at, but it can be a little bit too lively for some tastes. The Arcam, by contrast, presents a more balanced view of matters, but doesn't have the same degree of thrill power.

Try, and listen to both and remember to check out our September issue.



rest of the system and warrants an upgrade. We don't think that an LP12 would outperform the system, in fact it would bring out more of the system's capabilities. As you probably know, turntables tend to sound more engaging than most CD players, but that's no reason to stick with one that is outclassed by its ancillaries.

While the LP12 is the classic choice for a system like yours, our inclination would be to consider alternatives as well. A Rega P7 would give you a significant refinement of the sound you are familiar with. Alternatively, a Funk V would bring a bit of thrill power to the system (stick an RB301 on it and you have a very entertaining player).

There isn't an MC option for the Kolektor and Linn's Linto would take too great a chunk out of your budget, so you'd probably be best sticking with an MM or high output MC. The Dynavector DV-10X5 is just such a cartridge and works a treat on the LP12. The same is true of the the Sumiko BPS Evo III, which is also great value at £239.



With the huge variety of cables on the market, it can be difficult to work out which ones would be best for a system and how much to spend. With speaker cables available from a couple of pounds per metre to a couple of grand, it makes you wonder what is going on. Can there really be any point in spending a fortune on what is, at the end of the day, just a fancy bit of wire with plugs on?

As a rule you should spend at least ten per cent of a system's cost on the cabling, but with system's that are at the more affordable end of the spectrum this may not be sufficient to let you hear what the components are capable of. We'd suggest that 15 to 20 per cent is more appropriate for systems that cost up to £2,000. This is because, like it or not, cables do make a pretty significant difference, even mains cables have a pretty obvious effect on the components they power.

The other question is, should all the cables in a system come from the same company? Some people think that this is the only way to connect up a system and it should guarantee a degree of homogeneity in the resulting sound. With cable companies that plough a very distinct furrow, like Nordost for instance, you only get to hear the full effect when every link in the chain comes from the same source. But there is nothing wrong with mixing and matching cables to enhance or compensate for certain aspects of a system's sound – to tune it, in effect.

Cables almost always have an effect upon tonal balance, but this is often to do with the way the components they connect to interact with the cable, so it's not always predictable. In theory, every part of a system should be aiming to minimise coloration and distortion and this applies equally to cables. We recommend cables that take this approach, but accept that some systems need the treble to be tamed or the bass tightened-up.

Most cables have the same topology or design, speaker cables are either twisted or spaced pairs, whilst interconnects are

usually coaxial in construction and there is more variety as price increases. Good screening is useful in an interconnect and twisted speaker cables reduce impedance, which is also useful

but not the whole story. As ever the proof is in the hearing, so stick to our recommendations and you can't go wrong.

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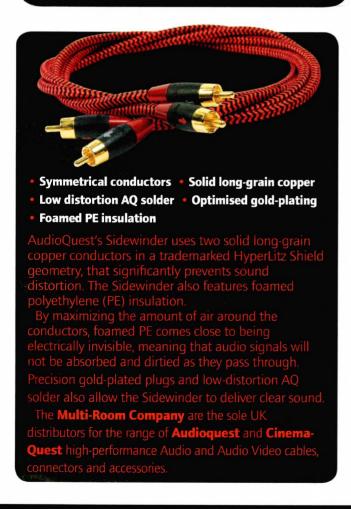


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Hi-Fi Choice test results are the most reliable in the business. We employ the UK's most respected hi-fi journalists and use the most stringent techniques to ensure our ratings are the ones you can trust. All the equipment we rate most highly is contained within these pages, from CD and vinyl to the latest disc players, amplifiers, tuners and loudspeakers.

Reviews online

We've also included techradar listings where our reviews appear online with our sister site techradar.com. To access selected Hi-Fi Choice reviews online, simply type: techradar.com/ into your browser (remembering the forward slash), followed by the six-digit number printed in the first column of our Buyer's Guide.

How to use this guide

The Hi-Fi Choice Buyer's Guide is the best way to make a shortlist of components to audition. Pick the ones that best suit your taste and budget, then use our Dealer Classified section to find specialist outlets where you can try them with your favourite music and test discs.

THIS MONTH'S HI-FI

A special mention goes to Rega this month, whose Radio 3 FM tuner has defied inflationary and exchange rate pressure and has actually gone down in price (to £390) since we



Source components

CD PLAYERS

PHONO CARTRIDGES

TURNTABLES

RADIO TUNERS

HEADPHONES

Amplifiers

STEREO AMPLIFIERS

Cables

INTERCONNECTS & SPKR

Loudspeakers

STEREO SPEAKERS

Stands and supports

EQUIPMENT SUPPORTS

Dealer Classified

DEALER GUIDE DEALER DIRECTORY

















Our favourite sources



BEST BUY EDITOR'S CHOICE

	~			SPECIFICAT							TIONS					
D PLA			WWW.TECHRADAFI.COM	SACD COMPATIBLE	ELEC DIG OUTPUT	OPT DIG OUTPUT	CD-RW COMPATIBLE		BAL ANALOGUE OUT	HEADPHONE SOCKET	VARIABLE OUTPUT	ISSUE NUMBER				
	-	rs will make sweet music for years to come	AR.CO	PATIB	OUTPU	OUTPU	/PATIB	DYSIL CO	SUE OI	SOCK	OUTPI	MUNBE				
DGE PRODUCT P TO £1.000	3	COMMENTS	≥	m	Ä	7	Fin	4			Ä	33				
Arcam CD17	700	Civilised sound, with a positively deluxe treble. Bass is clear, if not the weightiest ever		Kaki	0	0	0				A STATE OF THE PARTY OF THE PAR	315				
Cairn Tornado	950	The Tornado is a full-on experience that delivers intensely real sound for its price			•				-			305				
Cambridge Audio Azur 740C	550	Very flexible, this innovative upsampling player sounds exceptionally neutral and highly informative			•		•					29				
Cambridge Audio Azur 840C	800	Ultra-civilised sound is not to every taste: rhythm-lovers may find this player frustrating				0	•		•	-		31				
Cyrus CD6 SE	900	A combination of detail and sheer musical energy with a hint of high end to the performance					•					31				
Harman/Kardon HD990	500	Highly detailed with excellent extension at both extremes and impressive resolution	/594818		•		•		•			32				
Marantz CD6002	320	A hint of treble unevenness is the only specific flaw: performance is class-leading in most areas	7004010		0	•	•					30				
Marantz SA8003	830	Classic Marantz sound in a classy and attractive package. Our favourite sub-£1,000 player	/456022	0	•		0		-			31				
NAD C545BEE	350	Apart from slight lack of bass control, sound is very fine indeed – treble beautifully detailed	7430022			•	•					32				
Naim CD5 <i>i</i>	895						•		-			30				
Quad 99CD-S	700	Its competent musical performance comfortably exceeds the expectations of an entry-level player		31		8	•		•		-	29				
		Revels in big music thanks to fearless presentation: smaller-scale works can lack focus			•	99	•		_			28				
Rega Apollo	586	Unless you can't abide top-loaders, check this out: musically it's a highly praiseworthy performer	/400007				-		•			31				
Roksan Kandy K2	895	State-of-the-art technology and precision engineering produces a fine CD performance	/483697		•	•	•		•			30				
Yamaha CD-S2000	979	Sophisticated, this is a beautifully controlled, high-resolution player, although SACD is stereo-only	/488867	0	•		0			Michigan .	9338	30				
BOVE £1,000	1.000		1005000								S 1529	04				
Arcam CD37	-	Excellent detail and imaging, neutral tonality and above-average bass resolution	/395096	•	•	0	•					31				
Audio Research CD5	5,055	Audibly better than most CD players on the market – assertive and very dynamic	/455309		•	•			•			31				
Bryston BCD-1	2,500	Not as open as some but rather more timely than most, it sounds a lot more gripping than it looks			•	0			•			30				
Cairn Fog 3	2,200	Ergonomically challenged, high-energy player with Gallic charm and digital preamp on board			•	•			•		•	30				
Classé CDP-102	2,950	Rich, dynamic CD/DVD player with a full bottom end and a luxurious yet revealing balanced			•	•	•	•	•		•	28				
Consonance Droplet CDP3.1	1,995	A CD player which gets to the nub of what essentially music is about. Engages the listener every time			•		•					32				
Cyrus Audio CD 8 SE	1,200	A highly civilised player which can, nevertheless, deal convincingly with raw music	/399370		•		•					31				
EMM Labs CDSA	9,995	Classy, stripped down to basics SACD/CD player with some excellent engineering below decks		•	0	*	•		•			30				
Esoteric X-05	3,995	Superb resolve of fine detail with a perfectly judged balance and an ability to draw you into the music	/478365		•	0			•			31				
Leema Stream	1,170	The most timely disc player at its price point has tactile imaging and good dynamics			•		•					30				
Leema Antila	2,735	Musically engaging player that will have you going through your CDs afresh			•	•	•		•			29				
Linn Akurate CD	4,750	This multi-format non-video player doesn't have huge transparency, but is musically addictive		0	•	•	•		•			29				
Marantz SA-11S2	3,300	Superb value, this well-balanced player features various filter settings to customise performance			•	•	0		•			30				
Marantz SA-7S1	5,900	A bargain even at this price, the SA-7S1 sets the benchmark for CD/SACD players of its ilk		•	•			•				29				
Meridian G08	2,400	Advanced digital processing with special apodising filter that gives a very clean sound	/455040		•	•		0	•			31				
Moon CD3.3	2,200	Another revealing and refined player which warrants inclusion on anyone's must-hear shortlist	/594609		•				•			32				
Naim HDX	4,500	The HDX hard disk player represents an entirely new paradigm for high-fidelity replay.			•	•	0					31				
Roksan Caspian M Series-1	1,450	An exceptionally fine CD player that provides a high-end and musically rewarding performance			0	•						30				
Shanling CD-T1000SE	1,700	Commendably committed player which gets right to the heart of a wide variety of musical styles					•				•	30				
Sony SCD-XA5400ES	1,199	Elegant, refined control system and very strong CD/SACD performance	/465933		•	9			•			31				
Unison Research CDE	2,495	Valve CD player with interchangeable DACs that doubles as a standalone DAC that oozes musicality	/483759		0				9		•	31				

SPECSKEY SACD COMPATIBLE Plays high-resolution SACD discs in two-channel mode. ELEC DIGITAL OUTPUT Electrical coaxial output for digital connection to a DAC or digital recorder.

OPT DIGITAL OUTPUT Optical Toslink output for digital connection to a DAC or digital recorder. CD-RW compatible Will play CD-RW (rewritable) discs, most CD players can cope with CD-Rs. CD text Will display album and track titles from inserted disc. BAL ANALOGUE OUT Balanced XLR output connections for similarly equipped amplifiers. HEADPHONE SOCKET Quarter inch (6.3mm) headphone jack fitted to the CD player. VARIABLE OUTPUT Player features both fixed level and variable, volume adjustable outputs.



After 5 years in production, the Dino is still one of the most popular phono stages around. Highly versatile with accessible switches on the baseplate to facilitate a wide range cartridges.

'Never Connected' power supply technology virtually removes all incoming mains noise allowing only the music to be heard.

Visit our website to learn more about this exciting product and the high performance Diablo phono stage.

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Our favourite sources



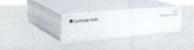
BEST BUY EDITOR'S CHOICE

				SPECIFICATIONS			S					
T	URNT	4 :	LES	WWW.TECHHADAR.COM		SUSP SUBCHASSIS	SPER	SUPPLIED WITH ARM	SUPPLIED WITH CART	USSI		
The	best record players	you c	an buy	DARC	SEEDS	BCHAS	SPEED CHANGE	A HIIM	O HUN	ISSUE NUMBER		
BADGE	PRODUCT	٤	COMMENTS	MO	B	SIS	A.E.	RM	ART	88		
*	Avid Volvere	2,900	A combination of a heavy platter with a sprung suspension makes vinyl sound powerful and solid		33/45	0	0			298		
Ţ	Clearaudio Emotion	1,185	Beautifully built with open and clean sound emphasising mid and top, but delivering nice timely bass		33/45			.0	0	30		
+	Clearaudio Performance	2,300	Ceramic-magnetic bearing spells a surprisingly uncoloured performance. Good arm and cartridge		33/45			8	0	29		
-	Continuum Caliburn	115,000	Luxury turntable with state-of-the-art design includes Cobra tonearm and Castellon stand. Amazing sound.	/587169	33/45/78		0	0	0	32		
-	EAR Disc Master	8,800	Combines new 'no contact' drive technology and high-quality materials to bring state-of-the-art resolution		33/45/78	0	0	opt		27		
•	The Funk Firm Saffire	2,450	Individual design and a sound that's refined and neutral with strong timing and dynamics		33/45		0	opt	opt	30		
+	Lumley Heliosphere	2,495	A distinctive-looking turntable with a distinctive sound and a performance that reflects your vinyl	/560765	33/45			opt	opt	31		
÷	Michell Tecnodec	579	Needs careful partnering but can deliver a very sophisticated result for the money		33/45			opt		30		
÷	Pro-Ject RPM 5	550	Great looks plus engaging sound that puts it in the serious league, needs good isolation for best results		33/45		0	0	0	27		
ŧ	Pro-Ject RPM 6.1	750	With its huge platter this is a steady design that's capable of fine results with a decent cartridge		33/45/78		0	0		29		
+	Pro-Ject X-Pack	1,000	Combines some very strong elements (Ortofon Rondo Red) into a killer package with top sound and value		33/45		0	0	0	30		
÷.	Rega P3-24	390	Very competent, uncoloured and musical, much improved by £148 outboard electronic power supply		33/45		opt	0		29		
5	Rega P5/RB700	684	Combines a great sense of timing with market-leading resolution and a phenomenal tonearm		33/45		0	opt		25		
÷	Rega P7/RB700	1,271	A highly capable player that could hold its own in the most exalted company		33/45		0	opt		25		
÷	Roksan Radius 5/Nima	1,375	Sophisticated design with accomplished sound quality, excellent imagery and good isolation		33/45	0	0			24		
-	SME Model 10A	4,105	Superbly built and highly resolute design, tested with a Series V/309 hybric arm		33/45	0	0	0		19		
÷	Townshend Rock 7	1,498	Has the ability to pull detail out of a vinyl groove, making it the most resolute turntable at the price	/587280	33/45		0	0		32		
-	Townshend Rock V/Excalibur II	7,000	If you want to hear everything that's on a record then there's no better machine for the job		33/45	0		0		30		

					SPECIF			
P	HUNO	C	ARTRIDGES	WWW.TECHRALIAR.COM			REPLACEABLE	S
MM and MC recommendations							IS 318	SSUE NUMBER
BADGE	PRODUCT	ξ	COMMENTS	COM	MM	NC	SINTING	/BER
***************************************	Denon DL-103R	290	Adds refinement to basic DL-103, at a price. One of the best rock'n'roll cartridges around			0		285
7	Dynavector DV-10X5	295	A high-output MC with superb dynamics and fine timing that's difficult to mount, but well worth the effort			0		307
-	Grado Prestige Gold	149	Produces rich, open and expansive music with the minimum of fuss				0	235
Ŧ	Ortofon Salsa	280	Despite a touch of midrange coloration, this cartridge really involves the listener with good extension and a clean sound			0		290
*	Ortofon Rondo Red	375	Delivers detail, power and resolution and makes a good case for its price					307
-	Sumiko Blue Point Spec Evo III	239	High-output MC with refinement at high frequencies and a nimble, articulate and revealing sound			0		270
*	van den Hul MC One Special	699	A gorgeous cartridge that's worth the price every time you hear a familiar track in a whole new light			0		235
-	van den Hul Condor XCM	2,400	A stunning cartridge with stereo imaging, dynamics and detail resolution to die for			0		265

							SPECIFICATIONS							
P	HUNU	5	TAGES	WWW.TECHI	MM PH	MC PH		ADJ.	S					
Get	the best performar	nce from	m your turntable	HRADAR.COM	NO NO	JNI ONC	ADJ.	ADJ. IMPEDANCE	UE NUMBER					
BADGE?	PRODUCT	3	COMMENTS	MOC	NPUTS	INPUTS	GAIN	Ä	BER.					
-	Cambridge Audio 640P	100	An outrageously good bargain that suits budget systems, but can confidently survive upgrades			0			305					
4	Creek 0BH15	240	Practical and highly compatible unit offering fine detail and pleasing, mellow balance		.0	0			305					
**	Tom Evans Microgroove	480	For dynamics and real bass extension with good tonal colour this is the one to beat			0			234					
*	Tom Evans The Groove	1,900	Plenty of detail, excellent imaging and almost flawlessly neutral: a good choice for maximum information retrieval		0				201					
	Trichord Dino/Dino+	563	Relaxed yet resolute with very good image depth and natural balance, not to mention great flexibility		0	0	0	0	234					

SPEEDS Speeds offered in rpm. SUSP SUBCHASSIS Turntables with a sprung or suspended support for the platter and arm. SWITCHABLE SPEED CHANGE Some decks require manual lifting of the belt from one pulley to another to change speed, but not these ones. SUPPLIED WITH ARM Deck is supplied complete with tonearm – some require a separate purchase in this department, but the dealer will fit it for you. SUPPLIED WITH CARTRIDGE Some decks are supplied with a starter cartridge and this is included in the price shown. MM Moving magnet cartridge – see amp and phono stage features to match this type. MC Moving coil cartridge – see amp and phono stage features to match this type. REPLACEABLE STYLUS Some cartridges have separate styli for ease of replacement, but it compromises sound quality



Cambridge Audio 640P £100 If you need a low-cost way to get your turntable talking to your amplifier, this is by far the best option Dynavector DV-10X5 £295

Fiddly to set up, but dynamics are superb from this highoutput MC cartridge, making it a firm HFC favourite



Townshend Rock 7£1,498 A great turntable for those upgrading from an entry-level deck. Sound engineering at a bargain price

THE NEW PBI

Poise, Precision & Power

The impact, dynamics and sheer scale are the signature of the latest addition to the award winning series range - Listen to them.

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Our favourite sources



BEST BUY EDITOR'S CHOICE

				SPECIFICATIONS									
R	ADIO	T	UNERS	WWW.TECHRADAR.COM				REMOTE	SIG. STRENGTH	ROT. 11	<u>88</u>		
Suri	Surf the waves with these carefully selected tuners				WAVEBANDS	PRESETS		E CONTROL	IGTH MI	ROT. TUNING KNOB	ISSUE NUMBER		
BADGE	PRODUCT	3	COMMENTS	СОМ	SON	SETS	RDS	IBOF.	METER	NOB	ABER		
FM	TUNERS		一位,但是这种是一种的一种,但是一种的一种的一种,	BAR PA	7843 AV	A		lane.		V 13	5 70		
-	Creek Audio Evolution	350	Sound is detailed, cohesive and extended both tonally and spatially - very classy		FM,M	80	0			•	308		
-	Denon TU-1500AE	180	Well attuned to the crowded modern FM band, this tuner produces clear, detailed sound		FM,M,L	100					281		
	Magnum Dynalab MD 90T	1,295	No remote or presets as standard, manual everything and valves but its sound is simply sublime		FM	opt		opt			257		
	Rega Radio 3	390	Strong bass, clear treble and a high enjoyment factor make this an appealing FM performer		FM,M	20		•			283		
-	T+AT1210R	1,200	High-end looks are matched by the sound, which is detailed and sophisticated, with useful features too		FM	100	•	•			283		
DAB	/FM TUNERS		· [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	東京の	A cat ha	Sign		100					
-	Arcam FMJ T32	600	A highly cost-effective way of optimising the airwaves. iPod functionality is definitely a bonus	/559242	DAB,FM	100		•			319		
-	Denon TU-1800DAB	300	There's a little grain on FM, but the decent performance on both bands makes this a great choice		DAB,FM,M	200	0	•		•	283		
-	Marantz ST7001	330	FM reception could offer a little more detail and insight, but DAB is fine		DAB/FM	0	90		0		283		
	NAD C445	350	FM is laid-back despite bright balance, but has good detail. DAB slightly livelier than most		DAB,FM	30		0		•	299		
-	Onkyo T-4555DAB	400	Admirably free of grain or obvious tonal blemishes, this tuner achieves a high standard		DAB	40		•	•	•	298		

SPECS KEY WAVEBANDS Which bands are supported: FM, M – medium wave, L – long wave, DAB – digital audio broadcasting. PRESETS How many stations can be stored in memory. RDS Radio Data System – station names and program titles can be displayed among other facilities (FM only, DAB has more comprehensive display potential). REMOTE CONTROL For the couch potato. SIGNAL STRENGTH METER Useful for setting up an aerial. ROTARY TUNING KNOB An ergonomic alternative to buttons.

				256 253	SPECIFICATIONS									
H	EADP		DNES	WWW.TECHRADAR.COM	ELEC	SU	CIR		6		3.5MM JAC	82		
∖udi	iophile solutions fo	r hoi	me and travel use	ADAR.	ELECTROSTATIC	SUPRA-AURAI	CIRCUMALIRA	OPEN BACK	CLOSED BACK	WEIGHT (g)	JACK ADAPTOR	SSUE NUMBER		
ADGE	PRODUCT	٤	COMMENTS	OM	ATIC	IRAL	RAL	ACK	ACK	T (9)	TOR	BER		
-	ACS T2	500	Ear-canal earphones display an impressive midband intelligibility and a knack for digging out the detail	/479584						28		31		
•	Audio Technica ATH-CK10	279	In-ear headphones offer unforced detail, natural dynamics and excellent clarity							15		31		
•	Audio Technica ATH-W1 000	559	Superbly comfortable and very revealing. Long listening sessions are a pleasure with new insights						0	250	0	30		
***	Beyerdynamic DT770	222	A touch coloured in the mid, but less than most closed cans; detailed and with excellent bass				0			290	0	28		
***	Beyerdynamic DT880	230	Combines musical involvement with a high degree of analytical virtues. Very comfortable			0				205	0	31		
**	Denon AH-D2000	300	Among the best closed-back headphones we've heard and very fine by any standards				0		0	350	0	30		
-	Denon AH-D5000	600	Sound is comparable with good open-back models, while isolation both inward and outward is useful				0		•	320		31:		
-	Denon AH-D7000	900	One of the best closed-back designs, bearing comparison with the finest open models	/478417					•	295	•	31		
#4 <u>**</u>	Etymotic ER-4P	195	Fiddle with in-ear earpieces and angles of approach and you'll be repaid with super-detailed sound							20		31		
	Grado SR60i	100	A strong contender with out-of-class sound in most areas: a brilliant budget all-rounder	/603478				•		210	•	32		
-	Sennheiser IE8	260	With its combination of neutral midrange and treble, this is arguably the best for in-ear all-round sound							20		31		
*	Sennheiser HD650	388	Clear and detailed, with very natural tonality through bass and midrange and just a little treble coloration					•		275	•	31:		
	Shure SE420	260	Expensive and no replacement for top conventional 'phones, but streets ahead of most in-ears						•	15	•	29		
	Shure E500PTH	382	Sophisticated in-ear design with three drivers, plus switchable 'voiceover' mic in the lead						•	20		285		
	Stax SR-001 Mk II	249	Expensive and power-hungry, but this electrostatic drags personal stereo into the world of high fidelity		0					280	•	268		

SPECS KEY ELECTROSTATIC Uses electrostatic film instead of more common cone or dome dynamics. SUPRA-AURAL Earpads sit on ear rather than around it. CIRCUMAURAL Earpads rest on the head around the ears. OPEN BACK Vented capsules let sound in and out. CLOSED BACK Sealed capsules. WEIGHT In grams. 3.5MM JACK ADAPTOR Allows connection to personal stereos, computers etc.



T+A T1210R £1,200
There aren't many similarly priced rivals to the Magnum Dynalab MD 90T for FM fans, but Germany's T+A has really hit the spot with the T1210R



Sennheiser HD 650 £388

An easy recommendation - Sennheiser's HD 650 should really cost more than this - it's simply fabulous and is a genuine bargain in the world of hi-fi



For regular travellers, the ACS T2 with its custom-moulded earpieces is an obvious choice, thanks to natural noise-cancelling, all-day comfort and great sound

Heatherdale audio limited

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Speakers

Audio Note ANK-SE speakers with stands, superb cond	£595
B&W DM-1800 speakers with dedicated stands	£150
Dynaudio Audience 7 speaker, superb/boxed	£395
Hales Trancendence 5 speakers	22895
Tannoy Sterling SE speakers (ex demo)	POA

Turntables, Cartridges and Tonearms

Selection of new high end MC cartridges, please call Blue Pearl turntable POA

Amplifiers

KR Audio Kronzilla monoblocks (£18,000)	£7995
Almarro 318-B (new)	£2250
TRI TRV-M300SE monoblocks (NEW)	£3995
Meridian 551 integrated amp, superb cond	£695
Roksan Caspian int amp with remote	£495
Almarro A50125-A int amp (NEW)	£3140
Almarro A205-A int amp (NEW)	£1195
Wavac MD-805 monoblocks (AS NEW)	£7995
Audio Note Kegon monoblocks (ex demo)	POA

Pre-amps

Mark Levinson ML 40 processor/pre-amp (£30,000) mint

	21110
Audio Note M9 phono pre-amp (ex demo)	POA
Proceed PAV pre-amp	£495

CD Players, DACs and Transports

Lector Digitube DAC BRAND NEW (£1100)	ONLY £795
Mark Levinson ML 390S Near mint	£2795
CEC TL-OX belt drive CD transport (AS NEW)	£8995
CEC TL-1N transport with DA-1N DAC (AS NEV	W) £8500
Meridian 508 CD player, superb cod with remo	ote £695
TRI CD valve player Made in Japan (NEW)	£1895

Miscellaneous

Townshend S/sink single shelf	£150
Winds Stylus gauge (NEW)	£395

Main Dealer for:

Mark Levinson, Ayre Acoustic, Tannoy Prestige speakers, Thiel speakers, Audionote, Esoteric, SME, Stax, Cello, Lyra, My-Sonic, Revel, Audio Tekne, Michell, Esoteric.



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ichaiogue		Ampimers	
Ariston RD80, ex condition	99	Accuphase A30 Power amp, excellent	2999
Aesthetix Rhea phono, the best we've ever heard	2399	Arcam A65+, excellent	179
Clearaudio Evolution with parallel tracking arm	999	Arcam Delta 290 and 7r, both available, each	119
Clearaudio Master Solution c/w Unify tonearm	2999	Audio Analogue Maestro Settanta, ex boxed	999
Conrad Johnson EF1, excellent boxed	799	Audio Innovations Series 700 integrated, ex boxed	399
Creek OBH15, excellent boxed	149	Audiolab 8000Q, reduced	399
Dynavector P75, excellent little phono stage	249	Audiolab 8000C&P in grey, boxed, excellent	349
Graham Phantom, ex demo, excellent boxed	1749	Cairn 4608A Integrated, nr mint in black	599
Graham Siee Elevator, excellent boxed	349	Conrad Johnson PV15, mint boxed c/w £700 phono	1799
Heybrook TT2 c/w Linn Basik LVX, vgc	229	Creek OBH22, excellent	199
Koetsu Black, mint	999	Croft Apparition Elite & Epoch Elite Pre/Power, lovely	1199
inn Lingo, excellent boxed	549	Cyrus Pre and Monos, excellent	799
inn LP12, with Linn Basik Plus tonearm, excellent	549	EAR 834L, decent little valve line preamp	449
inn littok LV11, excellent with LP12 armboard	349	Graaf GM50, nr mint boxed	2499
inn LP12, Cirkus, Lingo, reasonable	899	Krell KSA100S, excellent boxed, a beauty!	1749
inn LP12 early with Mission 774 tonearm	549	Krell KAV300i, excellent with remote	999
inn Ekos 2, excellent	899	Krell KAV250p/a Pre end Power combo, ex boxed	1999
Michell Tecnoarm, or mint	Call	Linn LK100, excellent boxed	229
Michell Orbe, excellent order, boxed	1299	Linn Kolector ex boxed, REDUCED	299
NAIM Stageline, excellent	179	Linn Wakonda, nr mint boxed, phono boards REDUCED	249
	449	Linn Akurate 2200, nr mint boxed in black	1599
Ongin Live Silver, mint boxed new version,	249	Meridian 501/555, excellent with manuals & remote	7 49
Ongin Live fully modded RB250		Meridian 502/507, excellent with manuals and remote	1249
Project Dabut 2 in Gloss Black, excellent	99	Michell Argo with Hera p/s	399
Project Perspective c/w arm and Sumiko BPS	349	Musical Fidelity A1001 Mega Integrated, boxed	1199
Rega P3, in green	279	Musical Fidelity XA100R Integrated, boxed	349
Rega RB300 Upgraded wiring etc	199		Due in
Roksan Xerxes Reference P/S, nr mint boxed	599	NAIM NAC112&NAP150X, excellent boxed	749
Roksan Xerxes 20/XPS7 as new, used	1499	NAIM NAC42.5/NAP90, Chrome, phonoboards, vgc	299
SME 3009/2 as new boxed	249	NAIM NAP160, recent service	349
SME Sevies V, early model but mint boxed	999	NAIM NAIT 3, nr mint boxed	349
Systemdek II (biscuit tin), c/w Linn LVX arm, vgc	299	NAIM NAC202/NAP250 2, excellent boxed	2899
forn Evans Microgroove plus (upgraded ISO), as new	499	NAIM NAC92, excellent, phono boards	149
Inchord Dino Mk2, ex demo	249	NAIM NA2 32.5/NAP140, excellent	399
Vilson Benesch Act 1 Tonearm, nr mint superb	799	Pioneer A400X, excellent boxed	198
, , , , , , , , , , , , , , , , , , , ,		Puresound 2A3, ex demo boxed	1449
Radio/Recorders		Quad 99/909, pre/power combo boxed c/w remote	899
Vicam Delta 280	75	Quad 44 Preamp, 405 Power amps NOW from	99
Cyrus FM7, excellent	199	Rothwell Indus SE, as new boxed passive	399
inn Pekin, excellent boxed	299		1499
Nakamichi CD2 recent importer service	200	Stello M200 Monos, nr mint boxed 200w, fantastic! Tag McLaren, FA20r Preamp and 125M Monoblocks	1249
Pure 702ES, excellent multiband and DAB tuner	149	Tag McLaren, PA10 Preamp and 60P Poweramp	
Quad FM3, FM4, 66FM	Call	Unison Research Unico Integrated, remote	549 399
JUAO FM3, FM4, BOFM	Call	Unison Research Unico integrated, remote	399
N- W- I			
Digital Communication of the C	199	Loudspeakers Art Ernotion Monitor Signature, nr mint REDUCED	3249
Arcam CD73 black, nr mint with remote			349
Arcam Alpha 6, excellent remote	99	AVI Neutron IV, excellent ex demo units boxed	249
Audio Analogue Maestro 192/24, ex boxed serviced	1199	Castle Durham 3, excellent boxed	
Audio Research CD7, mint boxed in silver	4999	Castle Howard choice of 3 pairs REDUCED	449
Cairn Fog v2, in silver c/w upsampling board, BARGAIN		Dynaudio Audience 62 Floorstanders nr mint bargain	449
Cambridge Audio CD3 pre-Richer original with remote	199	Focal JMLab Chorus 714, excellent boxed bargain	249
Creek Evo CD, excellent boxed	429	Focal JMLab Micro Utopia Be, excellent	1999
Cyrus DAD3Q, excellent c/w remote	299	Griffin, any products by this company wanted!	Call
soteric SA10, ex demo nr mint	1499	Linn Kaber, passive, vgc	449
soteric UX1, nr mint boxed, absolutely stunning	4499	Martin Logan Source, nr mint ex demo	1499
sateric P-05/D-05, ex demo nr mint boxed, stunning	Call	Martin Logan Purity, ex demo, for details	1999
(rell KID iPod Docking station, ex demo as new boxed	1199	Martin Logan Summit, ex demo slight mark, BARGAINI	
(rell KPS30i, excellent, recent lasermech, stunning	2999	Monitor Audio MA1800 Gold, large floorstander, bargain	349
inn Numerik, vilate SPS version REDUCED	399	Monitor Audio RS8, ex demo	549
Meridian 508/24, excellent	749	Monitor Audio GS10, excellent, BARGAIN	599
Monarchy DIP, nr mint	199	Monitor Audio BR2, vgc boxed	149
Monarchy DAC, nr mint boxed	499	NAIM Intro, black, boxed	299
Ausical Fidelity A3.2CD, excellent, remote, box	449	NEAT Motive ex demo, excellent	Call
NAIM CD5X, ex demo, nr mint boxed	1099	Opera Callas nr mint ex demo boxed	1699
NAIM CDX2, excellent boxed	1599	Peak Consult Princess Signature inc Stands, nr mint	2499
Pethos Diet avent bayed	1649	Q Acoustics 1010 AV 5.1 speaker package, as new	399
Pathos Digit, superb boxed		Rega Ele v 1.5, vgc in black	149
Ploneer PD9700, stable platter bargain, recent laser	119	Rega RS5 in Cherry, mint boxed ex demo in cherry	599
Pioneer DVD747, excellent boxed	199	Revolver Music 1, ex demo, as new in Maple	399
Quad 66, excellent boxed	399	Revolver Music 5 (New RW45), cancelled order	Call
Roksan Caspian M Series, nr mint boxed	649	Rogers LS4, excellent	99
Shanling CDT100, excellent due in	649	Rogers Studio 5, excellent boxed	199
Shanling CDT200, excellent boxed newer model	1199	Royd Minstrel, boxed	119
Sugden CD21SE, nr mint boxed	Call	Ruark Prologue 1, vgc REDUCED	299
Stello CDT200 Transport, superb boxed, remote	749	Sonus Faber Domus, vgc boxed	999
Stello DP200 DAC Preamp, superb build and value	999	Sonus Faber Cremona, brand new boxed	3250
ACT CD1, excellent in black	999	Spendor SA1 Original version	299
ag McLaren CD20T and DAC20, excellent	699	Tannoy DC2000, vgc black	199
ag McLaren CD20R, excellent boxed	349	Usher Audio S520 in gloss red, excellent boxed	199
EAC VRDS10, good condition, boxed remote	399	Usher Audio CP8571, nr mint crated	2999
Jnison Research Unico CDP, excellent		DESCRIPTION OF THE PRINT OF THE	_000
	599		
	599	SPECIAL SYSTEM DEALS	

SPECIAL SYSTEM DEALS
Audio Analogue Maestor CD and Amp
Esoteric A10 Amplifier and SA10 SACD player,
249 mit demo units
Call NAD Viso 5, in mint boxed
Call Rokasa Kardy K2 Amp and CD in Silver
599 Shanling MC30, nr mint boxed Tuesday to Saturday 10 til 5, tel 01642 267012 or email choice@2ndhandhifi.co.uk

Chord Indigo 1m, ex demo Cyrus PSXR, smooth black Grado SR80, SR80, SR125 ex demo NAIM Flatcap 2X, XPS2, HiCap, for details....

1999

Our favourite amplifiers



BEST BUY EDITOR'S CHOICE

	TEGF pick of the best or		TED AMPLIFIERS	WWW TECHRADAR.COM	LINE INPUTS	PHONO INPUT	REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (M)	ISSUE NUMBER
_	PRODUCT	£	COMMENTS	COM	SID	PS	P P	SE SE	8	783
_	0 £1,000		的复数形式 医阴道性 医阴道性 医神经性 医神经性 医神经神经	No.	201					E
~	Cambridge Audio Azur 740A	550	Ticks all the boxes for bass, clarity, imaging etc. and invites the listener into the music with uncommon grace		6	-			100	2
	Cambridge Audio 840A v2	800	A chunky powerhouse with features aplenty, this amp revels in loud music, but also offers detail and delicacy		8	•			120	3
7	Marantz PM8003	750	Detail isn't the utmost, but great vitality makes this amplifier quite thrilling		5	MM		6	95	3
	Moon 1.5	999	A likeable amp in many ways, with admirable bass, treble and imaging		5	•		0	60	(
	NAD C3226BEE	320	Unusually confident into awkward loads and very assured especially in bass. Treble a touch recessed	/603281	7		0	•	50	:
~	Naim Audio NAIT 5i	765	More versatile than previous Nait's, the 5/is a superb amplifier that offers vivid insights into all manner of music		4				50	3
-/	Roksan Kandy K2	895	Superior design and high-performance credentials makes this amplifier a must-have bargain	/483722	2 5	MM		•	125	(
BO.	VE £1.000									Ē
	ATC SIA 2-150	2,376	Revealing, dynamic and powerful amplifier that works with a wide range of speakers. Superb build quality	/478483	4			48	150	:
7	Arcam A38	1,450	A winning combination of sonic virtues including highly developed detail and musicality		7	opt		*	100	:
7	Astin Trew AT2000	1,349	If you prefer the timbral and timing qualities of music to its bone-crunching potential, then this is a serious contender	/498574	1 4		•	•	65	:
7	Audio Analogue Puccini Settanta	1,450	Detailed and lively, particularly in the upper octaves, but lacks a little bass extension		5	MC	•		160	1
	Copland CTA405	2,998	A musical and involving amplifier, which also has incredible insight and is user-friendly by valve amp standards		5		•		50	1
-	Harman/Kardon HK 990	1,000	Very clever, with built-in DSP room correction and more — but most important, a powerful and revealing amplifier	/594820) 7	MC	•		160	
	Jadis Orchestra DiP	3,450	A smooth, refined, yet dynamic-sounding tube amplifier with the added 'novelty' of an iPod dock	/465908	3 5				40	
	Leema Pulse	1,170	An organic sound alongside good power reserves and superb features, including a great MM/MC phono stage		5	•	0		80	1
7	Lyngdorf Millennium Mk IV	10,995	State-of-the-art digital amplifier successfully transcends virtually all the problems that afflicts others of its type	/603231	1 5				150	3
7	Moon Evolution i-7	5,450	Sophisticated, with an elegant build and sound quality, very limited features, even by high-end standards		5		•		150	2
7	MSB Platinum M200	13,656	This amplifier's devastatingly good all-round sound quality sets a benchmark that few will approach	/603452		•				3
37	Myryad MX12080	1,200	Sound is more assured at the top of the frequency range than the bottom, though bass is melodious and detailed		8		•		80	3
7	Mystère ia11	1,450	Small, deceptively powerful integrated valve amp with a crisp, pacey sound		4				40	:
7	NAD M3	2,700	Massive and flexible, it goes very loud with fine authority and dynamic range, but lacks some sparkle		7		•		180	
-	Naim Audio NAIT XS	1,250	Delivers a spellbinding, refined musical performance that sets a new benchmark for all integrated amplifiers	/498536	6		0		60	:
=	Primare I30	1,750	A smooth, sophisticated yet agile performer, and beautifully built too		6			•	100	1
-	Pure Sound A30	1,400	Valve integrated, with the accent on music rather than rhythm. Needs more inputs, though		3				30	2
ALL STREET	Sugden A21aL Series 2	1,399	Lovely solid-state Class A amplifier, sweet as a nut and more powerful than its predecessor		5	opt	0		21	1
No.	Unison Res. Unico Primo	1,395	Line input can be converted to phono (at extra cost). An excellent mix of valve and solid-state virtues	/499279	5	•			85	3
7	Unison Research P70	4,995	Delightful valve amplifier with fine neutrality, sweet midband, impressive bandwidth and ample power		4		0		70	3
	DF /D/		VED ANADO		SPE	CIFICA	ATION	S		
기	KF/PI	IV	VER AMPS	PREAMPLIFIER WWW.TECHBADAR.COM				T	P	
_			Tall Alvii V	TECHA.	POWER		P	REMOTE	POWER	
pa	rate boxes can br	ina cl	ear advantages	RADAF	AMP	LINE INPUTS	PHONO INPUT	E CO)	в оитрит (м)	
	PRODUCT	9 01	£ COMMENTS	AMPLIFIER ADAR.COM	AMPLIFIER	PUTS	NPUT	CONTROL	JT (M)	
	0 £2,000	W. C.							797	
	Cambridge Audio Azur 840E	/840W	2,000 Enterprising technology delivers a pre/power combo that always sounds detailed and controlled			8	opt		200	
	Naim NAC 122x/NAP 150x		1,615 Musically rewarding with outstanding sophistication and insight for such a modestly priced design	•		-	opt	0	50	
				NAME OF TAXABLE PARTY.					CONT.	
01	VE £2,000									

Border Patrol Control Unit 3,995 Bluff looking valve preamp, with one of the most neutral yet dynamic sounds around 277 5 opt Bryston BP26 Cracking preamp brings detailed results 8 opt 308 Chord Prima/Mezzo 140 7,135 Small, muscular, beautifully made and styled and sounds like a dream . • 120 269 Classé CP-700/CA-M400 9,200 Pre plus mono power combo with superb build, huge power and enormous flexibility. . 6 opt • 400 293 Cyrus DAC XP (preamp/DAC) 2,275 A DAC/pre with naturalness and resolution to die for and six digital inputs for signals up to 96kHz Densen Beat B-200/B310 2,400 Lively, energetic combination that bring a great sense of scale to familiar recordings 0 8 276 ont 80 Densen Beat B-250/B-350 8,600 Upgradeable to surround, with sweet preamp and slightly coloured power amp . 125 270 Hovland HP-100/RADIA 18,900 Uncommonly musical valve/transistor hybrid transcends stereotypes, one of the genuine high achievers Marantz SC11S1/SM-11S1 Preamp and power amp duo delivers high resolution and is consistent with different loudspeaker loads . 6 220 304 Roksan Caspian M Series-1 A powerful and enjoyable sounding amplifier combo that brings out the strengths of its CD player . • 85 307

SPECS KEY LINE INPUTS Input sockets for source components with a line level output: CD players, DVD players, tape decks, tuners, phono stages etc. **PHONO INPUT** Input sockets and onboard phono stage for a cartridge. Either MM (moving magnet) or MC (moving coil), occasionally both. **REMOTE CONTROL**A remote control is supplied with the amplifier. **HEADPHONE SOCKET** To drive your cans with. **POWER OUTPUT** Manufacturer's rated output in watts per channel.

SPECIAL READER OFFER .::: HI-FICHOLCE



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Our favourite cables



BEST BUY EDITOR'S CHOICE

				SF	ECIF	CATI	INS		
ABLES		ifference, especially our top recommendations	WWW.TECHRADAR CON	STRAND(D	SOLID CORE	00	S	DIGITAL CABLE TYPE	SOUE NUMBER
SE PRODUCT		COMMENIS	MON	NOCO	3800	COPFER	SILVER	MA.	MBEH
ALOGUE INTERCONNEC	TS								
Audioquest Sidewinder	45	A detailed cable, with fine tonality and excellent rhythm. Slight added upper-bass warmth does little to detract		•		•			29
Black Rhodium Prelude	90	Practical and sensibly priced all-rounder that seems happily compatible with a wide range of kit		•		•			29
Black Rhodium Coda	150	Superb bass and neutral and detailed midrange: treble generally sweet with occasional slight constriction		•		•			29
Black Rhodium Polar Illusion	250	A good all-rounder, with clear and purposeful bass and particularly fine treble				•			32
Cambridge Azur Reference	50	Performance wouldn't shame a cable at twice the price: especially adept in the treble with no trace of dryness				•			29
Clearer Audio Copper-Line Alph	na 88	Sounding like something a good deal dearer, this cable offers near high-end detail and seems highly compatible too				•			29
Clearer Audio Silver-line	283	Complex, well-screened cable which offers good sound all round with exceptional bass – at a price!				•			27
CrystalCable Piccolo	348	Thin, but tougher than it looks, Piccolo has some qualities of a solid-core type - notably resolution, focus and articulation			•		•		29
Kimber Timbre	145	A very neutral cable that will complement even very upmarket systems				•			3.
Monster M350i	45	Few cables at this price reveal so much about the recording space. Clear treble, too	100			•			28
Monster M1000i	230	Very capable, with only a hint of bass dryness to set against excellent results elsewhere				•			28
Nordost Wyrewizard Dream	110	Slight lack of precision in extreme treble, otherwise detailed and neutral with authoritative bass			•	•			30
Oehlbach NF214	63	The bass is a matter of taste, but suits many smaller speakers. Very good mid and treble				•			28
Profigold PGA3000	80	Not the ultimate for lovers of clinical precision, its character is engaging and detail and extension are good				•			29
QED Signature Audio S	190	Mellifluous and rounded, this cable is a great choice for lovers of the human voice							32
Supra EFF-IX	77	Lively-sounding cable which maintains a high level of detail and neutrality. Musically, a great all-rounder	-			•			30
Townshend Isolda DCT100	99	Sound has a particularly enjoyable cohesion and naturalness that makes for a great listener involvement	-	H	•	•			31
van den Hul The Wave	125	Generally neutral, with a hint of upper-bass richness: images seem to reside slightly further away than most				•			31
van den Hul Integration Hybri	-		-			•			30
ITAL INTERCONNECTS	u 170	Bass is nothing remarkable, but mid and treble are outstandingly open and clear: very transparent							30
Atlas Compass	85	Clight improvement in datail over given was cabled plus distinctly more typeful bees and more open troble						Е	28
Kimber DV-30	98	Sight improvement in detail over giveaway cables, plus distinctly more tuneful bass and more open treble				•		E	31
	+	A superb performer that lacks very little, even when compared to Kimber's high-end models						E	31
Merlin Scorpion Digital	130	Reduces distortion, making sound clear with unusually revealing low frequencies This cobises a wife a world if this to a cool transport (NAC combination gives to a bight and contact.)				•		-	30
Supra An Co	30	This cable can give a useful fillip to a good transport/DAC combination, even in a high-end context	1000	_		_		E	30
EAKER CABLES (PRICE			-		-	•		-	20
Atlas Hyper 1.5	12.5	Don't look to this cable to beef up the bass, but its performance at higher frequencies is revelatory at the price	-			_			29
Atlas Ascent 2.0	60	A highly analytical cable, with more bass extension than at first appears and very fine detail across the board		-		0			29
Chord Silver Screen	6	Screened speaker cable with excellent treble, but just a little light in the bass at times		•		•		-	31
CrystalCable Piccolo	1,395	A chip off the old block, this speaker cable has a similarly fast, fluid and subtle sound (price shows 3m pair)			•		•		30
Kimber 8PR	21	A cable that really enjoys the music, also admirable for the levels of analytical detail it allows through		•		•			29
Monster MCX-1s	5	Notable for its bass, which is perhaps a touch overdone at times but could be a good foil to small speakers		•		•			28
Nordost Heimdall	185	Alternative to Valhalla, silver plated, micro-monofilament construction, suitable for exacting systems		•		•			27
QED X-Tube XT300	12.5	A natural and controlled-sounding cable that's cost-effective for mid-priced systems			•	•			31
QED Revelation	15	Sensibly priced, this cable offers a performance which is a step-up from budget types		•		•			31
Supra Sword	108	Zero inductance construction, medium-resolution cable that has an excellent midband and is fundamentally musical		•		•			28
Townshend Isolda DCT	50	Cryogenically treated 'impedance-matched' cable with stabilising components added: great sound all round			•	•			24
van den Hul The Wind	50	Separate conductors provide plenty of room for experimentation and the conductor quantity keeps resistance low			*	•			31
Wireworld Solstice 5 ²	25	Rather bulky and awkward, but performance amply justifies it with superb bass solidity		•		•			31

SPECS KEY STRANDED Cable has a number of (usually) twisted strands to conduct the signal. SOLID CORE Cable has one or more individually insulated strands to conduct the signal. COPPER Material used to form the conducting element of the cable. SILVER Alternative material used to form the conducting element of the cable. DIGITAL CABLE TYPE E – electrical, O – optical. Cables are one metre length unless otherwise stated.

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Our favourite loudspeakers



BEST BUY EDITOR'S CHOICE

		SPEAKERS nore on speakers than anywhere else	WWW.TECHRADAR.COM	SIZE W,H,D (CM)	FLOORSTANDER	EASE OF DRIVE	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	
GE PRODUCT	£	COMMENTS	COM	(CM)	NDER)RIVE	(ZH)	PACE	MA.	
TO £1,000	16			100	N,					
Acoustic Energy Aegis Neo 3	363	Pretty, neutral floorstander sounds open with wide dynamic range and good bass weight		20,90.5,24	•	Α	24	100		
Acoustic Energy Aelite 3	735	Wood-veneered all-rounder has exceptional neutrality with deep smooth bass		20,103,39	•	Α	22	•		
Amphion Ion L	900	Sharp styling, fine mid/treble coherence and a sweet treble, but less happy bass alignment in test room		162,326,26.5		Α	40	-		
ATC SCM11	867	A very fine little speaker that's at its best with natural recordings where it adds little and reveals much		21,38,25		A-	55	0		
AudioPro Avanti A.10	350	A tough and effective little speaker. Overall balance is quite smooth and even		19,29,26		A+	38	6		
Bowers and Wilkins CM1	488	Luxury miniature has neutral, laid-back sound, with low coloration, fine imaging but weak dynamics		16.5,28,28		Α-	40	0		
Bowers and Wilkins 684	699	A fine all-rounder at a realistic price, this floorstander has a smooth, even and nicely open balance	/483503	20,91,30	•	G	22			t
Bowers and Wilkins 683	879	High-class drivers and a great price makes for a warmly recommended speaker		20,99,34	•	Р	20	8		t
DALI Ikon 6	999	Needs care with setup, but rewards you with impressively transparent and obsessively detailed sound		19,100,33	•	А	37	9		t
Dynaudio DM 2/10	880	Unfashionably bulky standmount has fine dynamics, grip, bass and headroom and is well mannered		27.5,45,35		Α	22	0		t
Focal Chorus 706V	389	Advanced drivers deliver a smooth, even, overall balance with healthy dynamic expression and tension	1	22,39,25		А	27			t
Heco Celan 300	649	Does tone colour, dynamics and detail with aplomb and communicates superbly in its +2dB mode		23,36,33		A+	40	0		t
JBL Studio L880	700	Good value floorstander with neutrality, massive headroom and plenty of punch.		22,99,37	•	Α	25			I
KEF iQ50	599	Looks cute and very discreet, with spacious imaging, good balance and a sweet treble	/483527	17.5,81.5,26		Α	23	85		t
Monitor Audio BR2	230	Good-looking standmount has a muscular sound with superior coherence		18.5,35,25		A-	30		@	t
Monitor Audio BR5	450	Not the best dressed in its class, but detailed, bold-sounding, good value and an easy electrical load		17, 85,25	0	A-	36	•		ľ
Monitor Audio Silver RS8	850	Bold, dynamic sound marks it out from the crowd, and it's an easy load that works well in larger rooms		90, 18, 27	•	А	33	6	•	t
Monitor Audio GS10	900	More neutral tonally than some recent MAs. High-quality stereo design which is easy to drive		20,36,27		A-	40	0		t
PMC DB1i	895	Could be more neutral, but a very effective musical communicator with fine warmth and sweet treble		15.5,29,23.4		A+	30		0	t
ProAc Tablette Ref Eight	704	Stunning standmount with electrostatic-like imagery. Its brother costs £200 more and is even better!		15,27,23		A+	40	6		t
Q Acoustics 1010	110	Neatly styled miniature has limited bass and power handling, but fine midband voicing for the price		15,21.5,19.5		Α	48		•	Ť
Q Acoustics 1020i	140	Outstanding value, the smooth, well-balanced and lively sound makes for a fine communicator	/516273	17.5,25,26.5		A+	60	•	•	t
Quadral Pico	849	Could be more muscular, but neutral and open with spacious imaging and little coloration		19,34,26		A-	30	0		t
Rega RS1	390	Clever close-to-wall speaker has fine coherence and good communication skills		15,32,23.6		Α	23		0	İ
Russ Andrews SP-1	352	This tweaked Focal 705V RA has a sound that is immediate, engaging and, most importantly, great fun		192,31.524.8		A+	65		0	t
Spendor S3/5R	750	Lacks dynamic muscle and loudness potential, but lovely smooth neutrality and good bass extension		16.5,30.5,190		Р	25	0	0	+
Spendor S3/5R Tannoy Revolution DC4T	599	Ultra-compact floorstander that lacks bass weight and dynamic tension, but sounds open and coherent	/488857	15,85,16	•	G	40		0	t
Tannoy Revolution DC6	900	Pretty compact standmount likes wall loading, delivering a lively bass and smooth, coherent midband	7 100007	23,36.5,23		A	40		•	t
Tannoy Revolution DC6 Wharfedale Diamond 9.1	150	Superior shape and finish at an exceptionally sharp price. Sound is laid back, but free from boxiness		19.5,30,28		A-		•	-	t
OVE £1.000	100	Supplies shape and inner at an oldeptionally sharp price. Sound to talk subtly but not from bounded	AND DESCRIPTION OF THE PARTY OF	10.0,00,20			.0		1500	H
AE Energy Radiance 3	1,500	This speaker's very effective enclosure ensures a wide dynamic range and a very clean sound	/587236	23,92,29.7	0	Α	27	10%		ī
	-	Notably superior coherence and focus, fine neutrality and dynamic range with low coloration	7007200	19,38,31	-	A-	24	9		t
Amphion Helium 520	1,000	Sharp styling and fine value for money with excellent voice band coherence		16,104,22	•	G	28	0		t
_								-		t
Amphion Argon 3L	2,300	Very solid build ensures an impressively clean sound with loads of bass and fine neutrality		19,92.5,30.5	-	G	26	0		+
ALR Jordan Classic 5	1,550	Slim, laid-back floorstander has sweet sound with fine coherence, imaging and dynamic range		17,99,26	•	A	28	100		1
ALR Jordan Note 3	1,950	Adjustable ABR gives much of the weight of a floorstander with the agility of a standmount	-	24.5,37,31.5	-	A	26	Sh.		1
ATC SCM19	1,534	Super-linear motor system and heavy weight construction makes the ATC a pro favourite		22,44,31.5		A-	54	100		+
ATC SCM16A	2,376	Makes a great case for the active speaker. Good value: includes built-in amps	/4704.40	27,45,33	-		42	0		
Aurousal VS	1,650	The fine coherence and imaging of a single driver system, plus extra help at the frequency extremes	/479149			G	20	0		+
AVI ADM9	1,125	Active mini-monitors that are exceptionally accurate and dynamic and they give good iPod, too	100701	20,30,26			60	9		1
Bowers and Wilkins CM9	1,760	Tall, elegant, expressive midband and expansive, but well-controlled bass	/59/244	20,102.5,32	-	A	60	(8)		+
Bowers and Wilkins 805S	1,950	Classy standmount with excellent coherence and imaging. Can sound laid back but a real delight	-	24,39,33		A	25	6		+
Bowers and Wilkins 802D	9,500	Great timing, superior dynamics and a sweet top end all enhance musical communcation		37,115,56	-	A	<20			-
DALI Ikon 7	1,400	Bulky vinyl floorstander has high sensitivity and a bright sound with superior delicacy and transparency		20,114,34	0	A+	22	(8)		4
Dynaudio Focus 220	2,630	Cleverly tapered floorstander has a brilliantly smooth, neutral balance and very sweet treble		20.5,98,29.5		A-	<20			+
Focal Chorus 816 V	1,099	Fine, warm balance, superior dynamics, and a sweet top end, but could be smoother		28,100,37.5		A+	20	0		1
Focal Chorus 826 V	1,349	Times nicely, goes loud with ease and will produce precise imaging if appropriately set up		28,104,37.5	•	A	45	0		1
Focal Chorus 816WSE	1,499	The W cone makes some of the qualities associated with Focal's high-end models more competitive		99.8,28.2,37.5		A+	39	0		1
Focal Chorus 836V	1,699	Bulky, sharply priced three-way could be prettier, but has good bass with genuine grip		28,115,38	•	A	28	9		1
Focal Electra 1027 Be	4,399	Outstanding mid and top with fine delicacy and low coloration, but lacks some bass grip and drive	-	26.5,111,35		Α-	25	88	-	1
Free FS1	3,500	An elegant design for anyone after the minimum of wiring. Wireless with Sonos or Airport Express		16,87,27		ACT	35	0		1
Gamut Phi5	3,040	Lovely and discreet floorstander has excellent sound and several very clever engineering touches		17,100,24		Р	20	45		

Our favourite loudspeakers



BEST BUY FDITOR'S CHOICE

BO.	VE £1,000	£	SPEAKERS continued COMMENTS	WWW.TECHRADAR.COM	SIZE W,H,D (CM)	FLOORSTANDER	EASE OF DRIVE	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
7	Guru QM10	1,595	A very clever close-to-wall standmount with fine imaging, that sounds a lot bigger than it looks	/465869	30,25.2,23.2		Α	26		•	317
-/	Jamo R 907	6,600	Arguably the more 'chummy' of Jamo's dipole flagships, it offers a powerful bass and open midrange	/498515	44,118.9,7		Α	30	•		317
	Kudos Cardea C1	1,450	A very pretty compact standmount with a delightfully subtle and delicate sound quality		20,35,27		Α	40			304
7	Kudos Cardea C2	1,950	This floorstander is a fine all-round performer with fine voicing and neutrality		20,92.5,27		G	23	*		32
	Kudos Cardea C30	5,250	An absolute honey that fully justifies its hefty pricetag, lacking only a little dynamic tension	/394973	20,112,27	0	G	22	9		31
	MartinLogan Source	1,799	Careful install needed, but capable of remarkable transparency at an extremely competitive price		24,120,37		Α	42			30
7	Mission 796	1,300	Clean, open and detailed, this smooth, relaxed loudspeaker does exactly what it says on the box	/594834	20.6,99.8,31.8		Α	25			32
7	Monopulse 42A	1,995	Oddball styling, fine bass-to-mid balance and dynamics, and superb voice coherence, but untidy treble		26,110,25	•	Α	25	0		30:
-	Monopulse 82	2,495	Could be more neutral, but excellent coherence, lively dynamics and fine imaging		27,110,25		A-	<20	•		28
7	Monitor Audio PL300	6,000	Completely new level of sophistication from a brand best known for mainstream, cost-effective designs		41,111,47	0	A-	28	•		30
7	Mordaunt-Short Perf 6 LE	4,799	Striking moulded enclosure minimises coloration, while overall balance is smooth, neutral and open		24,115,43	•	Α	22	•		30
7	Neat Momentum 3i	1,790	Sounds a lot bigger than it looks, with good coherence and an impressively wide dynamic range		22,38,27		Α-	23	•		30
	Opera Callas	3,195	Technically innovative multi-tweeter system, this is a grown up and articulate performer	/429144	23,37.5,34		В	32	•		31
7	Opera Seconda	1,995	Fine styling and finish, plus very superior voicing, if a shade lacking in warmth		24,102.5,31.5	3	Α	20	•		31-
7	Pioneer S-2EX-W	5.200	This speaker offers superb midband neutrality and exceptional clarity	/587272	29.1.56.5.42.5	•	Α	37			32
7	PMC GB1i	1,425	Good-looking floorstander has great class with fine delicacy and sweet detailing		15.5,87,23.4	•	A	30			30
7	PMC FB1i	2,100	A floorstander that boasts impressive bass extension and a smooth sweet top end	/429594	20,100,30		G	20			32
7	PMC 0B1i	3,600	This floorstander delivers a smooth overall balance with wide bandwidth and dynamic range	/429697	20,102.5,32.5	•	A	20	•		31
7	PSB Synchrony One	3,500	Slim and discreet floorstander that delivers superb sound quality and flexible bass	/516267	22,109,32.5	•	Α	45	0		318
7	Rega R7	1,467	Super-slim and super-smooth floorstander has fine agility with a slightly bright overall character		27,98,35	•	Α	25	•		27
7	Revel M22	1,800	A remarkably clean and revealing speaker with superb tonal and microdynamic capabilities		22,37,30		A-	48	•		27
7	Revel F32	3,200	Meticulously balanced, tonally neutral design makes for a taut, well disciplined sound		22,105,39	•	А	20	•		25
7	Roksan Caspian FR-5	2,475	Sharp looking speaker sounds exceptionally open and lively without aggression		20,100,25	•	А	22	6		29
7	Ruark Talisman III	1,499	No bass demon, but a sophisticated and agile speaker epitomising Ruark's design ideals		22,84,31	e	Α	22	•		25
7	Sonus faber Luito Monitor	1,690	This is a subtly designed, elegant-sounding package that's hard to beat, especially with good recordings	3	18.5,35,33.5		A-	55	•		32:
7	Sonus faber Minima Vintage	-	Easy, graceful-sounding compact is a natural for acoustic material at moderate volume levels	/455417	20,33,27.5		A-	55			312
7	Sonus faber Cremona Audit.		Open, exciting and with surprisingly good bass this is 'The Little Speaker That Could'		20,35,37	-	Α	50	0		30
7	Spendor SP3/1R2	1,600	Conservative styling, superb neutrality and coherence with unusually low coloration		22,40,28		Α	37	•		31
7	Tannoy Glenair 10	3,399	With a 250mm dual-concentric driver this is a generously proportioned, highly engaging speaker		36,100,35	•	Р	28	•		314
7	Totem Model 1 Signature	1,975	Expensive, but very seductive miniature delivers a beautifully smooth and balanced midband		17,31,23		Α	35			27
7	Triangle Genese Quartet	2,775	Great material value and a solid all-round sonic performance with great loudness potential		23,117,37		Α	25			30
7		16,250	New 'sw2' version is less immediate than its predecessor, but it remains highly enertaining		60,160,45	•	Α-	32			290
7	Usher Compass CP-6381	2,500	Lots of speaker for your money, with plenty of deep bass, unusual styling and massive build		35,127,65		Α	20			270
·/		10,500	Impressive cabinet design combined with hi-tech drivers to make truly world-class speaker		27,110,38	•	A-	40			26
7	Wilson Benesch Curve	5,383	Much (but not all) of the ACT's performance in a much more compact and affordable package		23,91,37	•	A	28			25
7	Wilson Benesch ACT	9,100	Superb enclosure gives uncanny freedom from 'boxiness'. Well-balanced, but top end might be sweeter		23,108,36		A	20	0		25
	Wharfedale Opus	1,500	Great material value and a solid, if bright and forward sound. Has great loudness potential		26,100.5,41	•	A	23			31
/	Yamaha Soavo 2	1,200	Cunningly crafted standmount with a beautiful balance that always sounds lively, open and involving		22,38,35	-	A	28	653		296

SPECS KEY SIZE W,H,D (CM) Width, height and depth of one cabinet in centimetres. FLOORSTANDER Speakers that don't require stands. EASE OF DRIVE How much power the amplifier needs (approximately) to drive the loudspeaker effectively. A+ 25 watts plus A 50 watts plus A- 100 watts plus ACT Active — the speaker has its own in-built amplifier. BASS FROM How low the speaker goes — the smaller the number the deeper the bass. FREE SPACE The speakers work best away from wall(s). CLOSE TO WALL The speakers will work best when up against a wall (but avoid corners).



Amphion Ion L £900

A great-looking loudspeaker that also boasts a superb mid/treble coherence and a super-sweet treble, some experimention with positioning will reap rewards



Mission 796 £1,300

Mission's 796 is a great choice for audiophiles looking for a clean, open and detailed sound with classic Mission aesthetics and great build quality



Opera Seconda £1,995

Classy, sealed-box, two-and-a-half-way Italian floorstander with a very fine fit and finish and a superior voice band

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Plus Systems to suit any budget

Plus Freesat/Blu-ray recorders

Plus 50Mb broadband on trial

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BEST BUY EDITOR'S CHOICE

		_		Paris yes	SPECIFICATIONS 100 PLAT							
E	QUIPN		ENT SUPPORTS	I	PLATE		9	ς.	ISSU			
A de	cent hi-fi rack ma	kes a	a sound investment	HEIGHT CM	SIZE (0	WELDED	SHELVES	SHELF T	ISSUE NUMBER			
BADGE	PRODUCT	£	COMMENTS	Š	(CM)	ē	S3	39VT	Ä			
	Atacama Equinox	409	Stable, modular design with style. Excellent bass transients and a fresh design concept	81	50,50	•	4	Glass	217			
m_	Audiophile Base Std Supp't	1,200	Expensive and quite bulky, but it's all worth it as sound is unusually detailed and resonance-free	57	46,35		3	MDF	302			
***	Custom Design Inert Matt	70	Isolation platform that can improve the sound of hi-fi components, but is a bit small for most kit		40x25			Metal	311			
	Custom Design Icon Signature	330	Gorgeous wood and glass looks: sound lacks a little detail, but is nicely lively		56,37		4	Glass	286			
	Custom Design XL4	380	Simple construction pays off in smart looks. Sound contribution is minimal and largely harmless		60,42		4	Glass	293			
	Custom Design Milan	509	Respect is due to any stand that looks this good with nothing more to complain of than slight muddying of detail	57	48,39		4	Glass	302			
-	Hi-Fi Racks Podium	500	A keenly priced piece of high-class furniture that also happens to sound great under a variety of kit		59.5			Wood	320			
***	Milty Foculpods	22.5	A set of four isolation pads that are amazingly useful for damping vibration and improving sound	2	5			Polymer	311			
	Partington Minim	470	Adds its own character to the benefit of rock, most particularly, but slightly to the detriment of acoustic sounds	78	45,37		5	Glass	302			
	Quadraspire Q4 Reference	680	Excellent performance from the school of wobbly racks. Natural sounding and plenty of detail	51.5	49,39.5		4	MDF	217			
-	Russ Andrews Torlyte Platform	146	This unassuming platform can be a godsend, cleaning away mid/treble muddle from the sound	8	48,36		1	Torlyte	302			
	Russ Andrews Torlyte Rack	988	Attractive modular system made of very light Torlyte: a touch of added warmth is its only vice	68	54,49		4	Torlyte	240			
•	Townshend VSSS	1,380	The Seismic Sink goes all glassy and attractive, yet retains the same excellent vibration-killing sound quality	76	35,50		4	Glass	273			

			A=111BA	10000	SPEC	IFIC/	ATION	S	
5	SPEAKER STANDS		# S				NUMBER	ISSUE	
Not a	all stands are mad	e eq	ual – try one of our top buys	HEIGHT (CM	SIZE (CM)	FILLABLE	WELDED	R OF LEGS	E NUMBER
BADGE	PRODUCT	£	COMMENTS	3	3	m	0	83	33
	Anvil Sound Display Stand	229	A variety of smart looks available – sound is clear and precise	50	20,17			1	293
	Custom Design SQ402	100	More a range than a model, capable of fine results especially with Acoustic Steel top plates	62	18,16.5			2	299
na n	Custom Design RS300	110	An attractive stand whose lack of coloration and ringing suits it to high-resolution systems	56	16,5,18	•		1	281
-	Custom Design SQ404	220	Robust four-pillar design gives very low coloration and maximises performance of speakers great and small	61	18,16.3			4	283
BACK	Partington Ansa 60	119	Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent	62	18,15			4	232
BROSE	Partington Dreadnought BS	299	Sound is better defined in almost all areas than cheaper, slimmer stands can offer	62	17,23	0		5	309
-	Partington Heavi II	499	Robust to the nth degree, this stand helps produce very taut, precise bass and detailed upper frequencies	53	31,22			6	287

SPECS KEY HEIGHT Of complete stand. TOP PLATE SIZE (CM) Width by depth of the supporting platform(s). Single figures indicate a square platform.

WELDED As opposed to bolt-together construction. NUMBER OF SHELVES To put your kit on (different configurations are often available). SHELF TYPE Material that shelves are made of. HEIGHT Of each stand, not including spikes. TOP PLATE SIZE (CM) Width by depth of platform. Single figures indicate a square platform. Speakers generally overhang top plates FILLABLE The stand can be mass-loaded with sand and/or lead to stop ringing. WELDED As opposed to bolt-together construction. NUMBER OF LEGS That support the stand.



Milty Foculpods £22.50

Cheap as chips way to bring real sonic benefits to both electronics and loudspeakers - these rubbery wonders help destroy vibration and come in handy packs of four



Partington Dreadnought BS £300 Probably the best speaker stand you can buy for the money – heavily engineered and backed up with sound theory, this mass-fillable stand is a top recommendation



Townshend VSSS £1,380

Although not cheap, Max Townshend's skillfuly engineered rack nears perfection in terms of equipment isolation, diminishing returns kicks in if spending more

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WITH ISSUE 317 OF

Guitarist



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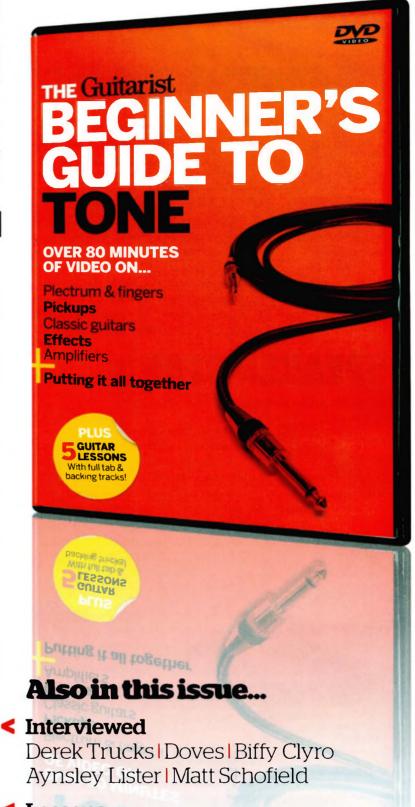
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It's all in Guitarist 317

On sale from June 8!

2nd-hand shootout

Need help choosing a good used turntable? Allow us to assist...

his month our second-hand guide looks at two vintage turntables and a couple of rather more modern offerings.

The Thorens TD 124 may have passed the half-century now, but its beautiful engineering has ensured longevity. During its heyday in the '50s and '60s, the TD 124 occupied studios and wealthy homes alike.

Today the product has more support than some turntables that finished production five years ago let alone 40! For proof of this you need look no further than the Swiss company, Schopper. It's fair to say that no one knows this deck better than Schopper: it can supply everything from a totally refurbished model to a new sticker. It kindly volunteered the following useful buying advice: "Ensure that any turntable is complete; missing parts will either be expensive and/or tricky to obtain. Look for a model with the original E50 motor and not the later, inferior Papst one. Check that the aluminium top platter is not warped. If the unit is being posted to you then make sure that the platter is packed separately and securely. We would add that with a deck such as this, original condition is more important than the plinth or tonearm fitted. Avoid decks that have been 'tweaked' unless very cheap." Like many decks of the day, the TD 124 came without a plinth allowing the buyer to decide on mounting

You won't be surprised to learn that Schopper does a range of new plinths from around £350. Top-spec TD 124s go for several times our £1,000 budget, but the original Mk1 model we saw for £950 looked like an excellent buy. Get a good one and this turntable will last you forever.

Like the TD 124, the Garrard 401 is a classic turntable with an exceptional service backup. Although this turntable ceased production in 1977, there are still plenty of companies prepared to supply parts and service. Some such as Loricraft, will even sell you a totally refurbished one. We found a 'like new', 401 complete with its original box and handbook for E900. You'd need a plinth and a tonearm but this could be the basis of a long-lasting turntable. A slightly fading, but sound 401 with plinth and SME 3009 was seen for E800.

Interestingly, when we last looked at this turntable a few years ago, early 401 models of this condition were fetching more like £500; proof that some hi-fi can appreciate in value. As with all vintage hi-fi, you need to have your wits about you when buying, however. Rumble and bearing wear can affect this deck, although the problem of the former is often misdiagnosed. In most cases, rumble isn't caused by the rubber-edged idler wheel, but by the eddy current braking system or poorly matched plinth. The mounting plinth is crucial

le. A
and
Above: Origin Live's
traditional-looking
Resolution Classic Mk 1

transparent sound quality that OL is renowned for. Origin Live also make its own Rega-based arms and every one of them from the OL1 to the Conqueror is a winner, thus making them an ideal match. And being a current model, the deck is fully serviceable.

Our final choice is another current, but rather unusual choice. Nottingham Analogue has been building turntables by hand since 1973. In this case, hand-built really means it, with

"Nottingham Analogue has been building turntables by hand since 1973. In this case hand-built really means it."

to a decent-sounding 401, so if you want to be certain of a decent sound buy a Loricraft or Martin Bastin model. There are many other designs out there, but some are better than others. As ever, be sure to take a listen. Bass should be solid and powerful and background rumble silent. Look for a model with a good history and one that hasn't been messed about with. Again, Loricraft can service them, but it won't be cheap at around £200 for a minor

service and £400 for a major one.

If you fancy a contemporary deck but perhaps not one of the established
Linn, Roksan, Michell triumvirate, then Origin Live's Resolution Classic is well worth a look. Essentially, the Resolution Classic is a more traditional, wooden-plinthed, version of the Resolution. It was originally called the Oasis-S and was launched in 2001.

Costing £2,300 new, we found a two-year-old Mk1 example for just £950. Interestingly, it may look rather conventional, but the sound is

anything but: you can expect the incisive,

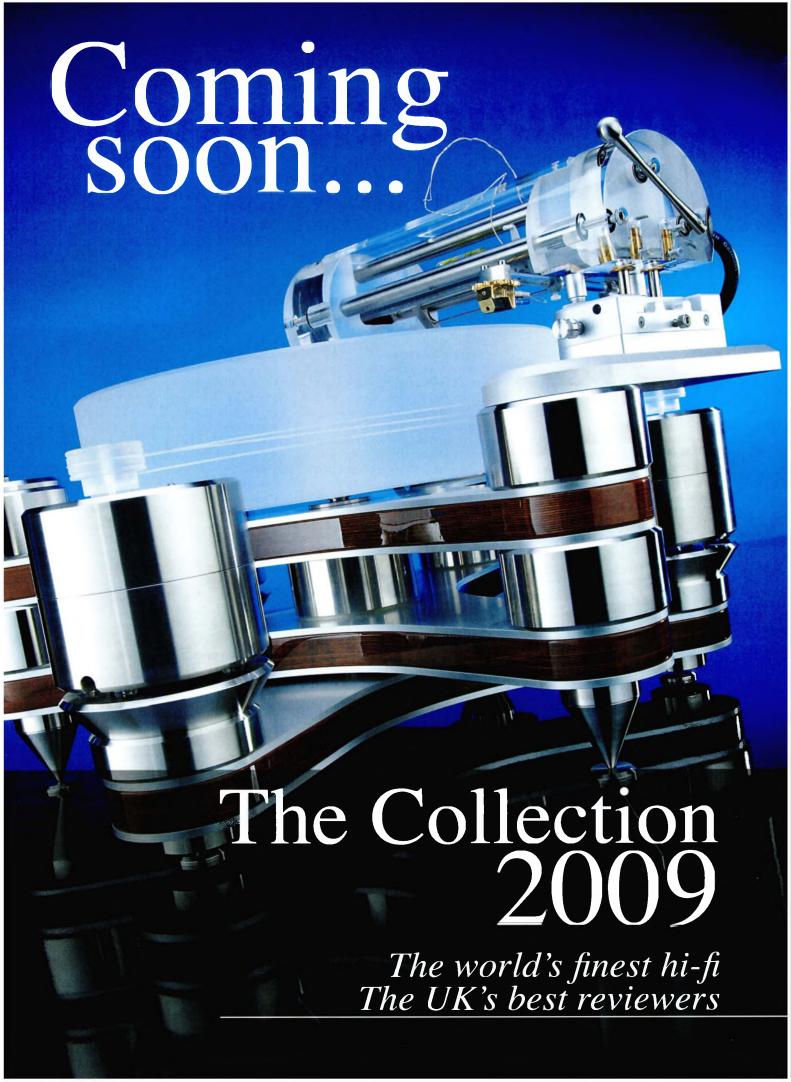
even the lathes lacking any form of computer aid. The advantage this approach has is that the Hyper Space model is fully serviceable, whatever the age. Nottingham Analogue's technique has long been to use heavy platters and low-torque motors. For this reason it's quite normal for the platter to need a push to get it going. Equally, stopping the deck is a hands-on experience! As much respected for its reliability as for its fluid, musical sound, the Nottingham Analogue Hyper Space is one of those decks that has endeared itself to a cult following. The £1,100 model with Rega RB300 arm we saw looks enticing.

Each of these decks offers something very different form the norm. Tellingly, though, in no case will sound quality suffer over more conventional £1,000 choices. Every one of these turntables offers an element of stunning sound quality. As to which is best is purely a personal choice, but we could see anyone of them becoming a treasured part of a separates system. **HFC**

Dominic Todd Next month: £2,000 CD players



Above: The Nottingham Analogue Hyper Space has something of a cult following (Picture: ASL Group – USA)



READER CLASSIFIED

Welcome to *Hi-Fi Choice Reader Classified*, the UK's first and best <u>free</u> private ads service for second-hand hi-fi. These pages are a must-read if you're thinking about buying used kit, and if you want to sell something it's definitely the place to be. It's <u>free</u> to place an advertisement – simply submit your ad of up to 30 words,

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FOR SALE

MYRYAD MXI 2150 amp silver, 150 watts, three years old, excellent condition, £850 ono, fully boxed, buyer collects. 01652 618420 (N Lincs).

LINN Komponent speakers: 110 floorstanders, 104 bookshelf, 120 subwoofer. Silver, two years old. £700 ono. 01777 711386 (Notts).

MUSICAL FIDELITY Tri-Vistor integrated hybrid amplifier, separate power supply. Serviced by MF + new valves, 350 watts (8 ohms), 600 watts (4 ohms). Mint, boxed with Russ Andrews Reference power cord. £1,425. 07859 388167 (SE London).

CHORD three metre HDMI cable 1.2 tested to 1.3. New (£95) £60. QED Reference two metre HDMI 1.3 cable, new in box £60. QED Signature Audio Silver Spiral one metre interconnects, new in box £75. QED Qonduit MDH6 high-performance 6-way conditioning block, including 1.5 metre mains cable, new in box, (£240) £100. 01639 774144 (W Glamorgan).

DAHLQUIST DQ10 speakers, Magnum MC250 amp and preamp, Marantz CD5001, £995. 07742 511175 (Warrington).

ARCAM CD92 CD player, Rotel RB980BX power amps. All boxed, mint, manuals etc. £650 the lot (upgraded). 01535 652992 (W Yorks). NAIM Highline DIN to DIN one year old, boxed with manual as new £425. Grado 325i headphones one year old £180. Rega Ear headphone amp one year old £90. 07795 652876 or email: m_ whiteley@hotmail.com (Bucks). NAD 352CT integrated amplifier, 80 watts, RMS, award winner, immaculate, pampered, 30 months old, can demonstrate. £195 ono. Roksan Kandy LIII Integrated amplifier, 120 watts, RMS, six months old, mint, 18 months unused warranty, can demonstrate, £475 ono. 01479 870261 (Grantown on Spey).

CYRUS CD6S cd player in quartz silver (£650) £350, Cyrus 6vs2 amplifier in quartz silver (£700) £399, Epos M5 speakers in dark cherry (£350) £199. All items fully boxed and mint. 01384 412234 or email: leet2009@hotmail.co.uk (W Midlands)

MISSION 752F rosewood speakers, good condition, hi-fi classic £285 ono. Rotel RA-05 amplifier in black with box £265. TCI Viper interconnect £25. 07979 15445 or 01903 813883 (W Sussex)

SENNHEISER HD 595 headphones, mint, boxed (£160) accept £85. 07891 533084 (W Glamorgan).

SHANLING CDT 80 CD player, immaculate condition, two years old, hardly used, still in original packaging. (£650) sell for £250 ono. 07751 537148 (Oxon)

KEF XQ1 in silver. Matching stands. Excellent condition, as new. Genuine reason for sale, £500 ono. 07766 078281 (London)

SONY DVD 5725D, Sony STR-D8940 FM/AM receiver, Yamaha YST-SW320 subwoofer, Yamaha IV5C200 speaker, NS-200 three small speakers NS100. £375 ono. 01245 348444 (Essex).



Signature, black, excellent.
Arcam 85 integrated with
Arcam phono, black, excellent
£300 each or £550 the pair.
Can demo. Marantz DR6000
CD recorder black, offers.
07941 015908 (Surrey).

CAMBRIDGE DACMagic £110. Kimber Select KS-1030 0.5 metre, mint boxed £700. Sennheisser HD650 with Russ Andrews cable upgrade, low use, mint £200. Both for £800. 01908 661094 (Bucks)

CHORD Odyssey 2 speaker cable, two metres, £20. Chord Odyssey 2 speaker cable, three metres £25. Chord Signature Coax cable £90. 01382 644815 (Dundee).

MARANTZ 19 vintage receiver. Working and in fair condition, needs checking over. open to offers. Ask for Lawrence 0121 550 9613 (W Mids)

SHAHINIAN Compass speakers, Mirage speakers, two Marantz recorders, R1 stands, QUAD 2/11s. Good condition. 07931 598393 (Middx)

Above: Cambridge DACMagic

BOWERS & WILKINS DM

705 speakers beech. Current model, immaculate, boxed, £450. FS700 dedicated stands filled £95. 01202 730449 (Dorset).

TANNOY DC2000 speakers £80 (can be auditioned)
Various recent *Hi-Fi Choice*, *Hi-Fi World* magazines £2 each. 01246 277394 (Derbyshire). **MONITOR AUDIO** BR2 Bronze speakers as new in beech. Gold plated bi-wire terminals, superb sound, four months old.

Excellent condition, £150. 01495 717921 (Gwent). **ATC** 20-2 active loudspeakers.

ATC 20-2 active loudspeakers, unmarked with all boxes, warranty etc. Stunning sound £2,100 ono. Matching HNE granite stands, polished, over design £375 ono. 01766 781211 (Gwynedd).

CYRUS 8VS2 integrated amplifier £499. Cyrus CD8SE

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!



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FOR SALE

CD player £899. Cyrus PSX-R power supply £299. All less than one month old. Genuine reason for sale. 01785 613408 (Stafford).

NAKAMICHI 680ZX cassette deck £150. Pioneer PD6700 CD player £50. A&R Cambridge T21 FM tuner, teak finish, immaculate condition £30. QED interconnect £5. lxos 104 OFC interconnect £10. Naim NAC A4 speaker cable five metre pair white £20. Naim NAC A4 speaker cable ten metre pair, white £40. michael.irving6@btinternet.com (Cumbria).

ESOTERIC X-01 CD/SACD player, mint, limited edition flagship model. Original boxes, instructions and remote, guarantee remaining. Stereophile class A+ recommended component, (£10,000) £4,495, no offers. 07777 628426 (Avon).

PRO-JECT MM/MC phono stage, £20. Denon TU260L AM/FM tuner, boxed and instructions, £20. Grado SR60 headphones, boxed, £40. All in excellent condition. 01708 740550 (Essex).

GARRARD 301 turntable. Brand new and still in original box and packaging with manual. Inspection report, template and all accessories. Serial No.79904. Rare opportunity. Sensible offers. 01708 552552 (Essex).

CYRUS CD6S CD player, Cyrus 6VS2 amp (both in quartz silver), Epos M5 speakers (dark

cherry) (£1,700) £999. All boxed and in pristine condition. email: leet2009@hotmail.co.uk (W Midlands).

PASSLABS 1.5 Aleph P £4,000. Audio Note ANS6II transfomer £3,000. Altec 604 £200. Altec 417 £300. Audio Note io £900. Ortofon MC3000II £350. Cello Cartridge £2,500. Trio KT815 decoder £250. Rolling Stone Box Set MFSL £850. Ariston RDII turntable £75. 07944 909209 or email; stevehifiman@hotmail.co.uk (Herts)

NAIM CD5X CD player, mint condition, boxed £899. Chord Company Chameleon Silver Plus interconnects, RCA factory terminated one metre £69, 0.5m £59. Odyssey 2 loudspeaker cables four metre factory terminated £89. 01984 640588 (Somerset)

player, warranty and manuals, excellent condition £2,300 ono. Shunyata Hydra-2 £275. Shunyata Diamond Black power cables £100 each. 07810 434589 (Surrey).

DALI IKON 7 floorstander, *Hi-Fi Choice* Best Buy, hardly used, mint condition. Bargain (£1,000) £500. 07896 348829 (Surrey).

MUSICAL FIDELITY The Preamp II MM/MC phono, tape loop £50. Musical Fidelity P170 power amp £100. Sony CDP XE CD player £20. 01277 841493 (Essex).

JEFF ROWLAND Coherence One preamp, Model 3 monoblocks £2,150. Castle Harlech loudspeakers £285. Celestion 66 studio monitors £300. Bowers and Wilkins DM6 £175. 01255 421589

(Essex).

OPERA Seconda speakers
(cherry) (£1,700) £750.
Unison Research valve/MOSFET
Secondo 120-watt integrated
amplifier (£1,650) £750.
Unico valve FM/AM RDS
tuner (£950) £450. All mint
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JVC QL7 DD turntable £350. Grundig A5000 SVX6000 pre/power 120-watt £250. Tannoy M1 speakers, cherry £50. Bang and Olufsen system 5500 £499. 01708 457691 (Essex).

ICON AUDIO LA4 preamp, MB90 power amps and passive Icon preamp (£2,700) £1,350. Five-input switchable triode 90-watt, 5-star review. Spare valves included. 07736 773830 (Yorks). KRELL KAV 400 Xi integrated

amp 200-watt. Two years old.
Mint £1,395. Also Graham
Slee phono stage. EraGold V
with external PSU, mint,
£200. 01453 762290
(Gloucs)

NAIM NAC 62 preamp, NAP 110 power amp (service 2002) £250. Castle Eden loudspeakers, plus Atacama stands £250. 01623 201481 (Norfolk). **MERIDIAN** 500 transport upgraded by Trichord; Clock 4, NC PSU, diodes and regulator board (£500) sounds stunning! Boxed, remote, manual, £300 ono 01235 762171 (Oxon).

CASTLE ACOUSTICS

Howard S2 quarter wave speakers, mahogany, new drivers 2002. Reason for sale: upgrade to Quad 989. £550 ono. 01748 823029 (N Yorks).

SONUS FABER Minima Amator speakers and Ironwood stands, elegant walnut, 88dB, very good condition, box and manual £700. Sennheiser HD650 headphones, brand new, sealed box, guarantee and manual £180. 01453 544354 (Gloucs)

MICHELL Hera power supply for Iso/Argo amplifiers, Gyrodec platters Mark 1 & 2 upgrades. Rare Gyro blue base. LFD Spirolink 2 interconnects and power cable. Offers. 07870 912 963 or email: wittering@raisedfloorsystems. co.uk (Herts).

RUSS ANDREWS Silver Ref mains cable 2004, four feet £800. 07846 058506 (Herts).

NAD C525 CD, C320 amplifier silver, boxed as new, £75 each. Buyer collects. 01384 897009 (W Midlands).

WANTED: Sony CDP-557ESD or similar CD player in good working condition, can travel to pick up, please call Robert on 07549 820608 or email: robpark9@yahoo.com

WANTED: idler wheel part no. 940-005 7.5 IPS for Ferrograph Series 7 open reel recorder. 01543 372169 (W Midlands).

WANTED: Crimson Elektrik 510/520 pre and power amp, working or faulty condition. 00 3531 6279810 (Ireland).

WANTED: Stax SRD-7/SB energiser, Stax Lambda earspeaker (normal bias, Moth 30-watt stereo power amplifier) chris@christalclear.co.uk, 01923 286760 (Herts).

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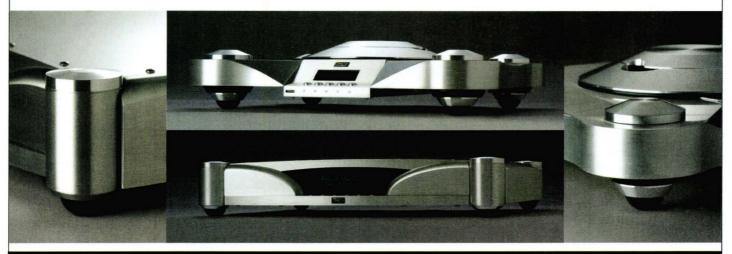
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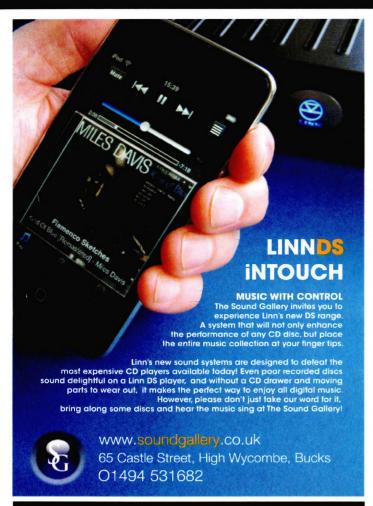




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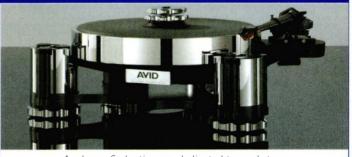




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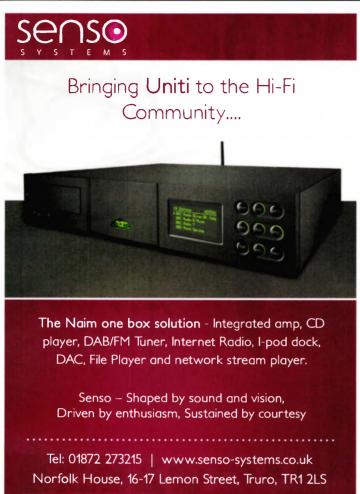
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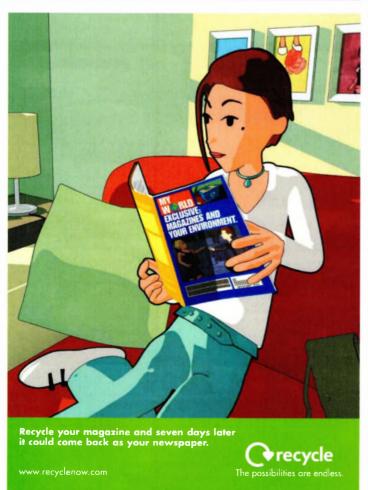
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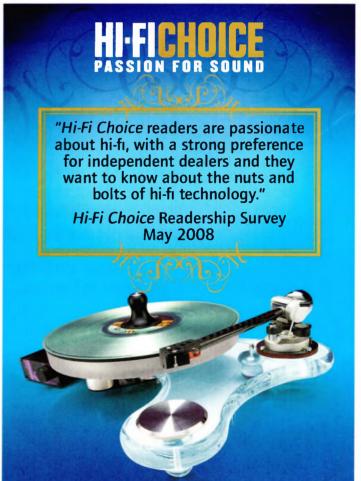












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