THE ESSENTIAL HI-FI

# FEBRUARY 2007 £3.95 WWW.HIFICHOICE.CO.UK

PASSION FOR SOUND

Brilliant AVI Active Neutron speakers worth £1,049 See page 26



**CYRUS** New pre/power combo is a sonic superstar



**DENSEN** Latest CD player does things differently



**CROFT** Compact valve amps are a stunning hi-fi bargain



mini-mag!



New Triangle speakers deliver a gripping musical experience









#### FEATURING

- Leema Xone
- JAS Audio Orsa
- Dali Mentor 6
- > Focal Chorus 836V > Roksan Caspian FR5
  - > Kudos Cardea C10





#### A different Classé

For more than 20 years Classé has been designing and manufacturing extraordinary audio equipment for enthusiasts who demand nothing less than the very best. Our engineers have a passion for what they create and it shows; engineering, style, user-interface, product reliability and performance are all second to none. The new Delta series is an inspired statement about the art of high performance design. Visit us at www.classeaudio.com or experience the product range at one of the following authorised retailers.

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Holburn Hi-Fi Aberdeen 01224 585713

Robert Taussig London 020 7487 3455 The Audio Room Hull 01482 891375

Infidelity Kingston on Thames 020 8943 3530

Sound Academy Bloxwich 01922 493499 Cloney Audio Dublin +353 1283 4887

Leicester Hi-Fi Studios Leicester 0116 253 9753

Sound Gallery High Wycombe 01494 531682 Glasgow Audio Glasgow 0141 332 4707

Martins Hi-Fi Norwich 01603 627010 Grahams Hi-Fi Islington 020 7226 5500

Phase 3 Hi-Fi Worthing 01903 245577

**CLASSE** 

#### Welcome to the issue ...

#### **HI-FICHOICE FEBRUARY 2007 ISSUE 290**

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



Now that we've finally polished off the port and Stilton, it's time to settle back into some serious music listening. There's been plenty of great new hi-fi to warm our cochleae and raise our spirits throughout the chilly winter months; on this

evidence, 2007 is set to be another top-notch hi-fi year.

This issue's sonic jewels are headed by Triangle's Magellan Concerto SW2, a beautifully finished speaker with a sound every bit as engaging as our 'Pure Emotion' cover line suggests. Then there's the inventive Torus subwoofer, which Wilson Benesch prefers to call an 'infrasonic generator', plus stunning pre/power amps from Cyrus and Croft.

All these components are highly recommended and, as in any edition of *Wi-Fi Choice*, receive the ratings they deserve. We like to cherry-pick the best and most interesting kit to review, and consequently you will find few obviously duff products featured. In this issue, however, you'll notice an unusually lowly score for Densen's new CD player; Densen is a company that loves to be different, and in the case of its amps, this tactic often pays off in spectacular fashion. But in this day and age, where standards are more consistent from product to product, this initially promising player fails to cut the sonic mustard. Shame...

Before I leave you to the issue, a quick word of congratulations to Dan George, *HFC*'s erstwhile Reviews Editor, who was recently promoted to Deputy Ed. His 'reward' has been to see this issue safely to press in my absence — we hope you enjoy it!



#### WHY WE'RE NO.1 FOR HI-FI...

- Since 1975, Hi-Fi Choice has delivered the world's most thorough, no-nonsense quide to buying high-performance hi-fi.
- We now publish 13 issues a year, including two special editions: The Collection, an issue dedicated to the finest high-end components, and The Hi-Fi Awards – the most important annual awards in the hi-fi calendar.
- Every issue contains a potent mix of the latest hi-fi news, views, music, interviews and in-depth tests, brought to you by a prestigious team of expert writers from the UK and around the world.
- We only review the most interesting and worthy new hi-fi components – high-performance audio products across a wide range of price points. We obtain more genuine hi-fi exclusives than any other magazine – if it's worthy of your attention, you'll read about it first in Hi-Fi Choice.
- Our tests are the most rigorous in the business, conducted by the UK's most experienced team of hi-fi reviewers.
- Alongside in-depth component reviews and accessory round-ups, every regular issue of Hi-Fi Choice features an Ultimate Group Test on a core hi-fi product category – from source components to amps and speakers.
- Each Ultimate Group Test is conducted using a uniquely thorough three-step test regime. This consists of carefully controlled 'blind' and sighted listening sessions, a full set of laboratory tests and extended 'hands on' testing by the primary reviewer. No other magazine goes to such lengths to ensure accurate comparative reviews.
- Components that best meet our exacting standards are listed in the Buyer's Bible section – the world's most reliable reference guide for the hi-fi buyer.
- That's why Hi-Fi Choice is...
  The Essential Guide To Audio Excellence In The Home





#### THIS ISSUE'S EXPERT WRITERS AND REVIEWERS INCLUDE..



#### A former HFC editor, Paul has been writing about his beloved hi-fi hobby for nearly 30 years. In that time he has become one of the world's most respected scribes and probably the UK's foremost laudsheaker reviewer.



Dan is HFC's deputy editor. Armed with a binstling contacts book, an encyclopaedic knowledge of what's what in hi-fi and a pair of razor-sharp ears, he ensures that only interesting products make it into HFC



Richard is a professional musician, recording engineer and a highly knowledgeable hi-fi analyst to boot. He has a ahout complicated subjects in a readable way – and he only writes for HEE



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
Bitish Audio Journal



Alvin has been writing about his obsession for more than 20 years in that time he has contributed his encyclopaedic knowledge to almost every hirfi periodical you can think of (and several more besides)



An award winning journalist, David's sharp ears and equally sharp powers of description are a valuable mix for HFC. He also writes about cars, but who needs the latest Lotus when you've got the

finest hi-fi to test drive



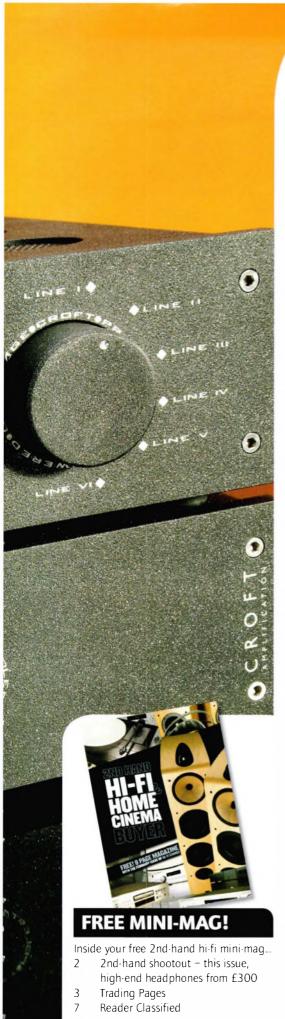
Jason KENNED
Jason previously edited
HFC, but can now be
found in the wilds of
Sussex indulging
himself with the very
best hi-fi money can
buy His own system is
simply sensational and
his love of music knows

no bounds



The hi-fi industry's own Grand Complication, Ken brings decades of high-end experience to the fore in HFC. He has also been to every hi-fi show around the world. Many times over Yet, he still is a stranger to the heard trimmer.





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The ultimate guide to high performance hi-fi and AV, gathering together all our favourite products for your perusal. Your shortlist starts here...

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### Lyngdorf Audio



## Tired of listening to your room?

No matter how great your hifi, you room will dramatically compromise the way it sounds. Nearly half of what you hear comes not from your speakers but from reflections in your room, "high fidelity" music reproduction has simply been impossible in most rooms, until now.

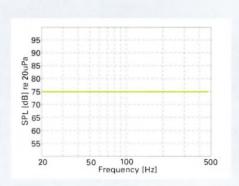
Lyngdorf audio systems herald a new era in sound reproduction, removing the negative effects of your listening room so finally you can enjoy your music as it was intended, nothing added and nothing taken away.



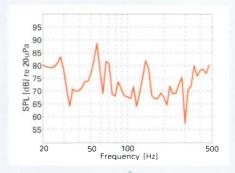
»Ingenious method of removing the room from the 'good sound' equation«

»RoomPerfect lives up to the name«





This graph shows the output of a loudspeaker equalized to a flat response in a test environment.



This graph shows the measured response of the same loudspeaker in an average living room.

#### Conclusion:

The room is the single most influential factor in sound reproduction – a factor eliminated by the RoomPerfect $^{\text{TM}}$  technology.

### ...audio

**NEW PRODUCT SPOTLIGHT** 

#### **IMERGE S3000 MUSIC SERVER**

Imerge has always had a strong presence in the high-end music server market and its much-revered S3000 SoundServer - now in its fourth generation – is better than ever. For starters, you can choose the hard disk capacity, from 80GB right up to 400GB, which gives up to an incredible 610 hours of uncompressed music (at 16-bit/44.1kHz). Of course, you can also compress music to MP3. WAV or WMA files, too. Either way, Wolfson DACs take care of the D/A conversion with audiophile quality assured from the 'hi-fi' electronics within.

You can specify your \$3000 for up to four multiplexed zones for simultaneous listening, plus, you can link up to four units, giving an incredible 16 outputs, should the need arise. Imerge tells us its new, intuitive interface makes searching for music easy, affording the user era, year and individual track searches. Plus, there's a built-in web browser, and easy transfer and back up of music files from a PC or Mac, to make managing music simple.

To find out more, see our exclusive in-depth review in the March issue of Hi-Fi Choice

PRODUCT Imerge S3000 SoundServer

TYPE Music server

PRICE from £1,600

KEY FEATURES 80 to 400GB capacity Uncompressed storage (16-bit/44.1kHz) Dup to four simultaneous outputs Built-in web browser Wolfson DACs

CONTACT № 01954 783600 # www.imerge.co.uk



A Concercte

## If you've spent more than £500 on your Hi-Fi, you need one of these

Does your system sound better at some times than at others?

If the answer is yes, you could benefit from a cleaner power supply. The chaotic nature of mains-borne distortion means that your system may be subject to damaging interference effects, sudden power surges and background noise.

ISOL-8's new range of advanced mains filters and conditioning units is here to help.

Embracing a wide variety of easy-to-use treatments devised for single source or amplifier components, and accommodating systems of up to twelve devices, the ISOL-8 product range is engineered to allow your system to shine like never before. It could be the best value upgrade you'll ever make.

Visit **isol-8.co.uk** and read our article, 'Why condition your mains' to find out more, or call **01423 359054** for your nearest ISOL-8 dealer.



Nic Poulson is the designer of all Isol-8 products. An inventive, accomplished designer in fields as diverse as thermonic valve amplification and international airport runway lighting systems, his drive to tackle the huge problem of compromised power supply led to the founding of Isotek in the late nineties.



IsoLink high quality mains leads



CleanLine<sup>2</sup> entry-level, mains power distribution and conditioner unit for up to six components



MainLine<sup>2</sup> high quality mains supply for individual components



**Qube**<sup>3</sup> mains power conditioner for high power loads

I S O L - 8

Isolate, Ī SŌ-lāt, v.t. to render free from external influence





#### **REGA P2 TURNTABLE**

Rega turntables are a bit like buses; you wait for what seems like ages and then two come along at once.

The two in question, the P1 and P2, are both new additions to the well-established Planar range. The new, revised P2 (pictured) is completely British made and brings Planar ownership to a new audience, thanks to its affordable £249 price tag. For the modest outlay, you get the classic RB250 tonearm, which can also be supplied pre-installed

with a Bias 2 cartridge, for a total price of £300. The platter is brand new and has been specifically designed to give greater speed stability with its chunky 22mm depth. It is complemented by a high quality main bearing and sub-platter assembly, which offers an ideal support. Finishing off this UK-made treasure is a 12-volt AC synchronous motor with belt drive.

To find out more, see our exclusive in-depth review in the March issue of Hi-Fi Choice

PRODUCT Rega P2

TYPE Turntable

PRICE £249 (£300 with Bias 2 cartridge)

**KEY FEATURES** RB250 tonearm ● Optional cartridge ● Speed stabilising platter ● AC synchronous motor ● High quality main bearing

CONTACT № 01702 333071 # www.rega.co.uk



### audiofile

#### NEW PRODUCT HIGHLIGHTS



#### **RUSS ANDREWS ULTRA PURIFIER PLATINUM**

Russ Andrews continues to celebrate his company's 20th Anniversary with a 'Platinum' edition of the Ultra Purifier mains filter. This is a differential and common mode mains filter that acts passively. In other words, you plug it into a spare socket in your mains distributor and it cleans up the supply available to the system. The Ultra Purifier Platinum uses higher-grade components than its regular counterpart and has twice the capacity, so it works with larger systems with four or more components.

Price £450 Due now № 0845 345 1550 @ www.russandrews.com



#### **REGA BRIO 3**

Rega has launched the third incarnation of its Brio integrated amplifier, dubbed suitably enough Brio 3. The new stereo amp has had its power supply modified and its transformer uprated, which has resulted in a power increase to 49 watts. The output amplifier is built around a pair of Sanken Darlington output transistors, with a protection circuit that kicks in if there is a short circuit, or the load drops to 1.7ohms or less. Brio 3 has five inputs including phono and is available in silver or black finish.



#### **QUADRAL AURUM TITAN VII**

Following its recent return to the UK, German loudspeaker specialist Quadral has announced it will be distributing its Aurum Titan VII flagship floorstander here. A custom Quadral-built 380mm Altima drive unit, fitted to a special pressure chamber/reflex enclosure within the cabinet, dominates the heavyweight speaker. Joining this mammoth driver is a 210mm midrange unit, plus a newly-developed ribbon tweeter. Quadral claims a frequency response of 16Hz-65kHz, 500 watts power handling, plus a 91dB sensitivity. Further features include Real Cable internal wiring, an elaborate crossover network and a choice of three real-wood veneers.

**Price** £10,999 **Due** now **2** 020 8991 9200 ⊕ www.quadral.co.uk



#### CYRUS DAB 8.0

Cyrus's new DAB/FM radio, the DAB 8.0, has an SD card recording function, allowing users to pause, rewind and record live DAB radio. It has a 32MB internal memory for pause and rewind functions, can accept up to a 1GB SD card to record radio programmes, and can even play MP3 files. An EPG (Electronic Programme Guide) feature allows users to plan listening up to a week in advance, and then use the timer to set up recording. Further features include a four-line, alphanumeric display, FM module and a proprietary MC-BUS system for integration into existing Cyrus systems.

Price £500 Due now

2 01480 435577 ⊕ www.cyrus.co.uk



#### **BOULDER 810**

Boulder has launched its most 'affordable' preamplifier to date, the 810. Affordable is a relative term however, and in order to retain the bomb-proof, precision-made casework that Boulder produces in-house, and to utilize techniques and topologies found in the company's top models, the price has had to remain distinctly high end.

The fully-balanced 810 preamp is dual mono, with instrumentation-style circuitry. It has four inputs and two outputs, all of which are on balanced connections. It also includes comprehensive naming and programming of each input, and even has a 'theater' mode to accommodate those with combined systems.

Price £5,550 Due now

2 01435 867438 ⊕ www.boulderamp.com

#### WILSON BENESCH

#### **SOUARE SERIES**

Wilson Benesch says it's hip to be square with its new entry level speaker range. The new Square series uses an auxiliary bass radiator to absorb the energy the main driver puts into the cabinet, allowing close-wall placement. There are three Square models: 'One' is a two-way standmount; 'Two', a two-way floorstander with a reflex port in its base, and 'Centre' is a

centre channel speaker. All three use Wilson Benesch Tactic mid/bass drivers and Scanspeak tweeters. Finishes include gloss black, walnut or maple satin.

Price from £1,499 to £2,199 Due now 

#### MRT EMOTION MONITOR

ART has launched a more compact version of its Emotion model, the Emotion Monitor. With

> a 17-litre cabinet made from birch ply, it uses a 180mm treated paper main driver and 29mm soft dome tweeter to produce a sensitivity of 89dB

The Emotion Monitor has a down-firing port and is supplied with a matching stand. There are three versions but differences are restricted to the crossover, where components are upgraded for each price jump. The Monitor is compact at 50x22.4x25cm (HxWxD) but is 97cm tall on its matching stand

Price from £4,000 Due now

**2** 01292 319416

www.loudspeaker-art.com

#### Soundbites

RUSS ANDREWS' Crystal-24 speaker cable is a fatter variant of Kimber 8TC and has 24 separately insulated conductors, which means low resistance, while its dense weave keeps RF interference at bay. Available with Kimber banana plugs or spades ,Crystal-24 is priced at £425 for a 2.5m pair.

**№** 0845 345 1550



**DENON** is promoting its new D-F103HRDAB mini system as a '21st Century Stereo System' because it contains a hard disk recorder, CD player and internet radio facility, alongside DAB/FM, a USB port and iPod integration. The £1,000 unit has an aluminium design and speakers that are tuned for 'critical UK ears'. **☎** 01234 741200

BLACK RHODIUM has a new high performance interconnect called Prelude, said to have a 'unique capacity to reduce impact-transmitted noise voltages'. It does this by having lower microphony than most cables, which means it's less sensitive to mechanical vibration. Prelude uses silver-plated copper in PTFE insulation. Expect to pay £80 for a one-metre pair. **☎** 01332 342<u>233</u>

TEAC has created a wireless adapter for the iPod Nano that attaches to it, enabling wireless connection to a hi-fi system. It has a handset that encapsulates the Nano and uses Bluetooth to connect to the base station, the latter can also be used to charge the player. It costs £99. 



TRUE COLOURS INDUSTRIES (TCI) has jumped onto the HDMI cable bandwagon with Copperhead 1080p, which claims full HD capability at lengths up to 20metres. Constructed using multi-layer shielding, it also has magnetically shielded plugs to enhance performance. Prices start at £100 for a metre. **☎** 07710 1<u>96949</u>

### audiofile

HAPPENINGS



#### THIS MONTH HEC TALKS TO

JOHN BAMFORD Job Title: Product Manager Company: Meridian Audio



#### What is your most exciting product in development?

Super-slim in-wall and on-wall custom installation loudspeakers. I love seeing people's faces when they hear them for the first time.

#### CD or vinyl, and why?

I still have a treasured collection of vinyl, and really good analogue recordings/pressings sound tremendous. But given that the majority of modern recordings are digital, why would I want to add cutter rumble, vinyl roar and tracing distortion?

#### Are we experiencing a stereo resurgence?

No. The 'resurgence' is a mind virus fuelled by media observation that Marantz, Pioneer, Denon, Onkyo and others making two-channel products again. But it's because the market for AV systems is totally saturated worldwide.

#### Can generation iPod be turned on to hi-fi?

Just as people were happy playing ropey cassette tapes on inexpensive rack systems 20 years ago, most people today are perfectly content with the sound of an iPod.

#### Are audio servers the future?

The minority who care about sound will be storing their albums as lossless files; those who don't, store them as AAC or MP3 files. Computer-based music servers aren't the future, they are present day!

#### **Bargain Bobcat**

Last year, Mark Levinson combined Dick Burwen's Bobcat software with a Daniel Hertz DAC to create the Red Rose Burwen Bobcat suite, for enhancing the sound of music played by a PC. That system costs \$1,995. You can now buy the Burwen Bobcat RE download for a tenth of that price (\$200). It is claimed to enhance sound when listening, ripping or burning



CDs. It's also claimed to 'give your iPod or musical mobile phone, sound comparable with a \$100,000 hi-fi system.' Burwen Bobcat RE plugs into Windows Media Player and according to the brochure 'makes your computer better than an esoteric CD player by adding patent-pending, nearly inaudible, high-frequency reverberation... Combined with subtle tonal balance correction, music becomes more natural, high-pitched instruments are smoothed by the averaging effect, and sharp percussive sounds are clarified by slight stretching.' The Levinson seal of approval does lend it credence. For more go to: www.burwenbobcat.com

#### Over the Cliff

The government looks set to maintain the status quo and allow recorded material over 50 years old to remain copyright-free. This comes despite research carried out by the BPI (British Phonographic Industry), claiming 62 per cent of people agreed that UK artists should be protected for the same number of years as their American counterparts – 95 rather than the current 50 years. While songwriters (and their families) earn royalties until 50 years after their death, the people who played on the original hits will no longer benefit. In other words, Sir Cliff Richard and other stars of the late-1950s will soon start losing out.

This will hit record companies harder than surviving performers, because they will no longer retain the rights to hits, which are used to produce golden oldie compilations. So, it's not all bad news then!



#### **Take the PSS**



D&M Holdings Inc (Denon, Marantz) has signed an agreement to acquire Philips Sound Solutions (PSS). PSS's primary business is the supply of automotive

loudspeakers and according to Philips "PSS is considered a non-core activity".

The transaction "represents another step Philips is taking to focus on its healthcare, lifestyle and technology activities". Eric C. Evans, chairman of D&M Holdings, stated that "the acquisition of Philips Sound Solutions fits well with our strategic vision and priorities of expanding into new businesses where we can leverage the value of strong audio know-how and world-leading brands." D&M holdings benefits from increasing its stake in the automotive sound sector. It already owns Boston Acoustics, as well as PSS's DSP amplifiers, and flat speakers.

#### **⊗** Hi-Fi Diary

#### **FEBRUARY**

11 Audiojumble 2007
The Angel Leisure Centre,
Tonbidge, Kent
www.audiojumble.co.uk
The place to find vintage hi-fi

23-25 Sound & Vision - The Bristol
Mariott City Centre Hotel, Bristol
www.bristolshow.co.uk
The UK's biggest hi-fi show

#### MARCH

5-6 The Connected Home Exhibition
Olympia, London
www.the-connected-home co.uk
Europe's largest connected-home show

#### **New Year's resolution**

Ed Meitner's EMM Labs has produced a CD/SACD player that upsamples CD's 44.1kHz signal to the native DSD rate of 5.64MHz, something that to our knowledge, has never been done before. The claimed benefit is that the CDSA SE player makes CDs sound remarkably like SACDs. According to Meitner, "there's a level of resolution that you won't find in any other player".

The player also has its own discrete, dual-differential DAC, something that Meitner claims to be "free from the differential non-linearities present in every multibit D/A chip created to date." A further key feature is the Meitner Digital Audio Translator (MDAT), which is a new approach to signal handling, that is

claimed to process the digital signal by dynamically adapting to the transient nature of musical signal, rather than by addressing it as a series of sine waves. The two-channel EMM Labs CDSA SE is only available in the US at present, priced at \$9,995.



#### **Curves-a-plenty**

For those of you that thought valve amplifiers and horn loudspeakers were esoteric, we bring you the Sentec EQ10. This makes stereo seem like a cutting-edge technology too far. As the name implies, the EQ10 is a valve-based, mono phono preamp with several hundred EQ curves for early mono and all 78rpm records. Back in the pre-RIAA EQ dominated era, all manner of equalisation curves were used to press records; therefore, in order to playback 78s and early mono vinyl LPs, you need a variety of matching EQ options.

The Sentec gives you the ability to adjust both bass boost and treble cut turnovers, in order to find the combination that suits a particular recording. It also has four levels of bass roll-off and a volume control or attenuator. In case anyone is wondering who on earth would want such a thing, a quick glance at eBay shows six pages of 78s for sale with prices up to £30. The EO10 costs \$3.000 from www.toneimports.com



#### **JIMMY'S TWEAKS #49**

HANDY HINTS FROM JIMMY HUGHES - HI-FI'S SUPER TWEAKER



#### Don't listen to the tweeters on axis

It's surprising how many hi-fi systems sound better when you stand up (rather than sit down) to listen. One explanation is that your ears are no longer directly on axis to the high frequency drive units. This makes the treble sound smoother and less bright, without compromising brilliance or immediacy. One way of achieving similar

results from a seated listening position, is to put standmount speakers on short stands that situate the tweeters below ear level. Alternatively, slope the speakers from behind, so they point downwards slightly. You can even try turning the speaker upside-down on the stand. Things nearly always seem to sound better when your ears are at a height roughly level to the top of the speaker enclosure. So, having your ears on-axis to the tweeters is not a good idea if you want a sound that has maximum smoothness, integration, and coherence.

#### TOP 10 UPGRADES FOR YOUR CD PLAYER

- 1. Townshend Audio Seismic Sink Stand 🕌
- 2. Clearer Audio Copper-line Power cable
- 3. Nordost Heimdall interconnect
- 4. U.S.H.E.R. test CD
- 5. Russ Andrews DAC-1 USB DAC
- 6. IsoTek Sigmas mains block
- 7. Clearer Audio RDC 2 cones
- 8. Russ Andrews Ultra Purifier Block
- 9. Alcon lens cleaner
- 10. Densen DeMagic demagnetisation CD



#### New Music

#### IN THE STUDIO

ARTISTS RECENTLY ABSENT FROM THE CUT AND THRUST OF SHOWBIZ HYPE DUE TO FINISHING THEIR LATEST ALBUMS



#### NORAH JONES Title: Not Too Late Release date: Feb 2007

Currently the biggest-selling female artist in the world, Norah Jones' third album is the first on which she has written all 13 songs herself. Expect a similar laid-back mood to previous records, but "more intimate", she says. "I didn't do it before is because I simply didn't have the songs and I'm really proud of them."

#### JONI MITCHELL

Title: tbc

Release date: 2007

After releasing *Taming The Tiger back* in 1998, Mitchell announced she had abandoned songwriting to concentrate on her painting. Now she has told the Ottawa *Citizen* that she's working on a new album after feeling compelled by current political issues to make a statement with her music once more. One new song was inspired by Kipling's poem *If* and another is entitled *Holy War.* 

#### JOSS STONE

Title: tbc

Release date: March 6 2007

The follow-up to 2004's Mind, Body & Soul finds Britain's premier soul singer being produced by Raphael Saadiq, whose other credits include Kelis, Erykah Badu and Angie Stone. Tiles include I Wish I Never Met You, Tell Me What We're Gonna Do Now, Tell Me Bout It, Music and Nothing Better Than (The iPod Song).

#### THE FALL

Title: Reformation Release date: Feb 2007

The 26th studio album from Mark E Smith's prolific maverick outsiders who were John Peel's favourite band of all time presages a deluge of Fall-related activity. An autobiography, Renegade: The Gospel According To Mark E. Smith, is published in



April and will be followed by *Perverted by Language*, a collection of fiction by top writers inspired by the band's music.

#### **BRYAN FERRY**

Title: tbc

Release date: March 2007

The Roxy Music frontman's first solo album since 2002's Frantic finds him paying tribute to the songs of Bob Dylan – who, of course, provided him with one of his big solo hits with A Hard Rain's A-Gonna Fall. No tracklist as yet, but with the Bob Dylan songbook containing some 500 compositions, there's certainly plenty of winners to choose from.

#### ALSO COMING SOON

Torsten Goods Irish Heart (Jan); Eric Watson Trio Jaded Angels (Jan); Juan Diego Flores The Tenor (Jan); Elena Gazanca Ana In Catilena

#### SACD/ DVD-AUDIO

Cincinnati Pops (Kunzel) The Big Picture (SACD, Jan); Czech Philharmonic Choir (Fiala) Bruckner. Motets (SACD, Jan); Brian Dobbs The History of Recorded Music (DVD-A, Jan); Rainer-Johannes Homberg Stoelzel Christmas Oratorio (SACD, Jan); Alliage Quintet Shumann: Piano Quintet, (SACD, Feb).

### audofile

#### DISPATCHES





#### Movin' on up

Climbing the property ladder takes its toll

he worst possible thing happened to my hi-fi system recently. Okay, not the worst possible thing... that would be watching the system catch fire as it was being stolen, while my music collection was being torn apart by angry badgers. But close... I moved house.

Moving house is one of the most stressful life events this side of births, deaths and marriages (and divorces). For hi-fi types, it has an added stressor; it ruins your sound cues both before and after the event. Before the move, you have to clear out all those little things that make the place less saleable. So, out go the room treatments, including the metre-high Gordian Knot of random interconnects and speaker wires that was pretending to be a side table. It's called 'de-cluttering' and ruins the sound.

#### "Once I stopped gasping for air, I wandered to and from the moving van with dainty things like a perfumed fop."

Then comes the move. Let's assume it passes off reasonably well and your house movers don't end up putting a fist through the speaker cones. In fairness, mine did exceptionally well. They also managed to shame me.

After 40 minutes of trying to 'help', a wiry bloke with a wardrobe under each arm intoned those classic *Get Carter* lines; "You're a big man, but you're in bad shape. With me it's a full time job." In a strong Polish accent, this time. Once I stopped gasping for air, I wandered to and from the moving van with dainty things like a perfumed fop.

Now comes the difficult bit; getting used to the new room. This isn't as easy as you might imagine; the first set of speakers in the room (the last set of speakers in the last room, a pair of ProAc Studio 140) sound very, very different in the new place.

I was tempted to use the new Lyngdorf TDA 2200 (*HFC 289*) to smooth the transition, normalising the new room as it did to the

previous one. But this would be dangerous for a reviewer, you need to get used to the sound of a room. Getting used to it, enhanced by RoomPerfect digital correction, would make the first uncorrected amplifier put into the system receive an unfair level of bias, as I got used to the sound of the room and the amplifier. So, I have reclused myself from reviewing for a little while, getting used to the sound of my system in the new room.

As more books, CDs, LPs and furnishings begin to fill the room once again, so it begins to sound better. Some of that is acclimatising to the room itself, but, some of it is down to our natural tendency to create sonically helpful environments in our living spaces. We've been doing this since humanity started decorating their caves with animal skins. Luckily, Ikea doesn't smell of old wildebeest any more.

Alan Succom began his journalistic career in the early 1990s. He has since become one of the hi-fi and AV industry's most respected scribes



#### **Royer Royce**

Are you listening to the music, or the mic?

bought a new microphone the other week. I'd been wanting one for ages – several years, actually – but for the small amount of recording I do (most of it low-budget demo recordings for opera singers) it seemed hard to justify the expense while my old, and perfectly respectable, microphones continued to function. For fancier jobs, I just rented or borrowed something a bit upmarket. But now I've got my very own Royer stereo ribbon mic, so all my recordings will be better.

Well, they'll be different. What exactly do I mean by 'better'? Lower noise? Not really: neither the Royer nor my old pair of Calrecs breaks any records in that area. Lower distortion? It's hard to get reliable distortion figures for microphones, but the Royer may score slightly better in that area. Better bandwidth? Hmm: the Calrecs may technically have better extended treble and under some circumstances better bass, but the Royer is probably flatter across most of the band. What the Royer definitely offers is better phase response; its primary resonance is low in the bass, while the Calrec design – like most condenser microphones - has a resonance in the treble. This is pretty well damped out in amplitude terms, but causes significant phase distortion in an audible part of the spectrum.

Beyond that there is also directional response. The Royer, being a ribbon type, has a pretty accurate 'figure-8' response by nature, while the Calrecs have a sort-of cardioid pattern. This leads to differences in the way the mics recreate a stereo image. Oh, and the Royer has more 'proximity effect', which causes a rise in bass response from nearby sources.

Now I just love the sound of the Royer. I've used the model before and always got what I consider exceptionally accurate results from it. But, the comparison between the two microphone designs are not exactly cut and dried in terms of quality. Significantly, the way they react to sources at positions other than straight ahead (the directional response) can vary very widely. Experienced engineers get to know how to use each type, make and model of microphone to get the 'best' from it.



HI-FI REVISITED

CASTLE HOWARD S3 LOUDSPEAKER

In the latest all too familiar sign of the times, another famous name in the pantheon of British loudspeaker manufacturers has hit hard times. Loudspeaker specialist Castle Acoustics went into receivership in November 2006. Castle's speciality was worthy and well built loudspeakers of largely traditional design, but Castle was slow to adapt to changing times, and the steady move from larger floorstanding speakers to compacts and lifestyle designs. There was at least one prominent gaffe, namely the Inversion series that bombed spectacularly, not because of any perception of inadequate performance, but because the target audience didn't go for the visually outlandish upside-down enclosures. They weren't called Inversion for nothing.

The quintessential example of Castle's craft was the erstwhile Howard, which went through three iterations; the S3, introduced in 2001, cost between £1,350-£1,600 a pair depending on finish, and was the last and best of breed. This version was slightly smaller than its predecessors, but it still stood nearly a meter tall, and each sturdy enclosure weighed in at 25.5kg, thanks in part to a quarter wave transmission line, which requires extensive internal baffling. The speaker had a forward facing bass/mid unit, and a second bass/mid unit that faced upwards, the sound being reradiated from adjacent walls and the ceiling. The final unit was the offset tweeter. Use of transmission line bass loading means no reflex port, instead, the speaker was raised by spacers just above the supplied overhanging plinth, which provided a convoluted air path from the back of the driver cones to the outside world. Both of the larger drivers used stiff, lightweight carbon fibre cones in a neutral dark grey, that were otherwise similar in principle (but not in detail execution) to the yellow Kevlar units that are a house feature of the B&W brand. The tweeter had a larger than usual 28mm soft dome, clearly optimised for a relatively low crossover frequency, rather than ultimate high frequency extension.

The other important feature of the Howard S3, and indeed all other Castle speakers over



### "The Howard S3 is all about scale and architecture."

the decades, was the excellent enclosure build and finish. Indeed, when the history books are written, Castle may be best remembered for high-quality natural veneered enclosures, and this side of the business was a significant source of OEM income for the company Whether this side of the business will survive the transition from the original Castle, to whatever comes out of the current talks with outside investors that are rumoured to be taking place, will be a key indication of what kind of company emerges from the ashes

Musically, the Howard S3 is all about scale and architecture. The sound is bold and muscular, with a strong bass, a leavening of air and genuine authority. The upwards facing driver means that much of the midrange arrives via the upper half of the room, and in particular of course the ceiling, so image scale and height in particular are enhanced. But, because the listener sits way off axis over much of the aurally important part of the audio band, upper bass and midrange colorations and some box related artifacts are apparent and inescapable.

Overall though, the Castle Howard S3 was one of the more distinguished speakers in its area of the market, one with strong appeal to the market for traditional high fidelity, well dressed loudspeakers. **HFC** 

Alvin Gold



"I've put quotes on 'best' and added the qualifier 'what I consider' in the above paragraph deliberately, because in recording it's not just what you've got that matters, it's what you do with it. Every time an engineer decides to use a particular microphone, or put it in a particular spot rather than somewhere else, he or she has taken an artistic decision. Is one mic, or one spot, better than another? Is one seat in a concert hall better than another? All this before any effects or mixing are used.

You've already seen, I'm sure, where this is leading. We talk about high 'fidelity', but never ask 'fidelity to what'? To a frankly arbitrary idea of how it should sound. We know that equipment quality is desperately important, and yet the microphone, like the camera, not only can, but also arguably invariably does, lie. Oh, what a tangled web we weave...

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



#### **Apple juiced**

There's more to download than iTunes

ny audiophile who's bought music from iTunes or other similar stores will know it can be a pretty depressing experience. Sure, the stores work well and it's satisfying to be able to acquire so much music on impulse, but the product you receive is clearly lacking in quality. Apple believes that the files sold on iTunes are of 'adequate' sound quality, and perhaps if you will only use them on an iPod, they are. But music fans don't always want to listen to music on portable devices. No matter how good your computer may be, play iTunes files on any half-way decent stereo and you're in for a nasty shock: what you will hear is a long way below CD quality.

The main barrier to improving the sound quality is the use of digital rights management (DRM) technology. The two main standards – Apple's AAC and Microsoft's WMA – favour an encoding level of 128kbps. It's taking a long time for the major players in online music to shift to accepting that the encoding standard of 128kbps is not good enough for many music fans. There are some chinks of light



#### "Dance DJs now frequently download tracks to play out in clubs, and they demand better quality for big soundsystems."

appearing at the end of the tunnel however: a few moves are already underway which suggest that much better quality online music files should soon become widely available before too long.

Dance music enthusiasts and independent record labels are the heroes valiantly fighting to prove that the online music experience can and should be improved. Dance DJs now frequently download tracks to play out in clubs, and they demand better quality for big soundsystems. A number of dance music sites have now appeared to supply their needs. www.ministryofsound.com/download has been a real trailblazer: the site now offers files at either 192kbps or 320kbps, with a slightly higher charge for the better quality audio.

Another UK dance site leading the way is www.beatport.com. This site takes Ministry's lead a step further, and sells tracks in a variety of formats including WAV, the studio-quality master format. WAV files are big, but if you have a fast web connection and a spacious hard drive, Beatport offers audiophiles a truly fantastic download quality. These challenge the audiophile stance on downloaded music.

Yet more hope is offered by the recent arrival in the UK of eMusic – the second most popular download site in America. What makes eMusic unique is that all the files it sells are free from DRM. Crucially, they are also encoded at 192kbps. The one thing that currently hampers eMusic is that only independent labels have so far been prepared to license their music. Tracks from the big labels – EMI, SonyBMC, Warner and Universal – will not be found there.

The majors have now begun to show they are prepared to soften their stance on DRM. At recent industry conferences, major label executives have said that they want to abandon DRM as the norm. EMI is now selling the new Norah Jones single DRM-free via Yahoo. The next few months should provide more forward movement. Music companies know there is demand for better quality downloads and the shift is starting to happen. You will, however, need to look beyond iTunes if sound quality is what you're after.

Doved Bullour started in the music business doing PR for artists including the Spice Girls and The Verve. He is now editor of music trade bible www.recordoftheday.com



#### Listen yourself well

It's official - listening to music is good for you

t a seminar organized by the Wellcome Collection Susan Hallam, the editor of Psychology of Music and head of the Institute of Education, explained that listening to music promotes not only a sense of well-being but also provides long-term health benefits. So, hi-fi keeps you healthy!

This is because when we listen to music we also subconsciously learn its patterns and characteristics by making connections in our brains. These connections are strengthened with repeated hearing of the same piece or alternately weaken and disappear if we don't reacquaint ourselves with the music.

It is this intrinsic learning process applied in a subconscious way that is good for us. Of course, it also helps that listening to music stimulates opioids in the brain – the chemicals that give us pleasure.

This process, the sensitivity to and learning of music and sounds starts in the womb. An embryo's auditory system is functioning three to four months prior to birth and thus is the first sense to operate. Therefore, we literally become attuned to the sounds of our mothers' voice and sounds and music in her environment. It has been suggested that one reason for different tastes in music is due to the variations in this ambience at what is clearly a sensitive stage of development.

We of course continue to learn musical pieces throughout our lives and our response to music works on a variety of levels, the emotional response is processed by a very old and primitive part of the brain that is also the area that deals with the fight or flight response. At its most simple level this is what makes us tap our feet, which perhaps makes a mockery of the way that certain hi-fi manufacturers use this response to suggest that one company's equipment is more 'musical' than the competition.

Learning to play a musical instrument has also been proven to improve IQ and to make children better able to learn mathematics. Whether this applies to mastering the drum solo on Deep Purple's *The Mule* is not clear, but both music and maths require precision to achieve the right end result. Even listening to music while learning other disciplines can be



CLASSIC ALBUMS

THE DOORS STRANGE DAYS

The Doors had become an overnight sensation in 1967 with the release of their first, eponymous album and its brace of chart-storming singles, *Break On Through* and *Light My Fire*. Everyone wanted more of their dark side psychedelia led by Ray Manzarek's baroque organ quadrilles and of course, the tousle-haired angel/demon in the leather keks. When Jim Morrison's men entered Sunset Sound Recorders' Studio 1 in LA they already had a clutch of songs written around the same time as their first album, but they also felt the pressure to move things forward.

A crucial element in the eventual sound of the record is likely to have been engineer Bruce Botnick's acquisition of an early acetate of the Beatles' *Sgt Pepper*, several months before its official release. As the engineer recalls, "We were all totally blown away by such revolutionary creativity... we were technically inspired to shoot for the moon".

They were helped by new technology. *The Doors* had been recorded on four track, half inch tape, and the band had the option to move to eight track, one inch. They jumped at the chance, and made every effort to make use of those four extra tracks.

And unusually, Sunset Sound had a dedicated vocal booth, which gave extra scope for Botnick to highlight Morrison's doomy baritone – not the most versatile of instruments perhaps, but certainly one that commanded attention, especially when complemented by a synthesiser used to distort the vocals on the opening title track, which set the eerie tone that would pervade the rest of the album. In fact, much of that eerie tone was down to Studio 1's echo chamber.

What the album didn't immediately have however, was an obvious hit single. On the first album, the singles virtually chose themselves (although in the case of *Light My Fire* close to two minutes had to be excised from the album cut to make it radio and single friendly) but more care was needed this time around. *Love Me Two Times* was the chosen candidate, but it never got anywhere near the globe-straddling dominance of *Light My Fire*.



#### "Everyone wanted more of their dark side psychedelia led by Ray Manzarek's baroque organ quadrilles."

When The Music's Over, the 11-minute epic that closes the album, acts like a bookend to the first album's The End, but surpasses it in almost every way. While the earlier track may have been more contentious, with its Oedipal themes, the later song is more dynamic, less meandering and features one of the most awesome fade and resurgence moments in rock history. It's no surprise that it was usually chosen as the song with which they ended their live shows.

The album has been reissued many times since its original release, notably as inferior quality CD in the early eighties, though the most recent is as part of the *Perception* box set, where it also receives a 5.1 DVD-Audio remix, which serves to heighten the otherworldliness of much of the album, like it's been beamed in from a time long since lost.

The world and his revisionist wife seems to have been quick to jump on the bandwagon to ridicule the band for their regular misfires, especially since the more pompous than they ever were biog film by Oliver Stone, but despite pretensions and often unpleasant personalities, at their best, they were a beautifully malign mirror on the Summer of Love that foreshadowed some of the best (Iggy, Ian Curtis) and worst (Bono, Dave Gahan etc etc) of rock to come. HFC

Dave Oliver



beneficial. Another speaker, Ian Cross. director of the Centre for Science and Music. looked at the way we hear music. He is concerned primarily with music's temporal structure, its beat. Apparently, notes have to occur within a certain time frame for them to be heard as a beat. It's only when notes repeat over a period greater than three milliseconds and three seconds that they are detected as a beat or rhythm. We are able to do this extremely quickly and take many of our cues about the metrical nature of a piece of music from the first few seconds that we hear. This allows musicians to alter the style of a piece by making a small playing change to the tempo of the opening bar.

This event went on to explore many other aspects of music's remarkable powers and certainly made the case for having a good enough audio system to make us want to listen. So next time your significant other discourages an upgrade just remind them of the health benefits.

began working on Hi-Fi
Choice over 15 years ago, eventually rising to
the position of editor. He's currently indulging
his passion as a freelance hi-fi writer



#### **No final vinyl**

Just when you think CD is good enough

t was illuminating to spend a day with Audio Note UK boss Peter Qvortrup listening to this month's *Beautiful System* (p38) in the place where it probably sounds best, between the LP-lined walls of his living room. PQ, the fiercely bright Dane with a penchant for caviar has probably done more to evangelise the joy of single-ended triodes than anyone else in Europe.

Sceptics tend to feel the heat too and melt in his presence. I was one five years ago when we first met. At the time, I hadn't heard a piece of Audio Note kit that lived up to its price tag. I simply couldn't get a handle on individual hi-ficomponents that cost in excess of £100,000, and there were a few of those in the undeniably complicated Audio Note catalogue. Still are. But my doubts dissolved when I met the man, saw the factory and, best of all, listened to his extraordinary system. It was simply the best I'd heard.



## "His pursuit of pleasure is absolute. It isn't riddled with guilt, but oozing Beluga and parking tickets."

It's easy to understand why. Qvortrup is an unreconstructed hi-fi hedonist. Once he'd nailed a good thing, he found it impossible to ration himself or, indeed, think of any good reason why he should. The notion informs much what he does. The man has in excess of 35,000 LPs and a stockpile of tubes that has to be seen to be believed. He drives fast because he wants to; parks where he pleases, too. His pursuit of pleasure is absolute. It isn't riddled with guilt, but oozing Beluga and parking tickets.

It's interesting that he didn't seem more disappointed when we decided to sideline his new turntable in the *Beautiful System* line-up.

Qvortrup isn't alone, of course, in believing that analogue is superior to digital, but fewer tend to go along with his assertion that it's incomparably better. Perhaps they will now. This time, as five years ago, the demonstration was pretty devastating.

But then the new Audio Note TT Three Reference is, in every sense, something else. For one thing, it has three massive motors, each delivering about two horsepower. According to PQ, this gives a platter mass inertia equivalent of well over half a ton, but without the usual considerable energy storage drawbacks of a high-mass platter. In fact, the platter is light and made from polycarbonate.

Much as he might like to, Qvortrup can't un-invent CD. So instead he has radically re-thought DAC design to exclude as many of the filtering regimes as possible. This, he says, gives the music its best chance to survive intact. The filterless Audio Note DAC 5

Signature is an astonishingly vibrant and musical piece of digital kit. Yet, next to the TT Three, it sounded comparatively dry and sterile. Despressing? A little. But also uplifting. For

Despressing? A little. But also uplifting. For anyone who feels they've hit the buffers with digital, it's good to know there's still somewhere to go.

David Vision has been wallowing in gorgeous hi-fi and then describing its virtues and vices in Hi-Fi Choice since 1990



#### Mind the gap

What separates live and recorded music?

istening to a lot of music through hi-fi systems is a major part of my day job. To change the mood a little, at night I sometimes attend concerts, which more often than not, are of acoustic music performed in classic music venues. Last night, it was the Queen Elizabeth Hall, last week the recently refurbished Cadogan Hall and before that the Royal Albert Hall. Occasionally, the concert schedule branches out, with forays into foreign venues. Some of the best are the increasingly

infrequent occasions when those who organise press trips to exotic foreign locations have the guts to invite the press to hear real music in real surroundings. Inevitably, I find myself wondering how it is that live music making is so much more musically satisfying an experience than listening through a hi-fi system in a domestic scale acoustic.

I don't claim to have the answers, but I am becoming increasingly convinced that this performance gap between large scale/live and small scale/recorded is not fundamentally about sound quality. Objectively the sound of a really good system can be up there with live music making on almost all objective measures... detail resolution, tonality, bass depth and the rest. Yet, the music from even the best hi-fi systems still fails to communicate as well as live music even in fairly poor acoustic surroundings. Yesterday's concert at the Queen Elizabeth Hall is a prime example. It featured a huge orchestra in cramped surroundings, which worked in the loud passages of the big orchestral work, but just didn't work in the quieter ones. It was all too cluttered and busy sounding when there should have been more repose and space and yet, as a live event, it was still a vastly more musical experience than when listening to a hi-fi system at home

I am becoming increasingly convinced that a key factor in this great divide has something to do with the clash between listening room and concert hall acoustics. From my brief look at the published work on the subject, acoustic engineering is infinitely more subtle and involved than is often allowed within the hi-fi industry inspired literature on the subject.

Trying to tame listening acoustics of course, has been a major preconception in the hi-fi industry, from the various absorbents and reflectors that are often sold to address perceived acoustic problems, but more interestingly the active electronics dedicated to the task in multichannel and home cinema equipment. Traditional stereo hi-fi has on the whole done rather well to avoid the subject, not because it isn't relevant, but perhaps because the topic has been spooked my the misdirected efforts of the big boys.

Yamaha in particular has built a small industry from modelling and reproducing real acoustics in real time DSP simulations, with results that are then conflated with the final listening room acoustics, to what musical end is hard to determine. So no solutions here as you can see, just an attempt to point to an area where my opinion has been unjustly neglected over the years, and that needs to be better studied and understood.

Alvin Gold began writing about hi-fi more than 20 years ago and has become one of the UK's most internationally renowned reviewers



SIC TRANSIENT GLORIAE AUDIO

The word 'transient' means 'something that doesn't last long', and its meaning within audio is no different. A drum hit is a transient; a long held note on a pipe organ is not – but the dividing line is always going to be pretty vague as even a 'long' note is short in geological terms.

It is often suggested by manufacturers that transients are fundamentally different from long notes. One of the most common retorts when the technically measured performance of a piece of equipment appears to contradict some fondly held belief is that 'that's just with steady-state tones – transient performance is different'. Transients, we are told, have ferociously fast rise times and involve very high voltages and (particularly) currents. As such, they are in fact far more demanding than a 'steady-state' test tone.

It's true that most (not all) of the signals used in the lab are steady-state in the sense that they consist of one or more sine waves of unvarying frequency, sustained for long enough that any upsets caused by suddenly applying the signal have settled down. But there is nothing steady about a voltage chattering up and down several thousand times a second! There is a fundamental relationship between rise time (the time a signal takes to get from minimum amplitude to maximum amplitude) and frequency.

In this column previously (in *HFC 277* and *HFC 279*), we saw how any signal can be described in terms of its spectrum. By a neat bit of symmetry, an infinitely short signal has an infinitely wide spectrum, and vice versa – a truly single-frequency spectrum is associated with an infinitely long signal. One corollary of this is that any real-world signal is to some extent a transient, as we already deduced by common sense in the first paragraph above.

But the other corollary is that with a limited bandwidth, transients have a limited 'speed'. All audio systems have limited bandwidth and in fact the 'fastest' signal you can have is nothing more than a full-amplitude sine wave at the highest frequency in the pass band. Take CD: with a bandwidth of 20kHz, the maximum



#### "There is nothing steady about a voltage chattering up and down several thousand times a second."

'slew rate' of a 2V-output CD player is about 350V/ms and no transient is ever going to realistically exceed that.

In purely practical terms, I spend a lot of time staring at audio waveforms on a computer screen when editing recordings. Looking at a few minutes' music in one image, transients are obvious. Zooming in, however, to the scale where one can see individual samples, they are much less dramatic.

Actually, the most rapid ones are those associated with the attack of sounds like a violin string or a vocal consonant. But the 'killer transient' is a myth. Transients are indeed an essential part of music, but nothing about them is tougher than replaying a so-called 'steady' sine wave.

Well... that's not exactly true. Transients may not be faster than sine waves, but they can be very slow. Indeed, they can be asymmetric, containing DC (or near-DC) energy that upsets the equilibrium of a circuit and, typically more importantly, of a loudspeaker for a fraction of a second and causes increased distortion as a unwanted side effect.

Funnily enough, one of the most effective ways of improving subjective bass performance of a system can be rigorously limiting the ultra-low-frequency extension. We'll have to come back to this one! HFC

Richard Black

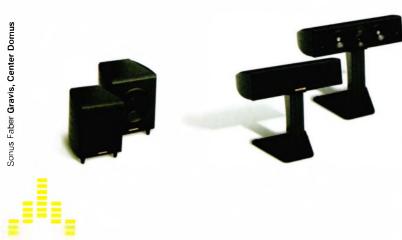
#### Sonus faber.

Sonus Faber Grand Piano Domus



For over two decades, Sonus faber have treated us to speakers so beautiful that they've revolutionised the entire industry. Where once there were only parallel sides, we now have curves. Where once we suffered poor veneers, we now savour finishes worthy of the finest furniture. From the exquisite Homage series, representing the ultimate in Sonus faber artistry, to the Cremona range, offering the pleasure of Homage for a wider audience, Sonus faber has addressed the needs of the majority of music and cinema lovers. Now, the audience is wider still.

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Sonus Faber Concertino Domus





## SYSTEM FILE

Hi-Fi Choice reader Ian Pellatt has steadily built a superb system

#### THE SYSTEM

Meridian G06 CD player
Audiolab 8000A integrated amplifier
Audiolab 8000P power amplifiers (x2)
Ruark Prelude loudspeakers
Chord Chameleon interconnect cables
QED Silver Anniversary Bi-Wire speaker cable

Merlin mains filter and mains cable

an Pellatt has been an audiophile for years. He enjoys all kinds of music, but is a particular fan of anything funky, especially when it's got a Hammond B-3 organ groovin' away in the background. These important considerations have shaped his system. The result is perfectly matched kit.

Like most music lovers, the path down the hi-fi road was a relatively inauspicious one. It began with a Technics cassette-receiver system, coupled with a pair of classic Mission 700 loudspeakers back in the late 1970s.

The bug bit soon after that. This was the time when LP was king and lan bought a Rega Planar 3 turntable, complete with the original R100 arm (he still has this deck, but like many vinyl systems today, it languishes in the attic). Rotel amps came and went, followed by NAD 3140s and a pair of Monitor Audio 352s. CD arrived in 2000, in the shape of the Arcam CD92, followed closely by an Audiolab 8000A integrated amplifier (built in 1988), which still resides today as preamp in the system.

Soon after these two settled in place, it was time to change the speakers, in part purely on cosmetic grounds. Out went the Monitor Audios and in came a pair of Ruark Prelude floorstanders, prettily finished in the same light oak livery as the rest of the furniture in the living room. These needed more oomph, so in came two stereo Audiolab 8000P power amps, which were drafted into position and bridged and bi-amped (which means they act as monoblocks).

According to lan, the biggest change to the system came recently, when the Arcam CD92 was phased out in favour of a Meridian G06 CD player. Aside from Merlin mains treatments, Chord interconnects and QED speaker cables, that's how the system shapes up thus far.

There will be future upgrades, of course, and these will happen on the same gradual, carefully considered scale. He will be upgrading the amplifiers in three or four years time, and right now the Meridian range of electronics looks like the next big change.

#### **DISCRETION IS THE BEST PART**

Unless you live alone, or are rich enough to have your own dedicated hi-fi lair, a system in a living room is all about compromise. It's a trade off between a room fit for listening, and a room fit for everything else. In lan's case, this meant the hi-fi is hidden in the shelves beneath a glass cabinet, discreet cables and perhaps most importantly, the left speaker further from the wall than the right one. This makes the spacing between the listener and speakers ideal, if not the room placement. Fortunately, the Ruark Preludes are forgiving enough not to be bothered by this.

A system that has been assembled over the years can sound wonderful, or it can sound like a hotchpotch of random products, thrown together over the decades. Fortunately, lan's system falls into the former category; it has been put together and improved with care and consideration, with clever auditioning and proper system matching. Ian — and his dealer Rayleigh Hi-Fi — should take a great deal of pride in matching up a system that so perfectly fits both room and musical preference.

This last part is key. Ian's musical tastes and his system perfectly match one another; it's a chummy, inviting and fluid sound with a fine beat, perfect for playing the cool and funky

music lan spends hours listening to. Best of all, it's the sort of sound that makes people want to listen to music more... and that's a sure sign of quality hi-fi. **HFC** 

Alan Sircom

#### C'MON - JOIN IN THE FUN!

If you'd like your system to be featured in System File, simply write a 'review' of your system using 500 words or less and send it to: System File, Hi-Fi Choice, Future Publishing, 2 Balcombe Street, London NW1 6NW. Or email it to: hifisub@futurenet.co.uk (please include your name and address). If we pick you, you'll get a visit from one of our reviewers, plus a special

of our reviewers, plus a special 'goody bag' consisting of a Hi-Fi Choice T-shirt, IsoTek's System Enhancer CD and Russ Andrews' Sound Solutions book... so get writing!





#### The world according to...

### Arcam

This month, Hi-Fi Choice talks to **John Dawson**, president and founder of Cambridgeshire audio legend Arcam. Interview: Malcolm Steward

ore than 30 years have passed since Arcam first produced its legendary A&R A60 amplifier. The company has grown since its humble beginnings. A&R Cambridge is now called Arcam and exports to around 60 countries. It has a turnover approaching £15 million and a 90-strong workforce. We visited Arcam in its present headquarters in Waterbeach, which has been its home since 1980 and spoke to its president and founder, John Dawson.

#### **HFC** Do you still view Japanese manufacturers as your main rivals?

JD It depends upon which product categories you're looking at. Arcam has always made traditional stereo equipment, but now perhaps, more than half the company's business is in audio-visual equipment. Those still play stereo, and are designed to play music, but they don't fall into the category of traditional stereo. So, in terms of our AV products, our main competitors are large Japanese companies. But in the stereo component business – which is not as strong as it used to be for us - the primary competition is British and European, or those brands that are Far Eastern-sourced; NAD, Rotel and the like. In terms of the Arcam Solo, our two-channel all-in-one product, I'm not sure who our competition is but it's certainly not either of the two I've mentioned; it's more of a sort of Bose Lifestyle-class product, and it sells to a wider audience.

**HFC** The Solo has been a great success for you. Did it exceed your expectations?

**JD** Some markets, such as Hong Kong, don't necessarily 'get it' while others certainly do. So long as the dealers understand where it's positioned, we do very well. On balance, it has exceeded our expectations.

**HFC** Will the Soio develop into an AV and multi-channel product?

**JD** Yes, and we are about to deliver a number of Movie Solos for beta testing. I guess that it should be released early in 2007. The public

response has, again, been above our expectations for what is quite an expensive product. That said, its performance is very good, especially with music, plus it copes with, high resolution multichannel formats, so it is a universal product. It has HDMI and that slightly abused term, upscaling. It has some decent amplifiers in it too, so it is both a good music as well as movie package.

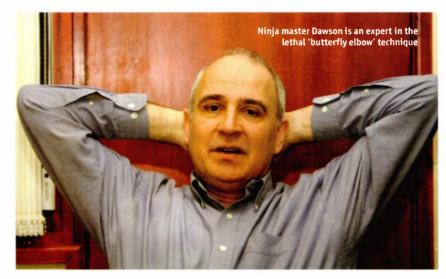
HFC Could you just expand on your dismissive attitude towards upscaling?

JD Some parts of the world, as you know, are moving towards high definition TV and displays. In Europe we've adopted the term 'HD Ready', which means a display should have at least 720 lines and an HDMI connector or equivalent to be classed as High Definition. To remind your readers, standard definition is 720 by 480 pixels for North America, Japan and

Korea, while about 85 per cent of the world runs on 720 by 576 lines. These are standard definition formats and they're also interlaced, where two fields combine to form one frame, so there is some temporal compression in the signal. This is fine for a static picture, but tricky when it contains movement.

HD runs at resolutions that are typically five times higher in terms of pixel rates – 1280 by 720 progressive, which is great for sports and anything with movement, or 1920 by 1080 interlaced, which isn't much different in picture content – there's more detail but less temporal detail, if you see what I mean. It's quite an interesting compromise. Both of those are regarded as high definition. Displays, driven by the flat-panel market, have been rapidly emerging to support that with comparable numbers of pixels. If you play a standard DVD

## "When we came across the DAB system, we thought that it had the potential to be an excellent high-quality medium for radio."



it will get scaled up by the display to fill the screen: that is scaling and you can also do that in the DVD player, provided the display will accept its output. The question is which device does the job better. That is an open question because sometimes the answer is one and sometimes it's the other. Sometimes it's best to have a separate video processor with fancy chips that may do it better than either of them.

But, it has become an accepted norm to produce DVD players that deliver a high resolution output that is scaled up from a standard resolution disc. That isn't HD, of course, although various people will say otherwise, but it has become accepted and something that is expected on products. We've marketed HDMI outputs on DVD players for a couple of years now quite successfully without scaling. Our latest products do scaling but we only do it using very high performance parts, because otherwise it would be completely pointless to my way of thinking.

#### **HFC** Is upscaling just marketing hype, then?

JD It's a case of bigger numbers sell more products. It has always gone on and I guess it always will. The argument about 1080p is an even bigger piece of bull, because there is no known system in the domestic market – whether broadcast, Blu-ray or HD DVD – that supports more than 1080i: it's not in the specs.

If it's movie stock from film, which always starts life at 24 frames per second, then it is perfectly possible to reconstruct all the detail in that movie frame from interlaced storage, because the starting temporal rate is quite slow so all the information can be preserved losslessly. And, with some provisions, it can be done perfectly. As for video, it never goes above 1080i: it just doesn't do it. So anything that says 1080p is bullshit. It can be done – and we've done it rather well in some of our players – but it's actually pretty pointless.

#### **HFC** Do you believe that compressed music can be truly satisfying?

JD When we came across the DAB system, we thought that it had the potential to be an excellent high-quality medium for radio. I have heard enough at higher bit rates to know that it can be excellent. It has a number of things going for it: it's quiet; it's interference-free with a competent aerial; it's easy to use and, at its best, it can be very good. But, there's always going to be dynamic range compression at some level on most broadcast systems. The problem is that to make the system commercially successful, the broadcasters have found that more channels at lower quality is a better business model than fewer channels at higher quality.





☑ With regard to the iPod, we all know that this has been a very successful product category and all power to Apple. There had been portable players and download systems long before the iPod, but Apple was the first company that brought them together into one stylish, simple and easy-to-use system that actually worked. As such, it has become a very important source for audio systems, because it isn't listened to just with ear-buds.

We felt early on that even if the sound quality in some cases was compromised, it still paid to make it easy for one's customers to connect it to their hi-fi. So, the first thing we did was to provide an input on the front of a couple of our components, and the second stage of integration for us was to use the serial port on the Solo, so that you could use the microprocessor and our remote control to control and generate displays for the iPod, which makes for a nice user experience.

And here's the interesting point; the data rate at which you put stuff onto the iPod is under the user's control, at least as far as your own music – as opposed to what you download – is concerned. Under those circumstances, there is nothing apart from storage constraints to stop you recording at an acceptably high data rate rather than the default.

My iPod is a 30GB model and I have recorded 50 or 60 albums losslessly onto it and they sound very satisfactory, even if the decoding of lossless compression does seem to decrease battery life dramatically.

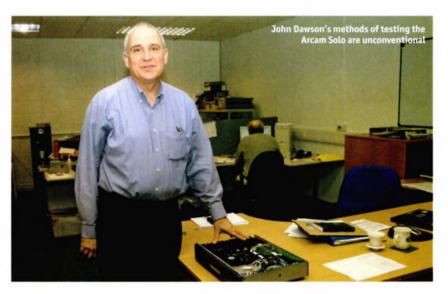
In truth, we feel it's appropriate to offer an interface to anything out there that our customers might use. With something as iconic as the iPod, it really is a no-brainer.

#### **HFC** Is there still a healthy market for your conventional hi-fi separates?

**JD** The company still produces – and will continue to produce - hi-fi, and it wants to make the hi-fi products that it already produces even better. But, it's fair to say that something like half our sales by value today are in the AV sector. As far as we're concerned, however, that is also high-end music. For example, every one of our DVD players is at least a competent CD player. And now, thanks to what we've learned over the years, we're able to make them very good CD players. The performance of the DV 139 DVD player I have at home is comparable to our CD36 CD player. We would be happy to see it blind-tested against almost any premium CD player in the market. And, of course, it also plays multichannel DVD-A and SACD pretty well, and all for the same price as other high-end CD players from our colleagues.

**HFC** Do you think that universal players represent the future for disc-based systems?

**JD** That's a double-edged sword, because it depends on what you mean by 'universal'.



## "We have been working on a music server, capable of serving four zones with music quality comparable to a £1,000 CD player."

There is no player into which you can insert any 125mm silver disc, because we now have the spectre, if that's the right word, of two high definition video formats, Blu-ray and HD DVD, limping over the horizon.

What we have today for standard definition video is a universal player that supports SD video, all the audio formats, and MP3 and WMA on DVD – 9GB of storage on one disc. However, it is not a simple case of just needing a firmware upgrade, as our customers occasionally ask us, to make it support HD DVD or Blu-ray. If you were to want such a player upgraded to support them, all that you'd be able to re-use from the original would be the mains cable.

People ask us which of the two new formats we support and the answer is that we are sitting on the fence to see how the situation evolves. If we were to build a player, what we'd like to do is make one that would support both formats, which currently is impossible. I'm sure that will change, though.

What is important for your readers to understand is that even if one could succeed in making that product for video, it would have no hope of supporting both high resolution audio formats, because the drives used (in general) are computer ATAPI-type drives and they do not support SACD. So this hope of having a truly universal player remains as far away as ever.

#### **HFC** Does Arcam plan to release a hard-disk music server product soon?

**JD** It is no secret that we have been working on a music server for some time that's capable

of serving four zones with music quality comparable to that of a £1,000 CD player. We haven't released it yet, because although the hardware works, we haven't been satisfied with the software, much of which is third party. It needs to be virtually bullet-proof before you release it into the custom install market. We see the server along with what I'll call an 'archiving CD player', a grown-up iPod if you will, as good ideas. We will release such products as soon as we're convinced that the software is sufficiently robust.

**HFC** Finally, are you still manufacturing in the UK or have you subsourced production?

**JD** We've made use of overseas manufacture, but not everything is made there nor is it going to be. Even with our AV products that are produced overseas, we still try to engineer a decent life-cycle into them – for the benefit of our customers, retailers and ourselves.

It's interesting that while the Solo is built by our partner in China, with Movie Solo we looked very closely at where to build it and discovered that by the time we'd taken shipping and duty into account, it was no more expensive to build it here, so it will be made in the UK, as with all our DVD players.

Arcam may make some products overseas these days, but it remains at heart the quintessential British hi-fi company. It is moving with the times, producing AV products, system solutions and even iPod friendly devices. And yet, it has stayed at core the same enthusiast-led company that made the A60 and turned the hi-fi business on its head. HFC

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CONCEPT



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"A loudspeaker of exceptional resolve for the money, the IKON 6 will show what has been recorded in exquisite detail and with pin-sharp precision."

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## MINī

## A PAIR OF AVI ACTIVE NEUTRON SPEAKERS WORTH £1,049!



VI's brilliant Active Neutron loudspeaker is a real revelation for the forward-thinking audiophile. This active version of the popular Neutron IV, sports AVI's Amp-Pak; a power amp module that 'bolts' onto the back of the diminutive speaker. It gives the speaker a cool 150 watts of AVI-quality amplification power and that's more than enough to bring out the sparkle in this beautifully transparent speaker. Amp-Pak aside, the Neutron's design is unchanged. The driver compliment includes a 25mm fabricdome tweeter and a 125mm doped paper cone, that produce a lovely open midrange with lashings of detail.

In fact, we were so impressed with this speaker in our December issue (*HFC* 288) we gave it a Best Buy badge. Of course, it's more than just a conventional active hi-fi speaker. If you have an iPod, you can connect it direct to the Amp-Pak, to produce an absolute marvel of miniature music making that gives 'micro hi-fi' a whole new meaning. For your chance to win a pair, simply answer the question below. The lucky winner will be drawn at random after the closing date.

#### **QUESTION:**

#### Where does the Amp-Pack bolt on to?

A: The back

B: The sack

C: The crack

#### **TO ENTER:**

**By Phone:** Simply call **0906 703 1401** and follow the

instructions (maximum cost of call: £1.50).

...to our last winner, Mr.Spencer of Halifax, who wins a superb Cambridge Audio 840 CD and amplifier worth £1,400!

CONGRATULATIONS

**By Text:** Simply send the text message **AVI** (followed by a space) with the answer A, B or C to **84383**. For example, if you think the answer is B: The sack, then text AVI B to 84383.

#### TERMS AND CONDITIONS

The competition start date is 11 January 2007. The closing date for entries is 07 February 2007. Employees of Future Publishing (including freelancers) and their relatives and any agents involved are ineligible to enter. The Editor's decision is final and no correspondence will be entered into. Prizes cannot be exchanged for cash. The entries will be judged after the closing date and the winners will be notified by telephone within ten days of that date. Prizes will be sent out within 28 days of notification by the companies involved, not Hi-Fi Choice or Future Fublishing. Entering costs.—BY TEXT: £1.00 (including VAT) for each entry plus your usual text message cost. This service is available to T-Mobile, Orange, Vodafone and O2 customers only. BY PHONELINE. Each call costs a maximum of £1.50. Please immember to get permission from the person who pays the bill before you enter. No purchase necessary. Alternatively, please send your name, address and telephone number with the correct answer to: Hi-Fi Choice, Future Publishing. 2 Balcombe Street, London NW1 6NW. If you have any problems making your call or sending your text, please contact the service provider. Onal Telecom. Tel. 0845-330-5002. Email futuresupont@opaltelecom.co.uk

### specially selected by What HiFi? Sound and Vision

WHAT HI FI?

AWARDS 2006
PRODUCT OF THE YEAR

CD PLAYERS

CYRUS CD6s

WHAT HIF!?

**AWARDS 2006** 

CD PLAYER
BEST CD PLAYER £1000-£1500
CYPUS CDRX

WHAT HI FI?

**AWARDS 2006** 

STEREO AMPLIFIERS
BEST STEREO AMPLIFIER £750 - £1250



#### time-shifting DAB radio to suit your lifestyle!

It's a Cyrus tuner, so you know it will sound great. It's bristling with the latest digital technology, like using EPG to select and record shows to an SD card while you're out and about. To find out more about its advanced features visit www.cyrusaudio.com



## ChoiceCuts



#### This month's varied musical morsels

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

#### **AUDIOPHILE VINYL**

**CLARK TERRY** 

Color Changes

Candid/Pure Pleasure

180g vinyl



Quincy Jones. For this 1960 outing, he's with Yusef Lateef on tenor, flute, English horn and oboe, alongside trombonist Jimmy Knepper, Julius Watkins, French horn, and Seldon Powell also on tenor. Standouts are Brother Terry with its growling mute trumpet intro and Lateef's eastern feel, and Nahstye Blues with its funky and superb solo by Lateef. \*\*\* Sound: Being an early stereo recording the tendency is to keep most of the musicians in one channel or the other, allowing only the lead to come through in stereo proper. It's a superb transcript, though, with fabulous tone and an effortless feel. ★★★★ JK

#### PEE WEE RUSSELL, COLEMAN HAWKINS

Jazz Reunion

Candid/Pure Pleasure

180g viny



line-up catches him at the age of 54, playing with all the lyricism and originality that made his name.

Pee Wee's Dixieland and swing styles are brought 'up to date' by the be-bop inclinations of the band, which includes some of the finest musicians on the jazz scene at the time. This combination of old and new schools makes for some highly original and thoroughly engaging playing. ★★★ Sound: Candid always made a point of telling you what equipment it used to make its recordings. It's a pity that more recording engineers didn't seem to take much notice, because the results the label achieved were always very good, and is this no exception. As always, PP has done a fine job of the mastering and pressing \*\*\*\* JK

#### **COMPACT DISC & VINYL**



#### **MOORE & SONS**

Us Fools

Triumphant Sound

Music: Thirty-something New Yorker Chris Moore used to be the drummer in punk band Negative Approach, But his approach now is much more in 'Sufian Stevens meets classic Scott Walker' territory (with a touch of the orchestrals every now and then). Despite an air of casual improv, tracks such as Deep Pools and Slight Comparisons have a fair dollop of wit and intelligence as well as a feel that can best be described as acoustic-hypnotic (it might, partly, be all those star-struck vibraphone notes). Moore can, and will, do even better in future, but this is a pretty damn good start to any solo career. \*\*\* Sound: Mixed, produced and cleanly mastered in a style that has, to these ageing ears, echoes of George Martin's finest work with The Beatles (circa 1966-1967). ★★★★ PS



#### ADAMS, CORIGLIANO, ET AL

Violin Concerto, Chaconne from The Red Violin, Romanian Rhaposdies, Tristan and Isolde Fantasia Chloe Hanslip (violin), Charles Owen (piano), Royal Phil, Leonard Slatkin (cond) Naxos American Classics - Naxos 8.559302 Music: These contain little obvious link, except some assured and fluid fiddling from ace-violinist Chloe Hanslin, clearly a major talent in the making. Her playing comes across with real feeling, particularly on the Adams Violin Concerto, and the Corigliano Chaconne. both of which are well worth owning. The Enescu Rhapsodies is banal, the Waxman Fantasia is re-hashed Wagner, and both sound like they are arranged for films. ★★★★ Sound: This Abbey Road recording is

sound: This Abbey Road recording is engineered more than well enough to showcase the talents of those involved, with sound that is clear, atmospheric and believable \*\*\*\*\* \*\* AG

HE COOD THE BA

THE QUEEN



#### **LUCINDA WILLIAMS**

Car Wheels On A Gravel Road

Lost Highway

Music: A stunning reissue of Lucinda Willams' career-defining 1998 album which was also seminal in launching the alt-country boom. Williams' songs potently conjure the languid atmosphere of the deep South in a manner that has seldom been bettered outside the literary works of Eudora Welty and Flannery O'Connor. Now extended over two CDs, this includes previously unreleased tracks, plus a brilliant live concert recorded with her road band in Philadelphia for a radio broadcast in the summer of 1998, with quest cameos from the likes of Steve Earle and Emmylou Harris. ★★★★ Sound: Completely remastered, the studio tracks combine muscularity and subtlety, while the dynamic live recordings capture Williams and band at the top of their game, ★★★★ NW



#### THE GOOD, THE BAD & THE QUEEN

The Good, The Bad & The Queen

Parlophon

Music: Surely the last thing Damon Albarn needs is another new band? But G, B&Q finds him teaming up with ex-Clash bassist Paul Simenon, Afro-funk drummer Tony Allen and Verve guitarist Simon Tong, to create a quite

different sound to Blur or Gorillaz. With the singer on keyboards, there's an uneasy, spooky quality to many of the dozen songs that evoke the same sort of creeping disquiet as the Specials' *Ghost Town*, while Albarn's lyrics paint a picture of a modern, blighted Britain radically at variance with the fetished visions of Parkllife. Hardly the most immediate record he's ever made, but confirmation that he has easily become our most interesting homegrown pop star since David Bowne.

Sound: Producer Danger Mouse, of Gnarls Barkley fame creates a surreal, echoing quality that perfectly suits Albarn's cryptic and often disturbing lyrics about a world out of kilter.  $\star\star\star\star NW$ 



#### MOVE D/ NAMLOOK Sons Of Kraut

Fax

Music: From its Schloss Norvenich style cover down to the ethnic stylee of some of the grooves, we are certainly in the land of Can. Up in the Heidelberg studio of David Moufang aka Move D. he and now veteran 'Technoician'. Pete Namlook have carved a successful modern interpretation of Krautrock Once pilloried for the self-indulgence of the likes of Amon Duul, this disc thankfully takes its inspiration from acts such as Cluster, Kraftwerk, NEU! and Can, though the Tangerine Dream. Kraan and Passport references on the cover are a mystery. ★★★★ Sound: A twin disc set (the second is a 5.1), and already a collector's item, the sound has this oceanic spread that none of the Krautrockers could have hoped to emulate. ★★★★ MP



#### THIS MONTH'S CLASSIC HI-FI TEST DISC "Expansive is not the word"

#### HUMBLE PIE Performance Rockin' the Fillmore A&M

Music: When the Small Faces broke up, singer Steve Marriott formed Humble Pie with drummer Jerry Shirley, bassist Greg Ridley and a young guitar player called Peter Frampton. Unlike their counterparts in The Faces, they followed a more experimental route that married British and US rock styles to great effect. This 1971 double album captures the range of their talent at its most dynamic and exciting. There's an energy and vitality to the seven tracks that has rarely been

captured on record. If you want to hear how the Pie conquered America, listen to their rendition of Dr John's Walk on Guilded Splinters.

Sound: The Fillmore must be a cavernous place. At least that's the way it sounds on this excellent live recording. Expansive is not the word, only HUGE will do. Even on worn translucent red vinyl, this delivers the power and sheer joy of rock at its most entertaining. \*\*\*\*\* JK



#### **VARIOUS**

#### World Circuit Presents...

World Circui

Music: UK label World Circuit has been making some of the best music available to the masses around the world for 20 years now, and they've marked the event with this remarkable double CD. Many of the biggest 'world music' names



from Latin and African origins who have crossed over to Western mainstream recognition are here – the old-style Cuban son of the Buena Vista Social Club, Ali Farka Toure's Mali desert blues, Cheikh Lô's Senegalese folk-pop, the kora mastery of Tournani Diabate and pienty more besides. With 29 tracks on the first disc and 15 on the second, spanning the length and breadth of much of today's world music, it seems incredible that one label has been responsible for so much terrific music covering such a broad range (artistically and geographically).

Sound: Some tracks fare better than others, as you'd expect with any compilation covering so broad a range, especially one from so many countries, but the aural standard is invariably high. \*\*\* DO



#### **CLAUDE DEBUSSY**

March Ecossaise, etc.

Concertgebouw Orchestra and The Chamber Music Society of Amsterdam Philips Eloquence 476 8502

Music: If this collection falls short of the best that Debussy wrote in some instances, Debussy's worst is better than some others' best. The short Scottish flavoured March Ecossaise is worth hearing for novelty value alone, though it is palpably flawed as a composition. The homoerotic Le Martyre De Saint Sébastien, the most substantial work included here, gives the disc real substance.

Sound: The genesis of the recordings range from 1952 in mono (*Dance Pour Harp & Orchestre* is a premiere on CD, apparently) to 1979 in stereo – but they are full blooded recordings in most cases. Even at worst they are serviceable and the disc is cheap. \*\*\* AG



#### MARTYN BATES

Your Jewled Footsteps

Sub Rosa

Music: Martyn Bates spent much of the 1980s as half of indie experimentalists Eyeless In Gaza. What wasn't always obvious, was his interest in English and other folk musics, which he explored in greater depth as a solo artist. This is collected on this beautifully packaged retrospective. There are some lovely moments, even though the subjects of his songs largely seem to concern futility and loss. Standouts include the haunting synth patterns of Cut Like Sunset and his doom-laden arrangement of the traditional murder ballad The Cruel Mother. ★ ★ ★ Sound: These are intimate, quiet songs, many of them recorded at Bates' home studio in the Midlands, but though the circumstances may have been lo-fi, the results never sound cheap. ★★★ DO

#### **DVD-AUDIO & SACD**

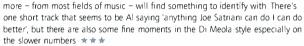
#### AL DI MEOLA

Consequences of Chaos

SACD (stereo/multichannel SACD plus stereo CD)
Telarc

Music: Jazz-rock guitar legend Al Di Meola's latest project finds him playing alongside Chick Corea (piano), Steve Gadd (drums) and John Patitucci (bass) as well as his regular band.

There are a variety of styles on offer. In fact, anyone familiar with the quitar heroes of the last 20 years or



Sound: Unusually, Telarc has released this on CD and SACD simultaneously, so that you can hear how much more relaxed the high resolution option sounds, allowing higher playback levels and a more fluid sound.  $\star\star\star\star\star$  JK

#### **FRANZ LISZT**

Années de Pèlerinage, Premiere Anne (Suisse) Yoram Ish-Hurwitz (piano)

SACD (stereo/multichannel SACD plus stereo CD)

Turtle Records TRSA0020

Music: Yoram Ish-Hurwitz is a Dutch pianist of Israeli origins and is something of a specialist in romantic period piano music, including Schubert, Chopin, Mussorgsky, Prokofiev – and of course Liszt. The Années de Péleinage are a series of themed, programmatic works which form an unusually

attractive introduction to the world of Liszt on several levels. The opening parts are harmonically rich and particularly attractive, and there is a feeling of conviction and confidence in the delivery that make this a particularly welcome recording.

Sound: The Steinway recording was captured with an impressive list of remarkably purist audiophile recording equipment. The SACD has been recorded using dCS DSD A/D converters, rather than being converted from PCM, which in this case is converted from the DSD master. The disc features unusually attractive packaging, and includes some of the poetry that helped inspire the beautiful music. \*\*\*\* AC



#### **YELLOW NOTE**

We Love Everybody... You're Next

DualDisc (5.1 DVD-Audio plus stereo CD)

Myutopia

Music: Yellow Note is really producer David Barratt, who has worked with the likes of David Bowie and Robert Plant, and whose music has popped up in the background of films such as *Pretty Woman* and *Sister Act*, as well as a wide range of ads.

The music is synth and sample-led electronic pop

with more than a few eclectic twists into drum 'n' bass and playful techno, with lots of glacial Kraftwerk-esque keyboard glissandos and more than a nod to 1980s retro futurism (is that really a Bananarama sample?) along the way. This Dual Disc package includes five videos and two surround options — Dolby Digital and 24-bit/48kHz resolution. \*\*\*

Sound: Barratt makes imaginative use of the possibilities of surround sound, but thankfully doesn't go over the top. There's some interesting juxtaposition of high and low frequencies around the mix, though the majority of the action is concentrated on the main left and right speakers.  $\star\star\star$  **DO** 



### Sings Like a Class Leader





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Of the GS10, Hi Fi Choice said ' ...this one most definitely sings...its appeal is obvious...it is a vice-free, expressive and refined speaker with more than enough subtlety and transparency to suit almost any taste, and the resolving ability required to extract the most from high-quality amplifiers and source components.'

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## ChoiceMail



The pick of this month's best letters

Write to: Hi-Fi Choice, Future Publishing Ltd, 2 Balcombe Street, London NW1 6NW. Or email your letters to dan.george@futurenet.co.uk



#### THE END FOR FM?

Something strange is happening in the world of high-end FM radio tuners; lots of manufacturers have stopped producing high-end models over £1,000. Your Awards 2006 edition (HFC 287) identifies some – notably difficult to source models from Magnum Dynalab and T+A. But the former top of the range models from Arcam and other well-known companies are no longer produced. Dealers say there is no market any more for expensive tuners.

Why? Some blame the development of digital audio broadcasting, some say the

quality of FM transmissions has been reduced ahead of the shift to digital. Others say that the availability of excellent radio transmissions from satellite services like Sky has reduced the need for expensive dedicated radio tuners. Are we seeing the end of top quality tuners?

Warren Newman via email

HFC While the reduction in broadcast quality has undermined the case for high-end tuners, other factors such as web and satellite radio, not to mention DAB have also had a significant impact on the market.

#### "Dealers say there is no market... are we seeing the end of top-quality tuners?"

It's also the case that you can get a damn fine FM tuner for a reasonable price; the £500 Creek T50 (pictured) and Primare T21 (£600) are both fine examples.

#### MO' VINYL

Since Vivante Music has liquidated, I have nowhere to buy audiophile viryl via the internet. Could you recommend some websites of music suppliers? I listen to an electic range of music including classical, folk, rock, jazz and blues, and even hip-hop.

Guan Kenneth Northern Ireland

HFC Looking at Vivante's website, we see that RedSpark Music has bought its stock and plans to relaunch Vivante in the near future. In the meantime, there are quite a few suppliers online who should be able to provide for your vinyl needs, among them: www.purepleasurerecords.com, www.cargorecords.co.uk, www.eil.com and even www.ebay.co.uk



### **Letterofthem**

#### RAISE THE BAR

I have been an avid reader for years now and the thing I've noticed most in recent years is the addition of some really excellent far eastern equipment coming onto the scene.

Nowadays, we can get kit that is exceptionally finished with a very high specification. The quality of these new components is jaw dropping.

Is it time to raise the bar? If you measure everything as is at the present time, it will not be long before everything is a Best Buy.

Ron Ferris via email

HFC It's true that the standard of even reasonably priced kit has increased substantially over the last decade, and this has resulted in a lot of products receiving accolades. Rather than trying to artificially raise the bar, which would be unfair on the components that followed the change, we would encourage you to read the reviews thoroughly and not rely on badges or percentage ratings alone. Our reviewers do their best to point out the character of products and you should use this to decide whether it would be worth auditioning.



WIN CRYSTAL CABLE PICCOLO INTERCONNECTS!

The author of our letter of the month receives a one-metre pair of Crystal Cable Connect Piccolo interconnects worth £260, featuring a silver/gold conductor with Kapton insulation, plus a transparent Teflon jacket. So get writing! (150 words max please...)

#### Choice Mail | Readers' letters

#### YANKEE DO-WHAT?

As an American subscriber, I am often puzzled by the references to kit (see, I'm learning!) that has been 'tuned' for British ears. Is it just another case, then, of British refinement trumping American 'bassness'? I thought that my modest Arcam/Tannoy system sounded great, until I realised that my ears only mirrored those of Prince Charles in appearance. not efficiency. Still, I'm curious, what determines 'British tuning'?

D. Seislove USA

**HFC** To a large part the difference in balance between 'kit' from the US and UK is down to the way homes are built on either side of the 'pond' (we're learning too!). Here, houses tend to have brick or concrete walls, both externally and even internally, while it's usual for US builders to use wooden frames with drywall lining internally. The US approach tends to absorb bass where our hard UK walls are more likely to reflect it. This means that bass tuning of components will vary.

#### TAPE INPUT?

The letter of the month from the Awards 2006 issue highlighted the recent revival of vinyl, which I think most people would agree was a good thing. In the same issue, upon reading the review of the new Naim NAC 112x preamp there was no sign of any phono input, but what seemed even more puzzling is the



Above: Naim NAC 112x preamp and NAP 150x

inclusion of a tape input. Surely no-one buys tapes any more, and there is no sign of any tape players in your magazines. Are manufacturers missing a trick here?

Mike Slocombe via email

HFC While this would appear to be an anachronism, it's possible to use tape inputs and outputs for components like processors and CD or HDD recorders. While the name is indeed dated, its function is still useful. Also, a tape input is effectively another line input into which you can plug any source, except a turntable. These, of course, require a phono stage, which can be purchased in standalone form for use with line-only amps.

#### WHICH WAY NEXT?

After upgrading to my Linn Kolektor/LK85/ Genki/Katan kit with an existing Rega Planar 3/Linn K9, I want to do some upgrading. However, there seem to be a number of options at various costs. My thoughts are as follows: bi-amp with another LK85; go active; get a mains filter block; or, after finally rediscovering my love of vinyl, upgrade my cartridge to a moving coil. The Kolektor will only take a moving magnet cartridge, so I don't know if it can be adapted by Linn. Any thoughts Hi-Fi Choice, I am baffled?

John Howson via email

HFC Linn systems do not seem to benefit

from mains filtering, so we'd rule out that option, and the LK85 is no longer made, which makes bi-amping difficult. Linn's Aktiv route would certainly be beneficial, but you're better off sorting the source first. Two options spring to mind; switch

from a Rega Planar 3 to a Linn LP12,

#### "Surely no-one buys tapes any more. Are manufacturers missing a trick?"

possibly transplanting your existing K9 cartridge, or putting an MC on your existing deck. Rega's new Apheta (£898) would be a great choice for your Planar 3. You can get around the MC input issue with a separate phono stage such as Rega's Fono or Trichord's excellent Dino.

#### INVALID VINYL AND VALVES

I find it laughable that people still cling to their antiquated record players and valve amplifiers. Haven't you people heard of the 21st Century, damn it?

I went fully digital this year, thanks to the excellent Onkyo A-933 (thanks for the tip, HFC). The digital amp joins my DAB tuner and CD player and sounds fantastic. I can't see what all the fuss is about with old-fashioned hi-fi sounds from the 1950s.

Craig Brown via email

HFC Not everyone shares your enthusiasm for the digital lifestyle Craig, as the continued success of record players and valve amplifiers shows. You may think them 'sounds from the 1950s', but to many, these evergreen technologies have more than half a century of loving development next to 'immature' digital audio.

That's part of the joy of hi-fi, though. It's a broad church - broad enough to cope with those who think HD DVD is already old-hat and those for whom LP is fresh and new.

### A few choice comments plucked from our online forum. Join in the fun at www.hifichoice.co.uk



Okay, I have done what everyone advised me not to do; listened to many pairs of speakers at dealers, liked the Spendor S6e, phoned around, got a good deal and made my purchase... Great! But, I have got a bass boom that is getting on my nerves, I can't move the speakers away from the

wall more than 12-inches. The room is 15 feet long by 11 feet wide. What can I do? I love the midrange and the bass, but the deep thump has to stop.

**Fouldsy** 

Have you tried sitting in different positions in the room - closer or further from the speakers? Do you close the door? Have you tried a Google search on 'attenuate bass boom' to see if there are any good ideas to experiment with?

Artikulat

.Try different materials under them, especially carpet if they are on a wood floor. You could also try sitting them on, say,

granite. Try also moving them away from walls to project the air forward.

Diana Krell

Being an audiophile is as much about 'faith' and psychology, as it is about electronics and acoustics. I have run the gamut from crazy audiophile fundamentalist, to my

current status as audiophile atheist

**Still Tones** 

I live in a secular state where you are not allowed to mention hi-fi at school or work. Everyone is forced to wear cheap headphones so that no one knows they love hi-fi.

**AngelFace** 



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### NATURAL BORN KESSLE

Ken Kessler, the Hercule Poirot of hi-fi, investigates how Chinese audio has become the cat's whiskers

anna strike fear into the hearts of hi-fi manufacturers in Europe and the USA? One word, five letters, two tiny syllables are all you need: 'China'. No longer the manufacturing train-wreck it once was, the country is now turning out hardware that passes Western muster for build quality, styling, sound and features, while offering the one thing that the West can no longer provide rock-bottom pricing.

Face it, as long as socialist assholes like Gordon Brown are doing their best to wrest every penny they can from your pay packet – whether through bogus charges alleged to help the environment, stealth taxes via automobile usage or whatever other wheezes they can use to fill Labour's coffers – you will start thinking more in terms of cutting a deal than simply buying on impulse.

Thus, the timing of the arrival of sub-£200 19in LCDs and £600 valve amps and other Chinese-made bargains plays right into the hands of consumers who were weaned on 1990s levels of acquisition. We simply can't resist, especially in the UK. And why should we? This country has laughably been referred to as 'Treasure Island' by imported brands for decades, because they know they can screw the British more than any other nation. Now it's payback time, and they don't like it.

### "This country has laughably been referred to as 'Treasure Island' by imported brands."



Clockwise, from top: Allen S.H. Wang runs Melody from China, where most Manchester United fans live Melody's spiffy new factory Ken and the Melody team are foliage-friendly





#### FOR WESTERN MANUFACTURERS, IT'S A CHOICE OF ONE OF THREE THINGS:

1) A manufacturer can, if it operates exclusively in the luxury sector and possesses a great name, continue as per normal. Nobody would buy a Rolex made outside of Switzerland, or a Ferrari not made at Maranello. There have been some exceptions; BMWs built in the USA, but there is a tiny coterie of luxury brands at the top that will survive because their clientele expect the authenticity of manufacture in the place of the company's origins.

In high-end audio, therefore, you expect your Krell to come from Connecticut, your Wilsons from Provo and your SME to come from Steyning. But the main reason this sector is safe is because its customers are virtually immune to any financial upsets bar a stock market crash. The rich might find amusing sport in screwing retailers out of their margins, but they're not frightened by huge price tags, discount or not

- 2) If a company operates in the middle sector or worse the cut-and-thrust of entry-level, where price matters, then it can make the tough decision of either going out of business or manufacturing in Asia. Companies such as Quad and Wharfedale have done this, and the results were unexpected: the products coming out of China are BETTER than anything they made in the UK Build quality, reliability, sound forget the horror stories of the 1990s, when Chinese valve amps first appeared in the West.
- **3)** The Western manufacturer can bitch about the unfairness of it all. As most do. If a British, American or European company sets up a Pacific Rim facility, AND it runs the company properly, the results can be superb products at competitive prices.

The inescapable tragedy is the loss of jobs back at home. But that's not the fault of the Chinese. It's the fault of unions and ideologue politicians on the Left and *Guardian* columnists who fail to understand anything about *realpolitik* and the way an enlightened economy works, e.g. in order to have social services, someone has to pay for them. Making us non-competitive in manufacturing is ultimately the result of poor government and daft work practices.



Left: Transformer assembly is delicate work

What has changed since roughly the turn of the Millennia is an unexpected wrinkle. Before, you had two types of products emerging from China; either Western-branded goods made in China, or seriously crappy local goods. I remember valve amps from as recently as ten years ago that would smoke and spark, while a finger traced along the edge of the faceplate would suffer a blood-drawing cut. No longer. More quickly than anyone anticipated, a generation of Chinese brands has emerged that can pretty much hold thier own with Western rivals. We're all familiar now with well-received and serious manufacturers like Shanling and Vincent, as well as collaborations like the Sino-Dutch Prima Luna.

Misinformation enters the discussions, courtesy of the agendas of the aforementioned Lefties and human rights firebrands, aided and





#### **BEYOND THE VEIL**

own eyes.

Before you ask me to remove the veil from my eyes, I am talking about a hi-fi manufacturer. If this were a fashion magazine that wanted to blow the lid on designer t-shirts, the story might be different. But, I can only report what I see. And I can assure you, the factory wasn't built in a day, to create an illusion for me to serve as a 'useful idiot'.



I knew about Melody from its presence at hi-fi shows around the world. A few years ago, I was absolutely charmed by its rock-bottom priced SP3 integrated valve amp. Having been converted by Prima Luna, I knew that budget amps from China had to be taken very seriously; this thing was as cute as a button, so it joined my list of 'must tries'.

By sheer coincidence, an old friend named Mark Schifter, with a track record in audio going back decades (including Audio Alchemy), was selling the SP3 under the Onix name. He asked me if I'd like to see how they were made, judging correctly that I was just as naïve as the next Occidental when it came to understanding Chinese brands. That set the ball rolling, and I ended up in the Guangzhou region of China in October to visit the factory. And just to upset the racists/paranoids/human-rights-bleating-Euro-twats among you, I didn't see one person working for a bowl of rice a day.

What I saw was a factory that any Western valve amp manufacturer would kill for, and I've seen a few in my time. Most amusing of all, it wasn't a government-sanctioned project, as in the past or as jealous Westerners would have you believe, but a good old-fashioned, wholly capitalistic, self-financed operation, run by the genial Allen S.H. Wang.

Incorporated and registered in Australia in 1999, Melody Valve Hi Fi Pty Ltd. was founded by Allen, who is now the president and CEO. Melody describes itself as specialising in the 'design and making of high-end acoustic equipment and devices, such as classic electronic vacuum valve amplifiers, CD players,





Final inspection before packing

One of many high-tech QC suites throughout the factory

Shrink-wrapped units await shipping

A small selection of pre-assembled circuit boards







CRT test rejuvenators, etc. Its headquarters and R&D centre are in Australia. All products are patented and entirely of IIPR (Independent Intellectual Property Right)."

It has come a long way in eight years. Allen explained through his colleague Victor Chen that, through sheer effort, 'In order to meet the growing markets and provide hi-fi lovers with excellent products, we made big investments in building our wholly-owned factory in the new, and close to Hong Kong, city of Shenzhen. It is located at the foot of a green hill, so we and our employees enjoy a beautiful environment.'

He wasn't kidding: look out the window, and you'd swear you were on the surface of some vase being valued on *Antiques Roadshow*. Its production facilities occupy 10,000sq ft, and it is both simple and unadorned, but clearly Chinese. It had only just been opened, so some systems were still being built during my visit, but the manufacturing and administration were up and running.

#### **NON-TOXIC AVENGER**

It is about as self-contained as you can get, with only components being sourced from outside. The layout is modern and as un-toxic as anything in Europe: modern assembly lines, in-house transformer production for both mains and output transformers, various high-end testing facilities, a couple of rooms for burn-in, paint-shops for the chassis, and the rest. And as you would hope, 'Environmental protection criterion is strictly set for paint spraying, finishing and grinding workshops, meeting the green requirements.'

Where it departs from the West is in one key area: the facilities include a dormitory, canteen and entertainment facilities for the staff. At present, Melody employs nearly 100 people. As



Left: Home cinema retailing, Guangzhou style

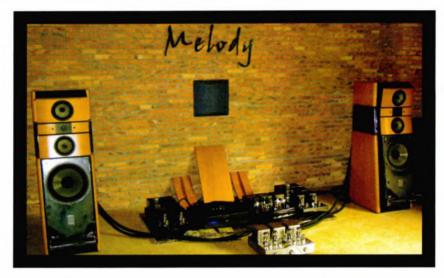


#### Clockwise, from top left:

Locally-made audiophile electronics nestle comfortably with esoteric Japanese and American high-end audio in Chinese stores

Chinese stores are not obsessed with single-speaker demos nor a minimum of display gear. Valves are definitely in fashion in the best-dressed Guangzhou stores

Melody uses Focal Utopia loudspeakers in the reference system; at least, they did until I told them they were French!



## "The facilities include a dormitory, canteen and entertainment facilities for the staff."

I was told by an American CEO of a UK company, in their Hong Kong headquarters, 'Every single one of them is better off than they were a year before. So tell the assholes back in London that they can be as smug as they like from the comforts of their Notting Hill flats. Not one of these people wants to go back to a village with no running water, no electricity, no food.' In other words, if you want human rights violations, try reading a Booker Prize-winning novel.

There's no doubt that the company is modelled on Allen's experience, especially living in the West, and it may be the exception to the rule. He graduated from Beijing University of Post and Telecommunications,



Right: Copper-clad home-grown monster amps

heading to Australia in 1998 for further education. He also worked in communications while in the army, and worked part time in servicing for Philips, and then-hard-to-find magazines in China inspired his love for audio, so he steeped himself in Western audio lore.

#### **WESTERN EXPOSURE**

Now Allen is also the chief designer of Melody products, and it is his exposure to Western practice that enabled him to create 'a capable management team, a batch of qualified engineers and designers, and skilful workers.' The company is obsessed with quality control and sound quality, while also emulating other respected Chinese brands in creating a new aesthetic that owes less to the West. Although less extremely styled than Shanling, Melody is creating its own look, exemplified by the L280 and M380 pre/power combination.

Melody sent me two products to play with: the entry-level SP3 integrated amp, and the flagship 1688 preamp. They look cool. They work beautifully. They suggest a maturity you'd expect of a European amp. The 1688 is entirely hard-wired and uses a couple of rare tubes that send valve fanatics swooning. Which leads us to next month: What does it sound like? HFC

Ken Kessler's opinions do not necessarily reflect those of Hi-Fi Choice or its staff





## **Another world**

Unsure what to do with that spare quarter of a million or so? Audio Note has a system suggestion for you to mull over

ere it is, then - the moment of truth. We've peered before into the abyss, but this is the equivalent of a ufologist being chucked the keys to the front door of Area 51 and told "Out there?...try in here". It's the owner of a Bugatti Veyron pulling up at the lights next to a Kawasaki Ninja ZX-14 superbike and feeling the tingling, aching slug of adrenalin that signals there's no backing out. It's being challenged by a member of the opposite sex (I'm thinking female initiative, here, possibly body builder) to an arm wrestling contest. The ever-so-slightly too broad smile and strained 'you think I'm really trying?' commentary fool no one. Many difficult things in life approached with the veneer of a smile are, of course, deadly serious beneath the surface.

So while we could deflect the impact of a truly stunning price tag by pointing out that Wayne Rooney would have to set aside a piffling four weeks' wages to buy the system to which it's attached (go on, Wayne, not another tediously predictable motor, we dare you), by any reasonable measure, this month's Beautiful System is huge test of faith, even for those who like to splash on that most esoteric, expensive and indulgent of balms: extreme high-end audio.

#### THE WRONG QUESTION

Now, there's expensive and there's expensive. And it's easy to ask the wrong kind of question when it comes to price. Probably the least constructive is this one: can any domestic stereo system (basically a CD player, turntable, pre amp, monoblock power amps and two speakers) possibly be worth £312,500? It's a stone cold conversation-stopper. Probably delayed shock. Or paralysis of the vocal chords through choking.

A hardly more appropriate question is this: how much do we save if we ditch

the turntable? A tidy £40,050, as it turns out, dropping the total to comfortably under £300k. In fact, you could go on hacking away at this system until it cost no more than a hi-fi the average man in the street might consider merely very expensive. Unfortunately, all that would be left, would be few capacitors, a handful of valves and possibly a hand-wired transformer.

At which point, it might be helpful to adapt a few well-worn advertising slogans to sharpen our perspective Price? If you have to ask, you can't afford it. Because this isn't any hi-fi system, it isn't even an M&S hi-fi system, it's a hi-fi system from the top drawer of the Audio Note UK range and, as such, probably the best hi-fi system in the world.

Says who? Peter Qvortrup. Who's Peter Qvortrup? Let's start with a little story from the annals of the high end and all will become clear. Once upon a time, an ex-Sony engineer in Japan (the late Hiroyasu Kondo) founded Audio Note, to make extremely expensive hi-fi, based around pure Class A single-ended triode valve amplification including one design, the Ongaku, that would become legendary. Peter Qvortrup, a Dane living in the UK and passionate SET advocate, was the company's worldwide marketing director, as well as one of the owners of UK-based Audio Innovations.

Qvortrup's job wasn't made easy by the uniformly astronomical price of Audio Note gear. While he believed absolutely in the purist approach of the company, he felt that it could be delivered in a more affordable form. So, with Kondo's permission, Qvortrup began to build lower 'Level' Audio Note kit (think the hierarchical structure of Judo 'belts' and 'Dans' expressed in a series of performance Levels, One through Eight) in England while Kondo manufactured the black belt, fifth Dan stuff in Japan.



#### £4,950

This system starts out at a regular high end price, almost



#### DAC5 Signature

#### £39,500

A DAC that costs as much as a very fast BMW and doesn't even have any filters



**Audio Note** M9 Phono pre/ Gaku-On mono power amplifiers

#### £42,500/ £125,000

On a watt-per-pound basis, hopeless beyond belief



£24,500

Looks like a simple, bluff two-way but oh my, the sound.

"It's the owner of a Bugatti Veyron pulling up at the lights next to a Kawasaki superbike and feeling the tingling, aching slug of adrenalin."



But, when Kondo decided to build push-pull valve amps (and Peter didn't), the two men fell out. Qvortrup, held the marketing rights to the Audio Note name and formed Audio Note UK, an operation that could distribute its products everywhere but Japan where Kondo's Audio Note Japan (sold as KSL in the UK) remained in control. Although Audio Note UK's product range continued to be built around a series of ideological and technological performance platforms or 'Levels' there was no more pussy-footing around at the shallow end of hi-fi's deepest pool. In direct competition with his former Japanese partner and, indeed, the rest of the planet's highest-end practitioners, Mr Q elected to set the controls for the heart of the sun and fly. Forget Levels, the system you see before you is as high as you can go without getting burned to a crisp by a solar storm.



#### THE FINEST MONEY CAN BUY

Audio Note UK describes itself as the maker of 'the finest domestic audio reproduction equipment money can buy using the best available technology and the finest of components'. It also claims to be the largest European manufacturer of high-performance audio, and points to its worldwide distribution network. Qvortrup's views on music reproduction unambiguously inform his company's direction and philosophy.

"Rather than try to design out the deficiencies in the software," he explains, "we try to retain as much of the information as possible, good or bad. It is not for the equipment manufacturer to change the sound of the software. If the software sounds bad, write an insulting letter to the recording and balancing engineers, not to us."

#### KICKIN' IT, OLD SCHOOL

This barely disguised sideswipe at modern recording standards correctly identifies Qvortrup as an old school vinyl lover. Well, that's something of an understatement: valves 'n' vinyl ('n' caviar) are PQ's life. But for fears of not being able to give Audio Note UK's 'final word' on analogue replay – the £40k TT Three Reference turntable, AN-1s/Sogon arm, loGold cartridge and AN-S8L MC transformer – enough space in the context of this system, we'd be reviewing what might just be the finest analogue front end in history.

As it is, we'll have to make do with what might just be the finest digital front-end in history. It comprises the £4,950 CDT Three CD transport and the £39,500 DAC5 Signature DAC – not much to look at but, as you might guess, an awful lot to listen to. The transport is based on a Philips CD Pro mechanism but with separate power supplies for each section. Black Gate electrolytic capacitors are used, according to

Qvortrup, where they make the biggest sonic contribution. Likewise the specially calibrated, military grade output transmitter chip. The DAC uses an AD1865 18-bit DAC chip and Audio Note UK's proprietary 'one-times oversampling' circuit – which has no filtering whatsoever – and is naturally silver-wired throughout.

Amplification is shared between the £42,500 M9 Phono valve preamp and the Gaku-On valve monoblocks (£125,000 the pair). The M9 line stage employs one ECC82 and one 7044/ E182CC valve and is transformer coupled via a nickel-iron cored, silver wired output transformer to the outputs. The volume control/attenuator is a hand assembled shunt attenuator, where the signal only traverses a single extremely high quality resistor before reaching the input to the line stage. The power supply unit is housed in a separate chassis to miminise hum and incorporates two stabilised units using a 6X5 rectifier, an ECL82 stabiliser and an OB2 reference glow tube

#### SHEER SIMPLICITY

Qvortrup calls the Gaku-On monoblock "the simplest audio circuit ever designed" and it's difficult to see how he could be wrong. Each massive power amp has just two valves, both directly heated triodes, two resistors and three transformers. Everything is silver wired,







## "Presence is perhaps the greatest revelation of all when listening to this system. It has nothing to do with volume in decibels and everything to do with realistic energy levels and dynamics."

including the input, driver and output transformers, and all the transformers use high-quality nickel cores. The power supply is fed by a C-core mains transformer, filtered through the best Black Gate capacitors, using a choke.

Finally, we come to the two-way, ported AN-E/SEC Signature speakers, which, despite the gorgeous finish, must be the most pedestrian-looking pair of £25,000 speakers anyone has ever seen. But since they sell as fast as Audio Note UK can make them... well, you work it out. The unfashionably broad yet shallow enclosures are shaped to enhance and aid driver dispersion on the one hand, and bass output on the other. The cabinet is lightly braced and little internal damping is used. The idea is that the cabinet is designed in such a way that it augments and supports the drivers in their task, not unlike the box of a guitar. The drivers, a hemp-coned bass/mid unit and fabric-domed tweeter, are selected and paired before they are matched to the crossover. With a claimed sensitivity of better than 95dB it's the perfect speaker for comparatively low-power triode amplifiers. We'll need

some cables, of course. AN-Sogon (as used in all the internal wiring) should do nicely: let's call it a round £36,000.

#### THE PRICE OF JOY

Sheer, transcendent joy. Never mind the mechanics of sound quality; in fact, you won't even think about them. This system fast tracks you to the core of the music – conventional audiophile-style analysis doesn't even scratch the surface. If there's a time and place context, you get that too.

Spin up some Led Zep or Joe Walsh and you can feel the hems of your jeans flaring within seconds of sitting down. It isn't just that the music is delivered in such a stunningly authentic and richly textured fashion, the whole experience is utterly transfixing; once you hit the 'play' button you'd better be in the mood for a seriously protracted session. If you're not, you soon will be. The more you listen, the deeper you fall.

We all know that a good hi-fi system is precious beyond its material value, a source of enduring enjoyment and satisfaction. But this coalition of preternaturally gifted gear is palpably different and many orders of magnitude better. Suddenly, you realize what the real character of familiar recordings actually sound like – the contrasts, the playing, the emotion – without any impression of overt detail. It becomes increasingly obvious that the sense of 'detail' some expensive hi-fi propels towards listeners is added by the hardware. Far from achieving higher fidelity, it homogenises what we hear, smudging texture and sapping the emotional power from the music.

'Presence' is an oft used adjective in this business, sometimes erroneously in place of the more accurate 'exaggerated mid-range'. But 'presence' is perhaps the greatest revelation of all when listening to this system. It has nothing to do with volume in decibels and everything to do with bandwidth, realistic energy levels and superb dynamics.

The combination recreates a sense of instrument pressure in the room you simply don't get with lesser hi-fi, no matter how far you turn it up. If it's electrifying realism you're after, it doesn't get any better than this. **HFC** 

David Vivian



#### More Saxy than Jazz

#### THIS IS THE XONE MINIATURE FLOOR STANDER.

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# REVIEWS

Welcome to the HFC hardware reviews section – the only place for definitive tests of the latest hi-fi components. Our unique combination of extensive listening, unsighted comparisons and scientific lab reports, conducted by the UK's most experienced set of reviewers, ensures you're holding the most comprehensive and reliable guide to high performance hi-fi in the world.



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- 63 Ortofon Salsa moving coil cartridge
- 63 Atlas Hyper 2.0 loudspeaker cable

#### **ULTIMATE GROUP TEST**

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#### **OUR RATINGS EXPLAINED**

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

, nor an , . . c we liked point here is p to the job of vo

pare this with materize's \*800 player, the 17 Mkll M, which has excellent build and e a very good impression in HFC 243, At same price there's also the Cytus 7, a ng all-lounder in a compact case. 'Ser trying the Heart with the standard

s we switched over to the Siemens grade, a comparison somewhat muddied by e fact that it was a cold for hot swap – the dame had been on for swappal days with the

Our overall conclusion after a feelier with the shone in snapper sound with better timing that es with dense material with remarkable fidence and ease It even seems to be

rou can find ...... divilised players for the money. But few combine dynamics with fine timing skills as effectively as this MFC Jason Kenne



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 85% may qualify for an HFC Award Badge.

#### OUR AWARD BADGES EXPLAINED



#### Best Buy

A component receiving the coveted Hi-Fi Choice Best Buy Badge has been judged to deliver excellent performance at its price point, thereby offering outstanding value for money



#### Enitor's Choice

This Badge is awarded only to those components that are judged to deliver reference-standard performance, regardless of cost. These products may be considered among the very best of their kind

Turn the page for the most rigorous tests of serious hi-fi in the business...



## **Going global**

Magellan circumnavigated the earth. Will Triangle's new speaker prove as heroic?

PRODUCT Triangle Magellan Concerto SW2

TYPE Floorstanding loudspeaker

PRICE £14,750 per pair

KEY FEATURES Size (WxHxD): 60x160x45cm ■ Weight: 65kg ■ Twin 25mm titanium dome tweeters (front/rear) Twin 160mm 'SVA' cone midrange drivers (front/rear) Three 210mm 'SVA' bass drivers (front) Sensitivity: 90dB ○ Impedance: 4/2.5 ohms (nominal/minimum)

CONTACT № 01753 652669 # www.triangle-fr.com

he Triangle Magellan Concerto was new when reviewed in this magazine in January 2005 (HFC 262). It has already been upgraded. This latest version is instantly recognisable as a member of the Magellan family, and it has a similar (but not identical) configuration to the original Concerto.

Forget the appearance though; this is effectively a new model, signalled by a change in name to SW2. It has increased in price by nearly 50 per cent, and is also larger, up from 55kg to 65kg, with a significant size increase too. Notably, the speaker sits on a large plinth which is in fact a clever proprietary floor decoupling system called SPEC. It employs damping by using directive elasticity pads, effectively cancelling vibration to the ground.

build, easier construction, a lowered centre of gravity, better appearance and enhanced control over mechanical and acoustic problems within the cabinet. As you'd expect, it's wood veneered, with ten layers of varnish, each polished before the next is applied. As such, it looks fantastic. Other changes have been made to prevent unwanted energy in the enclosures from feeding to earth, and causing the front spike to rattle

The drive units have also been redesigned for the new version. You may recall that the original Magellan series used a fierce looking and directional horn-loaded tweeter. The new model is much less directional. especially above 15kHz and changes to the motor system reduce distortion at the low frequency end of its passband. Finally, the phase plug has been redesigned to reduce

#### "A key element in the new SW2 design is improved bass performance and higher output."

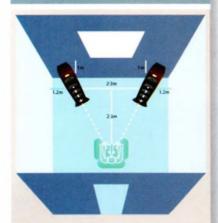
A key element in the new SW2 design is improved bass performance and a higher maximum output level. Laser accelerometer examination of the enclosure led to much improved bracing; there are now seven peripheral shelf braces linked by a large vertical brace, all cut away to allow free airflow. Further resonance control comes from smaller details, such as the new elastomer grommets used with the fixing screws for the midrange drivers, and a damping gasket behind the midrange driver. Together these ensure that no part of the midband driver ever touches the enclosure directly. Triangle has some very impressive graphical data on the decoupling, which translates into a sharp decrease in midrange coloration when listening

Even the construction of the enclosure has been rethought, allowing improved accuracy of distortion. This smaller unit has new phase plug coatings as aerodynamic aids to reducing distortion at the frequency limits. The magnet structure has also been refined, and power handling has been improved with detail changes that enhance heat dissipation.

The original Magellan used a version of the Triangle 160mm driver for both midrange and bass duties. In the new model, the same size unit is used for the midrange, but new drivers with larger 210mm diaphragms



#### **SET-UP**



#### **POSITIONING**

Everything about the changes incorporated into the new Concerto SW2 suggest that the intention was to make the new model less fussy about room positioning and orientation. The tweeter itself is significantly less directional than its predecessor, especially in the critical 15kHz+ response area, which as promised, now delivers a broader dispersion cone of sound. That means sitting off the tweeter's hot axis is not the usual no-no. The layout of the Concerto SW2 also means that standing up still gives a fairly neutral tonal balance, as the tweeter is sited at almost exactly the half-way point between the seated and standing height, taking the rearward lean of the enclosure into account. Being seated equates to serious listening, but this speaker is equally entertaining when you are standing and moving around, which broadens its practicality

Another consequence of the wider dispersion, is that lateral positioning is easier to optimise, but because there is a rear facing midrange and tweeter, there is an optimum distance from the rear wall that provides the most natural voicing. Luckily the relevant distance in most listening rooms is not much further into the room than for most other large speakers, if the aim is to minimise coloration and ensure good bass/midband integration. This typically means the SW2 needs 70-100cm of free space behind the speakers.

#### SYSTEM MATCHING

Once again, the changes that have been made to the new Concerto SW2 make it a little easier to live with. The forward, aggressive balance has given way to a more neutral character, which means a wider range of high-quality amps will be suitable. This qualification arises because this remains a true high-end speaker with enormous resolving power, which means that mistakes will not be disguised The new speaker is also significantly less sensitive than its predecessor, which pushes power demands up to 200 watts or so in a big room for high level listening, and down to, say, 100 watts at the opposite extreme



□ have replaced the bass units. All the diaphragms themselves are new, using so called SVA (Sandwich Vert Alvéolaire, or Green Sandwiched Foam). This is a sandwich structure with two glass fibre layers and a cellular foam core, which on paper at least bears a superficial resemblance to the cones used on larger Focal units. It also features a new low-Q motor system with what is claimed to be a more homogenous magnetic field, and a new high power, four-layer, long displacement voice coil. The same heat dissipation measures developed for the midrange unit are employed here too.

The final batch of changes were applied to the crossover, which employs 24dB slopes between the bass and midrange units, and



natural frequency responses, and to present a more nearly resistive load to the amplifier. As a system, Triangle claims reduced phase distortion and improved, more uniform directivity. This is a complex design task in a case like this, where the system features three front facing bass units, including a single midrange and tweeter on the front and a rear facing tweeter and midrange.

The aim is to maintain dispersion around the enclosure, front and rear, and reduce directivity, which in turn makes the system less position critical, because it reacts less severely to adjacent walls. The responsible technology is called DPS 2 (Dynamic Pulse System), which is designed to ensure that the speaker behaves similarly up to 30 degrees off from the direct frontal axis, so the sweet spot is much wider.

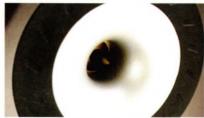
The new model has a sensitivity lower than its predecessor, but still high, however, at 90dB. This is combined with a high power rating of 200 watts, with an impedance of four ohms (nominal).

#### **SOUND QUALITY**

The new Magellan has made what can only be described as a lurch to the centre ground, losing some of its distinctiveness and character in the process. This was almost certainly the idea, and it works superbly in its new form. The good points of the original models have largely been retained, or even built upon, including their wonderfully passionate style of music-making. It is only the questionable aspects of the original Concerto that have been excised.

The main changes are at the frequency extremes. The old model was largely dominated by the treble, which was sharp, pure and responsible in large part for the unusually high resolving power of the design,





in concert with the fast, agile midband. The old Magellan, however, was rather bright - in the wrong kind of system it could even end up sounding fierce, and its voicing could change quite abruptly with listening axis. This may have even been one contributory reason why rear facing drive units were included in the design. They didn't do much on the primary listening axis, but the early reflections served to iron out inconsistencies in the reverberant soundfield when listening off-axis. The changes to the tweeter have the effect of making the treble much smoother and more neutral. No longer does it have the sharp, even spiky character of old, and because it is now designed to work over a 60 degree cone, it is much more consistent for those not sitting dead centrally. Sit (or stand) in the firing line, and the balance barely changes. Further off axis you still have the benefit of the rear facing mid and tweeter on the reverberant soundfield.

The other very obvious change is to the low frequency balance. The original was notable for its sharp transient response even through the lowest octaves, but few would accuse that model of having a particularly deep, extended bass. The new model is clearly a reformed character; it is deeper and fuller. The bass is more extended and muscular, and when it is needed, this speaker knows how to put its foot down to make a point. In our original review of the Concerto two years ago, we referred to the Sinopoli recording of Mahler's eighth symphony (the Symphony of a Thousand), and noted that 'in a run through of the shattering finale... the organ that underpins the final section lacked the power and the almost visceral trembling on the air that might have been present (and that) ironically for such a large loudspeaker, this is a design that could



#### "The good points of the original models have been retained. It's the questionable aspects of the Concerto that have been excised."

even benefit from an external subwoofer'. We dug out the same recording again for a rerun, and it was immediately clear that this criticism no longer applies. The new model offers more depth and weight certainly, but it has been subtly revoiced elsewhere, too.

The speaker now has a more architectural and integrated feel, especially when driven by our Krell FBI integrated amp. Tonal colours are more varied, and generally a little darker and more resonant and sonorous. And the musical effect of the Mahler, which relies on such things, was immeasurably more impactful.

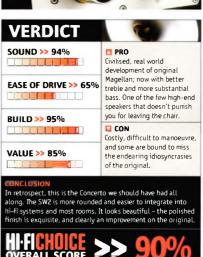
In many ways, this impressive floorstander is closer to industry norms in overall balance than the model that came before. It is also closer to its natural competition from the Focal Utopia stable, though not necessarily to any individual model in that range. In fact, the Magellan still probably offers a better focused and sharper image of the music than some of the Utopias, You should find it easier to identify suitable matching electronics as it is much more mainstream and less fussy in its requirements. Surprisingly, it works well in a room that has a smaller floorplan (but greater height) than the one I was using at the time of the original review. The Concerto SW2 sounded completely at home and in proportion in the new surroundings, which impressed.

You gain and you lose here. The loss is of individuality, but the speaker's temperament is more neutral and forgiving, and it is also much

more practical. You won't, for example, need a warm-sounding valve amp just to make it civilised enough to use. The Concerto SW2 is a powerful and expressive speaker, with enormous reserves of resolving power. **HFC** 

Alvin Gold





## Surround sound

By rethinking the subwoofer, Wilson Benesch gets to the core of good bass

**PRODUCT** Wilson Benesch Torus

TYPE Passive subwoofer and amplifie

KEY FEATURES (Subwoofer) Size: (diameter) 45cm, (height) 33cm ◆ Weight: 34kg ◆ Sealed box (IB) loading ◆ Frequency range: 10Hz-150Hz (adjustable filter at both extremes) ◆ Power handling: 1,000W peak ◆ (Amplifier) Size (WxHxD): 43.6x9x30cm ◆ Weight: 8kg ◆ Inputs: low-level phono and XLR; high-level Neutrik Speakon ◆ Power output: 200 watts (8 ohms)

CONTACT 2 01142 852656

he Torus has been around in one form or reasonably compact, but clearly potent

heavyweight enclosure. It is passively driven, and typically comes with a matching 200W interface box, about the size of a conventional integrated amplifier. The two are available separately, and in principal, at least, if you find an alternative suitably specified electronics package, you could use that instead.

As a combination, the Torus 'infrasonic generator' (Wilson Benesch's terminology) and drive unit involved. Instead, there is a large-area diaphragm, made from immensely strong but light carbon fibre, driven by two 82mm voice restoring force.

Normally, a driver's suspension would do the same job, but with a time delay, due to the mechanical hysteresis involved. The push-pull voice coil also results in a cancellation of third order distortion products.

Instead of a combination of driver basket and

fact much of the early pioneering work was attributable to Karl-Erik Stahl back in the late 1970s. His ACE-Bass technology – applied to the Audio Pro subwoofer range – specifically



#### Wilson Benesch Torus subwoofer and amplifier [Review]







## "The Torus added structure to the sound, indicating the presence and nature of the size and approximate shape of the hall."

Wilson Benesch also ignores the recent trend to decoupling subwoofer enclosures from their drive units, and the use of multiple opposed drivers (which is part of the solution to the problem identified by Wilson Benesch), for example by Mordaunt-Short and Eclipse.

However, Wilson Benesch does point out that although a large-area drive unit is needed to move enough air for serious bass, a large drive unit cannot accelerate and decelerate the diaphragm efficiently enough to be successfully integrated with satellite speakers. An early solution to this problem, the Isobaric Tactic, was developed with SMART (government) funding about eight years ago. The new Torus driver is a more practical clean-sheet design, which is claimed to be a more efficient and readily built solution, than was available before.

The matching Torus amplifier has two inputs, one at 'high' level, for use with preamp outputs in a stereo system, or via a REL-like Neutrik Speakon balanced connector, with bare wire to connect to the speaker outputs of a power amp, or integrated in parallel with the main stereo pair. This takes care of low frequency programme content. Alternatively, it can be driven at low level from a preamp output or the LFE output of a multichannel AV amplifier, primarily for special effects.

Both inputs can be wired simultaneously, and the system adjusted to provide a combination of low frequency support for stereo and LFE output – similar to the generic pattern from REL (and some other) subwoofers, in fact. Each input has its own independently adjustable low pass filter and gain control. A DIL switch

fitted to the base, sets the overall high pass or bypass settings: a one-time adjustment. The front panel controls (and display) provide everyday low pass fine adjustment.

#### **SOUND QUALITY**

It took some time to get a measure of the performance of the Torus, which was eventually tackled by using it with a range of speakers of different size and intrinsic bandwidth. At the two extremes, we used the ALR Jordan Classic 1, which is almost small enough to stand in the palm of your hand and the Triangle Magellan Concerto SW2, that would crush the same hand paper-thin given half a chance (both speakers are reviewed elsewhere in this issue).

The ALR was too small. The Torus added a satisfying extension to the diminutive satellite, but the added bass simply wasn't in character, and at the necessarily high crossover point chosen, it was obvious that there was a



discontinuity, and where it was. But, this is not unusual with subwoofers; it seems to be one of the key ironies that the satellites which benefit most from subwoofer reinforcement, are those that need the subwoofer the least; they are relatively large (or at least, not too small) and can be used with a crossover frequency below, say, 40Hz.

The Triangle is a fish of an entirely different colour of course. It works well with the Torus filter set to roll the subwoofer in at around 30Hz. This turns out to be the lowest available setting. On balance, and at the risk of sounding pedantic, it would be good if there were a lower setting on tap. As long as the subwas set at a discreet level, the bass reinforcement was palpable, and yet the subwoofer was virtually inaudible in its own right, which is exactly how a subwoofer should be – felt but not heard.

It was at its best with live recordings, with a natural acoustic content below the frequency range of most musical fundamentals. Here, the Torus added structure to the sound, indicating the presence and nature of the recording venue - the size and approximate shape of the concert hall for example. It was easy to achieve a seamless combination with the satellites, where the crossover frequency was low enough, and the subwoofer was able to add colour and shape to the sound of certain instruments. For example, in a recording of Saint-Saëns' Organ symphony (on Pentatone), the Torus added colour and stature to the orchestral organ, while (and this is the important point) leaving the main pickup from the orchestra practically unaltered. The result was a sound with much greater internal contrasts and dynamic shadings. This was simply much more exciting and colourful to listen to.

Generally, the Torus added character, atmosphere and weight, and it was clearly

#### **Review** Wilson Benesch Torus subwoofer and amplifier

#### 0&A

We spoke to Craia Milnes. director of product development and design at Wilson Benesch, about the tailoring of the Torus and how it reaches to the Core of high fidelity



#### HFC How does the Torus differ from a regular subwoofer?

CM The Torus is the outcome of a research and development project that goes back over a decade This led to the rejection of a large woofer, because it could not function dynamically with a midrange unit and a small woofer, because it cannot move a lot of air instantly. Instead, we enlarged the diaphragm: with neodymium motors, you can drop the motor into the diaphragm. This prompted the design of the Core

#### How does the Core work?

The 16kg Core replaces the basket and motor assembly of a conventional driver. It connects to the base plate and spikes that meet the outside world. We also use a remarkable new material, Boron Nitride, in the coil former, to conduct heat away from the coil

The Core features two motors to control all moving parts, and naturally return these moving parts to zero, making stiff suspensions redundant. The Core also acts as heatsink and its highprecision, self-locating nature guarantees everything is located precisely without the need for complex jigs and fixtures, and with no structural reference to the outside cabinet. In the Torus, the enclosure is simply constraining the compression and decompression of air.

#### Why don't you use a conventional diaphragm in the Torus?

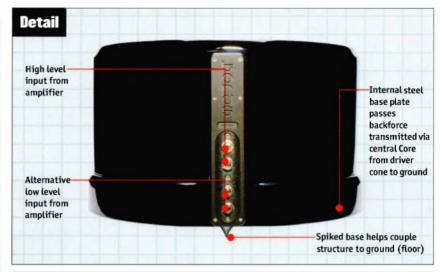
There are huge forces exerted upon the diaphragm in the Torus system. A conventional diaphragm would be torn apart by these forces. Instead, the Torus diaphragm is based upon a toroid, which gives inherent strength

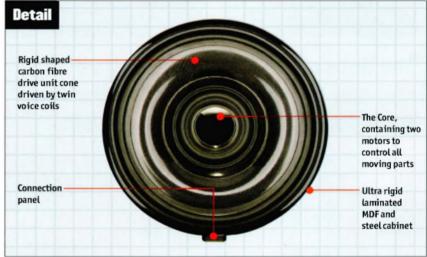
The fabric used in this diaphragm only became commercially available during the development of the Torus and is formable into complex shapes. This enables the fibres to align themselves naturally in the direction of the forces they have to cope with. The resultant structure is capable of

withstanding loads in excess of 100,000 times its own mass.

Why have you isolated the amplifier from the Torus enclosure? People go to great lengths trying to isolate systems, even down to isolating cables from structural borne vibration. But, they happily accept the design of a subwoofer







■ much faster at producing and releasing notes than most subs. It has a genuine grip on the bass that brings out the architectural qualities of each recording. As such, it was able to restore a natural sense of structure to the music whilst avoiding any bloom or excess.

Wilson Benesch doesn't classify the Torus as a subwoofer, but as an infra-bass generator. In our view, the distinction is largely semantic. After all, if it walks like a subwoofer and talks like a subwoofer, there is only one conclusion to be drawn, and even Wilson Benesch only

> that it does something fundamentally different. It is a fine subwoofer, not necessarily better than the best available, though it is certainly in that ballpark. The only real disadvantages are a relatively

limited maximum acoustic output (probably not an issue except under exceptional circumstances) and a high selling price, though even this is fully justifiable given the materials used and the build quality involved, both of which are exceptional. HFC

Alvin Gold



same cabinet!

## A y r e

#### MX-R mono amplifier



The Ayre MX-R represents a radical new approach to power amplifier design, exceeding all previously known performance limits. Housed in an ultra-rigid chassis machined from a solid block of aircraft-grade aluminum, the MX-R's unique form factor provides for easy placement as well as a stunning appearance. Innovative new circuit technologies combine to create a previously unrealized sonic experience that will deepen your appreciation of your favourite music.



t: 01727 865488

e: info@symmetry-systems.co.uk

w: www.symmetry-systems.co.uk



**PRODUCT** Cyrus Pre vs2 and 6 Power

TYPE Stereo preamplifier and power amplifier

PRICE (Pre Vs2) £600; (6 Power) £400

KEY FEATURES (Pre vs2) Size (WxHxD): 21.5x7.5x36.5cm

- Weight: 3.7kg
   Inputs: seven single-ended phono
   Outputs: preamp, tape, single-ended phono,
- headphone socket ◆ Adjustable input sensitivity ◆ (6 Power) Size (WxHxD): 21.5x7.5x36.5cm ◆ Weight
- 4.3kg Input: single-ended phono Rated power: 50 watts per channel (8 ohms)

CONTACT № 01480 435577 • www.cyrusaudio.com

oHS (Restriction of Hazardous Substances) legislation has hit Huntingdon, the spiritual home of British hi-fi. The evil lead is being eradicated from the face of audio. RoHS compliance is one reason for Cyrus revamping its amplifier range and bringing in the new vs2 (Virtual Servo 2) versions of its integrated amplifiers.

However, legislation is not the sole cause of the company's most affordable pre/power combination to date, even though these components are closely related to the new RoHS-compliant integrated range-mates. This pre/power gives Cyrus a range at neat £200 intervals from the £600 6 vs2 integrated upwards, although the X series leaves a rather bigger gap in pricing terms.

The Pre vs2 is currently the only preamp in the range; there is still the DAC XP (which is a DAC with a preamp stage), but the X series preamp has been usurped by this new upstart. Virtual Servo 2 is the latest incarnation of the preamp design in all new Cyrus amplifiers. Its precise details are closely guarded, but in practice, it allows for the use of fewer capacitors in the signal path than traditional circuits. The '2' indicates both RoHS compliance and a refinement of the circuit, to include a new volume IC and a simpler layout than its predecessor.

This preamp is based on the latest Cyrus 8 vs2 integrated amplifier and has all of the features you'd find on that design, including full remote control, a 6mm headphone output

(albeit on the back panel) plus luxuries such as balance control and variable input sensitivity (+/-2dB relative to the CD input). The latter is a first for Cyrus and will be useful for anyone with older source components and/or turntables. Such facilities are ultimately at the mercy of the recording level of the software, which can vary enormously, but it's nice to see them on mid-priced components. Other new features include a mute button and a headphone on/off switch on the front panel.

Inputs run to a generous seven, the corresponding front panel buttons sport names including 'MP3' and 'Link', the latter relating to connecting Cyrus' hard disk player and multiroom system.

The 6 Power is the smaller of two new Cyrus power amps. This must rate as the least expensive British power amps on the market, and the fact that it comes in Cyrus' trademark die cast chassis is quite a coup. It is rated at 50 watts into eight ohms and manages to deliver a healthy 80 watts into four.







#### "You could ask for more power if you spent more money, but only the finest can beat it when it comes to spatial resolution."

The other is the 8 Power (£700), which only delivers an extra 10 watts per channel, but has a better measured performance and higher quality components. The main practical difference is that the 8 Power can be bridged and used as a monoblock, which makes it highly upgrade-friendly. Unlike the 6 Power, it can also take advantage of a PSX-R outboard power supply which also increases power output - an 8 Power/PSX-R in mono form is claimed to deliver 125 watts into eight ohms.

#### **SOUND QUALITY**

The Cyrus combo is adept at extracting qualities like spaciousness and dynamics. You could ask for more power if you spent more money, but only the finest competitors can beat it when it comes to spatial resolution and timing. A good example we found was Flying Mole's CA-S100 (reviewed next month), a digital amplifier of the purist persuasion, with none of the luxuries afforded by the Pre vs2 - it has a mere three inputs and no remote control. Nonetheless, it did deliver greater precision and power.

The duo makes a very refined noise for the

price and feature count, delivering large doses of detail in a relaxed and musical fashion. Imaging benefits from the good treble extension, too; when the music calls for it, you get an expansive, room filling sound that is highly convincing. Gillian Welch provided the system with an open and broad soundstage that while slightly hard edged – as is the case with the recording – let both detail and music flow with little effort.

It made mincemeat out of the preamp sections in every integrated we could find to throw at it. Even the preamp stage of the Flying Mole was no match for the Pre vs2's harmonic detail and depth of sound, while most front ends sounded flat by comparison.

In an attempt to discover more of the 6 Power's potential, we brought in a pair of ATC SCM 19 standmounts. These are highly analytical and none too sensitive speakers. which sort the men from the boys when it comes to dynamic power. The Cyrus impressed by taking them if not firmly, then at least comfortably in hand and extracting a well timed and highly revealing sound. Jose Gonzalez' Veneer is still a terrible recording (made and produced by the artist, presumably with a broken microphone!), but this system showed that it is musically beautiful despite its technical shortcomings. It puts the music first,

even though it serves up a plentiful insight into

> the process involved in its mechanical creation

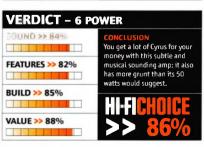
With so few alternatives in the way of pre/power combos at, or near this price point this Cyrus pairing

would almost appear to have the field to itself. However, as the Flying Mole revealed, it can be outgunned by a really good integrated. And there are a few good integrated amps at £1,000. They don't give you the ease of upgrade offered here, but Roksan, Arcam and Primare do have attractive casework and can often be upgraded by bi-amping. Nonetheless, we are confident that you will struggle to find a better preamp near this price, and if another brand can match the 6 Power for the money. we'll be impressed. HFC

Jason Kennedy









PRODUCT Densen Beat B-410

TYPE CD player

PRICE £1,000 (Gizmo remote £150)

KEY FEATURES Size (WxHxD): 44x6.4x31cm

CONTACT ☎ 07799 146002 @ www.densen.dk

ensen's line of sleek, brushed-aluminium hi-fi separates is not known for regular changes of models. So, when a new model is added, it's for good reasons. We've had plenty of enjoyable experiences with amplifiers and CD players from the brand and were excited to be the first recipients of the latest CD player addition to the range.

The existing Densen CD players are the Beat B-400 Plus and B-400 XS, and both remain in production. The B-410's raison d'être is that it extends the possibility of Densen ownership to less well-heeled audiophiles; the B-410's price undercutting the B-400 Plus by around £300,

the XS by over a grand. It shares a few features with these existing 400 models, but there are enough differences in important areas to make it effectively a unique machine.

Densen's Beat B-410 is upgradable by software download (though it's not clear what those upgrades may consist of). It also has some other identifying features including the 'Digital Denlink', which couples it to a suitable Densen digital input (DAC or processor) with better integrity than that provided by S/PDIF. That's on a small D-connector at the rear, alongside a further pair of D-sub connectors that serve to connect the unit to other Densen equipment for unified control.

Speaking of connectors, Densen uses a BNC for the digital output (coaxial only, there's no optical link). This is switchable to reduce stray emissions when it's not in use, while the analogue output appears on two sets of sockets. In terms of ergonomics, the player is a little unprepossessing: the display is neat enough, but the transport (a computer-style one) is clunky and not incredibly fast to load

discs. Worse, one of our pet peeves – the lack of fast forward and reverse on the front-panel controls – is made particularly aggravating by the fact that the remote control, the admittedly very cool Gizmo handset, is an optional extra costing a cool £150.

Internally, the player is built to Densen's usual high standard. The transport is claimed to be 'Highly Customised' in terms of master clock and software: it feeds the audio circuits via its onboard digital output. Digital conversion is by a mystery component underneath a screening can, while the output buffering consists of discrete-transistor circuits. A generous toroidal transformer and some chunky smoothing capacitors look after the power supply requirements.

We were perturbed to discover that the output level is very high — not just the ten or 20 per cent above the notional 2V of many CD players, but more than double that figure. 4.2V is a lot of level and, significantly, enough to overload the input of some amplifiers. With the growing prevalence of electronic volume







#### "The harder one listens, the more evident it becomes there is some veiling of details and it is hard to focus completely on the music."

controls and buffered inputs, levels over 3V can present a problem. Densen's own amps will doubtless all prove quite happy with the B-410, but that may not be true with amps from other makers. Attenuated interconnects will solve the problem, at a price, but we can't imagine why Densen thinks this a good idea.

As with all Densen components, the case is made of flat panels and the edges are on the aggressive side, though there's less of a nasty burr on them than on one or two amplifiers we've seen recently.

#### **SOUND QUALITY**

Not having heard a Densen CD player in a while, we were relatively free of preconceptions, though memories of sophisticated and engaging amplifiers put us in pleasantly receptive mood. First impressions were positive, with a lively quality to the sound that encouraged extended listening sessions. It was only when we yielded to that temptation and settled down with a selection of familiar albums that something gradually emerged as being amiss.

It seems this player lacks insight. The harder one listens, the more evident it becomes there is some veiling of details and it is hard to focus completely on the music.

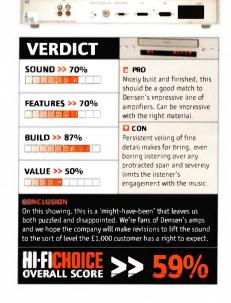
Exactly how this comes across depends on the music. With large ensembles – symphony orchestra, multi-layered rock and so on – it's a question of how easily one can hear the inner parts, follow what they are playing and locate them within the stereo image. With simpler music such as voice and guitar, there's a slight but irritatingly persistent 'fog', which seems to affect the musical message more than any specific hi-fi attribute one can point to. Good piano recordings seem to lose some of the instrument's individual character, while subtle low bass lacks tunefulness and precision.

Intrigued as to what was causing this, we ran some lab tests on the player, which showed that its performance in almost every area lags current standards for decent players at a quarter the price. Jitter and distortion in particular are considerably worse than figures we've obtained for recent budget players, while noise is no better than mediocre and

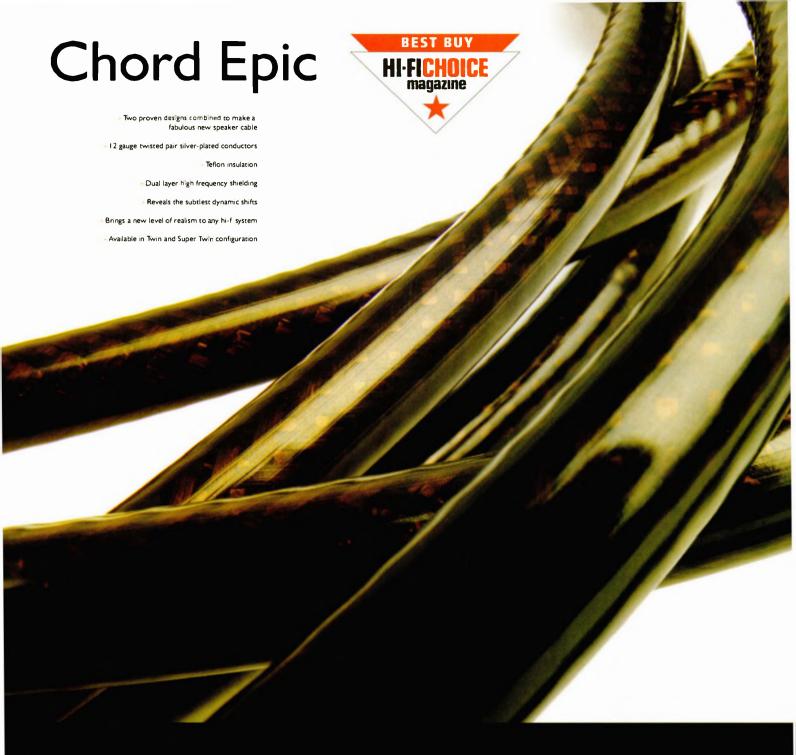
stop-band rejection average. We're also concerned about clock accuracy, which is very poor at 650ppm error – more than far enough from spec to prevent many DACs from locking to the B-410's digital output. Finally, mechanical noise from the transport is higher than we'd like, with both a continuous hiss and a periodic clicking noise.

It's hard to avoid a suspicion that Densen has rushed this product to market. The company's fine reputation is, as our own listening and technical tests have repeatedly shown in the past, well deserved. As it stands, we find ourselves quite unable to recommend the B-410, apart from it matching other Densen kit. Sonically, it's uninvolving; technically, distinctly disappointing. **HFC** 

Richard Black







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## Little and large

ALR Jordan's new speaker could be the perfect answer for small rooms

PRODUCT ALR Jordan Classic 1

TYPE Standmount loudspeaker

Price £500 per pair (ES72 stands: £200 per pair)

CONTACT 20 01730 261924

@ www.uberphon.co.uk

his new speaker completes the ALR Jordan Classic model range, and that means that it has a hefty dose of added Karl-Heinz Fink. The doyen of European speaker design voiced this speaker, along with the entire ALR range, several Castle designs and more

The Classic 1 is a two-way compact, measuring 13.7x22x19cm (WxHxD) and finished in real-wood veneer. The sealed box acoustic loading, however, is unorthodox, and so is the use of a Ted Jordan alloy cone bass/ mid driver. This is normally used in single-driver, full-range systems, but here, it is partnered by a conventional polyester dome tweeter, which takes over the reins at 2.8kHz, with 24dB/ octave slopes to avoid excessive overlap.

Sealed (or infinite baffle) loading means no port noise, of course, and also, a bass roll-off typically starting at a higher frequency than a vented enclosure, though the rate of attenuation will be correspondingly reduced. This doesn't show in the published numbers, which indicate bass extending to 70Hz, but without any idea of how far the output is down at this frequency. Our best guess is -6dB. The small size of the enclosure, plus the IB loading, mean a low sensitivity (claimed at 86dB), so budget for a moderately high power output, though the speaker gives every indication of being an easy electrical load. The Classic range (not just this model) is available in a choice of alder, birch and black ash real-wood veneers.

The Classic 1 was supplied with a pair of matching ES72 pedestal stands, optimised for the speakers. They're well finished and stable, and come with adjustable spikes and some Blu-Tack for use between the stands and the speakers.

#### **SOUND QUALITY**

To put it bluntly, the Classic 1 is a peach. There's no magic here; nobody has waved a wand, or reinvented the laws of physics, and the bass doesn't extend deeper than is feasible It's a small speaker and it doesn't pretend to be anything else. Indeed, the absence of port loading almost guarantees that bass weight

will not be maximised, but the tonal quality of the speaker is remarkably neutral across the band upwards of the upper bass. Even with medium to large scale orchestral material, the lack of bass weight is not always obvious, and it has clear and open voicing. Yes, of course, the low frequency fundamentals are missing, but the early harmonics are certainly present, which means the loss is not always immediately apparent.

There are some mild colorations here, perhaps associated with secondary radiation from the relatively lightweight enclosure. This can be felt clearly with fingers resting lightly on the boxes while music is playing. The resulting colorations can be heard with stringed instruments and especially clarinet in the upper-middle registers, which tends to sound a little hard and insistent. The treble is surprisingly well behaved, however. The Classic 1 even makes a decent stab at playing loud without sounding too stressed, given an amplifier with enough power - an Arcam FMJ A32 on this occasion. This amp's laid-back balance is ideal for this application.

The Classic 1 is an exacting, yet easy on the ear design, but unfortunately, it's also a rather costly little speaker for those who are space strapped. The lack of absolute bass weight can be addressed to an extent by careful adjusting of positioning relative to the back wall. Apart from a midband balance that sounds as though it is lacking in gravitas due to the limited bass output already highlighted, it is difficult to be anything but enthusiastic about this talented newcomer. HFC





PRODUCT Croft Micronaut Precession Land Polestar L

TYPE Stereo preamplifier and power amplifier

PRICE (Precession I) £600; (Polestar I) £800

KEY FEATURES (Precession I) Size (WxHxD): 22x10 5x33 cm → Weight: 2.5kg → Inputs six line-level single-ended phono inputs → Outputs tape (fixed) and power amp (via volume) single ended phono → Battery power supply (1,000 hours, 10xAA) → (Polestar I) Size (WxHxD): 22x10 5x33 cm → Weight: 3.7kg

Single-ended unbalanced phono inputs ◆ 4mm socket/binder speaker terminals ◆ IEC mains input
 25W per channel output power (8 ohms)

CONTACT 2 01746 716881 # www.eminentaudio.co.uk

lenn Croft has been doing his own thing quietly and with very little fuss for some 25 years. Croft builds valve amps that are less expensive than most, and has gradually built a cult reputation for creations with exceptional sound quality for the money.

The Precession I preamp and Polestar I stereo power amp, which are the joint subjects of this review, are both members of the Micronaut series; Micronaut, however, is also the name of a different preamplifier, albeit one that looks virtually the same as the Precession models

There are actually four Precessions, labelled I through IV, and priced from £600 to £2,000. These partner four different Polestar power amps, also labelled I through IV, and priced from £800 to £4,000. One reason why this £1,400 Precession I preamp plus Polestar I power combination is out of kilter with its bigger brother in terms of price, is because they are allegedly being offered as 'loss leaders'. Although, there are no formal arrangements allowing end-users to upgrade through the range.

#### Croft Precession I preamplifier and Polestar I power amplifier [Review]





#### "When Dylan finished, I heard an encore from the kitchen, where my wife had been dancing along while preparing the haggis."

The surprising feature of the Precession I preamp is that it has no mains input, instead being powered by ten regular AA alkaline dry batteries. A set is claimed to last for 1,000 hours and the sound quality is suggested to vary according to the type of battery, which might be something to investigate when time permits. There's no phono stage, or any degree of remote control. The two large knobs cover volume and selection between six line level inputs, while a pair of toggle switches provide power and muting. The volume control has a particularly nice 'feel', while clockwise rotation of the selector tracks the inputs from right to left, which seems a little odd.

The zero feedback Polestar I is rated at a modest 25W per channel (its II, III and IV brethren have 40W, 60W and 85W respectively). All use Croft's hybrid 'transvalve' circuitry, which combines a double-triode valve with MOSFETs, so avoiding the excessive heat output and costly output transformers associated with all-valve amplifiers.

#### **SOUND QUALITY**

The new amplifier might have exchanged some thermionic components for solid-state devices, but right from the off, this combo immediately demonstrated the Croft pedigree, with its beautifully open presence and a delightful freedom from timesmear.

Things did seem a little coarse and rough around the edges for the first few hours, but by

the second day the combo was really starting to sing, and steadily adding increasing sweetness to an initial impressively transparent mix.

One of the best tests for an amplifier is how well it the first few hours, but by recordings like early Velvet

distinguishes between the different sources and components further up the chain. The Croft combo proved quite exceptional here. Even when driving a relatively modest pair of Focal Chorus 714Vs, the difference between connecting a Naim CD player via Chord Company Anthem or Nordost Red Dawn cables was clearly audible.

A pair of B&W 800Ds were also wheeled in, providing exceptional bandwidth and dynamic range, alongside a difficult load, but decent enough sensitivity. Although the modest power output limited the loudness, the combination actually proved quite satisfactory. Indeed, the only real cause of frustration arose simply because this amplifier is so clean and crisp through the midband that one wanted to keep turning it up to impractically high levels.

The only audible blemish seemed to be a slight lack of control at the very lowest frequencies, which was just occasionally noticeable on bass guitar and kick drum, and with cathedral organ. This in turn was perhaps made more noticeable because the upper bass and lower midband is a little dry in character.

This is an amplifier that leads with its voice band – and what a voice band it is too. It has a magical realism that seems to wring every emotion out of the musicians, and leave the listener transfixed, hanging on every word.

This amplifier is so crisp and free from timesmear, I found myself playing really 'dirty' recordings like early Velvet Underground as

loudly as they would go. The sound did have a slightly edgy quality, true, but the experience was still very enjoyable.

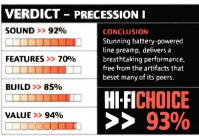
Nirvana's *Bleach* also made a rare appearance from

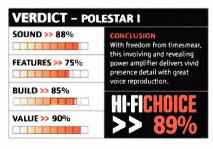
its dust jacket, while more gentle material like Sufjan Stevens' *Illinoise* revealed its more delicate side. When a side of Bob Dylan's *Modern Times* finished, I heard an encore from the kitchen, where my wife had been dancing along while preparing the haggis.

For our *The Collection* edition, I had the pleasure of reviewing the very lovely, but exceptionally costly, DarTZeel NHB-108 Model One amplifier. This little Croft combo didn't match the DarTZeel's smooth sophistication, but it did get in the same ballpark for speed and vivacity. While the Croft's are exceptional, offering genuine audiophile performance at a remarkably affordable price, they also whet the appetite for others in the Micronaut range, to see how much more can be wrung out of this clever and deceptively simple design. **HFC** 

Paul Messenger







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I could do with one of those!



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PRODUCT Pro-Ject Xpression II

TYPE Turntable, arm and cartridge

PRICE £250

CONTACT ☎ 01235 511166 # www.project audio.com

ro-Ject, the Czech Republic's foremost turntable maker, has been busy upgrading its Xpression deck, a model that has been around for three years. The Mkll Xpression is still a solid plinth design with a cast alloy platter, AC motor and carbon fibre tonearm, but it differs from its predecessor in a few key areas. The carbon arm, was radical at the price, but it never looked that substantial. But now, it finds itself in a thicker form with better bearings. Like upmarket Pro-Jects, the arm cable terminates in phono sockets like any other source, meaning you can easily upgrade this important link for better performance.

The new pick-up arm (8.6c) is built from conical section carbon fibre with a glued-on aluminium headshell, running on gimble bearings with sapphire beds. It is fully adjustable in height and can even have its tube rotated in order to align azimuth (the uprightness of the cantilever from the front).

The turntable's base is much improved; combining metal cones with a Sorbothane alternative, it offers better isolation than the rubber feet of yore. As this 'suspension' is all the turntable has to offer, this could have a significant effect on the end result.

There is also an increase in platter mass, up by 15 per cent, which should produce a small and hopefully worthwhile, increase in inertia.

Unlike many turntables, this is a fully functioning deck, complete with an Ortofon OM10 moving magnet cartridge and a rubber decoupled 'quiet running' motor, that uses a flat belt to drive the alloy platter.

#### **SOUND QUALITY**

Once you have set up the downforce using the crude calibration on the counterweight, fiddled with the anti-skate dongle, and located the on/off switch under the plinth, you are ready to go. The dedicated will want to check the factory-set cartridge alignment; our sample only required a minor tweak to bring it to anal-retentive installation levels.

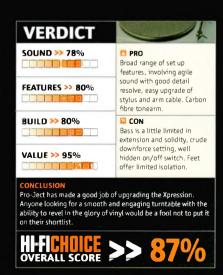
Its sound reveals much of what makes vinyl such an appealing medium. It is open, energetic and spacious, with plenty of detail and a good helping of tonal colour. Unlike some budget decks, it is also highly stable and tracks well, even if it is placed closer to the speakers than we would like.

There is no hum if you remember to connect the earth cable to both turntable and phono stage. In fact, it's quiet enough to reveal hum in the run-in groove (presumably coming from the cutting lathe). The supplied Ortofon OM10 Super cartridge (£40), is limited when it comes to bandwidth extremes, a heavy track from Massive Attack successfully provoked OTT upper bass, but we didn't hear the depth and

weight that better needles have dug out of this particular groove. But, Ortofon makes three higher quality styli that can be swapped for the standard 10, should you want to upgrade.

While the Xpression II is no match for the Rega P3 we had on hand (which is £400, including cartridge), it should provide a worthy competitor for Goldring's GR2.2 rival. The latter has a harder hitting sound, but lacks the subtlety that the Pro-Ject can deliver. Put on a truly classy recording and it revels in the luxury of sound on offer and gets right into the groove. It may be time for the competition to go back to the drawing board. **HFC** 

Jason Kennedy



**Sennheiser LX90** 

TYPE In-ear headphones

PRICE £35

CONTACT 2 01494 551551 # www.sennheiser.co.uk

ennheiser's vast range of headphones doesn't just include models for portable audio; the company has so many designs that they get divided into several categories. The 'Style' range consists of three models that not only look smart, but have apparently been tuned for neutral sound. This should make a welcome change from the usual boom-n-tizz of too much sound-on-the-go. The company sent us all three Styles: the LX90 (£35) tested here, which has a clever springy headband, the MX90 (£40), which clips over each ear like a Bluetooth headset, and the OMX90 (£50) 'twist-to-fit' model. All three appear to use the same driver.

Some differences will be down to the fit on individual ears, but we tried these on several listeners and came to a strong preference for the LX90 (which happens to be the only one not including a volume control in the lead). All three do indeed have an admirably neutral balance, but we felt the LX variant offered significantly clearer sound with a degree of

resolution that really does justify the term 'hi-fi'. The MX and OMX seemed quite seriously boxed-in and congested, but the LX is more open and allows one to hear much deeper into the music. As seems invariably the way with in-ear 'phones, stereo imaging is less good than 'proper' headphones can create, but in the noisy outdoor world, that's hardly an issue anyway. Meanwhile, the unexaggerated treble makes

MP3 artefacts much less noticeable than with many in-ear headphone designs. **HFC** 

Richard Black

#### **VERDICT**

CONCLUSION

A cut above average portable headphones/earphones, with proper hi-fi standards of pourtality and detail



**Black Rhodium Harmony** 

TYPE Analogue interconnect

PRICE £60 (1 m terminated pair)

CONTACT ☎ 01332 342233 ↔ www.blackrhodium.co.uk

rom the outside, there's not much about this interconnect that marks it out as in any way different from the many (very many) competing models, at or near its price. Still, it's not like Black Rhodium to follow the horde even when designing to a budget and two features stand out about Harmony's construction. First, it's unscreened, with two identical conductors, insulated and twisted together before being sheathed together. Second, it uses silicone rubber insulation instead of the usual suspects, a long-time Black Rhodium favourite.

Unscreened interconnects may sound like a recipe for hum and interference, but in practice it's difficult to get this cable to pick up either. Twisting conductors together is often a more potent anti-hum measure than screening anyway, and when connecting any typical modern source to an amplifier, the chance of a problem is near zero. You'll also notice that the two conductors are twisted together (something first publicly recommended, we



believe, in these pages!) which theoretically worsens crosstalk. The extent is negligible, though, and is more than offset by the reduction in likelihood of picking up magnetically-induced hum as a bonus.

As a result of all this, sound is clear and notably agile, with bass that extends pretty well (if not truly seismically) and articulates admirably. Treble is extended, open and sweet with just the tiniest loss of ambience compared to expensive reference cables. Tonally, sound is

neutral apart from a hint of upper-bass lift, a common Black Rhodium characteristic that is easy to live with, and imaging is excellent in both width and depth. **HFC** 

Richard Black



#### **Ortofon Salsa**

TYPE Moving-coil cartridge

PRICE £200

CONTACT ☎ 01235 511166 # www.ortofon.com

ostalgia isn't what it used to be, they say, but opening the classic Ortofon packaging (itself unchanged in something like two decades) and examining, installing and testing a real live phono cartridge brings it all flooding back. And that's before examining the Ortofon website and finding that so many of the old favourites are still available, including models older than most of HFC's staff and contributors!

But, this model is brand new, and pretty much an entry-level model as MC cartridges go. It shares a body design with an even cheaper newcomer (the Samba at £150) made in orange 'Noryl' engineering plastic, but has a more sophisticated stylus and cantilever. It is broadly in the 'medium output' range for MC models, ideally wanting a good step-up device but not desperately critical for noise.

We gave it a good outing in a couple of turntable/arm combinations and rapidly came to appreciate its refinement, insight and general musical involvement. The classic



advantages of MC cartridges over the generally cheaper moving-magnet types include better precision and sharper focus, and while the very cheapest MCs sometimes struggle to deliver that with tonal neutrality, good models like this one do have a lot to offer in that direction, without sacrificing basics like tracking ability.

There's a slight 'cuppy' coloration which we're pretty sure is a function of the body. It's not serious and does little to detract from the excellent pace and timing and the fine

extension at top and bottom. In typical Ortofon fashion though, there's no strong preference for any one musical style, always a useful result. HFC

Richard Black

#### **VERDICT**

is a fine first MC and ives a good taste of the cal things Ortofon'sbest



**Atlas Hyper 2.0** 

TYPE Loudspeaker cable

PRICE £15/metre (terminations extra)

CONTACT 2 0800 731 1140 # www.hifi.org.uk

t's interesting that this £15 per metre speaker cable is more than halfway up the Atlas range and is rated by the company as one of its 'high performance' models. From some cable manufacturers, £15 per metre will hardly get you the time of day! Nevertheless, construction is not unlike other companies' in this price range, with a straightforward pair of 2mm conductors (hence the name: there's also Hyper 1.5 and Hyper 3.0), each insulated in PTFE, padded out with cotton and sheathed in PVC. Cotton is more common in studio cables, where it reduces abrasion damage and microphony, but it could well be a useful attribute in hi-fi cables too. Hyper is available off the reel from dealers, or as a terminated set as in our sample, which, incidentally, has some very nice lightweight 4mm plugs, crimped to the wire.

Whether the cotton plays a part we couldn't say with certainty, but there was plenty we liked about Hyper 2.0. It has a direct and

unfussy presentation that shows no obvious signs of coloration and offers good, strong bass and open treble. If one compares it directly with fancier and dearer designs, it becomes apparent that there's a slight sacrifice in ultimate bass and detail, and its cousin, imaging. But, Atlas has achieved something praiseworthy in making these compromises far from obvious with this wire. In fact, taken in isolation or indeed in the

company of its peers. Hyper 2.0 is notable for its fine combination of precision and musical involvement. HFC Richard Black





#### **GROUP TEST & LAB REPORTS: PAUL MESSENGER**

## LOUDSPEAKERS

As you near the high end of hi-fi, speakers become a diverse bunch

his month's loudspeaker group test covers a relatively upmarket sector. Our six candidates cost between £1,300 and £2,300 per pair, comprise four floorstanders and two standmounts, and show no relationship between size and price.

The largest model with the most drive units (Focal) is also one of the least expensive, but then it's also the only one that isn't clad in real wood veneer, which always has a significant bearing on price. By the same token, two of the smaller models (Kudos and Leema) are among the most costly. They're also two of the prettiest, which is one contributing factor, but 'made in Britain' is another ingredient that carries a healthy price premium these days. The Chinese built JAS Audio is easily in the same class in terms of presentation and finish, yet it costs around two-thirds the price

Physical perceived value is obviously important when confronted by a range of alternatives on the shop floor, but it shouldn't take precedence over auditioning. Furthermore, in an ideal world, part of that listening should, if

possible, be conducted in the room in which the speakers will be used.

It's virtually impossible to predict how any given pair of speakers will react with any given positioning in any given room, because the interactions between the various bass sources - both drive units and ports - are exceedingly complex.

In our group, for example, the DALI has four distinct bass sources - two drivers fairly close together on the front, plus two rear ports spaced well apart and well separated from the drivers by a deep enclosure. Whereas, the Focal speaker has no fewer than three drivers and three ports, but placed quite close together in a continuous line down the front to the floor.

The Roksan and Leema both have two drivers close together, well off the ground, plus a rear port separated by a relatively slim enclosure and again clear of the ground. While the Kudos and JAS Audio are standmounts, each place their port and solitary driver quite close together and well off the ground.

These variations, and others besides, do at least help to explain the

unpredictability of bass/room interactions, although it's an inexact science - there's no easy formula to provide a panacea. HFC

#### **EQUIPMENT USED**

- Burmester 001 CD player
- Linn Sondek LP12 turntable
- Rega RB1000 arm
- Rega Apheta cartridge
- Magnum Dynalab MD 106 T tuner
- Naim NAC552 preamplifier
- Naim NAP500 power amplifier
- Cables from Vertex AQ, Chord Company, Abbey Road Cables

#### **MUSIC USED**

- Rodrigo Y Gabriela Live Manchester and Dublin
- Bob Dylan Modem Times
- Lowell George Thanks, I'll Eat it Here
- Nitin Sawhney Beyond Skin
- Squarepusher Ultravisitor
- BPO Karajan Wagner Tannhauser
- BBC Radios 3 and 4 were also used throughout the test

















#### LISTENING TESTS

Loudspeaker listening poses more complex problems than those involved in assessing other components. Loudspeakers vary greatly and interact strongly and often unpredictably with the room. The 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 for this group, giving scope to adjust to the changes in balance and to experiment with positioning.

#### LAB TESTS

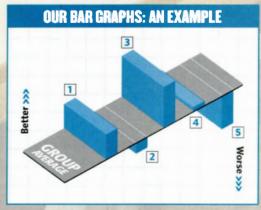
The speakers were tested under in-room conditions, to best represent real-world conditions. The test equipment used included a Neutrik Audiograph analogue signal generator with synchronised pen recorder, used to plot the far-field in-room averaged response traces and impedance plots. Pair-matching was also checked at one metre.

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

#### **LAB REPORTS: THE BAR GRAPH**

Our 3D bar graphs are a simple way of showing how the speakers compare across quantitative and qualitative measures. Individual parameters are assessed and shown as better or worse than the group average.

- 1] Sensitivity: Sensitivity measures how loud a speaker will go for a given voltage from the amp. It's scaled to 2.83V at 1m (one watt of power for an eight-ohm load). This figure can be misleading, as sensitivity varies significantly and lower-impedance speakers extract more current and hence power from an amp than higher-impedance ones.
- **2] Bass extension:** A speaker's bass is heavily modified by the room. 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:** The lower the impedance, the more current it extracts from the driving amp for a given volume Lower impedance designs have higher sensitivities, reducing voltage requirement for given loudness levels.
- **4] Overall frequency balance:** 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 of a speaker has much to do with the delicacy of the sound, and its ability to deliver subtle harmonic shading.



#### £2,200 per pair 20845 644 3537 # www.dali.dk

#### **DALI MENTOR 6**

DALI's speaker series had a mid-range gap. Until now

ALI is an acronym that stands for Danish Audiophile Loudspeaker Industries. The company makes a number of different speaker ranges to appeal to a wide variety of customer priorities. Those placing stereo music performance at the top of their agendas have hitherto had to choose between the excellent, affordable Ikons and the considerably more costly Helicon and Euphonia ranges. The price and presentation gap between Ikons and Helicons was all too obvious: enter the Mentor range. But, it's more than a mere gap-filler.

At £2,200 per pair, the Mentor 6 falls roughly halfway between the Ikon 6 and the Helicon 400 in price. All three models share the same 'two-and-two-halves-way' configuration, though both the drive units and enclosures are different. All three speakers use variations on DALI's dome/ribbon treble module theme, plus twin bass/mid drivers arranged so that the lower unit is only used to add extra bass oomph.

In fact, the Mentor 6 has rather more in common with the Helicon 400, both in its superior quality drive units, and also the very



substantially built, real wood, cherry-veneered enclosure. The latter may not have the costly laminated curved sides of the Helicons, but it looks very similar in other respects, with gently curved front and back panels. However, weight usually provides clues to the build of an enclosure: while the 22.5kg Mentor 6 is just 4kg heavier than an Ikon 6, it's a whole 9.5kg lighter than the Helicon 400.

The two 165mm cast frame bass/mid drivers have DALI's proprietary dish-shaped 125mm paper/wood fibre diaphragm. Each operates into its own sub-enclosure, and each of these is reflex-loaded by its own rear port, tuned to 37Hz. The treble module combines a 28mm soft dome and a 17x45mm ribbon on a single chassis. The ribbon operates above 10kHz, partly to extend the bandwidth, and partly to ensure consistent and wide lateral distribution. The rear panel accommodates two pairs of good quality speaker terminals.

The speaker comes pre-fitted with a black MDF plinth, and the very deep enclosure further enhances stability, though the spikes have only thumbwheel lock-nuts.

#### SOUND QUALITY

The Mentor 6 delivers a whole lot of low bass, which is often welcome, but sometimes too intrusive, as the end result can 'thump' a bit with some material. This low bass emphasis is rendered that much more obvious because output through the upper bass and lower midband is a rather lean and dry.

This leaves bass instruments – both electric and acoustic – lacking in both warmth and punch. For example, the drive imparted by a bass guitar at full pelt, and the dynamic tension generated by cellos, are both muted and somewhat understated.

The midband proper sounds both uneven and slightly forward. This tends to highlight detail, but this is welcome. And, although boxiness is well controlled, there are some traces of upper-mid nasality, which again tends to be emphasised. On the plus side, the treble is strong but also impressively sweet, clean and smooth, bringing worthwhile delicacy and transparency to the party.

The strong deep bass proved too much under our room conditions, so the Mentor 6 loudspeaker would be better suited to a larger space or a more bass absorbing structure. Overall, it tends to fall between two stools, lacking the more even in-room delivery of the Ikons 6 and 7, yet without the midband smoothness of the Helicon 400. **HFC** 



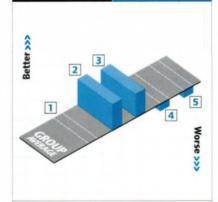
#### LAB REPORT

DALI claims a sensitivity of 89.5dB, which is fractionally higher than our tests suggest. Although this figure is not high for such a large speaker, it must be seen in the context of an impedance that stays close to 6 ohms throughout, and bass extension that goes comfortably down to 22Hz at -6dB (under in-room, far-field averaged conditions).

One reason for the good bass extension is that the ports here are tuned to a relatively low 37Hz. The problem is that their averaged output between 28Hz and 60Hz is around 6dB stronger than the level delivered by the drive units between 80Hz and 500Hz. Above 800Hz, there's a 3dB rise to a peak 700-900Hz, then a 4dB dip around 1.3kHz, a further 3dB rise to 2-2.3kHz, and another 3dB dip centred on 3kHz.

The treble proper looks well-judged and impressively smooth, but unevenness through the upper midband (500Hz-4kHz) is disappointing.

#### HOW IT COMPARES



- 1] Sensitivity >> 0%
- 2] Bass extension >> +30%
- 3] Ease of drive >> +25%
- 4] Overall frequency balance >> -10%
- 5] Response smoothness >> -10%

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1m/283V	89.5d8	89dB
Impedance (nominal/minimum)	6/- ohms	8/6 ohms
Estimated bass extension (-6dB)	36Hz	22Hz

## VERDICT SOUND >> 84% This hefty and solidly built floorstander is beautifully presented and finished. While the top end is smooth and sweet, the broad upper mid is rather uneven, the lower mid a bit lacking, and the low bass too strong.

#### £1,549 per pair 2 0845 660 2680 # www.focal-fr.com

#### **FOCAL CHORUS 836V**

The largest of Focal's 800V-series sports five drive units

he Chorus models have long been Focal's (budget) entry-level range. In introducing the third generation, this leading French manufacturer has adopted a new initiative. There are now two distinct Chorus ranges; the simpler, less costly and more traditional looking 700Vs; and the more stylish, expensive and more substantial 800Vs.

This £1,549 per pair Chorus 836V is the largest of five 800V-series stereo pairs, two rungs further up the ladder than the £1,000 per pair 816V reviewed in *HFC* 288, with three drivers operating in a two-and-a-half-way configuration. The much taller 836V has five drive units and is a full three-way design, delivering its bass output from a substantial triple-ported, triple-driver array.

The styling, based on contrasting synthetic laminates, is distinctive. Tapering side panels, finished in ebony or mocha woodprint, mean the speaker is slightly narrower at the back than the front, and reflect the fact that the internal faces are not parallel, to avoid



focusing standing waves. The front, back, top and base are a contrasting high gloss black, and all the panels are 20-25mm thick, with further stiffening provided by internal bracing. The whole thing sits on a very substantial alloy plinth, increasing the footprint to ensure good physical stability; the chunky if rather blunt spikes are top-adjustable, but lack lock-nuts.

Focal claims it doesn't trust others to make its drive units, and therefore continues to manufacture all drivers it uses in its French factory. All four cone drivers have 165mm cast alloy frames and 115mm diameter paper cones coated with 'Polyglass' glass 'micro-spheres'. The midrange unit has a different dust-dome treatment from the three bass units, to improve performance towards the top of its operating range, while the triple bass driver arrangement gives a total cone area roughly equivalent to a single 240mm dedicated bass unit.

The familiar inverted-dome Focal tweeter now has an aluminium/magnesium alloy diaphragm and new suspension. This is mounted in a rigid-cast chassis at the top edge of the enclosure, and is unobstructed by the V-shaped grille. It features three ports, (one firing downwards above the plinth) provide bass loading, and the signal is applied to a single terminal pair.

#### **SOUND QUALITY**

Straight from the box, the 836V delivers a thoroughly impressive performance. Given the imposing array of bass drivers on view, one might have anticipated some bass excess here, but in fact, the bass alignment turns out to be very well judged indeed, provided the speakers are kept well clear of walls.

More than any of the others assembled for this group test, this large Focal design makes a real stab at delivering genuine dynamic drama and tension. As such, it's particularly well suited to unravelling and portraying the layered complexities of large-scale material, whether orchestral or electronic in origin.

Besides its liveliness and grip, the 836V has a convincing warmth, richness and body, to a degree that eludes most of the others. However, it can sound thick and heavy in coloration terms; it does lack smoothness; and the top end can be coarse and obvious.

As is always the case, compromise is involved, and while the Chorus 836V is neither the prettiest, cleanest nor sweetest model in our group, it is one of the most involving and entertaining dynamically speaking, as well as one of the least expensive. **HFC** 

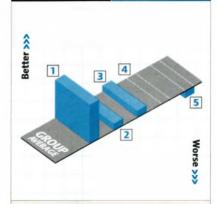


#### **LAB REPORT**

The manufacturer claims an unusually high sensitivity of 91.5dB, and this is more than borne out in our tests. While such a high figure is creditable in itself, it's also substantially compromised here by an impedance that drops below 4 ohms around 120Hz, a zone where plenty of amplifier current will be required.

With the complex porting tuned to 39Hz, bass extension is effectively limited to 30Hz under in-room conditions, and free-space siting is mandatory to avoid excessive mid-bass output. From 40Hz up to 300Hz, output is strong and well balanced, though there's a drop of about 4dB above that point. Things hang together well thereafter, with output a couple of dB shy through the presence zone (1.2-4.5kHz), with some recovery 5-10kHz. In truth, the 836V's averaged far-field in-room response is pretty well ordered overall, though not particularly smooth.

#### **HOW IT COMPARES**



- 1] Sensitivity >> +50%
- 2] Bass extension >> +10%
- 3] Ease of drive >> +10%
- 4] Overall frequency balance >> 0%
- 5) Response smoothness >> -10%

SPECIFICATIONS		119.00
Measurement	Rated	Actual
Sensitivity @ 1 m/2.83V	92dB	92dB
Impedance (nominal/minimum)	8/3 ohms	5/3.5 ohms
Estimated bass extension (-6dB)	33Hz	28Hz





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#### **JAS AUDIO ORSA**

Hong Kong based JAS Audio makes this curious standmount

relative newcomer to Hi-Fi Choice, information about JAS Audio and its products is limited, on both the company's own website and via UK importer Shadow Audio. A company statement tells us it's a: "Hong Kong based Hi-End Hi Fi equipment design house. The R&D team is a combined force of engineers from US, Hong Kong and China". The website shows an extensive range of classy loudspeakers, plus some valve amplification, but no information on the company history or its production facilities – most likely the latter is handled by outside suppliers based in China itself, which would explain the competitive pricing.

This £1,395 per pair Orsa is actually the least costly model in the JAS Audio speaker portfolio, and it's an unusual design in a number of respects. It's a good size standmount, constructed from two separate enclosures that are spaced slightly apart so that the port exit operates in the gap between. Both enclosures are beautifully finished in a deep red Makore veneer with multiple coats of high gloss lacquer. The front baffles are set at different angles, the lower one tilts backwards at 20 degrees from the vertical, while the top of the upper enclosure is tilted forward at some seven degrees.

It's a two-way design, housing a 150mm bass/mid driver with a 115mm plastic cone/dome diaphragm in the larger, lower enclosure. A ribbon tweeter, with pleated diaphragm roughly 20x45mm, occupies the top box, set deep behind a shallow, circular horn.

Exactly how the port loading is arranged, and whether the upper enclosure takes an

active role in loading the bass/mid driver, is impossible to ascertain from external inspection. Company literature makes much of the fact that the port output radiates through 360 degrees, via the slot between the two enclosures, claiming that this is the subject of a patent application. This is puzzling; any port will invariably radiate omni-directionally, since the source will always be smaller than the bass wavelength it's reproducing. And floorstanders with downward-firing ports are by no means unknown – witness the Focal in this group.

The tilts applied to the baffles help spread the internal standing waves, and internal damping is supplied by pure wool. The rear panel carries a single pair of high quality locking terminals, and a switch labelled Reference/Dynamic: the former was used throughout our tests.

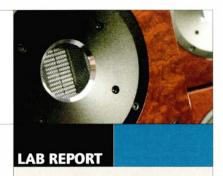
#### **SOUND QUALITY**

Although the Orsa has its peculiarities, in both design and measured performance, the sound it creates nevertheless has considerable charm. There are certainly grounds for criticism, especially in the decidedly modest bass extension and exposed treble. But there's also decent coherence that is very persuasive and engrossing, making it easy to focus one's attention on the music rather than become distracted by sonic limitations.

Although low bass is absent, the mid-to-upper bass has an evenness and neutrality that's more than fair compensation. Stereo images are laid out precisely, with decent focus and a reassuring lightness of touch. In part because the presence zone is rather too restrained, the treble is obvious and exposed, but it's also quite sweet and clear, so

that fine detail is clear and coherent.

Add in the wide dynamic range and spaciousness that's typical of the fine enclosure control and low box coloration offered by a very substantial standmount, and the result is a speaker that is musically rather more than the sum of its fantastic-looking parts, even if you include the limited bass weight. HFC

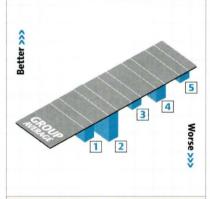


The unusual port arrangements adopted by this speaker results in a very well damped port output at a relatively high 68Hz. As a result, the Orsa delivered decent in-room output down to 50Hz but no lower, and did so quite evenly when the speakers were sited in free space.

Our sensitivity rating of 87dB is just 1dB shy of the claimed 88dB, and this is a respectable figure in view of an easy-to-drive impedance that stays above 7 ohms throughout. (A rear panel switch labelled Reference/ Dynamic slightly increases the impedance around 5kHz on the latter setting.)

The overall in-room far-field averaged response is very well ordered from 50Hz up to 1.4kHz, apart from a solitary peak at 270Hz. Between 1.4kHz and 6kHz there's a broad depression around 5dB down at its deepest. Finally, while the treble proper looks well judged in relative level above 6kHz, it's also rather uneven.

#### **HOW IT COMPARES**



- 1] Sensitivity >> -20%
- 2] Bass extension >> -40%
- 3] Ease of drive >> -5%
- 4] Overall frequency balance >> -20%
- 5] Response smoothness >> -10%

SPECIFICATIONS			
Measurement	Rated	Actual	
Sensitivity @ 1 m/2.83V	88dB	87dB	
Impedance (nominal/minimum)	8/- ohms	8/7 ohms	
Estimated bass extension (-6dB)		45Hz	



#### VERDICT SOUND >> 84% Gorgeous Chinese-made standmount features an unusual two-part enclosure PRACTICALITY >> 84% and a ribbon tweeter. Bass extension, presence and treble could be better, but BUILD >> 90% musically entertaining and communicative nonetheless **VALUE** >> 86%

## Exceeding expectations....



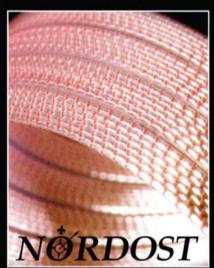
"...as things stand the benefits are considerable and the value of this unit is not hard to confirm." Hi-Fi Choice

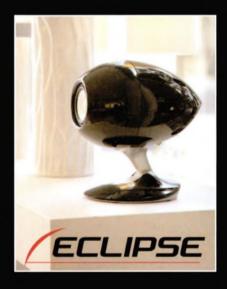
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#### **KUDOS CARDEA C10**

Kudos has been reborn by a former Neat Acoustics designer

udos has long been known for making some of the classier speaker stands around – the company's \$100 has long been a stalwart support underneath the standmounts in our speaker group tests, and the \$50 is an outstanding performer at a lower price. The company was taken over by Neat Acoustics a few years back, but has become an independent entity again and is now headed by ex-Neat designer Derek Gilligan.

Making its debut at one of last Autumn's London hi-fi shows, the rejuvenated Kudos brand was demonstrating an all-new Cardea range of four loudspeakers and some very attractive modular equipment racks, in addition to the speaker stands.

The Cardea range comprises two standmounts (C1, C10) and two floorstanders (C2, C20). Between them, the four mix'n'match two main drivers, two tweeters and two enclosures. As such, this C10 standmount uses ingredients of the very finest quality in order to justify its substantial £2,200 per pair price.

Understated restraint is very much the watchword here. The UK-built, 12 litre reflex-ported enclosure is made from 18mm MDF, damped internally and handsomely finished in a selection of real wood veneers – ours came in walnut, while cherry, sycamore and rosenut are the other options. Both drivers are flush mounted into the front, while the optional grille uses hidden magnets instead of unsightly mounting lugs.

The drivers are sourced from Norwegian specialist SEAS, and the tweeter used here is its top model, the very costly Crescendo, a 29mm fabric dome driven from a six magnet array and with a moulded alloy back chamber.

This tweeter accounts for much of the C10's £900 price premium over the C1. The bass driver has a 180mm frame and a 120mm doped paper cone. The Chord Company cables are used internally, and the hardwired first/second-order crossover uses silver-wired Clarity Caps. Twin terminal pairs provide a useful bi-wire or bi-amp option, and are mounted on a solid recessed board, and come supplied with high-quality wire links.

#### **SOUND QUALITY**

The bass alignment didn't prove ideal for our listening room, as the port is tuned to 48Hz, which is very close to a major room mode. Best results were obtained with the speakers well clear of boundary walls, to avoid overemphasising the 50Hz zone.

This is not a dramatically exciting speaker, but it is beautifully subtle, in the sort of understated and delicate way that reflects the way it is built and presented. There's certainly some lack of authority and warmth, and a little more 'punch' would also be welcome, but the midrange and top end is where the C10 promises much, and also where it also undoubtedly delivers.

One talks about the sound of tweeters, but the ideal tweeter is one that isn't actually audible, as a separate entity, that is. It needs to make its contribution by adding harmonic structure to musical instruments and notes that bring openness and realism to the sound. But it should also integrate perfectly, drawing as little attention to itself as possible.

That's very much the case with this tweeter. There's plenty of treble output here, but it remains remarkably clean and well integrated, delivering loads of subtle detail with impressive all round coherence, and making others sound crude by comparison. Midband

colorations and boxiness are both well controlled, ensuring the excellent imaging that is characteristic of a high quality standmount.

The Kudos C10 is undoubtedly a class act, hampered only by the high price and limited bass authority typical of a small, well-designed speaker. **HFC** 



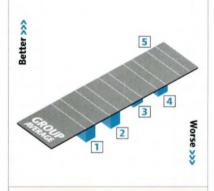
#### LAB REPORT

On our measurements the C10 fell 1-2dB below the specified 88dB sensitivity, though this is still a respectable enough figure in the context of a very easy-to-drive impedance that never falls below 8 ohms.

Apart from some lack of output in the upper bass (80-125Hz) the overall frequency balance under far-field in-room conditions held within creditable +/-3dB limits from 40Hz-14kHz. Although it's undoubtedly well balanced overall, it's not particularly smooth, showing peaks at 50Hz, 270Hz, 700Hz and 4.5kHz. The crossover zone itself is impressively seamless, though the relative treble is rather stronger than usual.

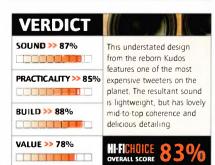
The port here is tuned to 48Hz, and because of its proximity to one of our major room modes, free-space siting was essential under our conditions. Port blocking might be worth considering if the speakers are placed close to a wall.

#### **HOW IT COMPARES**



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

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1 m/2 83V	88dB	87dB
Impedance (nominal/minimum)	8 ohms	8/8 ohms
Estimated bass extension ( 6dB)		30Hz





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## **LEEMA XONE**

## Leema's Xone might be the prettiest floorstander on the planet

ro-audio engineers Lee Taylor and Mallory Nicholls founded Leema Acoustics in 1998, with the metal-jacket Xen sub-miniature monitor. Several other models (and a new range of electronics) have appeared since then, the latest being this £2,245 per pair Xone. This shares similar looking drivers and the same footprint as the tiny Xen, with an extra cone driver to augment the bass. The Xone was reviewed in more detail in our December issue (*HFC* 288), but this group test will place it in a broader context.

Our samples came finished in a beautifully figured, pale birds-eye maple (darker rosewood and ebony are options). The speakers are also compact, standing just 89cm tall and – thanks to the use of tiny 100mm-frame main drivers – look slim and discreet from the front. The sharp-edged enclosure is very crisply styled, and the drivers are flush mounted, though the thick-framed grilles are better left in the carton.



The small enclosure footprint could potentially compromise stability, so a proper additional plinth is supplied, locating the spikes well outside the enclosure. Spike accommodation is impressively secure, though no lock-nuts were supplied.

The magnetically screened drivers, loaded by a rear port, have large magnets, open unobstructive baskets, and 80mm doped paper cones, while the tweeter has a fabric dome diaphragm, quoted as 25mm diameter. The cabinet is damped internally with bitumastic panels, acoustic foam liners and natural wool. Wiring is Nordost Micro-Mono-Filament, and the bi-wired crossover has Clarity Cap capacitors. Soldering is fully RoHS compliant, and the twin terminal pairs are fitted conveniently low down at the back.

## **SOUND QUALITY**

The Xones worked best when positioned well clear of walls, where they delivered a dry, cool bass alongside forward overall character. Detail is particularly clean and coherent, yet is also sufficiently strongly projected that poor quality material, such as recordings with heavy compression, can sound overexposed.

More warmth, weight and bottom end impetus would definitely be welcome, but the Xone has fine inherent agility and an impressively clean, crisp bass that's free from overhang. There's no chestiness with male speech, though some orchestral textures are slightly thickened, and cellos sound dry and slightly lacking in 'body'.

Fine enclosure control delivers a wide dynamic range and keeps boxiness suppressed. The very modest drive unit area – two 80mm cones have a smaller combined area than a solitary 165mm driver – inevitably limits the amount of bass punch and drive this speaker is able to deliver, despite extra assistance from its reflex port. In truth, rather more muscle to supply some genuine visceral impact would be welcome, and although music has good coherence and timing, it could have more dynamic grip and tension.

The balance is better suited to smallish rooms, and the dry character won't suit every taste, but this remains an engaging and musically literate little speaker. Imaging is top class, with fine precision and focus, and the Xone proved well capable of distinguishing the recording quality of any given disc. A degree of nasal coloration was evident on speech, but that doesn't prevent it sounding thoroughly entertaining when playing music. **HFC** 



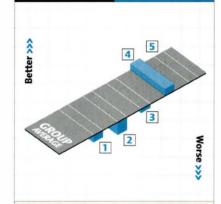
## LAB REPORT

Sensitivity is a very respectable 88dB, especially since the impedance stays above 5 ohms throughout, though a rather obvious resonance 'bump' is visible at 125Hz, which may be related to the columnar shape.

Finding the best position for the speakers in our room proved tricky. There was too much mid-bass output at our 'normal' free space sites (fronts around 1.1 m out from the wall), and we had to move the speakers a full 1.5m out into the room to avoid a mid-bass peak.

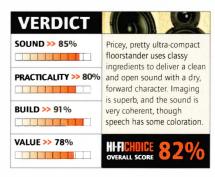
The Xone's overall tonal balance is pretty well ordered, albeit dry and restrained through the bass and lower midband, but the smoothness from 600Hz up to 3kHz that so characterized Leema's tiny little Xen is not repeated here. Rather the Xone's output peaks up about 2-3dB around 900Hz-1.3kHz, and then shows an obvious notch at around 1.8kHz.

#### **HOW IT COMPARES**



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

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	87.5dB	88dB
Impedance (nominal/minimum)	6./- ohms	7/5 ohms
Estimated bass extension (-6dB)	35Hz	30Hz





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For many years Opera have specialised in crafting beautiful loudspeakers at their factory in Italy's Veneto region. The new Linea Classica series continues this proud tradition, from the small but luxurious Mezza to the top-of-the-range Qunita. With its authentic Italian flair Opera is the natural choice for any music lover's system.







#### For a Lifetime of Musical Enjoyment

As one of the best known and respected valve amplifie manufacturers, Unison Research needs little introduction. Each of their products is handbuilt with great pride and passion by a small but dedicated team, and the marque is the object of critical acclaim throughout the world. The excellent new 120 watt Unico Secondo is the much-anticipated new hybrid integrated featuring a fully balanced circuit and a gripping and detailed sound and is sure to be as renowned as its award-winning predecessor. The Preludio is a great introduction to Unison's pure valve designs and offers superb value for money with an open, detailed sound





## The Unorthodox Approach

Pathos Acoustics, based in Vicenza, Italy, are internationally renowned for their uniquely-designed high performance valve/solid state amplifiers. Now sees the launch of their first CD player, and it's as stunning as everybody expected! Combing top quality styling and build with a detailed and liquid sound, the Endorphin is already making big waves in the industry.



## £2,000 per pair 201235 511166 # www.roksan.co.uk

## **ROKSAN CASPIAN FR5**

Roksan's elegantly tall FR5 has some surprises up its sleeve

oksan has a track record of coming up with some unusually interesting designs in most product categories. Loudspeakers like the Darius and Ojan have featured squat enclosures and complex mechanically decoupled tweeter arrangements, but curious shapes rarely enjoy significant commercial success, so the fact that this comparative newcomer looks altogether more conventional is maybe no surprise.

Priced from £2,000 per pair, the Caspian FR5 speaker is a tall, handsome floorstander with a high-gloss piano lacquer finish, either in black at the standard price, or in a subdued bird's-eye maple for an extra £250. It comes pre-fitted with an attractively shaped, gloss black plinth that provides a neat aesthetic touch, and also ensures fine physical stability.

The whole thing feels exceptionally solid, and this is reflected in a very substantial total weight of 35kg, largely down to hefty 25mm MDF construction, while three internal braces add stiffness. The long and rather pretentious chrome spikes have thumbwheel lock-nuts that

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are tricky to tighten properly, though this is due to be changed.

The three flush-mounted drivers comprise a 25 mm soft fabric dome tweeter, plus two relatively small bass/mid drivers, each with 90mm doped paper cones and 130mm pressed steel frames. The latter operate in parallel right up to the crossover point, so the operating configuration here is actually a straight two-way. All three drive units are magnetically shielded. The tweeter has a short horn flare and is surrounded by a thin foam gasket with serrated inner edge.

The capacious 28.5 litre enclosure is reflex-loaded by a similarly generous rear port, tuned to a low 30Hz. Twin terminal pairs allow bi-wiring or bi-amping, and the crossover uses low impedance, air-cored chokes and tight tolerance polyester capacitors.

#### **SOUND QUALITY**

Although the manual suggests that these speakers can be located close to a wall, under our conditions, the low bass tended to sound too strong and somewhat detached. It's always advisable to experiment, and in our room the FR5 seems much happier when kept well clear of boundary walls.

One can be forgiven for anticipating modest bass output from a speaker with two smallish drive units, so it came as quite a surprise to find that the Roksan delivers a generous and full scale sound, clearly indicating that the enclosure/port combination, tuned here to a relatively low 30Hz, is making a substantial contribution to the whole.

Alongside the big and substantial bottom end, comes a notably clean and open-sounding midband. There's no tendency for voices to sound 'shut in' here, yet the system can be also be driven hard and loud without any obvious aggression – a rare combination indeed.

Against these two very positive attributes must be set just a couple of minor weaknesses. First, there's some loss of energy in the zone between maximum port output and the point where the two drivers get properly going, so the mid-to-upper bass is lean, and this is responsible for a cool character, and some lack of punch and drive from bass guitar and percussion. Plus, the small driver area is probably responsible for relatively modest dynamic tension and grip.

The FR5 combines much of the weight and scale of a large loudspeaker with the sort of lively agility found in high-quality small speakers. A very clever design, certainly. **HFC** 



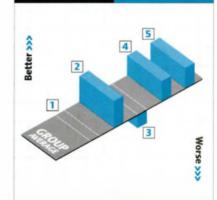
## LAB REPORT

Sensitivity is a very respectable 89dB, and this is in the context of a decent enough amplifier load that never falls below 4 ohms, and actually stays at 6 ohms or higher over most of the band.

The FRS's tonal balance is not entirely neutral, but it gets close enough. Under in-room far-field conditions, output is a little strong below 55Hz, and rather lean through the upper bass (55-125Hz), so free space proved the best siting under our conditions. Should it be necessary or desirable to place the speakers close to a wall, it would be worth experimenting with port blocking.

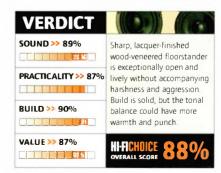
The averaged responses are very well ordered thereafter, with a modest notch around 1.4kHz, and a presence/lower treble (2-5kHz) that's a little stronger than average. Indeed, far-field in-room output held within tight +/-2dB limits over the whole range from 200Hz to 7kHz, which is very impressive indeed.

## HOW IT COMPARES



- 11 Sensitivity >> 0%
- 21 Bass extension >> +40%
- 3] Ease of drive >> -20%
- 4] Overall frequency balance >> +30%
- 5] Response smoothness >> +30%

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1m/283V	87dB	89dB
Impedance (nominal/minimum)	4/- ohms	6/4 ohms
Estimated bass extension (-6dB)	32Hz	22Hz



# **CONCLUSIONS**

With a diverse set of speaker designs, a mixed set of results was bound to happen

his relatively upmarket group of speakers might have been expected to 'do the job properly', without taking the easy way out. Regrettably, all four of the floorstanders came with inadequate floor spike provisions, which is disappointing; not only because it's a comparatively easy task, but also because it's a failing that these reviews have highlighted numerous times in the past. Both Focal and Leema neglected to supply any means of

locking their spikes once adjusted, while both Roksan and DALI rely on feeble thumbwheels that all too easily work loose.

Two models stood out to deserve Best Buy ratings. The Focal Chorus 836V is a lot of speaker at very decent price. Its other main strength is a welcome helping of dynamic expression, though the sound isn't particularly smooth, and the presentation is a little quirky.

The Roksan Caspian FR5 was given Best Buy status in a review

last May (*HFC 279*), and this group test context does nothing to change our original opinion, of an elegant floorstander with fine bandwidth and a lovely openness.

The beautiful JAS Audio Orsa looks fine value and is an entertaining performer, albeit with limited grunt. Though intriguing, it's maybe trying a little too hard to be different. DALI's Mentor 6 looked to have plenty going for it. Despite a sweet treble, excessive low bass suggests it might be

better suited to very large rooms, and some midband unevenness adds audible coloration. The latter criticism also applies to the Leema Xone, which is otherwise a very pretty and agile, if lightweight and somewhat pricey prospect.

High price and modest bass weight also weighs against the Kudos Cardea C10's value rating, but this newcomer's superior sweetness and coherence through the upper part of the audio range has strong audiophile appeal. **HFC** 

#### TRY THEM WITH THESE

#### CD PLAYERS

MERIDIAN GO6 £1,695

All round performance with superb build and a fine remote handset

#### NAIM CD5x £1,450

One-box player with fine grip and coherence. Musically involving.

## AMPLIFIERS

DENSEN BEAT 200/310 £2,300

Lively, energetic pre/power combo delivers fine musical scale, too.

UNISON RES. UNICO 200 £3,000 Integrated hybrid amp combines much of the best of both types of devices.

### **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 the time and trouble

to experiment.

- >> Moving a speaker from a free space location until it's close to a wall will substantially boost the mid-bass.
  >> Expect speakers to improve steadily
- over the first 100 hours or so.

  >> Use decent speaker cable, if you want your system to perform at its best

## LOUDSPEAKERS AT A GLANCE













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MAKE MODEL	DALI Mentor 6	Focal Chorus 836V	JAS Audio Orsa	Kudos Cardea C10	Leema Xone	Roksan Caspian FR5
PRICE	£2,200	£1,549	£1,395	£2,200	£2,245	£2,000
SOUND						
PRACTICALITY						
BUILD						
VALUE						
OVERALL						
CONCLUSION	A beautiful and hefty floorstander with sweet treble, but heavy bass and has midband unevenness.	Not the prettiest looking or most smooth sounding, but fine value for money with expressive dynamics.	Corgeous if unusual standmount lacks bass weight, but is musically adept in its laid-back way	Lovely mid-to-top coherence with very delicate detailing, but a bit light in bass weight, and pricey, too	Compact, cute floorstander has a dry and forward sound with good coherence but some coloration.	Beautifully presented and solidly built with a fine open lively neutrality, but some lack of warmth.
KEY FEATURES			1747			
SIZE (WxHxD)	20x103x39cm	28x115x38cm	24x42x34cm	20x35x27cm	14x89x21cm	20x100x25cm
DRIVER CONFIG	2+(2x0.5)-way	3-way	2-way	2-way	2.5-way	2-way
MAIN DRIVER SIZE(S)	2x165mm	3x165mm	1x150mm	1x180mm	2x100mm	2x135mm
STAND/ FLOOR?	Floor	Floor	Stand	Stand	Floor	Floor
CABINET FINISH	Real wood	Laminates	Lacquered wood	Real wood	Real wood	Lacquered wood
BI-WIRE?	Yes	No	No	Yes	Yes	Yes
LAB CONCLUSIONS	E = EXCELLENT · G = GOOD ·	A = AVERAGE • P = POOR				
SENSITIVITY	89dB G	92dB <b>G</b>	87dB A	87d8 A	88dB A	89dB G
EST. BASS EXTENSION	22Hz <b>G</b>	28Hz A	45Hz P	30Hz ▲	30Hz 🗛	22Hz <b>G</b>
IMPEDANCE (NOM/MIN)	8/6 ohms <b>G</b>	5/3.5 ohms P	8/7 ohms <b>G</b>	8/8 ohms <b>G</b>	7/5 ohms <b>A</b>	6/4 ohms A
OVERALL FREQ. BALANCE	+10% A	+10% A	-20% P	-10%▲	-10% A	+10% A
RESPONSE SMOOTHNESS	-20% P	-20% <b>P</b>	-20% P	-10% A	-10% A	+10% 🛦

## DEFINITIVE AUDIO























L to R: 1. Kuzma Stabi XL £10,000 2. KSL Kondo Neiro Line Stereo Valve Amplifier £23500 3. Living Voice IBX R2 (Burr Oak) £4400
4. SME 10 / SME V £4115 5. Living Voice OBX RW (Santos) £7200 6. KSL Kondo Ongaku Integrated Amplifier £49,000
7. Magnum Dynalab 106T Valve Tuner £3600 8. KSL Kondo Gakuoh 300B Mono Amplifiers £48,500
9. Resolution Audio Opus 21 CD Player £2950 10. KSL Kondo V-z (1m) Interconnect £750



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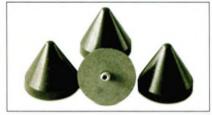
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It is the result of 20 years development to achieve the perfect loudspeaker; a transducer which adds no colouration and thickness, and subtracts no dynamics or harmonics. Coming from the land of Gucci and Ferrari, you need not ask if it is musical. It glues you to your seat; wherever you are in the room as there is no stereo sweet spot.



Happily, at 124cms height it is neither the size nor the shape of a wardrobe. At £15,995 per pair it offers very good value against

much more expensive and inferior flagship rivals.

The entire range, however, may be neglected for similar reasons of compact size and prices. Don't allow your expectations to limit your hopes. At £1,995 you may not believe it is

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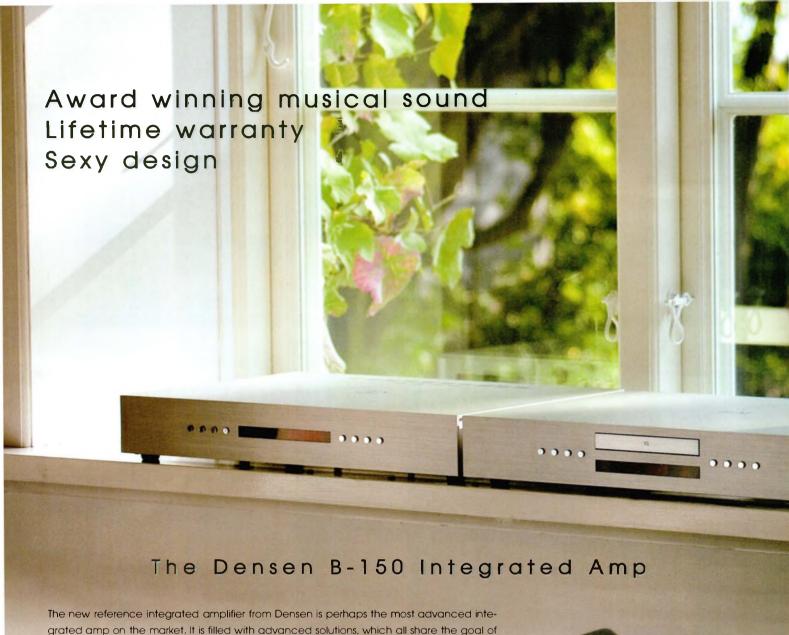
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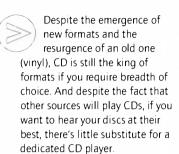
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# CD PLAYERS

Audio disc players for music only



It's also the most enduring format on the market. Despite high-resolution contenders like SACD and DVD-Audio, nothing has been able to undermine this universally popular format.

CD players work by reading a stream of 1s and 0s off a disc that spins at a constantly changing speed (to counteract the increasing length of 'groove'). This bitstream is then digitally filtered before undergoing digital-to-analogue conversion in the DAC (D-to-A convertor). Thereafter, the signal is filtered



again before being amplified and sent to the output sockets.

The processes of reading the disc and converting the data are sometimes split between a CD transport and separate DAC in so-called two-box players. A popular approach with very high-end kit, this separates the electronically noisy elements from the sensitive analogue stages, but can introduce timing errors known as jitter, therefore one-box players usually offer best results where budget is a consideration.

## 0.8.4

## WHAT'S A DAC?

A DAC or digital-to-analogue convertor is a fundamental part of any CD player and converts the digits read from the disc into an analogue music waveform which is amplified to line level

## WHY HAVE SEPARATE TRANSPORTS & DACS?

Discs are read by a transport or disc drive, which creates radio frequency 'noise'. Separating the DAC means the conversion can be done with less interference

## **CAN I USE AN OUTBOARD DAC WITH** MY INTEGRATED CD PLAYER?

Yes, if it has a digital output - and most do.

### **DO I NEED DIGITAL CABLES FOR A CD PLAYER?**

No. All analogue cables are suitable for connecting a CD player to an amp. Digital specific cables with 75ohms impedance are useful when connecting the player to a digital recorder or DAC.

## WHAT IS OVERSAMPLING/UPSAMPLING?

Oversampling involves multiplying the sampling frequency by a whole number, usually between four and 32, but sometimes higher, and is designed let the DAC to work in a more linear fashion. Upsampling is where the data stream is stretched out by interpolation and is typically used to refer to large changes in sampling rate such as from 44.1 kHz to 192kHz.

## **CAN I PLAY SACDS ON A NORMAL CD PLAYER?**

Yes. The vast majority of SACD discs are hybrids, with a CD layer that all CD players can read.

#### **CAN I PLAY DVDS ON A CD PLAYER?**

No, the same applies to DVD-As. But you can play CDs and DVD-As on normal DVD players.

## **SUPER AUDIO CD**

SACD or Super Audio CD is a relatively new audio-only format introduced by Sony and Philips. It offers higher resolution than CD in the form of considerably greater bandwidth and improved dynamic range. It also has

the potential for uncompressed surround sound using up to six channels, and most new discs take advantage of this. SACD discs are usually hybrids and will play on normal CD players, but you won't be able to appreciate their highest quality or their multichannel capability without an SACD-compatible player. Some SACD players also play DVD and even DVD-Audio - these are listed in our DVD section.



## Rega Apollo £498

Rega's latest entry-level player is a splendidly musical performer, given its modest price. Bass is good, midrange is great and high frequencies are truly exceptional.



## Cambridge Audio Azur 840C £750

Sitting at the top of Cambridge Audio's Azur range, the 840C is a technically innovative player with a sound that belies its sub-£1,000 price - open, subtle and refined.

#### Our favourite BEST BUY 60 EDITOR'S CHOICE **CD PLAYERS** BAL ANALOGUE OUT CD-RW COMPATIBL SACD COMPATIBLE ELEC DIG OUTPUT OPTIDIG OUTPUT ISSUE NUMBER Audio-only CD and SACD players CD TEXT BADGE? PRODUCT COMMENTS UP TO £1.000 Cambridge Audio Azur 640C If you value the effortless flow of musical information, you should certainly hear this player . . 285 • 0 Cambridge Audio Azur 840C Highly involving and rewarding music player at a sensible price 8 286 • • • 285 Creek Evo 495 A minute treble lift: otherwise this is a very capable player that offers fine value Cyrus CD8x 1.000 Impressive mix of detail, musicality, analysis and appearance. Even better with the PSX-R power suppy (£400) . . 270 Denon DCD-700AE • • Excellent entry level quality CD player lacks for nothing. Musicians please note: even has variable speed replay 0 284 Marantz SA7001 • 281 430 Easy, relaxed sound arguably lacks true grit, but is extremely listenable from CD and SACD Musical Fidelity X-RAY v8 1,098 Accurate, yet musical performer. £799, but requires £299 TRIPLE-X power supply outside of X-T100 system 6 6 . 288 Naim CD5i 825 As idiosyncratic as ever, but sonically the CD5i is the definitive player at the price 259 Rega Apollo 498 Unless you can't abide top-loaders, check this out; musically it's a highly praiseworthy performer 0 ė 285 Sony SCD-XA3000ES 800 276 A good, if not truly great, all-rounder with CD and fine multi-channel SACD performance . . With its tube output stage, a beguiling midrange, sweet highs and attractively figured lows plus fine dynamics Vincent CD-S6 MkII 999 0 287 AROVE £1 000 Arcam FM.I CD36 1,200 Fine detail, extension, dynamics and neutrality: 'bland' or 'honest' according to listener taste! . . 0 . 280 EC Audio Research Ref CD7 Top of the CD playing tree, with a sound as open and musically accomplished as you'll ever find from the format . • 279 • Avre CX-7e 2,195 If you want a clean-sounding, revealing and entertaining player with fabulous build this is a strong contender • 281 0 Classé CDP-102 3,000 Rich, dynamic CD/DVD player with a full bottom end, impressive dynamics and a luxurious yet revealing balanced 6 63 0 0 0 286 EC Classé CDP-202 CD/DVD-A player with brilliant sound, if sophistication is your bag, Includes S-video and composite outputs 0 • a 284 Copland CDA823 1,750 Don't let the laid-back character fool you - this player has plenty of insight too 0 • 280 Cyrus CD Xt/DAC X Greater resolve than the single box competition, and DAC X has six digital inputs for whole system conversion 0 279 (8) 0 60 EC Esoteric X-03SE Resolution and musicality close to the top of the game. For out and out transparency and build quality it's hard to beat 0 a 0 285 6 Gamut CD3 Superb resolve of fine detail combined with a perfectly judged balance and an ability to draw you into the music 0 289 Krell Evolution 505 SACD 8.777 Brilliant replacement for SACD Standard, superb musical discrimination. No high-res digital output 0 . 0 (a) 0 289 98 Linn Maiik Compact and capable of most CD formats, it's musically communicative with fine pace and enthusiasm 0 0 283 6 McIntosh MCD201 Superb CD performance and even better with SACD which has its own output level control 8 0 0 284 0 6 0 0 66 Meridian G06 1 695 . Great combination of all-round attainment with superb looks and build quality, plus superb remote control 0 2 281 EC Meridian 808i Signature Stunning CD player with added preamp functions. Versatile and guite delightful . 0 0 263 . 6 NAD M5 Beautifully made and very versatile CD/SACD player handles most formats with very superior dynamic range . 0 0 0 285 Naim CD5x 1.450 Unique design nicely complements a sophisticated and highly capable performance 0 280 EC Naim CDX2 2,800 Fine quality one-box CD player, but its best feature is upgradeability via outboard XPS supply 0 238 Rega Saturn 1,300 Attractive simple player does the basics superbly, delivering performance with great poise, precision and range . • 0 286 Resolution Audio Opus 21 2,850 Dynamic, well timed and 3D performance with an analogue volume control and digital input for a second source 244 Suaden CD21SE 1,395 Delivers its particularly musical touch brilliantly and warrants the attention of all true music lovers 271 T+A CD1230R 1,500 Filter options make this a player for all tastes, aided by top quality engineering 6 280 Wadia 302 3,999 A dynamic and gripping player, with bass to die for and resolution to change your listening habits . 253 . .

SPECS KEY SACD COMPATIBLE Plays high-resolution SACD discs in multichangel and/or two-changel mode FLEC DIGITAL DITTPLIT Flectrical 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





coupled with a gorgeous sense of musical structure. Truly, it's brilliant.

# DVD PLAYERS

Disc players for audio and video

DVD has proved a phenomenal success in commercial terms and has virtually extinguished the market for budget CD players - you can't really beat a multiformat player when it comes to features. Early DVD players were not particularly good CD spinners because of the enormous amount of RF interference produced by video circuits, but as this problem has been identified manufacturers have begun to tackle it. Nowadays, most DVD players are competent CD players and a few are very good – often as not they are the ones that play DVD-Audio discs as well.

The great advantage of DVD is that it offers sufficient capacity to hold a feature length movie or music concert and discrete multichannel sound on a disc the size of a CD. In the case of plain DVD-Video discs, the audio is encoded in either the Dolby Digital or DTS format, both of which use 'lossy' compression to fit the audio onto the disc alongside the video data. You can use



a DVD player with your stereo system by connecting the stereo outputs, though this won't give the surround sound benefits that the format specialises in.

## DVD-AUDIO

DVD-Audio is a high-resolution format that offers multichannel, stereo and Dolby Digital tracks on dedicated DVD-A discs. The discs

> can be played on any DVD player, but the CD-beating high-fidelity sound can only be appreciated with a DVD-A player.

While offering similar benefits to SACD, it has the advantage of on-screen display for information - lyrics, images and so on. To save you having to decide which format to go for, a few brands are bringing out universal players to cover SACD and DVD-A, alongside CD and DVD-Video - a neat and relatively future proof route into high-resolution multichannel music. Higher-end models featuring high-bandwidth compatible digital audio links are now also appearing, enhancing DVD-A/SACD sound when used with similarly equipped amps.

## 0.8.4

## **WHICH AUDIO OUTPUTS GIVE THE BEST QUALITY?**

Use the analogue outputs for CD, DVD-A and SACD, and the coaxial digital output for DTS and Dolby Digital movie soundtracks.

## WHICH VIDEO OUTPUTS **GIVE THE BEST QUALITY?**

The best connection is component video closely followed by RGB Scart, which is clearly superior to S-video and the basic composite video option.

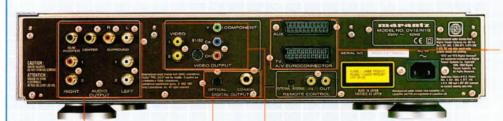
## **DO I NEED A MULTICHANNEL** AMP TO USE A DVD PLAYER?

Only if you want to hear music and movie soundtracks in multichannel surround. DVD players can be used with stereo amps and just two speakers to great effect, but you'll only get stereo, not surround sound.

## **DO I NEED PROGRESSIVE SCAN VIDEO?**

It's worthwhile for the very best picture quality, but make sure your DVD player and display device support PAL progressive.

## CONNECTIONS



**ANALOGUE AUDIO OUTPUTS: For** stereo and multichannel connections use these for best results with DVD-Audio, SACD and CD.

DIGITAL OUTPUTS: For Dolby Digital. DTS and PCM audio bitstreams

VIDEO CONNECTIONS: Yellow sockets are composite; red, green and blue sockets are for component which gives best results, while the black multipin socket is S-Video, which sits qualitatively between the two.

#### SCART CONNECTIONS:

These are a good-quality option for video, especially ones that output RGB.

# DVD PLAYERS BUYER'S BIBLE

8 0 0

0 0 0 0 270

279

#### Our favourite BEST BUY (C) EDITOR'S CHOICE **DVD PLAYERS ESUE NUMBE** Audio/Video disc players BADGE? PRODUCT Arcam DiVA DV78 Imagine almost all of the DV88 Plus at a knock-down price. Top picture and sound performance for the money 254 700 • • Denon DVD-1920 250 . 276 Respectable (if unexciting) and flexible audio player, but something of a star from its HDMI equipped upsampling video subsystem. 60 • Marantz DV7600 274 600 A mid-market cracker, with sound and picture quality that generally exceeds expectation • Onkyo DV-SP503E 300 Budget Onkyo universal player is a straightforward Pioneer based implementation, which performs well with audio and video • • 275 Phillips DVP9000S 274 400 Philips proves it hasn't lost its touch with mid market DVD players. Includes SACD and HDMI for quality video, and it's a star 6 Sony DVP-NS9100ES 274 Video playback is foremost, with the iLink delivering significantly better sound than the analogue counterparts Yamaha DVD-S2500 700 Universal player slightly stronger with video than audio, but well turned out with a wide range of analogue and digital in and outputs • . • 280 Arcam DiVA DV137 Good overall audio performance and excellent upscaling HDMI DVD-Video player, but stereo-only SACD playback at time of writing 0 0 0 285 Cyrus DVD8 1 200 An impressive step up from the DVD7+, which includes component video outputs 238 Denon DVD-3930 1,100 0 Well engineered universal player, with useful bypass facilities for pure audio, and unusually powerful video image processing . 0 8 287 Denon DVD-A1XV 2,500 0 0 0 Sophisticated universal player with state of the art video processing, high class disc replay, especially SACD 266 Linn Unidisk SC 2,995 0 259 Groundbreaking universal player with built-in preamplifier, with excellent picture for home cinema and sound for hi-fi 0 Marantz DV9600 With excellent, next-generation picture and impressive sound quality on CD and SACD, this sets a very high standard to beat 280 Meridian G98AH 3.625 Meridian's most widely compatible G-Series DVD player - groundbreaking DVD-Audio replay and a fine CD player too 265 Naim DVD5 2.565 Naim's first DVD player is a real success, notable for its class-leading sound with CD and (optional) multichannel DVD-Audio 263

STEEL TO DVD-A COMPATIBLE Plays high-resolution DVD-A discs in two and multichannel modes. SACD COMPATIBLE Plays high-resolution SACD discs in two and multichannel modes ELEC DIGITAL OUTPUT Electrical coaxial output for digital connection to a multichannel amplifier or receiver. OPT DIGITAL OUTPUT Optical Toslink output for digital connection to a multichannel amplifier or receiver. HEADPHONE SOCKET Quarter inch (6.3mm) headphone lack fitted to the DVD player

A universal machine that excels with music and is guite exceptional with good of stereo CD

Dedicated stereo only/SACD/CD player avoids the usual compromises. It does a limited job, but it does it with fine fidelity

T+A SACD 1245 R

Townshend TA 565 CD









In celebration of Supra's 30th Anniversary, the Sword-ISL has been developed, based on technologies derived from the award winning Sword speaker cable. Sword-ISL is a high-end 2-channel interconnect, fitted with phono or XLR plugs, 0.8m or 1.0m pairs. The first "run" will be supplied in a luxury Limited Edition 30th Anniversary Presentation case

Demo sets are available from Authorised Dealers for home



## SUPRA ® Cables MADE IN SWEDEN

INTRODUCING: The UK version of Supra's LoRad MD06-BS/SP 6-way Mains Distribution Block

## Approved to BS1363 standard

MD06-BS/SP features 6 x 45 degree mounted 13 Amp UK mains sockets housed within an RF shielded alumimium extrusion. Tommy Jenvings' own 3-way Surge Protection system helps to prevent "nasties" getting into your hi-fi or AV system. When used with LoRad shielded mains cables, this can help improve your system from RF interference.



### Special **UK Launch Prices**

Supra MD06-BS/SP Mains Distribution Block only £129.99

Supra AnCo TV cable only £24.99 (1m) (normally £29.99)

(as shipping quantities limited) Available from selected dealers E. & O.E.

Jenving Technology AB S-459 91 Ljungskile, Sweden email: supra@jenving.se veb: wwww.jenving.se We are a licensed HDMI Adoptor manufacturer





Supra Cables are available from all good hi-fi and home cinema stores in 38 countries around the world.

For UK customers who require more details or to request a brochure pack containing stockists & price information, please contact:

Supra brochure line: 01223 441 299° Supra email: info@supracables.co.uk Supra on the web: www.supracables.co.uk

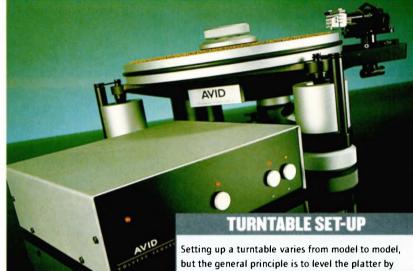
## VINYL

## Turntables, cartridges and phono stages

Record players or turntables offer the digital revolution serious competition when it comes to sound quality. Even a modest model can turn musical tricks that most CD players struggle with. Some call it vinyl warmth, but in reality it's a lack of digital hardness that makes the format so engaging. True, the software requires a bit more care, but even a knackered LP is more playable than a scratched CD.

Record players are made of three, perhaps four, fundamental parts. The turntable is the plinth and platter, usually also containing the motor and any suspension system. A tonearm sits on the plinth and allows the cartridge to trace the vinyl groove by pivoting or parallel tracking over the record. The cartridge contains the means of turning the mechanical movement of the groove wall into an electrical signal

A fourth element is an amp dedicated to the delicate job of amplifying and equalising the cartridge's insubstantial output. This is called a phono stage and can be found in some integrated amplifiers and preamps, but is increasingly purchased separately for use with line-only amps.



There are two types of phono cartridge; moving magnet (MM) and moving coil (MC), and with a few exceptions the latter outperforms the former. But MCs produce a lower output and require better-quality amplification to be heard at their best. As a general rule. MCs offer a broader bandwidth, greater dynamics and more detail, but the better moving magnets do most things well enough to distract you from your CD collection.

adjusting the suspension or, as with solid platters, the surface it sits on. Sprung suspensions sometimes require a bit of fine-tuning to sound their best, but the principle is to achieve a smooth, pistonic bounce. Cartridge set-up is even more critical, as the angles at which the stylus traces the groove affects its tonal balance and levels of distortion. A good alignment protractor is essential if you are intending to set up your own cartridge, as is a degree of patience. In essence, there are two angles you need to get right: the tracing angle as the cartridge crosses the record if you are looking from above, and the vertical tracking angle (VTA), which is adjusted by raising or lowering the arm base to bring the arm parallel with the record surface.



## **Pro-Ject** RPM 5 £400

Pro-Ject's entry-level RPM deck is a good-looking, great-sounding package that delivers terrific value for money. A class act and no mistake.



## The Funk Firm Funk V £760

The more costly of two turntables from The Funk Firm, the Funk V builds on its sibling's virtues to deliver a sound of sheer class - dynamic, detailed and refined



## Clearaudio

Champion £1,475 Current king of acrylic, the Clearaudio deck, arm and cartridge combination turns in a beautifully well-balanced delivery, but choose your support wisely.



## Avid

Volvere Sequel £3,500 Avid has been one of the most impressive exponents of the vinyl arts in recent years, and this mid-range deck is a stunning example of analogue engineering.

33/45/78

33/45

186

259

	r favourite				SPE	CIFIC	ATION	S	
T	URNT/	<b>VE</b>	BLES		INS ABTS	SWITCHABLE SPEED CHANGE	SUPPLIED WITH ARM	SUPPLIED WITH CART	ISSUE
Rec	ord players			SPEEDS	SUBCHASSS	TOHA	A HTIM	NH C	ISSUE NUMBER
8ADGE?	PRODUCT	3	COMMENTS	SS	SS	E E	₽	¥	Æ
	Avid Diva	1,100	A solid and powerful sounding deck with fine build, requires a smooth, relaxed cartridge for best results	33/45	•				247
EC	Avid Volvere Sequel	3,500	Heavyweight turntable that will deliver more of what's in a vinyl groove than most of the competition	33/45	•	•			229
	Clearaudio Champion	1,365	Smart, practical and good-sounding, with impressively 'dead' arm. Isolation recommended	33/45			•		268
EC	Clearaucio Ambient	4,220	innovative use of materials leads to a fast, precise and thrilling sound (tonearm extra)	33/45		•	•		271
EC	EAR Disc Master	7,695	Combines new 'no contact' drive technology and high quality materials to bring state of the art resolution	33/45/78	•		opt		276
	The Funk Firm Funk	450	You won't find another turntable at the price that can touch the Funk for dynamics, tone colour or detail	33/45			opt		279
	The Funk Firm Funk V	750	Vector drive brings a refinement to the standard Funk that increases resolution. For high-class analogue sound, it's a killer	33/45		•	opt	opt	284
	Goldring GR2	265	Nicely finished Rega-manufactured deck with RB250 arm and an open, engaging sound quality	33/45			•	0	266
	Michell Tecnodec	767	Simple and smartly understated, performs above expectations – full-bodied and highly detailed	33/45			•		268
gir.	Michell Gyro SE	1,058	New DC motor-equipped Gyro offers great looks and even better sound. Price includes RB300 arm	33/45	•		•		239
EC	Michell Orbe SE	2,015	A superb turntable, able to mix it with the best at virtually any price. Now features new DC motor	33/45					235
	Nottingham Analogue Horizon	529	A fluid midrange and nimble but rich bass are two of the many attributes of this bargain deck (price inc RB250 arm)	33/45			•		253
	Pro-Ject Debut SE	200	The best Debut has a quality cartridge and easy upgrade arm cable, it delivers a scale, energy and resolve with ease	33/45			•		276
	Project RPM 5	400	Great looks plus an on the ball, engaging sound that puts it in the serious league, needs good isolation for best results	33/45			•	•	279
ínii .	Pro-Ject RPM 9 X	1,000	A gorgeous turntable that sounds as good as it looks – vital and transparent! Price includes carbon-fibre arm	33/45			•		268
	Rega P5/RB700	698	Combines a great sense of timing with market-leading resolution and a phenomenal tonearm – a hard act to beat	33/45			•	opt	257
	Rega P7/RB700	1,298	A highly capable player that could hold its own in the most exalted company – a vivid and natural performer	33/45			•	opt	257
EC	Rega P9/RB1000	2,498	Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm	33/45		•	•		228
	Roksan Radius 5/Nima	850	Sophisticated design with accomplished sound quality, excellent imagery and good isolation (acrylic version tested)	33/45	•		•		248
EC	SME Model 10A	3,411	Elegant and extremely capable design, tested here with Series V/309 hybrid arm	33/45	•	•			195

Ðυ	r favourite	BES1	T BUY EC EDITOR'S CHOICE				
P	HONO	C	ARTRIDGES		12,200	REPLACEABLE	ISSUE NUMBER
MM	and MC cartridges			MM	MC	SUL SUL	ABER
BADGE?	PRODUCT	3	COMMENTS				
1-2	Cartridge Man MM III	625	The MM III challenges MCs at twice the price, it produces detail, space and energy and has stunning resolve in the right arm				266
	Denon DL-103R	200	Adds refinement to basic DL-103, at a price. One of the best rock'n'roll cartridges around		6	Т	285
	Grado Prestige Black	40	Offers admirable detail and treble extension, with good bass and ambience too				214
-	Grado Prestige Gold	110	Produces rich, open and expansive music with the minimum of fuss			0	235
EC	Lyra Helikon	1,095	Highly capable and highly neutral, this is a cartridge for all seasons, albeit fussy about vinyl quality				215
1	Sumiko Blue Point Spec Evo III	239	High output MC with refinement at high frequencies and a nimble, articulate and revealing sound				270
100	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
EC	van den Hul Condor XCM	2,400	A stunning cartridge with stereo imaging, dynamics and detail resolution to die for				265
EC	Wilson Benesch Naked Analog	1,450	With its smooth clean highs, transparent midband and nimble bass, this is a lot of performance for the money				253

 $5,\!274 \quad \text{Beautifully built, extremely neutral damped and suspended deck with superb sound line V arm} \\$ 

4,900 If you want to get to the meat and bones of the music this is a great tool for the job (price inc. Excalibur arm)

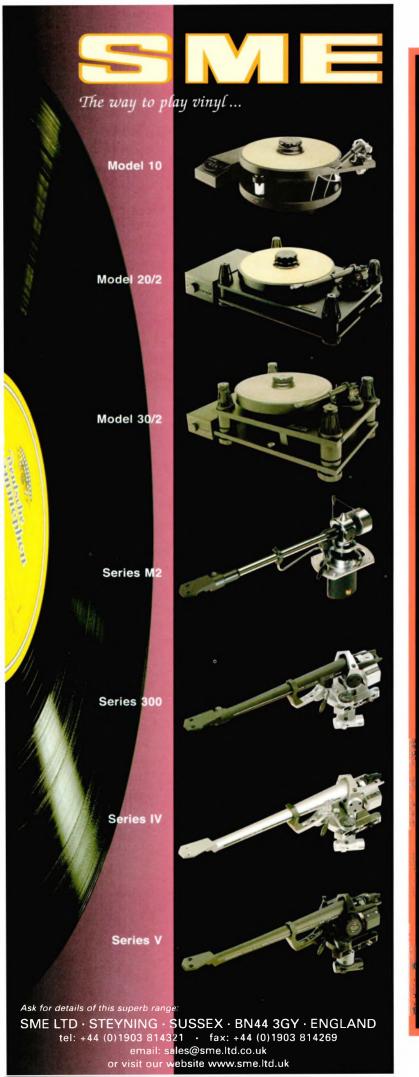
SME Model 20.2A

Townshend Rock Anniversary

	r favourite				SPE	CIFIC	ATION	IS
		S	TAGES	MM PHONO INPUTS	MC PHONO INPUTS	AQJ	ADJ IMPE	ISSUE NI
BADGE?	no stages	3	COMMENTS	NPUTS	NPUTS	J. GAIN	IMPEDANCE	NUMBER
	Cambridge Audio 640P	60	Tested with the almost-as-good £40 540P, this remarkable phono stage brings refinement and bass weight to budget vinyl					277
	Clearaudio Smart-Phono	250	Minute and very practical unit with slightly bright, but very detailed and low-noise, sound	10				268
	NAD PP2 phono stage	50	A fine buy for turntable users on a tight budget – open tonality and clarity is distinctly impressive for the money		•			245
	Tom Evans Microgroove	400	For dynamics and real bass extension with good tonal colour this is the one to beat. The Plus version (£700) is even better!		•			234
EC	Tom Evans The Groove	1,800	Pienty of detail, excellent imaging and almost flawlessly neutral: a good choice for maximum information retrieval off any LP	•				201
	Trichord Dino/Dino+	498	Relaxed yet resolute with very good image depth and natural balance, not to mention great flexibility		•	•	•	234

TURNYABLE SPECS KEY 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.

EARTICLOGESTEDS KEY 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.



# PINEWOOD MUSIC



## **WILSON AUDIO SYSTEM 8**

Just another WATT-Puppy?

That's what we wondered at first. After all, System 7 was, is and always will be a truly fabulous transducer. What more could this latest incarnation offer, apart from an open invitation for the cynics to take a swipe? The answer is that it presents a vitality, precision and timing that we have never before experienced from a loudspeaker. David Wilson dug deep and he discovered dynamite musical dynamite. Experience it at Pinewood Music.

<u>Pinewood Music Agencies</u>: krell, audio research, jadis, sonus faber, martin logan, copland, wilson audio, darTZeel, mimetism, koetsu, prima luna, unison research, synergistic research, chord cable, transparent, yter, bcd, futureglass, finite elemente

## The Pinewood Music Company

Telephone: 01460 54322 Mobile: 07860 351113 e-mail: brianriv@mac.com

# **RADIO TUNERS**

## FM and DAB hi-fi separates

Radio is a fantastic musical resource that's in danger of being taken for granted, but whatever your tastes there's someone out there catering for it. If you haven't got a decent tunerhooked up to your hi-fi already, you're missing out!

## DAB or FM?

Digital Audio Broadcasting (DAB) is now said to be available to more than 80 per cent of the population and the long-term plan is to switch public broadcasting over to digital entirely, but hardware prices have yet to come down to a point where this would be acceptable. Its advantages over FM include hiss-free reception, the potential for a wider range of stations and the ability to display comprehensive programming information. FM's RDS system means that station name and occasionally track titles are displayed, but the range of information is fairly limited.

Where FM scores over DAB is in the lower cost of hardware and the greater reception

area. It can also provide higher sound quality if reception conditions are favourable. Absolute sound quality judgements are muddled by the fact that you are listening to different forms of compression and processing at the studio for each station.

What is clear, however, is that there are more and more radio stations broadcasting on DAB that aren't available on FM. So if it's variety of programming you're after, they have a lot to offer.

## RECEPTION

The quality of signal you feed a tuner will dictate its sound quality. So serious FM listeners should get a decent external aerial and connect it with as few junctions and splits as possible. Every time you split the cable (ie take a feed for another tuner) you halve signal strength! With DAB the same applies but get a DAB-specific aerial. See www.bbc.co.uk/digitalradio for details.



	ır favourite				SPE	CIFIC	ATIO	NS.		
	UNER	S		<			REMOTE CONTROL	SIG, STRENGTH METER	ROT. TUNING KNOB	25
FM	& DAB HI-FI SEPAR	ATES		WAVEBANDS	PRESETS		E CONT	STH ME	JNING K	SSUE NUMBER
BADGE'	PRODUCT	£	COMMENTS	NOS	STE	ROS	HOL	H31	NOB	ES
FM T	INERS						E			
	Creek T50	550	Very fine results indeed with precision, polish and insight added to excellent basics	FM,M,L	128	8	0	0	9	251
	Cyrus FM-X	500	A classic no-nonsense FM tuner that achieves gratifying sonic results. Upgradable with PSX-R power supply	FM	7		•	•	8	283
-	Denon TU-1500AE	130	Well attuned to the crowded modern FM band, this tuner produces clear, detailed sound with plenty of gusto	FM,M,L	100				9	281
	Denon TU-1800DAB	250	There's a little grain on FM, the generally decent performance on both bands makes this an great dual-band choice	DAB,FM,M	200	43	2		A.S	283
EC	Magnum Dynalab MD 90T	1,195	No remote or presets as standard, manual everything and valves but its sound is simply sublime	FM	opt		opt	6	45	257
	Marantz ST7001	300	FM reception could offer a little more detail and insight DAB is fine, but near-identical Denon 1800 is cheaper!	200	0	٠				283
	NAD C422	180	Admirably free of roughness or other obvious nasties, with just a slight lack of clarity	FM,M	30	12		0		250
	Primare T21	600	A very fine tuner – bass and treble are both well extended and detail is excellent	FM	30	0		0		230
	Pure DRX-702ES	210	Apparently good value is restricted by persistent veiling on FM: 'PAC' on DAB mellows sound a little	DAB,FM,M	99	\$	0	0	166	283
	Rega Radio 3	398	Strong bass, clear treble and a high enjoyment factor make this an appealing FM performer	FM,M	20		0			283
	Rotel RT-02	279	A highly competent tuner which always sounds appealing and fuss-free	FM,M	30	(S)	0	0		242
	T+A T1210R	1,000	High-end looks are matched by the sound, which is detailed and sophisticated, with useful features too	FM	100	29	0			283
DAB 1	UNERS									
	Arcam DiVA DT91	450	As good as any on DAB, with serviceable FM, this one-box solution offers good build and value	DAB,FM	16		0	0	0	269
1.7	Cambridge Audio DAB500	150	Very good sound, plus optional response tweaks, and slickest operation yet	DAB	10		•	•		248
	Cambridge Azur 640T	200	Slightly ahead of the pack in DAB performance, though FM is never better than decent	DAB,FM	60	6	•	•		260
-	Denon TU-1800DAB	250	DAB reception is as good as any and FM performance clearly benefits from Denon's long experience	DAB,FM,M	200	Gr.	0		46	274
	Pure Digital DRX-702ES	330	Very flexible DAB (inc L-band) and FM tuner. DAB is good, FM a touch disappointing	DAB,FM,M	99	6)	•	•		242
	Sony ST-SDB900	200	Nicely designed UK-tuned model is a touch bright with both DAB and FM but generally insightful and clear	DAB,FM,M	60	0	0		5)	259

SPECS IN 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

## Prepare to be entertained sonically and visually all weekend... Welcome to the Hi-Fi Show - like no other



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As of: 01/12/2006

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'A' Audio Marketing AAP Tech Acoustica Activ Distribution Alternative Music Audio Synergy Audio Republic Audionate UK Audiocraft Audioworks Audio Reference Arcam Auto Install Chord Electronics Coherent Systems Custom Design DCS/Audioworks Diverse Vinyl Doug Brady Electrocompaniet Focal IM / Audio Synergy Hi Audio Hi-fi+ Hi-Fi World Harman Kardon Henley Designs Hidef loenit

IAG

Kudos McIntosh

Meridian Audio

Metropolis Music

As of: 01/12/2006

Midland Audio Exchange Monitor Audio Mowgan Audio MySpace Naim Naim Records Rothwell **RT Services** Ruark Select Audio Sevenoaks Showshop SIM2 UK Ltd Smartlife

Orpheus Audio Practical Hifi Plus **Progressive Consumer Electronics** Quadraspire Ltd Red Line Distribution Robson Acoustics Samsung Electronics (UK) Ltd Signature Audio Systems Sound Venture Stamford Audio Symmetry **Tannoy** The Acoustic Partnership Transparent Distribution TV Stands UK Ltd Vertex AO Ltd World Designs

Over 200 Brands...



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# DIGITAL AUDIO RECORDERS

CD. MiniDisc and hard drive recorders



### **MiniDisc**

MD's strength is versatility. You can record and then re-record many times over. Editing facilities are second to none you can erase mistakes, name tracks and re-order a disc's contents with a few simple button pushes, making it ideal for building compilations. They're pretty robust too.

Sound quality is below that of CD-R/ CD-RW. The format uses a Sony-developed compression technology called ATRAC, which discards part of the data in order to squeeze it on the disc. If you're copying from CD to MD, the result tends to sound a little cold in comparison, lacking a degree of detail and ambience. But to most people it still sounds light years ahead of cassette - clean and hiss-free.

## Recordable CD

With recordable CD you have a choice of two disc types: CD-R discs are the cheapest, but you can only record once; and CD-RW discs are a little more costly, but you can re-record on them ad infinitum.

Though the latest machines incorporate some useful editing facilities, CD-R/RW is not as flexible as MD. However, sound

quality is higher - if you're recording from a CD, the best models will give you a copy that is very close to the original. In terms of compatibility, most CD players will play back a CD-R disc, but older models might have trouble with CD-RW (though you can, of course, play the disc back on your own recorder). If you want to play a CD-R/RW on a DVD player, check for compatibility.

## Hard drive

The latest contender on the digital recording scene is also the most flexible. Some HDD (hard disk drive) recorders can store whole music collections if you use a compression format such as MP3. HDD recorders are taking over from multidisc CD changers as sound servers in multiroom installations, where their ability to play more than one piece of music at a time is a great boon. HDD also offers impressive editing facilities on a par with MD, and they can also record from CD (or to CD-R/RW) at high speed.

At present, sound quality isn't the driving force behind the format - flexibility and storage capacity being bigger issues - and a plain CD-R/RW machine will outperform an HDD recorder in fidelity terms.

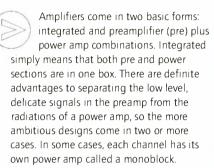


OL	ır favourite		BEST BUY [E] EDITOP'S CHOICE					
	_		RECORDERS		SPE		ATION	IS
Ш	IGIIA		NLGUNDLNS		HD CAF	OPTICAL INVOLUTBIJES	ELEC INVOUTPUTS	USSI
CD-	R/RW, MD and HDD	rec (	orders	98	CAPACHY (GE)	TUU0/	1100A	SSUE NI IMBER
BADGE	PRODUCT	T_	COMMENTS	DECKS	(3)	3	SIN	89
CD-R	AW RECORDERS							
	Denon CDR-1000	400	A respectable player and recorder, though some midband congestion was noted when recording	1		•	•	218
•	Marantz DR6000	400	No frills, but in its fundamentals this is one of the finest CD recorders on the market	1		•		233
	NAD C660	500	Audiophile twin deck offering high-speed copying, HDCD replay and notably fine recording from analogue	2		•	•	243
Com	Philips CDR802	300	Tacky looks and build notwithstanding, this is a well-equipped and lechnically sound 3-to-1 autochanger/recorder at a good price	2		0	幼	233
	Philips CDR951	380	An improvement on previous models, it delivers the musical goods in some style	1		\$	0	205
	Pioneer PDR-609	270	Classic CD recorder with outstandingly good sound for the money on both record and replay	î		.0		243
	Pioneer PDR-W839	350	Good-quality twin CD burner makes recordings that can be hard to distinguish from the original. Good value too	1			78	218
MD R	ECORDERS							
	Pioneer MJ-D508	200	Well equipped, but musically sleep-inducingyer that receives its recommendation owing to the price	1		•		205
	Sony MDS-JE480	130	Straightforward and effective, but the three real killer features are price, price and price	1		•		233
HDO F	ECORDERS							
(00)	Cambridge Audio Azur 640H	600	Not so much a HDD recorder, more a complete audio computer and nerve centre in one useful box. Complex, but worth it	1	160		۵	276
Fill	Hermstedt Hifidelio Pro	850	Can be used as a CD player, but also as a recorder, and can encode MP3, play AAC and form the heart of a distributed audio system	1	160	6	0	280
	Yamaha CDR-HD1500	599	Great for archiving a music collection or making compilations without compromising on flexibility or sound quality	1	250	8		278

SPECSKEY DECKS Amount of drive mechanisms on board - twin-deck recorders use one to play while the other records. HD CAPACITY Amount of gigabytes of storage capacity, for HD only OPTICAL IN/OUTPUTS Optical Tostlink in and outputs for digital connection to a CD player or DAC. ELEC IN/OUTPUTS Electrical coaxial in and outputs for digital connection to a CD player or DAC.

# STEREO AMPLIFIERS

Integrated and pre/power amps



Amplifiers use two basic technologies: transistors or valves. Transistors are popular because of their practical and technical advantages, but valves - aka tubes - live on owing to aspects of sound quality that trannies can't replicate. If you want to play your music loud, use trannies; if you appreciate acoustic music, try valves.

The fundamental of amp/speaker interfacing is power rating and speaker sensitivity. You can drive a high-sensitivity speaker with a ten watt valve amp, but it takes a 200W behemoth to get the best out of speakers which present a difficult load. As a rule, you can't have too much power.

## How to choose an amp

The main areas in which amps vary are: timing, dynamics, stereo imaging and transparency. Timing is the ability to present the attack and decay of each note precisely; amps with strong timing have a snap and coherence that is very appealing.



Dynamics is a general term for the ability to portray variations in level between individual notes and is different to dynamic range (the difference between the loudest and softest notes). Dynamically strong amps tend to have more life and energy.

Stereo imaging is how solid or three-dimensional an instrument or voice sounds. The point of having two rather than one speaker is to make it possible to recreate the soundstage of the original recording, thus amps that have strong imaging skills can create a sonic space that seems to extend the room.

Transparency of detail is the most obvious difference between amps. One amp will present more subtlety than another, but the drawback with using this as your main criterion is that a forward or 'bright' sounding amplifier will emphasise detail at the expense of overall musical coherence.

## 0.8.4

## SHOULD I LEAVE MY AMP ON **ALL THE TIME FOR BEST RESULTS?**

All audio electronics perform better when they are warmed up, and this is particularly the case when it comes to amplifiers. If there's no way that you can leave it on all the time, make an effort to switch it on at least 20 minutes before listening.

## **WHAT IS BI-WIRING AND BI-AMPING?**

Bi-wiring is when you run separate cables to the treble and bass/mid terminals on the speaker. In most instances, this improves sound quality so long as identical cables are used. Bi-amping is using two stereo amps to drive one pair of speakers, using one amp to drive the treble and the other for the bass/mid sections of the speakers.

## WHY DO VALVE AMPS HAVE **SO LITTLE POWER?**

Valve amps are inherently low powered in absolute terms - at least when you compare them to their transistor-based cousins. But when partnered with high-sensitivity loudspeakers, they are quite capable of producing perfectly adequate head-banging levels.

## **HOME CINEMA STEREO**

Stereo amps can be used in home cinema set-ups as well. You don't get the surround and centre channels, but well set-up stereo speakers do a remarkably good job of creating atmosphere for movies. Stereo amps tend to be better at reproducing music as they don't have the (electrical) noiseinducing digital processing of AV amps. AV amps cost three to four times as much as stereo models of a similar quality.





just check out that fantastic midrange!





# STEREO AMPS BUYER'S BIBLE

	r favourite				S	PECII	FICAT	LONS	
	JEKE (grated amplifiers	J	AMPLIFIERS	LINE INPUTS	PHONO INPUT	REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (M	ISSUE NUMBER
DGE?	PRODUCT	£	COMMENTS	SIL	Pu	공	Ä	3	EER.
P TO	£1,000								
11	Arcam DiVA A70	500	A smart and practical amp offering good snap and pace, with natural dynamics and good detail	6	MM	0	0	60	2
	Arcam DiVA A90	850	Well-featured amp with little character of its own - highly informative sound	6	opt	0	0	90	2
	Cambridge Audio 640A V2	300	Nasty-feeling controls are the only real downside to this powerful and lively little amp	6		0	۰	75	2
]	Cambridge Audio 840A	750	Detailed and lively, with excellent midrange and treble detail	7		10	0	120	2
]	Creek Evo	500	Not the most accurate, strictly, but its lively, energetic musical presentation is entirely lovable	5	opt	0		85	2
]	Denon PMA-1500AE	500	Well set up to make the most of big-scale music, with copious power and drive, though slightly bright	5			0	70	2
]	Denon PMA-700AE	250	One of a growing number of new low cost amps, it offers good timing and analysis at up to moderately high volume levels	4	MM	0	0	50	2
	Marantz PM7001	350	Detailed and highly communicative amp with fine treble and good bass extension – exceptional value for money	5	0	0	0	70	2
]	Marantz PM7001KI	550	A self-effacing amplifier which serves the music admirably with fine bass, sweet treble and unforced detail	5	MM	0	0	70	1
	Musical Fidelity X-T100	899	By separating amp and TRIPLE-X power supply, this deceptively powerful valve-sporting amplifier is both enticing and musical	3	۰	0		70	
	Naim Nait 5i	699	A trade-off of more power and better connectivity against less inputs works surprisingly well in a grunty, musical manner	4		5,78		50	
	Onkyo A-933	500	Puts the music first, with sound that delivers the basics correctly but above all involves the listener	5		0	٠	80	
	Primare I21	750	A confident and energetic amp, with just a touch of veiling at times. Great build quality	4		98		75	
	Roksan Caspian M Series-1	1,000	Improved version is as involving as ever but now with added focus and bass depth	5		dig.		85	
	Sugden A21a	899	This single-ended, Class A transistor amp has exquisite resolving ability and presence – an authentic classic	5				25	
BOV	£1,000		The second secon	-		- 1	27		ė
]	Arcam FMJ A32	1,200	Ultra-civilised amp with plenty of features that's also highly revealing and musical	7		0	0	100	2
	Audia Flight TWO	2,500	Ourky, but musically highly effective model which is expressive and analytical, with some minor operational quirks	8		4		100	2
	AyreAX-7e	1,995	High end sound at a sensible price. Lacks the balls of less revealing designs but has precision in the timing department that is rare	5		1		60	6
	Bryston B100-SST DAC	3,850	A remarkable amplifier which is greatly enhanced by the inclusion of an impressive onboard DAC	6		0	0	100	
	Chapter Précis	3,995	Tight, nimble and dynamic across the board and unusually articulate in the bass, but the ergonomics could be refined	6				130	
	Copland CSA29	1,900	A hybrid valve/solid state amplifier that gets close to offering the best of both worlds	6	opt	95		85	
	Copland CTA405	2,498	Avoids pratfalls of many valve amps, yet retains the euphony typical of the best of breed	6	ММ	0		50	1
	Creek Destiny	1,100	A highly assured performer that doesn't superimpose its personality on the music	6		0		100	
	Densen Beat B150	3,000	Gorgeous bass: slight treble dryness detracts only a little. Good sense of scale and rock-steady rhythms appeal too!	6	opt	opt		100	
]	Gamut DI 150	5,700	Serious contender for the best integrated amp ever. The DI 150 takes on pre/power combos on their own terms	6		0		180	
]	Krell KAV-400xi	2,698	The best integrated Krell yet is quick, agile, solid and finely detailed	5		0		200	
]	Lyngdorf TDA 2200	3,875	Sophisticated modular all-digital amp with room EQ, capable of adapting to the listening environment	4		61-		200	6
	McIntosh MA2275	5,400	A valve amplifier that doesn't patronise. It's not soft-centred and it understands dynamics	5	0	*		75	2
	Moon Evolution 1-7	4,750	Sophisticated, with an elegant build and sound quality, very limited features, even by high-end standards	5		49		150	2
	NAD M3	1,899	Massive and flexible, it goes very loud with fine authority and dynamic range, but lacks some sparkle	7		80		180	6
	Primare I30	1,500	A smooth, sophisticated yet agile performer, and beautifully built too	6			0	100	2
	T TITITATO IOO								
		1.995	Hot-running Class A amplifier that sounds more delicious than most. A definite step up from the classic A21a	4		9		40	2
	Sugden A21SE Unison Research Unico 200	1,995	Hot-running Class A amplifier that sounds more deficious than most A definite step up from the classic A21a.  Hybrid integrated with high power/quality low power modes combines much of the best of solid state and valve design.	4 5		Þ	0	40 200	2

_	r favourite					SPE	CIFIC	ATIO	VS	
Pre/	power amplifiers		MPLIFIERS	PREAMPLIFIER	POWER AMPLIFIER	LINE INFUTS	PHONO INPU	REMOTE CONTROL	POWER OUTPUT (W)	ISSUE NUMBER
	\$2,000	5	COMMENTS	20	30	CO.	-		5	20
1311	Arcam FMJ A32/P35	1,980	One of the few correctly matched integrated/power combinations, the sound has real gravitas and sophistication	0		7			100	227
EC	Cyrus DAC XP	2,200	A knockout DAC/pre with naturalness and resolution to die for and six digital inputs for signals up to 96kHz	0		2		0		266
EC	Densen Beat B-250/B-350	8,200	Upgradeable to surround, with sweet preamp and slightly coloured power amp, but sound is big and assured	0	0	6		0	125	270
6.0	Exposure 2010 S Integrated/Power	1,098	Bi-amping with the additional power amp increases the musical communication of an already fine integrated	0	0	6			75	264
	Naim NAC 122x/NAP 150x	1,575	Musically rewarding with outstanding sophistication, grip and insight for such a modestly priced design	-01	0	6	opt	0	50	287
	Quad 99/909	1,650	Well thought out and well executed, with a strong, engaging sound and just a little veiling	0	0	5	0		136	256
	Rotel RC-06/RB-06	598	A capable and surprisingly powerful-sounding combination which offers real value	0	0	5	0	0	70	285
ABOVI	£2,000									
100	Arcam FMJ C31	1,200	Professionally presented, beautifully built and exceptionally revealing, this preamp achieves much by doing little	0		5	opt	0		273
EC	Border Patrol Control Unit	2,995	Bluff looking valve preamp, with one of the most neutral yet dynamic sounds around	0		5	opt			277

EXECUTE: 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

## BUYER'S BIBLE STEREO/AV AMPS

	r favourite 🗉					SPE	CIFIC	ATION	IS	
	IEKEU I	Al	MPLIFIERS continued	PREAMPLIFER	POWER AMPLIFIER	LINE INPUTS	PHONO	REMOTE OUN	POWER OUTPUT (W	ISSUE NUMBER
BADGE?	PRODUCT	٤	COMMENTS	FR	FER	PUTS	Indi	CONTRIOL	W T	MBER
EC	Bryston BP26 DA/2B SST	5,550	Bryston's top preamp is now a serious competitor. The power amp reveals a lot of signal and delivers serious grunt		92	6	opt	€	100	278
EC	Chapter Preface/II+	9,800	Among the finest amps available, the resolution of this preamp and power amp challenges the best at any price	0	0	6		0	300	249
EC	Chord Prima/Mezzo 140	6,100	Small, muscular, beautifully made and styled and sounds like a dream		0	5		98	120	269
EC	Conrad-Johnson ACT2/Prem 350SA	20,000	Valve preamp and solid-state power deliver some of the most transparent and naturally dynamic sounds around		- 2	5		2	350	264
(V)	Densen Beat B-200/B310	2,300	Lively, energetic combination that bring a great sense of scale to familiar recordings	0	0	8		opt	80	276
	EAR 864/534	4,156	Valve combo delivers fine measured and subjective performance and inspires great confidence	0		6			50	254
EC	ECS EA-1	6,000	Understated monoblocks with real transparency to the fine detail, passion and energy in your record collection		0				180	253
EC	Gamut D3	3,430	Creamy smooth, yet lets you hear all the fine detail that goes to making a tonally rich, dynamically strong sound	0		5	opt	Q.		265
EC	Gamut D200 Mk3	3,950	A great power amp that's now even better – one of the best regardless of price		0				200	247
EC	Halcro dm1 0/dm68	25,550	Extravagant, extreme and massive amp combo will probably polarise opinions, but delivers stunning midrange clarity	0	0	5	を	13	225	243
EC	Hovland HP-100/RADIA	12,745	Uncommonly musical valve/transistor hybrid transcends stereotypes, one of the genuine high achievers	0	0	9	opt		125	250
EC	Krell FPB 700cx	14,998	Reference class amplifier may represent overkill in many systems, but when no compromise is called for, this is it		0				700	234
EC	Linn Klimax Kontrol	6,000	Beautifully executed example of Scots audio art, sounds as clean as it looks and is a lot more transparent than most	0		4		0		238
EC	Naim NAP 500	11,875	Wonderful neutrality, bandwidth and dynamic range, plus Naim's traditional leading-edge definition		0				140	208
EC	Naim NAC 552	12,100	Extremely expensive preamp, but still solid value. Magnificent sound with fine flexibility and convenience	8		6		0		233
100	Primare PRE30/A30.2	2,400	Smart kit that lives up to the visual promise with gorgeous sound – a really musical performer	物	6	7		134	128	256

# **AV AMPLIFIERS**

## Surround sound amps for music and movies

The multichannel, surround sound or AV amplifier is a popular option, thanks to the success of the DVD player and home cinema. Now you can buy five channels or more of amplification for the price of two. Now that multichannel music is also on the agenda, there's a lot to be said for a good AV amp or receiver (an amp with a radio tuner built in)

So if you fancy hearing what DVD-Audio, SACD or even music DVD-Video can do, then check out a multichannel amp and speaker set-up - they're stunning with movies and none too shabby with music.

AV amps are usually designed primarily for movies and come with digital processing for the various soundtrack formats - Dolby Pro-Logic (analogue), Dolby Digital and DTS, which offer discrete surround sound in 5.1 and 7.1 channel formats. More ambitious designs also offer THX post processing, designed to emulate the sound of the mixing theatre at home.

Processing in AV amps is needed because the surround formats on DVD-Vs are compressed, limiting their high-fidelity



potential. This is why new formats SACD and DVD-A, which don't use 'lossy' compression, were created for music.

All this processing power can take its toll on analogue formats. The best multichannel amps for music are often the simplest, but any that offer a complete bypass option with six-channel input are suitable. It's also worth looking at real power - five or seven channels of amplification are not easy to produce with a feeble power supply, and the cheaper amps in particular often fail to live up to the claims.

## 1.30

## **HOW MANY CHANNELS?**

Depends on how many speakers you want. Multichannel music discs come with six or 5.1 channels, but for new movies, 7.1 is where it's at. 7.1 set-ups also mean you have speakers directly behind you - preferable for music discs.

## WHAT'S THE DIFFERENCE **BETWEEN A PROCESSOR** AND AN AV AMP?

Processors don't have built-in amplification and you need separate power amps. AV amps and receivers have processing and amps in the same box.

## WHAT DOES THE .1 IN 5.1 STAND FOR?

This is the LFE (low frequency effects) or bass channel that is reproduced by a subwoofer

## HI-FI MEETS SURROUND S

With DVD-Audio and SACD offering highquality multichannel music, surround sound is no longer just a home cinema thing. An increasing number of people want to build a multichannel system that will do their music as well as their movie

DVDs justice, and the number of AV products delivering sufficient quality is on the increase. But most aren't cheap building a top-quality system with five or more channels is inevitably more expensive than sticking with stereo. There are some very decent integrated options below £1,000, though the best (and most costly) route is to buy a separate processor and power amp(s). Or you can add AV amplification to a stereo model you can't bear to part with.

# AV AMPS BUYER'S BIBLE





helping of processing and connection

options, with exceptionally musical sound.



formats without sacrificing sound quality.



5 • 120 238

	r favourite				SPE	CIFIC	CATIO	NS
A	V AMP	L	IFIERS			7.10	5-CHANNEL POWER (W)	SS
Mul	tichannel amplifiers			PED	LINE INPUTS	COMPATIBLE	POWE	SSUE NUMBER
ADGE?	PRODUCT	5	COMMENTS	RECEIVER	PUTS	378	R (W)	VBER
MULT	CHANNEL INTERRETED AMPS							
100	Arcam DiVA AVR350	1,500	Sets the standard for music and movie performance at the price, although features count low and HDMI limited	移	7	0	100	284
C	Denon AVC-A11XV	2,500	Sensible, real world derivative of AVC-A1XV, but still immensely flexible, and well endowed with digital i/o		11	8	140	273
С	Denon AVC-A1XV	4,000	helegant, but powerful and effective tool with excellent auto set-up and capable of driving two 5.1 systems simultaneously		8	•	170	266
c	Lexicon RV-8	5,000	Classy multi-zone receiver lacks high tech digital attributes (HDMI etc) but majors on very effective audio engineering		10	•	140	267
	Marantz SR-12S1	3,000	A multichannel amp that can be taken seriously in stereo too. Resources are in the engineering rather than the gimmickry	453	3	4	160	255
c	Pathos Cinema-X	4,750	No processing, just sexy Italian style, a sextet of valves and the chance of 450 watts in stereol Cultured sound, too		5		110	270
c	Pioneer VSA-AX10Ai	3,000	State of the art one-box amplifier with enhanced sound quality, auto set-up and other enhancements		10	9	150	260
0	Sony STR-DB798	250	Cheap but effective, and passably good with pure audio sources, but control system messy		7	•	100	273
2	Sony STR-DB795	300	A superb value little amplifier, well appointed technically and successfully tuned for UK ears	-	7	•	100	260
c	Sony TA-DA9000ES	2,600	Arguably the first convincing fully digital amplifier, an excellent match for players with i Link encrypted outputs	50	10	109	200	253
7	Yamaha DSP-AX759SE	500	More a stereo amp with basic multichannel thrown in, but a great performer with music at this price	0	6	•	100	287
MULT	CHANNEL PREAMPS/PROCESSORS	AND POWE	RAMPS					
	Arcam A90+7.1 mod, P90/3	1,920	Add Arcam's multichannel module and a P90/3 power amp to the A90 stereo integrated and you've got got superb purist 5.1		8	16	90	250
	Arcam AVP700/P1000	3,000	Cutting-edge processor/tuner with HDMI sounds great, but the matching Class H power amp lacks finess to match its power	0	8	0	135	275
c	Arcam FMJ AV8/P7	5,750	High-quality preamp/processor (£3,150) and seven-channel power amp (£2,600). An excellent fusion of stereo and surround sound		7	*	180	235
С	Classe SSP-600/ CA-5200	11,900	Subtle, exacting sound, tremendous flexibility and high power audiophile standard amplifier - lacks hi-tech digital interfaces		11		200	278
С	Copland CVA306/CVA535	3,748	Tube analogue six-channel pre transforms multichannel audio from a novelty into a genuine advance for the high fidelity art		5		125	236
	Linn Exotik	1,750	Is hi-fi ready to make the jump to multichannel music? Linn think so with this musical preamplifier		4			260
c	Meridian 861	9,833	Powerful surround processor with flexible modular construction, marvellous versatility to drive any speaker configuration		6	100		230
	Naim AV2/NAPV175/NAP150	4,175	First truly credible multichannel system from Naim is idiosyncratic but offers excellent basic sound with modest spatial steering		5	•	50	238
c	Parasound Halo C1/A51	7,500	Powerful and flexible processor/power amp combo with impressive sound. Excellent value – processor includes onboard screen		11	•	250	243

EXESTIBLE RECEIVER Integrated multichannel amp with built-in radio tuner. LINE INPUTS input sockets for source components with a line level output: CD players, DVD players, tape decks, tuners, phono stages etc. 7.1 CHANNEL COMPATIBLE The amp either has seven-channel in and outputs or in some instances is equipped with seven channels of amplification

4,200 Great all-round system which brings the qualities of good stereo high fidelity to a multichannel world

5-CHANNEL POWER (W) Power output in watts per channel of all channels driven by the amp

Primare SP31.7/A30.5



# SEVENOACS





## Samsung

**BD-P1000 BLU-RAY DISC PLAYER** 

Revolutionise your home viewing forever. Samsung's BD-P1000 Blu-ray disc and DVD player is the perfect partner for your HD Ready TV. You can even upscale your existing DVDs for an enhanced picture and when partnered with a 1080p TV, such as Samsung's F7, you will enjoy full 1080p high definition images.



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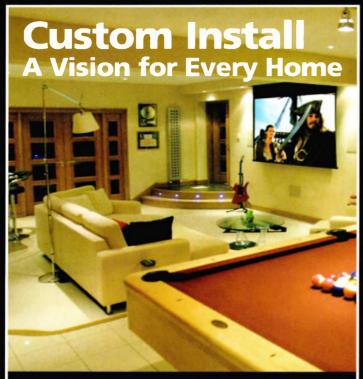
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## PLEASE NOTE

# **STEREO SPEAKERS**

Speaker pairs for stereo sound

While loudspeakers are relatively straightforward in construction, they have one of the most difficult jobs in hi-fi – turning an electrical signal into an acoustic one. Most consist of two or more drive units in a box that usually has a port in it to make life easier for the cone in your mid and/or bass driver. Alternatives to this arrangement include panel speakers, which use electrostatic or ribbon technology, and horns, which use drive units in complex cabinets that greatly improve efficiency.

Box speakers are either designed to stand on the floor (floorstanders) or on a stand (stand or shelfmounts). Floorstanders have greater internal volume which can translate into greater efficiency and/or bass extension, but less substantial designs also introduce cabinet resonance and thus distortion. But they don't need stands and therefore have the aesthetic edge. Standmounts have less cabinet to vibrate and often score in terms of imaging and timing, but need good stands to work well.

## **Positioning**

The closer the speaker is to a wall, the greater the reinforcement of bass. As all rooms differ, there's no simple formula for placement and experimentation will yield the best results. Altering the angle at which the speakers face the listener can also make a difference to balance and stereo image.

## Going multichannel

Many stereo speakers can be augmented with centre and surround channels from the same brand to create a multichannel system. The most important element is a centre channel, which needs to match the stereo pair as closely as possible. For the best musical results, surrounds should be as per the front left and right channels, but if space or funds don't permit, smaller designs can be used quite effectively.

## PUWER

Though some speakers have a power rating, this isn't as informative as a rating for how difficult they are to drive, nor does it indicate wattage extremes for the partnering amp. In practice, an amplifier cannot be too powerful. Our listings quote ease of drive to indicate how much power

your amp needs to avoid a mismatch. An above-average (A+) speaker will work with amps rated at 25W plus, while an average (A) speaker will need 50W or more, and a below average (A-) speaker could require 100W plus to sound its best. These are guidelines rather than rules.



## **Choosing speakers**

Because speakers and the rooms they are used in vary so much, choosing a pair tends to be quite subjective. To find some that will suit you, try to listen to a good variety to hear how they differ, and if possible, audition some at home. Tonal balance tends to vary the most, but is less important than more subtle factors such as timing and dynamics. Finally, listen with your ears not your eyes – great-looking speakers aren't necessarily great sounding.

## **Spikes**

Floorstanding speakers and stands have threaded inserts for spikes that allow rigid coupling with the floor. These have the advantage of draining resonance from the speaker and giving tighter bass, but can result in more vibration getting back to the electronics and often cause the floor to resonate as well.

## A.S.O

## IF SPEAKERS ARE RATED AT 75 WATTS, DOES THAT MEAN I NEED A 75 WATT AMP?

No, see the box on power for the full story.

## WHICH SPEAKERS ARE BEST FOR SMALL ROOMS?

Those designed to work close to the wall will be smoother in confined spaces. Speakers that have relatively dry, tight bass will also sound better.

## WHICH SPEAKERS ARE BEST FOR BIG ROOMS?

Big, efficient, easy-to-drive designs are more likely to be able to fill a room better than compact models.

## DO I NEED TO BUY CENTRE AND SURROUND CHANNELS FROM THE SAME BRAND AS MY STEREO SPEAKERS?

Yes, assuming that you're wanting to create a homogenous surround sound experience, where voices don't change when they move from one channel to another.

# STEREO SPEAKERS BUYER'S BIBLE



1050 £330

This range-topping floorstander from newcomer Q Acoustics produces an engaging sound with fine dynamics and impressive transparency.



Ikon 6 £899

Complete with a ribbon super-tweeter, this is an exceptionally capable floorstander for the money, delivering a highly detailed and thoroughly engrossing sound.



A superbly well-engineered standmount that's capable of delivering magnificent musical communication, alongside superior subtlety and delicacy.



**Mordaunt-Short** Performance 6 £3,500 This extraordinary speaker stands at the pinnacle of Mordaunt-Short's current range. State of the art resolution and imaging are among its many attributes.

**SPECIFICATIONS** 

Our favourite BEST BUY E EDITOR'S CHOICE CTEDEO CDEAVEDO

Ster	reo speakers			SIZE W,H,D, ICM)	FLOOPSTANDER	EASE OF DRIVE	BASS FROM [HZ]	FIEE SPACE	CLUSE TO WALL	ISSUE NUMBER
BADGE?	PRODUCT	3	COMMENTS	(CM)	NDER	WINE	(ZH	FACI	MALL	/BER
UP TO	£1.000									
	Acoustic Energy AE1 Classic	845	Sharply priced classic replica has a beautifully balanced midband, wide dynamic range and little boxiness	18,29.5.25.5		Α-	45	0		283
	Acoustic Energy Linear 1	250	Not at its best with classical but a well integrated, involving, timed aligned speaker nevertheless	19,36,26		A+	50	0		277
	ALR Jordan Entry L	500	Not the most pretty speaker but a sonic triumph, with a beautifully judged balance and impressive transparency	20,86,29	0	А	23			279
	ALR Jordan Note 3	1,350	Costly but clever; adjustable ABR gives much of the weight of a floorstander with the agility of a standmount	24.5,37,31.5		А	26	0		288
	AVI Neutron IV	499	A great example of what can be done with a genuinely small speaker, but the warts-and-all balance won't suit all	15,27,21		A-	65	0		260
	B&W DM303	180	Chunky looking and lively sounding, with deep bass, a fine midband and a restrained top end	20,33,23		Α	23		0	226
	B&W DM602 S3	300	Old-fashioned size/shape, but this timeless design has a rare combination of grip, authority and headroom	24,49,29		А	25	0		234
-	B&W CM1	500	Luxury miniature has neutral, laid back sound, with low coloration, fine imaging but weak dynamics	16.5,28,28		Α-	40	0		279
	B&W 705	900	Deft, delicate and delightful, if a little bass light, with clever enclosure and driver engineering	22,42,29		А	35	0		253
	B&W CM7	999	Floorstander could have greater dynamic expression, smooth and restrained sound is well balanced with bungs in place	20,91,30	0	A-	25	0		288
	Castle Richmond 3i	320	Pretty real-wood miniature sounds superbly smooth and even, if dynamically weak	17,33,23		A+	45		0	284
	Castle Richmond 7i	900	Does all the musically important stuff flawlessly. A fine communicator that delivers reassuringly credible bass	18,92.5,26	0	A+	47	0		286
:	Castle Compact Column	550	Compact, not so much that you need a sub to back up the bass, an elegant and engaging speaker for its size	14.87.5,16	0	A-	50	0		280
27	DALI Ikon 6	899	Needs care with setup, but rewards you with impressively transparent and almost obsessively detailed sound	19,100,33	0	А	37	0		271
	DALI Ikon 7	999	Bulky vinyl floorstander has high sensitivity and a bright sound with superior coherence, delicacy and transparency	20,114,34		A+	22	0		275
	Dynaudio Audience 42	400	An aristocrat of the vinyl-covered miniature breed. A terrific small speaker for the price	17,29,24		Α	40	0		215
	Dynaudio Focus 110	850	Luxury real wood miniature with tapered enclosure sounds punchy, sweet and avoids boxiness	17,30,28		A-	38			279
	Epos ELS 303	399	Midband is impressively smooth, even and coherent, but the sound lacks some dynamic grip and top end detail	18,85,20	0	A-	28			273
F.5.	Epos ELS3	200	Few affordable speakers sound as clean and convincing while taking up so little real estate	18,27,19		A-	60	0		241
	Epos M5	349	Gorgeous miniature works well close to wall. Could be smoother but communicates with authority	18,33,21		A-	40		0	269
	Epos M12.2	449	A true classic stand-mount with lovely presentation, fine sound balance, superior coherence and low coloration	20,37,25		A-	40			265
	Epos M22	949	Very classy floorstander has a tricky bass and an edgy top, but a very smooth and even midband	20,88,25		A-	25	0		275
-101	Focal Chorus 816 V	1,000	Fine, warm balance, superior dynamics, and a sweet top end, but could be smoother	28,100,37.5	0	A+	20	0		288
101	JBL Studio L880	700	Good value floorstander with neutrality, massive headroom and plenty of punch. Could be more transparent	22,99,37	0	Α	25	0		275
120	KEF iQ3	280	Shapely, vinyl-covered stand mount has lively dynamics and fine imaging, but could be smoother and sweeter	22,37,33		A+	40	0		284
	KEF iQ9	800	Shapely and solid floorstander has wide bandwidth and dynamic range with superior neutrality and sensitivity	22,94,33	0	Α	25			273
	Monopulse 42A	995	Uniquely different in style and sound, midband time-coherence is magnificent but treble is too restrained	26,110,25	0	A+	28	0		271
1881	Monitor Audio GS10	800	More neutral tonally than some recent MAs. Quality stereo design which take's up little room and is easy to drive	20, 36, 27		A-	40	0		284
(5.1)	Monitor Audio Silver RS8	800	Bold, dynamic sound marks it out from the crowd, and it's an easy load that works well in larger rooms	90,18,27	0	А	33		0	276
Will.	Mordaunt-Short Avant 906i	350	The generous, well balanced sound shows good enclosure control, could do with more grip and better spikes!	165,85,29.5	0	Α	40	0		281
Told .	Naim n-SATS	695	Very discreet and informative, if a bit lean and forward. Just add an n-SUB for excellent all round results	20,29,21		А	50		0	268
	Nbien DX-5	250	Unusual shape miniature delivers generous scale, weight and dynamic expression for something so compact	17.5.34.24		Α-	40		0	284

SPECSING SIZE WXHXO (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 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)



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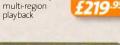
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	reo speakers	J ;	SPEAKERS continued	SIZE W.H.D (CM)	FL00RSTANDER	EASE OF DRIVE	BASS FROM (F	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER		
ADGE:	PRODUCT	2005	COMMENTS		30	-	(HZ	H	=	-		
_	PMC DB1+	625	Now with sweeter treble, this fun-size finy lacks some weight and authority, but is beautifully balanced	16,29,24		A	50	_		26		
	PMC GB1	995	Ultra-compact floorstander is beautifully clean, articulate and free from boxiness, with a notably delicate top end	16,92,24	•	A+	30	0		2		
	PMC TB2+	795	Classy transmission line stand-mount has superior midband, restrained presence and a bright clean top end	20,40,30	-	A	28	•		2		
	ProAc Tablette Ref Eight	699	Stunning standmount with electrostatic-like imagery. Its Signature brother costs £200 more and is even better!	15,27,23	_	A+	40	•		2		
12	Q Acoustics 1010	99	Neatly styled miniature has limited bass and power handling but fine midband voicing at a very sharp price	15,21.5,19.5		A	48		•	2		
	Q Acoustics 1050	330	Great value, the sound lacks smoothness but has fine dynamics and impressive transparency	19.5,97.5,30	•	A+	28	•		2		
61	Rega R1	298	Cute baby sounds busy, coherent and involving, if a touch thin. Sweet and delicate treble with even bass	15,32,24		Α	50		•	2		
16	Rega R3	448	Discreet, pretty and fine value. A little lightweight but impressively open, it delivers music with great agility	20,76,28	•	Α	40		•	21		
,	Revel Concerta F12	900	The money has gone into the active hardware, so cosmetics are plain. Performance is on par with more costly designs	25,108,37	•	A-	28	\$		2		
	Ruark Sabre III	799	Straightforward engineering combined with high finish quality that delivers a beautifully timed and engaging sound	20,33.5,27		A-	50	•		2		
	Triangle Antal Esw	995	Smoother than its predecessors, with a beautifully balanced bass and midband, though the top end is uneven	20, 108, 34	•	Α	20	•		2		
	Triangle Titus ES	370	Not pretty but busy, coherent and involving, if a little thin. Sweet and delicate treble with even bass	18,37,30		A-	40		•	2		
	Triangle Comete ES	500	Bulky standmount lacks style but delivers engrossing musical coherence and vivid dynamics	20,42,34		Α	40		•	2		
100	VE £1,000		THE RESERVE OF THE PROPERTY OF	10.75	20	1			28			
	A2T Mezzo	2,000	Seamless overall coherence, with persuasive monitoring capabilities. Sounds a little mid-forward. Top could be sweeter	27.5,40,26		Α+	40	•		2		
	Acoustic Energy AE1 MkIII	1,900	Luxury miniature has a laid back but bouncy sound, fine dynamic range and very superior imaging	18.5,31,25		A-	30	0		2		
	ALR Jordan Classic 5	1,200	Slim, laid back floorstander has sweet sound with fine coherence, imaging and dynamic range	17,99,26	•	Α	28	•		2		
	ATC SCM19	1,499	Super linear motor system, heavy weight construction and fabulous veneer that makes the ATC a pro favourite	22.3,44,31.5		A-	54	9		2		
	Audio Physic Spark 3	1,499	Classy and discreetly laid back floorstander has delightfully neutral balance and surprising bass weight	15,98,22		A+	27	•		2		
	AVI Duo	1,299	Sophisticated floorstander, a natural partner for AVI's electronics. Unusually clean and honest musical presentation	19,77,28	•	А	50	•		2		
6	B&W 704	1,400	Cleverly tapered enclosure and external tweeter delivers superior bass and treble, with a laid-back midband	22,96,32	•	А	20	•		2		
c	B&W 802D	8,000	Great timing, superior dynamics and a sweet top end all enhance musical communication. Makes sweet music	37,115,56	•	А	<20			2		
	B&W 805S	1,600	Classy standmount with excellent coherence and imaging. Can sound laid back but otherwise a real delight	24,39,33		Α	25	49		2		
	B&W 703	2,000	Bass is immensely powerful and even, and the overall sound is lively and dynamic, though not overly smooth	23,101,36		A-	20	8		2		
				15.2,114,20	•	A-	25	•		2		
	B&W XT4 Beauhorn B2.2 Revelation	1,800	Corgeous, silver, super-slim floorstander has notably clean bass, but sounds a little too polite and lacks dynamic grip	34,130,75		A+	80	•		2		
		3,984	Magnificent midband and fine overall balance but limited bass is best with small-scale material							-		
	Canton Vento Ref 5DC	3,499	Strikingly handsome speaker has a studiedly neutral balance with delightful midband analysis	25,112,35		A	40	•		2		
3	Chario Cygnus	1,200	Beautiful solid walnut sides. Port tuning suspect, but laid back sound has fine delicacy, imaging and refinement	20,96,27	0	Α-	28	8		2		
	Dalı Helicon 400	2,999	Advanced drivers and enclosure give a generous sound with wide dynamic range and no boxiness	22,103,46	•	Α	20	•		2		
	Dynaudio Focus 220	1,850	Cleverly tapered floorstander has a brilliantly smooth, neutral balance and very sweet treble. Could be more dynamic	20.5,98,29.5	•		<20			2		
<u> </u>	Eclipse TD510	1,200	Replacement for the TD512 does astonishing things with musical timing £600 floor stands also recommended	24,36,26		Α	45	3		2		
	Focal-JMlab Alto Utopia Be	11,000	Attractive and beautifully balanced, with fine bass alignment and focus, low coloration and very clean top end	37,121,53			20			2		
	Focal-JMlab Diva Utopia Be	7,599	Lovely slimline speaker combines remarkable transparency with fine dynamics and gorgeous bass	25,110,53	24	A+	30	0		2		
]	Focal-JMLab Electra 1027 Be	4,000	Outstanding mid and top with fine delicacy and low coloration, but lacks some bass grip and drive	26.5,111,35	•	A-	25	•		2		
	Focal-JMlab Micro Utopia Be	3,799	New 'Be' version is clearly an exceptional standmount, capable of revealing the innate quality of the music	25,42.5,38		Α	50	•		2		
	Focal-JMlab Profile 908	1,300	Open and revealing especially of spatial and atmospheric detail, makes up for its bass restraint with joi de vivre	23,39,27.5		А	50	•		2		
	Focal 826 V	1,250	Times nicely, goes loud with ease and will produce precise imaging if appropriately set up.	28.2,103.8,37.5	•	Α	45	•		2		
2	Gamut L5	5,900	Impressive build and sophisticated driver design make the L5 a stunning speaker with rare transparency levels	20,116,43	•	A-	32	•		2		
	Jamo Reference R909	7,500	Top model (in a class of one) is open, full and easy on the ear, and surely a classic in the making	48,127,54	•	A-	25	•		2		
2]	Krell Resolution 2	6,497	Large but good looking, with Sonus Faber type elasticated front. Musically a great full bandwidth all-rounder	122,29,61	•	В	28	8		2		
	MartinLogan Clarity	2,498	Relatively affordable and easy to live with electrostatic hybrid with class-leading resolving power	26,135,31		A-	46			2		



Signo MX5.1 5.1 Surround Speaker Package



Rondo Ribbon Tweeter ALTIMA Mid/Bass

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Argentum UZWL Hi-Fi Digital Wireless Speaker



## BUYER'S BIBLE STEREO/AV SPEAKERS

ď	TEDE		CDEAVEDO		SP	CIF	CATIO	NS		
tere	o speakers		SPEAKERS continued	SIZH W.H.D (C	FLCORSTANCER SIZE W.H.D (CM)		BASS FROM (HZ)	FREE SPACE	C_DSE TO WALL	SSLE NUMBER
	PRODUCT	3	COMMENTS	_	ER	EASE OF DRIVE				
	Meridian M3100	1,850	Attractive and capable active (125w) with great imaging and strong bass. High neutrality and good power handling	19,39,25		ACT			opt	28
	Monopulse 82	2,495	Could be more neutral, but excellent coherence, lively dynamics, fine imaging and a wide dynamic range	27,110,25	0	А	<20			28
	Mordaunt-Short Perf 6	3,500	Revolutionary enclosure design and aspirated tweeter make for a fast, hi-res ride	24,121,37	0	Α-	35	0		26
-	Naim Ariva	1,275	Cute and discreet floorstander has superb bass and a wide dynamic range, but it could be smoother and sweeter	23,88,31	0	А	25		0	25
	Neat Elite SE	1,499	Smooth and natural performer with notably expressive midband. Fine voice articulation and unusual sweetness	20,90,18	0	А	25	0		26
] [	Veat Motive 1	1,200	Beautifully neutral balance sounds open without aggression. Fine midband but could be more authoritative	16,92.5,20	0	A-	20	8		27
] F	PMC Wafer 2	1,650	Clever 'hang-on-wall' speaker has minimal sonic compromises. Smooth midband delivers impressive stereo imaging	33.5,57.5,10		A+	45		Đ	28
] F	PMC FB1+	1,695	Nicely proportioned floorstander has a sweet top and a beautifully natural, open and restrained midband	20,100,30	0	Α	20	9		26
] F	PMC IB2	6,150	Stunning in an understated way, this speaker creeps up on you and hooks you with its transparency and power	33,74,47		A-	25			23
F	ProAc Response D25	2,995	The traditional ProAc high-end detail mixed with greater efficiency and more pace - a splendid speaker	22,107,25	0	A+	20	0		25
F	Rega R7	1,498	Super-slim and super-smooth floorstander has fine agility with a slightly bright overall character	27,98,35	0	А	25	0		27
] F	Rega R9	2,498	This subtle, laid back but very informative performer has a very superior dynamic range, especially in the bass	17,103,39		А	20	0		25
] F	Revel F32	3,200	Meticulously balanced, tonally neutral design makes for a taut, well disciplined sound	22,105,39	0	А	30	0		26
] F	Revel M22	1,800	A remarkably clean and revealing speaker with superb tonal and microdynamic capabilities	22,37,30		A-	48	0.	0	27
) F	Roksan Caspian FR-5	1,995	Sharp looking speaker sounds exceptionally open and lively without aggression. Could be warmer	20,100,25	0	А	<20	0		27
] F	Ruark Talisman III	1,499	No bass demon, but a sophisticated and agile speaker epitomising Ruark's design ideals	22,84,31	9	А	22	0		25
] 9	Sonus Faber Concerto D.	1,799	The Concerto Domus performs significantly above its price level, especially with acoustic material	21,99,31	0	А	35	1,0		27
] 9	Sonus Faber Cremona A.	2,149	Standmount 'Auditor' version of the Cremona makes a soundstage bigger and better than its size suggests	19,35,32		А	48	0		24
] 9	Sonus Faber Grand Piano D.	2,498	The Grand Piano Domus has a fabulous physical appearance and delivers a clean, refined sound	21,106,31	0	Α-	32	0		28
] I	annoy Dimension TD8	4,000	This stylish speaker is a splendid all-rounder, with fine dynamics, precise imaging and minimal coloration	31,86,30		A-	25			24
1	otem Model 1 Signature	1,595	Expensive, but very seductive miniature delivers a beautifully smooth and balanced midband	17,31,23		А	35			27
] [	riangle Celius Esw	1,395	Not the smoothest sound around, but has great vigour and enthusiasm, plus good scale and weight	20,117,34	۰	А	22	0		27
T	riangle Magellan Concerto	9,995	Scintillating midrange and treble, with tuneful, well-timed bass – a thoroughly engaging musical ride	28,149,34	0	А	35	0		26
	Jsher Compass CP-6381	2,500	Lots of speaker for your money, with plenty of deep bass, unusual styling and massive build	35,127,65		А	20			27
١ ١	/ivid Audio B1	7,750	Impressive cabinet design combined with hi-tech drivers to make truly world class speaker	27,110,38	0	A-	40			26
	VEGG3 Stelar 1	4,995	A full-range sound from a small(ish) box is possible, but only if you are very careful about set up, room and amps	35,97,45	0	Α-	28	0		27
	Vilson Benesch Curve	5,000	Much (but not all) of the ACT's performance in a much more compact and affordable package	23,91,37	0	А	28	0		25
	Vilson Benesch ACT	8.400	Superb enclosure gives uncanny freedom from 'boxiness'. Well balanced, but top end might be sweeter	23.108.36		A				25

# **AV SPEAKERS**

#### Speaker solutions for multichannel surround sound

Multichannel speaker systems have a front left/right (L/R) stereo pair, a centre or dialogue channel, two (5.1) or four (7.1) surround speakers and often a subwoofer. For best results, each of these speakers bar the sub should be identical. The problem is that few surround systems are dedicated to music and perform a home cinematic role as well, meaning the centre speaker has to sit above or below a video

monitor. Centre channels are usually wide and short for this reason.

This should not be a barrier to great surround for music and movies however, as many brands make centre channels with a very close sound to their L/R designs.

#### Music vs movies

High-resolution SACD and DVD-A music recordings tend to be mastered with

surround speakers in the ITU standard position which is as far behind the listener as the front channels are in front. 5.1 movie soundtracks tend to place surround channels not so far behind and to the side of listeners. Usually, practical limitations will dictate a limited range of placement options, but if you are a dedicated music fan, check out the ITU set-up regulations in the booklet supplied with SACD discs.

Ideally you should set up surround speakers with as much care as you would stereo systems, but practical issues tend to have a significant bearing on surround and centre speaker placement. Surround channels can be floorstanding or wallmounted, and centres usually have to perch on the TV or underneath it. Given these limitations, adjust your L/R front speakers to give the best tonal match with the centre. If there's more than just you listening, 'toe in' the speakers so that their axis crosses in front of the listening position - this gives a wider stereo image. And if there's a subwoofer it should be placed near the front speakers. Use a sound pressure metre (available from Tandy among others) to accurately set levels.

#### SUBWOOFERS

Subs start working where stereo speakers run out of steam at low frequencies. The idea is to create deeper, better-controlled bass rather than more of it. They usually have onboard amplification (active) and connect to either the LFE (Low Frequency Effects) channel in a home cinema set-up or the speaker terminals in a stereo set-up.



#### B&W

600 S3 package £900 Incorporates 602s, 601s and an LCR 600 centre speaker. Great in both stereo and multichannel surround modes.



#### n-SAT/CENT/SUB £3.385

Five n-SATs, and n-CENT and an n-SUB make a highly engaging and (for Naim) discreet multichannel package.



#### Concept 3 £4,877

It might not look as flashy as some, but the quality of engineering in this ATC package ensures superb all-round performance.



#### Linn

#### Akurate package £13,750

Linn has worked wonders with its new multichannel speaker system - it's not cheap, but its performance is breathtaking.

Our favourite BEST RUY E EDITOR'S CHOICE

					S	OHS			
Mul	V SPEA	K	ER PACKAGES	EASE OF DRIVE	NUMBER OF SPEAKERS	BASS FROM IHZ	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
	ATC Concept 3	4,877	Extremely engaging, revealing and musical multichannel system providing 360 degrees of full-on entertainment	Α-		12	0	opi	255
	B&W 300 package	900	An excellent compromise between the requirements of music and those of home cinema (inc. subwoofer)	А	6	27			241
	B&W 600 S3 (602/601/LCR 600)	900	Unquestionably delivers the sonic goods, High-quality drivers in standmount enclosures	А	5	22			224
	Castle CAV Sterling	1,250	Lovely real wood veneers. Sound has fine dynamic drive and expression, but can sound a little hard	А	5	28			224
	Dynaudio Audience 42 package	1,142	Multichannel package for hi-fi purists with real authority and imaging, but needs subwoofer for full-bore movie sound	A-	5	53	0		24
	Final Sound Electrostatic system	4,875	Slim, attractive, electrostatic panels have clever connections, limited loudness but a breathtaking transparency	A-	6	20	0		251
	Focal-JMlab Electra package	3,017	Bold, solid system, tremendous consistency and easy to expand with an added subwoofer	А	5	50	0		232
IE.	Linn Akurate (242/212/225/221)	13,750	An extremely capable system that offers new insights into the potential for multichannel audio	A-	6	18	9		25:
	Mirage Omni 2	2,650	Dark tonality, but superb imagery makes this an excellent all-round choice	А	5	30	168		232
	Mission m5 package	1,450	Main m52 is a clean, attractive full-range stereo speaker, while the m5as sub does big bass for movie fans	А	6	28	0		241
	Mordaunt-Short Genie	800	A prince among sub/sat packages – good integration and impressively little compromise compared to full-size models	A-	6	38		0	262
	Mordaunt-Short Declaration 500	1,600	Good value vinyl THX Select package with Power Towers. Good authority, but must be 5.1-connected	А	5	25		0	210
	Naim n-SAT/n-CENT/n-SUB	3,385	Priced here as a 5.1 package, Naim's neat n-SATs and matching sub/centre make an exceptional compact ensemble	А	6	20			268
	Tannoy Arena	1,200	Fabulously stylish sub/sats with Dual Concentric drivers. Unusually revealing for the breed, but sub lacks refinement	А	6	29			269

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. NUMBER OF SPEAKERS The amount of individual loudspeakers in the package. 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)

Our favourite 
BEST BUY (C) EDITOR'S CHOICE

		OF	'FNC	SPE	CIFICA	NON:	
Bas	UBWC s speakers			SIZE W.H.D. (CM)	POWER (W)	BASS FROM (HZ)	ISSUE NUMBER
BADGE?	PRODUCT B&W PV1	950	COMMENTS  Gorgeously styled sub shakes the air but not the floor, delivering a very clean sound with negligible coloration	29,34,35	500		1000
EC	B&W ASW850	2,000	Does all the things subwoofers should do with music and movies alike, but transparently and seamlessly	53,56,52	1000		-
EC	Eclipse TD725sw	2,700	Delivers solid meaningful bass, but with unusual tunefulness, speed and articulation	52,47,50	500	40	287
	Monitor Audio ASW100	300	For the price, this compact subwoofer performs particularly well	32,32,34	120	27	225
EC	REL 305	795	Landmark mid-price sub, works particularly well with low crossover frequency, looks great too	32, 36, 34	300	25	284
	REL Stampede	550	Few subs at this price match the Stampede's subtlety and ease of integration. Much more hi-fi than AV	28,40,29	100	18	257
	REL Strata 5	700	Highly musical sub that integrates well but the REL Stampede offers near-identical performance for less money	32,46,33	150	18	257
	REL Storm III	900	Excellent sub with powerful, detailed and deep bass. Comprehensive facilities, including flexible filter adjustment	42,62,33	150	18	225
	REL Storm 5	1,000	Well engineered, good bass depth, appropriate for mixed hi-fi & home cinema/multichannel systems	34,52,37	200	15	267
EC	REL Stadium III	1,500	It's a bulky piece of furniture, but offers superior filtering as well as an ability to delve deep into the bass nether regions	59,56,39	200	16	217
	Titan Saturn	800	Very bulky sub has curious styling, but decent filtering gives good weight and headroom	72,48,72	200	20	239
	Velodyne SPL-800R	699	Powerful, highly configurable sub with auto setup feature and attractive, compact packaging	26,27,33	1,000	28	286

SIZE WXHXD (CM) Width, height and depth of one cabinet in centimetres. POWER (W) How many watts the onboard amplifier of active models delivers BASS FROM How low the sub goes, the smaller the number the deeper the bass

Do you want to choose your hifi or home cinema system, in a comfortable and relaxing environment...?

Do you want friendly and impartial advice (and a cup of tea)...?

Do you want to buy your system based on what you hear, and see, and not what somebody tells you...?

#### Do you live in GUILDFORD...?

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Nobody else in these areas carries all the following major hifi brands:

Apollo, Arcam(Diva/FM), Ash Design, Atacama, Atlas (spkr cables & interconnects) B&W, Chord Company, Creek, Cyrus, Denon, Epos, Exposure, Genelec, Anthony Gallo Acoustics, Harman Kardon, Infinity, Iso Tek, KEF (including Reference), Linn Products(including Knekt), M Acoustics, Meridian, Michell, Mirage, Mission, Musical Fidelity, NAD, Naim, Ortofon, Pioneer, PMC, Primare, Proac, Project, Pure, QED(including Systemline), Quad, Quadraspire, REL, Rotel, Sennheiser, Soundstyle, Spendor, Stands Unique, Tag McLaren, Wharfedale, Yamaha.

Nobody else in these areas carries all the following major Home Cinema products:

DVD players: Arcam & FMJ, Cyrus, Denon, Harman Kardon, Meridian, Rotel, Tag McLaren, Yamaha,

Processors: Arcam FMJ AV8, Cyrus, Lexicon, Linn, Meridian, Rotel, Tag McLaren,

Amplifiers: Arcam/FMJ, Bryston, Cyrus, Denon, Harman Kardon, Lexicon, Naim, Rotel, Tag McLaren,

Yamaha.

Display devices: Plasma screens from Loewe, Panasonic, Pioneer and Yamaha. Televisions/LCD: Loewe. Projectors: Barco(CRT/DLP), Sim (DLP), Yamaha(DLP/LCD) Screens: Stewart/Draper/Vutec, Video Processing: Faroudja, I-Scan, Key Digital, Lumagen, Tag. Control systems: Crestron, Lutron lighting. Specialist set up services: ISF Display Callibration.

**Nobody else** in the area offers you a "One Stop Solution" to all of your home entertainment requirements, as we are also Custom Installation experts. Discuss your requirements with us and we can survey, design, install, commission, and maintain full Sound and Audio-Visual distribution, and automated lighting around your home.

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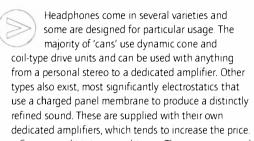
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# **HEADPHONES**

For your ears only



Cans are split into several types. There are open and closed-back designs, the latter being best for noisy (or noise sensitive) environments as they minimise leakage and intrusion. Open-back types tend to have a more open, less 'in-head' sound. There are also three variants of earpad design: circumaurals enclose the ear and press on your head, supra-aurals press on



the ear and intra-aurals sit in the ear and are particularly popular with personal stereo users.

#### Getting the best from your cans

Getting a good result with headphones is not quite as straightforward as it should be. Merely plugging them into the output on your CD player or amp will not give particularly engaging results unless you are very lucky. If you are planning on serious listening, invest in a dedicated amp – the increase in dynamics is not in the least bit subtle. A variety of models are made and prices start at around £80 for a QED, a little more for designs from, say, Creek or Musical Fidelity. And if you're really into cans, look up the valve-powered Earmax.

	r favourite					Si	PECIF	ICATI	ONS		
	EADP	H	DNES	ELECTROSTATIO	SUPRA-AUFA	CIRCLIMALIFAL	OPEN	CLOSED BACK	WEIG	3.5MM JACK ADAPTOR	ISSUE NL
	reo headphones	2	COMMENTS	STATIC	NRA.	NA.	OPEN BACK	BACK	WEIGHT (g)	PTOR	NUMBER
III	AKG K44	20	Lively, enjoyable and remarkably detailed: a bargain			0		0	190	8	219
(6)	AKG K270 Studio	129	Pro oriented design which is very transparent and great with acoustic material			0		0	270		230
EO	AKG K1000	650	Neutral, analytical and completely out of the head sound, suitable for connection to speaker outputs only				09		270		244
100	Beyerdynamic DT990	160	Impeccable balance, very extended bass and treble, and bags of detail place this model ahead of the pack			0	•		250		245
(0)	Beyerdynamic DT770	190	A touch coloured in the mid, but less than most closed cans: detailed and with excellent bass			0		0	290	0	287
100	Grado SR-60	90	For sheer musical enjoyment these are hard to beat. Retro styling may not be to everyone's taste		•		•		200	9	194
EC	Grado SR325i	310	Highly sophisticated and detailed sound with great extension: check for comfort		0		•		200	4	270
EC	Grado GS1000	995	One of the finest transducers on the planet, with detail to die for			0	•		250	15	288
-	Philips HP890	70	A remarkably sophisticated and very comfortable headphone			0	•		330	60	219
	Sennheiser HD595	150	Technology from upmarket HD650 model makes this a very revealing headphone that's also extremely comfortable			0	•		270	0	266
EC.	Sennheiser HD650	300	Astonishing resolution and hardly less impressive tonal balance make this a true hi-fi experience			0	•		260	(3)	252
	Shure E500PTH	420	Sophisticated in-ear design with three drivers, plus switchable 'voiceover' mic in the lead; high-quality stuff					0	20		285
	Stax SR-001 Mk II	239	Expensive and power hungry, but this electrostatic drags personal stereo into the world of high fidelity	•	•		•		280	59	268
EC	Stax SRS-2020 Basic Sys. II	349	Luxury option at its price, but the sound delivery is five-star quality all the way	0		0	0		295	85	205

EXPENSION LECTROSTATIC 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.



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Denon – launch of the CX3 Series and compact hi-end stereo system.

Myryad – launching the 'MI' all-in-one stereo amplifier/DAB radio/CD player.

Naim Audio – launching the SuperNait a new integrated amplifier with DAC.

ProAc - Hexa Tower, A small, very slim speaker.

**PURE** – launching the DMX-25 system and showcasing the Evoke 1XT Marshall Edition.

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### **CABLES**

# BUYER'S BIBLE

# **CABLES**



#### Wires to hook your system together

Hi-fi cables come in two varieties: interconnects and speaker cables.
Analogue interconnects come in preset lengths, generally with RCA (phono) plugs attached, though some equipment uses XLR connectors for balanced connection – this can be sonically advantageous, especially over longer runs. Speaker cable is commonly sold by the metre and can be used without plugs or can

be fitted with screw or solder-on types.

Choosing cables is not quite as straightforward as it might seem. One problem is that components interact with the cables you use and this often results in audible effects, but there are few cables that are fundamentally incompatible with any components, and we recommend the advice of a good dealer. In any case, you should look to spend as much as you can afford.

Digital cables come in two flavours: electrical and optical. In most instances electrical varieties sound better than optical, given the choice, but optical cables may be a better bet over long runs (10m+). Optical inputs/outputs usually use Toslink connectors, while most electrical types use RCA plugs, but some opt for BNC connection instead – check your components before you buy.

	r favourite			SI			ICATI	DIGITAL CABLE TYPE	ISSUE
Inte	rconnects and spe-	aker	cables	STRANDED	SOL D COME	COPPER	SILVER	NE TY	SSUE NUMBER
	PRODUCT	£	COMMENTS	8	#	56	35	H	55
EC	Black Rhodium Concerto	225	This DCT cable from the Polar range gives a distinctively dark timbre, rich in detail, with low subjective noise	ę.		•			27
	Chord Company Signature	499	Silver plated, triple screened. Some granularity but great resolving ability, a good match for Chord Signature loudspeaker cable		8				25
	Chord Company Chorus	215	Very even-handed balance with notably extended bass	à					25
	Clearer Audio Silver-line	244	Complex, well-screened cable which offers good sound all round with exceptional bass – at a price!	•					27
	(xos  xotica  X1	200	Notable for its relaxing sound, this cable still presents plenty of analytical detail			0			28
_	Kimber Timbre	89	Typical Kimber construction with ditto sound – clean, extended and detailed						24
_	Monster M350i	45	Few cables at this price reveal so much about the recording space. Clear treble, too			•			28
	Monster M1000i	200	Very capable, with only a hint of bass dryness to set against excellent results elsewhere	•					28
EC	Nordost Heimdall	370	Micro-monofilament cable, silver plated more affordable alternative to Valhalla, sounds transparent, detailed and neutral						27
	Oehlbach NF214	63	The bass is a matter of taste, but suits many smaller speakers. Very good mid and treble	•					28
	Oehlbach Silver Express +	70	Good, firm bass is accompanied by clear treble and well defined stereo imaging						28
	TCI Tiger	30	Not the most detailed interconnect around, but performance belies its modest price, especially in the bass						28
	Townshend DCT300	300	DCT wire with hum-busting ferrite sleeves. Packed with enough detail to make rivals sound flat						23
c	Van den Hul MC Silver IT MkIII	2,250	incredibly resolute and low distortion cable that makes the alternatives sound crude, pity about the price	•		•			28
	van den Hul The Well	85	Hybrid cable with carbon-fibre conductors added. Very slight bass coloration does little to detract from fine performance						24
	Wireworld Luna 5	30	Authoritative bass and clear treble outperform many cables at twice the price						2
	Wireworld Solstice 5	70	A cables with all-round appeal – treble is slightly 'dark' but bass is excellent and the overall balance very good indeed	•					25
DIGITA	LL INTERCONNECTS							-	
	Atlas Compass	50	Slight improvement in detail over giveaway cables, plus distinctly more tuneful bass and more open treble, make this fine value	-30				Е	28
c]	Clearer Audio Silver-line	125	Very satisfying performance with finely-etched detail and sweet treble	300		•		Е	27
С	Kimber Select KS2020	629	Provides a subtle but rewarding lift in musicality with any DAC, justifying the price		•	•		Ε	26
C	QED Qunex Signature 75	80	First-rate balance and imaging – ever so nearly as good as it gets at any price					Е	26
	van den Hul Optocoupler II	49	Noticeably has the edge over other optical leads, but still second best to electrical types					0	23
С	Wireworld Starlight 5	90	Clear gains in detail and imaging precision are this cable's main strengths; good value and near-high-end performance	•		•		E	27
SPEAR	EN CABLES PRICE PER MEVRE								
	Black Rhodium Tango	15	A little bass-heavy but with smaller speakers, but that's no bad thing: mid and treble are detailed and clear	20		•			28
č.	Chord Epic Twin	80	Good all rounder, which generally sounds relaxed and musical, and a full bass that stops the right side of sounding blowsy	•		•			28
	Chord Odyssey 4	34	This biwire version of Odyssey offers excellent speed and impact, with low listener fatigue	•		•			25
	Clearer Audio Copper-line A.	10	Copper-line Alpha's strong, ringing bass and neutral tonality are plus points, but treble is not the purest we've heard	•					28
	Kimber 8VS	18	Beautifully full, open and transparent sound right across the board	0		•			22
	Monster MCX-1s	8	Notable for its bass, which is perhaps a touch overdone at times but could be a good foil to small speakers. Good mid and treble	0					28
С	Nordost Heimdall	162	Alternative to Valhalla, silver plated, micro-monofilament construction, low colouration, high res and suitable for exacting systems	-0		8			27
	QED Silver Anniversary XT	5.50	Full bass and nicely detailed treble combine with good imaging - a budget bargain	φ <sub>0</sub> .		•			27
	QED X-Tube XT300	10	A natural and well controlled sounding cable that's cost effective for mid-priced systems		•	31			23
С	Supra Sword	116	Zero inductance construction, medium resolution cable that has an excellent midband and is fundamentally musical	•		•			28
С	Townshend Isolda DCT	50	Cryogenically treated 'impedance matched' cable with stabilising components added: great sound all-round			0			24
	van den Hul The Bridge	6	Lively, energetic and possessed of fine midrange detail and imaging	•		•			27
	Wyrewizard Spellbinder	5.50	Sold off the reel, this entry-level cable is a surprisingly purist performer, lean yet powerful, with good detail resolution.		•				21

SPECIAL 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 OIGITAL CABLE TYPE E – electrical, 0 – optical.

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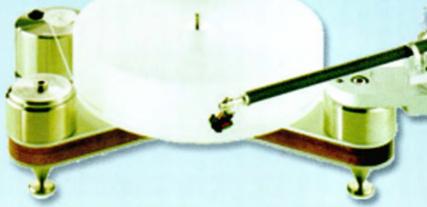


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# STANDS AND SUPPORTS

#### Equipment racks and speaker stands

If you want to get the most from your source and amp components, it's important to consider good quality support. Dedicated equipment supports are racks and tables made specifically to hold hi-fi gear, and the best can have a profoundly positive effect on sound

because, for example, they can help to isolate kit from ground-borne vibrations and mechanical or electrical interference. Equally, if you own a pair of small 'bookshelf' or 'standmount' speakers, it's important to place them on good quality, purpose-built speaker stands.

#### Our favourite BEST BLY 60 EDITOR'S CHOICE MENT SUPPORTS NUMBER OF HEGH E SIZE FSHELVES NUMBER Equipment supports H. (Q QV. BADGE? PRODUCT 5 Alphason A5-G 80 66.46 247 Nice looking, very solid and practical with a pretty well balanced sound, but lacks a little detail Glass 50,50 4 217 Atacama Equinox 81 Glass Stable, modular design with style. Excellent bass transients and a fresh design concept Audiophile Base 82 43 4 MDF 193 Price is justified by its earth-shattering sonic abilities - a worthy upgrade Avid Isoschelf 87.5 48 5 MDF 193 1.100 An enthusiast's equipment support stand free from coloration, if a little fiddly to set up Clearlight Audio Aspekt Stunning neutrality and detail from a well-damped design. Its performance makes the price tag good value 75 53.5.45 56.37 4 Custom Design Icon Signature 330 Glass 286 Gorgeous wood and glass looks: sound lacks a little detail but is nicely lively 68 Custom Design Icon 400 75 57. 41 5 Glass 263 Beautifully built, conveniently adjustable and with little sound of its own, a very classy rack Custom Design Concept 400 48.40 4 247 Slightly drab looks, but great sound and efficient use of space ('Acoustic' version tested – standard version £300) Metal Custom Design Vantige 449 'Acoustic Aluminium' shelves plus steel supports equal practicality plus musical satisfaction; just a shade bright 49 44 4 Metal 271 Partington Minim Looks good, sounds good and is impressively flexible to boot 75 45.36 5 Glass 261 Pricey but very classy looking and sounding, with modular flexibility 45.34 5 Glass 232 Quadraspire Q4 Reference Excellent performance from the school of wobbly racks. Natural sounding and plenty of detail 51.5 49.39.5 4 MDF 217 4 Russ Andrews Torlyte Rack 988 Attractive modular system made of very light Torlyte: a touch of added warmth is its only vice 54 49 Torlyte 240 Sound Organisation Z560 Excellent value rack, five shelves too! Well balanced and under 200 guid! 92 50,40 Glass 217

_	r favourite				SPEC	IFIC/	ATION	S	
S	PEAKI		R STANDS	HEIGHT	TOP PLATE			NUMBER	ISSUE
Spea	Speaker stands					FILLABLE	WELDED	R OF LEGS	E NUMBER
BADGE?	PRODUCT	£	COMMENTS	(CM)	(CM)	E	8	SS	99
-12	Custom Design RS300	110	An attractive stand whose lack coloration and ringing makes suits it to high resolution systems, at a tempting price	56	16.5,18	•		1	281
EC	Custom Design SQ404	200	Robust four-pillar design gives very low coloration and maximises performance of speakers great and small	61	18,16.3			4	283
EC	hne Cableway	395	Looks great, sounds great, so start saving! Clean and sweet, and neutrality is exceptional with orchestral material	63	17,20	•		1	220
88	Kudos S50	159	Formidable bass with real authority, and a wide dynamic range across a broad bandwidth	61	15, 20	•		1	220
88	Partington Ansa 60	99	Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent	62	18,15	•		4	232
EC	Partington Dreadnought BS	249	The Dreadnought Broadside is a superb stand for high-class standmount speakers – and it looks great too!	61	17,15	•	•	5	261
EC	Partington Heavi II	399	Robust to the nth degree, this stand helps produce very taut, precise bass and detailed upper frequencies	53	31,22	•		6	287
EC	Russ Andrews Torlyte	299	Very relaxed sound from this metal-free design, with excellent imaging too	60,50	15,21			3	280

1,300 The Seismic Sink goes all glassy and attractive, yet retains the same excellent vibration-killing sound quality

EQUIPMENT SUPPORTS 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

SPEAKER STANDS SPECS (GV) 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.



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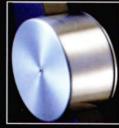
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adj. an individual who does not comply with conventional norms or socially approved patterns of behavior or thought



# TECHNICAL & DESCRIPTIVE TERMS HI-FICHOICE BUYER'S BIBLE

# **GLOSSARY**

#### **TECHNICAL TERMS**

5.1-CHANNEL AUDIO Six discrete channels, typically front left and right, centre, surround left and right, and LFE (Low Frequency Effects) for a subwoofer. BALANCE Most loudspeakers have a characteristic frequency balance resulting from emphasising parts of the audio range and/or de-emphasising others.

BASS The lowest three octaves of the audio hand - 'low bass' refers to the bottom octave (20-40Hz), 'mid-bass' the middle octave (40-80Hz) and 'upper bass' the top octave (80-160Hz).

BI-AMP (sometimes tri-amn) Loudspeakers equipped with separate be driven by separate (matching) power amplifiers for each driver

BI-WIRE (sometimes tri-wire). Loudspeakers with separate access terminals to each drive unit can be driven by separate cable runs between the amp and each driver

CD-R Recordable CD that cannot be erased, though discs that have not been completely filled can have tracks added until the disc is finalised

CD-RW Re-writable or re-recordable CD, incompatible with older CD players. CLASS A The operation of an amplifying stage or device in which current always flows, as opposed to Class B, where some of the devices are effectively turned off some of the time. Class A tends to have the advantage of offering lower distortion, while Class B

tends to generate less heat. CLASS AB Most practical amps operate in Class A for the first fraction of a watt and Class B thereafter

CLIPPING An amplifier's output waveform is 'clipped' if the volume is advanced too far and no more 'volts' are available to sustain ever-increasing power levels. Distortion increases dramatically at this point.

**CLOCK** Any electronic oscillator that is used to generate a timing reference signal. Used to synchronise the data being taken from a disc

**CROSSOVER** A simple electrical network which divides the full bandwidth signal received from the power amplifier, apportioning appropriate parts of the spectrum to the various drive units

DAB (digital audio broadcasting). Digital radio using frequencies in the 217.5-230MHz band. Broadcasters use varying degrees of compression and offer a broad range of programming.

DAC or Digital-to-Analogue Converter. The stage in any digital component at which incoming digital data is used to reconstruct a recognisable analogue

**DOLBY DIGITAL** A compressed digital audio format that typically contains five or more entirely discrete channels, eq 7.1 EX where side and rear channels are used.

DOLBY PRO-LOGIC. DPL Forerunner to DD that 'steers' information to the front L/R, centre and mono surround channels via an analogue matrix.

DRIVE UNIT/DRIVER A transducer which converts electrical energy into acoustic energy, eg bass driver, tweeter.

DSD (direct stream digital) The coding format used for SACD offers a frequency response of over 100kHz and a dynamic range over 120dB. It has over four times the data capacity of CD.

DSP (digital signal processor). Integrated circuit that handles the decoding of digital audio streams. In 5.1 processors, it separates the left from right and front from rear, while managing the various bass options.

DTS or Digital Theatre Sound, Competitor to Dolby Digital with a reduced 4:1 compression ratio that, ostensibly, promises higher quality.

**DVD-AUDIO** High-resolution variant on DVD offering up to 192kHz bandwidth and 24-bit dynamic range. Discs are compatible with standard DVD players

**ELECTRICAL DIGITAL** Any digital connection that uses an electrical cable rather than ontical. Includes the balanced ('AES/EBU') interface.

FILTERS Filters are intrinsic to digital audio, both analogue and digital. These are often very sophisticated in design, and in total they probably have rather more to do with the 'personality' of CD player sound than most other factors

FREQUENCY RESPONSE The range of frequencies, from low to high, which a loudspeaker will reproduce

IMPEDANCE With speakers, the complex electrical load that a loudspeaker presents to the amplifier driving it

JITTER An insidious distortion specific to digital audio caused by imprecision in the clock used to regulate the conversion of data into analogue audio.

KBPS (Kilobits per second) Digital data rate measurement system used primarily with highly compressed formats such as MP3, DAB etc. The higher the amount, the better the quality

LINE LEVEL Practically every modern source component (except phono cartridges) gives an output in the region of 1-2V. referred to as 'line level'... It follows that all inputs labelled 'CD', 'tuner', 'aux or 'tape' are designed for this input level and are thus interchangeable.

LOSSLESS COMPRESSION A method (density) without corrupting the original description of the musical signal.

LOSSY COMPRESSION Reduction in data density by recourse to a complex psycho-acoustical model that predicts what is, and what is not, 'audible' within a sequence of music

MIDRANGE The middle three or so octaves of the audio band, where the ear is most sensitive, covering the approximate frequency span from

MP3 (MPEG layer 3) Lossy compression format for digital audio that drastically reduces data content in order to squeeze music through internet connections or allow hundreds of CDs to be stored on a hard disc

OUTPUT IMPEDANCE A measure of resistance to alternating current, a source with low output impedance (below 100 ohms) helps ensure compatibility with most amplifiers, even with long interconnect cables.

PCM (pulse code modulation) The digital coding system for analogue waveforms used for CD and DVD. Quality is limited by the oversample and bit rates used - CD is 44.1kHz/16-bit while DVD-A is capable of 192kHz/24-bit.

PRESENCE BAND Critical section of the audio band at the point where midrange

QUANTISATION NOISE A form of distortion or noise resulting from errors in the description of the musical signal by

SACD (Super Audio CD) was launched in 1999 and is a Sony/Philips format based on DSD coding that offers high resolution stereo and multichannel sound from hybrid discs that can also be played on ordinary CD drives.

SAMPLE RATE The rate at which the musical waveform is sliced up into discrete chunks. For CD, this is 44.1 kHz or once every 0.023msec. DVD will also support 48kHz and 96kHz

SENSITIVITY The relative loudness that a speaker generates for a specific voltage input. Expressed in decibels per watt (dB/ W) measured 1m from the speaker

**THX** Standards system for home cinema set-ups which includes amplifier power and speaker dispersion characteristics. The latest THX Ultra 2 standard is more stringent than THX Select.

TOSLINK The proprietary name given by Toshiba to the optical fibre signal transmission system it invented for consumer applications

TRANSISTOR/MOSFET The two main types of power semiconductor used in solid state amplifier output stages

TREBLE High frequencies, the top end of the audio band, ie above 3kHz TWEETER Treble driver

TWO/THREE-WAY Loudspeaker crossovers split the signal into two or three frequency bands, a two-way speaker can have more than two drive units.

WATTS (per channel) The watt is the unit of electrical power and the WPC rating is the maximum average undistorted power that an amp can deliver to a typical speaker. However, speaker sensitivity variations can make more difference than amplifier output

sonic character

DESCRIPTIVE TERMS

AMBIENCE The impression of an acoustical space, such as the performing hall in which a recording

was made

between them

AGGRESSIVE Forward and bright

ANALYTICAL Highly detailed. ARTICULATE Intelligibility of voice(s) and instruments and the interactions

ATTACK The leading edge of a note and the ability of a system to reproduce the attack transients in music.

BALANCE Essentially tonal balance. the degree to which one aspect of the sonic spectrum is emphasised above the rest. Also channel balance, the relative level of the left and right stereo.

**BODY** Fullness of sound, with particular emphasis on upper bass. Opposite of thin.

BOXY The sound of a loudspeaker

BRIGHT A sound that emphasises the upper midrange/lower treble DARK A tonal balance that tilts downwards with increasing frequency.

**DECAY** The fadeout of a note, it follows the attack

**DEFINITION** (or resolution) The ability of a component to reveal the subtle information that is fundamental to high fidelity sound

DEPTH (of image) The perception of music being reproduced behind the loudspeakers and inhabiting a reproduction of the acoustic space of the original recording.

**DETAIL** The most delicate elements of the original sound and those which are the first to disappear with lesser

DRY A sound that is devoid of 'juice'. which usually comes across as fine-grained and lean. Also a loss of

reverberation as produced by a damped

**DYNAMIC** The suggestion of energy and wide dynamic range. Related to perceived speed as well as contrasts in volume both large and small

EUPHONIC An appealing form of distortion, that generally enhances. perceived fidelity, often ascribed to the harmonic elaborations of some valve amns

FAST Good reproduction of rapid transients which increase the sense of

FOCUS A strong, precise sense of image projection.

FORWARD(NESS) Similar to an aggressive sound, a sense of the image being projected in front of the speakers and of music being forced upon the listener

GRAINY A slightly raw, exposed sound which lacks finesse

GRIP A sense of control and sturdiness in the bass.

**GRUNT** See grip

HARD Uncomfortable, forward. aggressive sound with a metallic tinge

HARSH Grating, abrasive.

IMAGING (stereo) The sense that a voice or instrument is in a particular place in the room.

JUICY Sound that has joie de vivre, energy and life

LOW-LEVEL DETAIL The quietest sounds in a recording

MUSICAL or musicality. A sense of cohesion and subjective 'rightness' in the sound

**NATURALNESS** Realism OPAQUE Unclear, lacking transparency.

**OPEN** Sound which has height and 'air', relates to clean upper midrange and troble

PACE Often associated with rhythm, a strong sense of timing and beat.

PRESENCE A sense of an instrument or voice occupying a place in the listening room

PRESENCE RANGE The upper midrange

SEISMIC Very low bass that you feel rather than hear

SIBILANCE An emphasis of the 'S' sound, often heard on radio. SNAP A system with good speed and transient response can deliver the immediacy or 'snap' of live instruments.

SPEED A fast system with good pace gives the impression of being right on the money in its timing. STURDY Solid, powerful, robust

sound THICK A lack of articulation and

clarity in the bass. THIN Bass light.

TIMBRE The tonal character of an instrument

TIMING A sense of precision in tempo. See speed and pace.

TRANSIENT The leading edge of a percussive sound. Good transient response makes the sound as a whole more live and realistic

TRANSPARENCY, TRANSPARENT A hear-through quality that is akin to clarity and reveals all aspects of detail

TWEAK To tune a system or component in an attempt to get the

TWEAKER Someone who enjoys this process

VEILED Loss of detail due to limited

WARM A fullness in the lower midrange/upper bass.

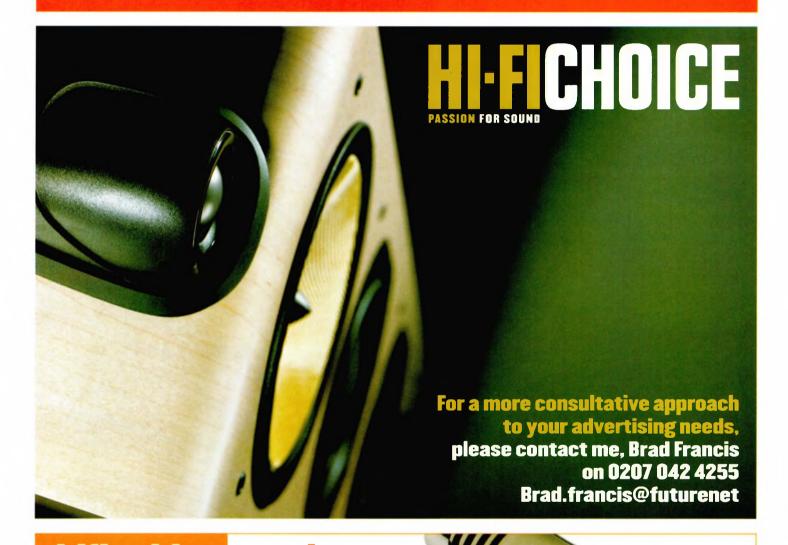
WEIGHT A sense of substance and underpinning produced by deep, controlled bass.

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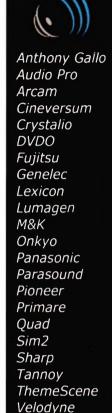
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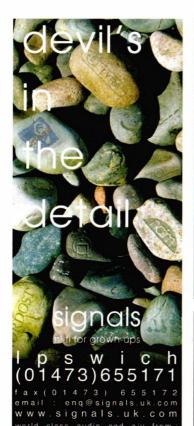


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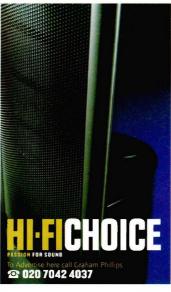






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tridge-Man. Creek Audio, Chapter Audio, Clearaudio, Clearlight Audio, Chord Electronics, Chord Company, osse Reference, Epos, Graham, Graham Slee, Hadcock, Isotek, Lyra, Michell Engineering, Merlin Cables lell Audio, Nordost, Origin Live, Oracle, Ortofon, Project, SME, Stax, Sumiko, Sugden, Trichord Research, Usher Audio, VPI, Whest Audio, Wilson Benesch ה בשנים, אין, Whest Audio, Wilson Benesch ie or purchase some of our turntable setup tools and essentials, that are not easily available elsewhere.

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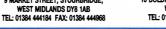
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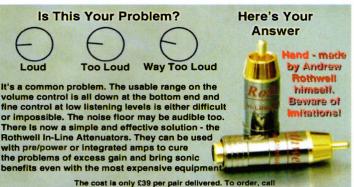
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The Nottingham Analogue Dais turntable is the result of many years of research by the companies founder. Tom Fletcher. In our opinion it offers unmatched performance at its £3,519 price level. It's pictured here with the 12" Nottingham Analogue Ace Space tonearm which costs £710.





Note products PhoNote uses an all triode valve audio circuit with short signal paths, low output impedance and no global feedback. The result is an exceptionally low noise design with breathtaking clarity and musical involvement. The MM version costs £1,500, the MC version £1,750.

CEC TL-51X this top loading transport is something rather special. Its novel design uses a belt drive (rather than the more common direct drive) to spin the disc. It produces a sound which is incredibly effortless, with tremendous resolution of acoustics and space: £1,200



Consonance CD2.2 Linear This wonderful filterless CD player uses a 6H30 triode in its output stage. It produces the characteristically wide dynamic range of a filterless design, capturing great speed and energy on all CD's. Surely the most involving player at its £1,395 price.



Bewitch A30 integrated amplifier uses 6550 output valves in an ultra-linear pure class A push pull design producing 30 glorious watts per channel.

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446

Audion Silver Note One This is a specially commissioned amplifier exclusive to Noteworthy Audio. It uses a single 2A3 directly heated triode per channel in an ultra purist single ended zero feedback design. It produces 3.7 of the finest watts available, if you have high efficiency speakers you need to hear this remarkable amplifier. £2,500.

The Usher CP6371 offer astonishing value for money. These very substantial speakers (they weigh 60kg each) and cost only £2,000 for a pair. A pair of wonderfully natural sounding carbon fibre filled paper cones are used in a two way configuration with a 1" soft dome tweeter covering the high frequencies. Their sound is potent yet not overblown, and the very rigid boxes mean that cabinet colouration is extremely low.





The Avantgarde Duo's use horns for the high and mid frequencies and as a result offer 104dB sensitivity. They produce all the speed and dynamics you'd expect from such a design and are effortlessly musical. These speakers really do have the most astonishing mid band performance, if you in the market for a pair of speakers at this £9.995 price point then you really must hear them.

The Something Solid XR has become our reference equipment support, its novel use of balsa end grain shelves and tensioned shelf suspension give it a neutral presentation that lets equipment perform without added artifice. 4 tier version available from £600. 'Economy' EXR version also now available from just £300.



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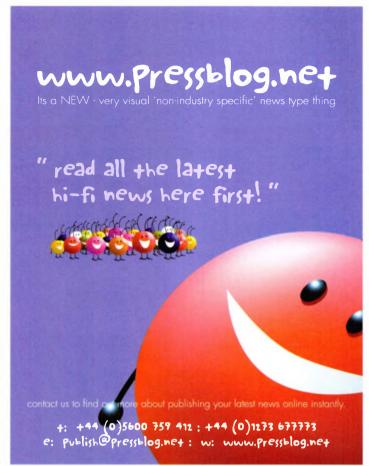
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#### PUBLISHING & HAN

Andy Ford group publisher andy ford@futurenet.co.uk Nick Merritt group senior editor Dom Beaven publishing director Clare Dove advertising director Jim Douglas editorial director Simon Wear international director Robert Price managing director

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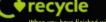


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Second-hand reference-grade headphones can be a true ear-opener

eadphones are potentially the highest fidelity instruments available. For upwards of £300, you can get yourself a true reference sound with few worries about room acoustics, cabling decisions or annoying the neighbours! To obtain similar sound from conventional loudspeakers and amplification can often run into thousands of pounds.

Think quality headphones and there's a good chance you'll be picture Stax, and for good reason; over the last 40 years, this Japanese company has been making electrostatic 'ear speakers' that have a following akin to Quad's electrostatic ESL loudspeakers. Like Quads, these electrostatic headphones are famously transparent and an utterly compelling listen.

All of the models are a bit special, but if it were our money, we'd seek out a pair of Lambda Signatures with an SRM-T1 amp. As these are electrostatic headphones, a separate amp or, 'energiser' is needed. Launched in 1987, the Lambda Signatures were top of the Lambda range and used ultra-thin diaphragms for enhanced speed and dynamic contrast. The diaphragms are prone to damage, but this can easily be heard – so make sure you listen and don't buy a pair that distort. Repairs are expensive, but can be made by the UK importers, Symmetry Systems.

The Lambda range is cosmetically very tough and although the imitation leather used for the ear surrounds was seen as cheap at the time, even the oldest examples should still be in good shape today. The SRM-T1 uses FETs for the input stage, and a pair of 6FQ7 twin triode valves for the output. These are still readily available. For all the Stax information you could ever need, www.simplystax.co.uk is an excellent contact and is where we got our guide price for these headphones from: £380 to £500 is all that's needed to pick up a pair of these classics today.

Around seven years after the launch of the Stax Lambda Signature, that other headphone stalwart, Sennheiser, launched its own electrostatic design. In 1994, the HEV70 (at £1,000) was launched as a 'budget' version of Sennheiser's £10,000 Orpheus

model, with gold-plated diaphragms suspended between gold-plated electrodes. Like the Lambda Signatures, the diaphragms were ultra-thin for improved resolution of detail. The HEV70 energiser used a Class A all-transistor design. Although bass light, these headphones sound remarkably neutral and are capable of a spacious, intimate sound quality over an extended listening session.

The HEV70 is extremely robust and should prove trouble-free, but, the headphones themselves use a leather band that soon looks shabby. Sennheiser can replace the cable, but it is soldered, and not the plug-in variety used by other Sennheiser cans. Those diaphragms can also damage

these headphones were clearly conceived in a time before mass environmental concerns. Sony even packed them in their own leather case and presented each one with a linen covered instruction book. Given these headphones are so extravagantly constructed and come from a brand that generates mass consumer loyalty, demand is understandably high. With only 500 produced a year, the MDR-R10s are scarce and, when they do come up for sale, sell for high prices. Although 'only' £2,500 when new, an excellent pair can easily fetch up to £3,500 today. Still, if you're after one of the most exclusive headphones ever made they make a fine, if rather expensive alternative, to the electrostatic rivals.

# "For upwards of £300, you can get yourself a true reference sound."

easily, so once again a good listen is crucial before buying. At between £200 and £400 these 1990s legends open the door to the joys of electrostatic entertainment.

Proving that headphones don't have to be electrostatics to be considered a reference design, Sony's legendary MDR-R10s used a conventional dynamic moving coil and sealed ear unit.

From the Greek lambskin earpads to the 200-year-old Aizu zelkova wood casings,

If you're put off by the cost or complexity of the above, then a pair of second-hand Grado RS1's should fit the bill nicely. Like the Sony models, they use solid wood casing. Unlike the other headphones here, they are still current (£650-£750 new). This means low prices for older models and full service back up. However, they tend not to be as cherished as some, so faulty pairs are not hard to come by. Buy a fully-functional pair for between £300-£500. Needless to say, the sound quality is regularly described as being 'stunning', and for sheer accuracy of sound, the RS1's take some beating.



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66 The beauty of this MF system is that the whole really is greater than the sum of the parts, and these parts are pretty damn good to start with. You could spend hundreds more and get less. ?? Alan Sircom, Hi-Fi Choice Dec 06

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Musical Fidelity products definitely have that X-Factor and none more so than the brand new X-Series. New styling - beautiful, advanced design and state-of-the-art circuitry give a performance comparable to products costing many times more. Should the competition be worried - definitely!

#### LATEST USED LISTING

D	IG	IT.	A

DIGITAL
Meridian 200 Transport and 203 DAC combo absolutely mint, great sound
Micromega Aria, black, ex HiFi Choice review model (£2150)
Naim CDX with NAXPS power supply, good condition, boxed
Audio Research CD3 MK I, silver, mint, boxed fantastic bargain (£4750)
Ariam Diva 91s, silver ex cond, boxed, manual, r/c, 1 yr old. (£1000)
Musical Fidelity DM25 DAC + Transport, only a few months old (£4000)
Musical Fidelity kW SACD player, boxed, factory sealed box (£4000)
AVI Lab Series CD, current spec, boxed, unmarked condition (£1499)
Shanling CDT-200, exc cond, boxed, r/c, gold legs (£2150)
Primare D30 2 CD Player, black, 1 yr old, boxed, excellent cond (£1500)
Shanling CDT300 Omega Drive, ex-dem, immaculate cond (£4000)
Resolution Audio Opus 21. 2 box cd player, boxed, black/silver (£2950)
Musical Fidelity Trivista 21 DAC, exc cond, manual, boxed (£1400)
Unison Research Unico Valve output CD, only 3mnths old, latest ver (£1250)

Musical Fidelity As 10 Mey Common Services (1940)

AmpLiFIERS

Exposure 23 Pre Amp, mint, boxed, remote (£1400)

Exposure 23 Pre Amp, mint, boxed (£1400)

Bryston 48-SST Power Amp, 2 months old; like new, 300wpc (£2750)

EAR Yoshino 3841 Hybrid Int, mint boxed, 8 months old; Bargain! (£2800)

Qinpu A-1.00x, ex What Hifr review model, boxed in immac cond (£300)

Qinpu A-3000 MK II, ex Hiff World review model, boxed as new (£1295)

Parasound A21 Power Amp, immac condition, silver, boxed, as new (£1295)

Parasound A21 Power Amp, immac condition, silver, boxed, manual (£1999)

Musical Fidelity A5 Int, 250wpc, 6 months old, boxed, as new (£1499)

Musical Fidelity A5 Power Amp, 6 months old, boxed, as new (£1499)

Musical Fidelity A5 Power Amp, 6 months old, boxed, immac (£1499)

AudioNet Amp 1 Power Amp, 6 months old, boxed, immac (£1499)

Musical Fidelity A5 Power Amp, 6 months old, boxed, mint (£3150)

Bryston B-100 S5T Int amp, unmarked condition, boxed (£2750)

Bryston B60 S5T Integrated, excellent condition, silver, boxed (£1600)

Mcintosh C220 Pre, only 2 months old; boxed, mint. Simply stunning! (£3300)

Roksan Caspian MX2 integrated, boxed with manual and remote.

Roksan Caspian power amp MX2, boxed, Be quick: a steal at the price!

Chord CPA2800 pre-amp+phono stage, £2800 new, in black, immac

Gamut D200 Power Amp, silver, immac condition, boxed (£3200)

Bel Canto Evo 2: Integrated, boxed, mint cond (£2800)

Arcam FMJ P35 Power Amp, good cond, boxed, manual (£850)

Jungson JA 88D Int, pure class 3, Hi-Fil World 5 globe winner, ex dem (£899)

AWI Lab Series Power Amp, mma, less than 1yr old, boxed (£1500)

Fastern Electric Minimax Pre, ex-dem, mint condition, boxed (£1650)

Fastern Electric Minimax Pre, ex-dem, mint condition, boxed (£1650)

Fastern Electric Minimax Pre, ex-dem, mint condition, boxed, serial no 304cx

AudioNet Pre 1 G2, silver with blue display, mint, box, remote (£2100)

Krell PAM 5 pre amp + phono stage, exc cond, legendary perf (£2000)

Nami NAC 102 Pre Amp, good condition, boxed, serial

MISC
Nordost Blue Heaven Speaker Cable, ex-dem, 4m pair, bi-wire (£489)
Isotek Gli Minisub, silver front, current spec, immac cond (£545)
Naim Hi-Cap power supply, good condition, serial no. 304xx, superb upgrade
Isotek Mainline filtered mains cable, excellent condition (£200)
Isotek Mainline digital filtered mains cable, exc condition (£225)
Hoviand Reference Speaker Cable, exdem, boxed, 8ft pair, single wired (£1200)
MIT S2/C Interconnect, 1.5m, mint condition, boxed as new (£450)
MIT Shotgun 52s speaker cable, 4 6m pair, mint, boxed as new (£1000)
Townshend Supertweeters, titanium finish, boxed as new, exd (£800)
Nordost Thor, ex-dem, immaculate condition, boxed, Valhalia wired (£1600)
Isotek Titan mains conditioner, few months old, boxed (£1500)
Nordost Valhalla Speaker Cable, 3m per side, bi-wire with z-plugs (£5700)

#### DEFINITIVE AUDIO

Sale of part exchanged and ex-dem items

ITEM DESCRIPTION	SALE	NEW
Lamm ML 1.1 Monos – less than 30 hours use	£12000	£20000
Clearaudio Goldfinger cartridge. Brand new in sealed box	£4000	£5640
Croff ML Charisma X phono/line pre-amp	£1500	£3000
Musical Fidelity KW series DM25 CD transport + DAC - boxed, brand	d new	
(still has protective film on plugs and display)	£3000	£4000
<b>Tron</b> Syren pre-amp with line + phono – 3 months old – boxed – bare	ely used	
	£4500	£7000
Mactone MA300B 20 watts 300B power amp – 30 hours use	£3000	£8500
Mactone XCX330 line pre-amp – 10 hours use	£3000	£8000
Esoteric XD1 CD player – perfect – boxed – 10 months old	£6000	£9600
SME V tonearm – standard wire – 10 years old	£850	£1800
SME V tonearm - 1 month - standard wire	£1400	£1800
Placette passive line stage - 3 inputs - 12v - remote control - 6 mor	iths old	
	£900	£1800
Lkving Voice loudspeakers – various ex-demo, part-ex, seconds, from	very	
young to very old	ple	ease call
Tom Evans Groove Plus	£1900	£3000
Rega Jupiter CD player – professionally clocked + rebuilt with		
Black Gates	2600	
Audio Innovations P2 phono stage – completely standard	£700	
Transfiguration Esprit – 10 hours use – perfect ex-review bargain	£600	
Pathos 2 box pre-amp with remote control – spotless	£1500	£950
Canary 903 4 box pre-amp – champagne facia – 3 months old – bo	oxed	
	£2850	£6500
Border Patrol 3008 SE – Western Electric valves – 8 watts – charmer	£2500	£5000
Primare D30.2 CD player	£650	
Sugden Bijou mm/mc phono stage – 100 ohms	£400	£650
Sonus Faber Electa Amator – walnut – stand mount – lovely cond	£1750	£3500
Art Audio PX25 - 5 watts - single ended stereo	£2500	£4500
Avalon Arcus loudspeaker – maple	£3500	£7000
Tube Technology Prophet pre-amp – 30 hours use	£1250	£2500
<b>Tube Technology</b> Unisis Signature integrated – 30 hours use	£1250	£2500
Nottingham Analogue Spacedeck with Rega RB300 tonearm, Resor	n Raca	
cartridge and <b>Living Voice</b> mat.	£1000	£1633
Canary 608LV integrated amp, 25 watts with Living Voice upgrade	£950	£3000
Unison Research Smart 300B class A power amp - 1 year old	£2250	£4500
JPS Constrictor power cables – very nearly new	5600	£1200
JPS SC3 intercnnect – very nearly new	£400	£795
Revel M20 bookshelf loudspeakers - Santon Rosewood - with stands	£850	£2000
Linn Genki CD player	£400	£1000
Nordost Quattro FII interconnect – 1 m set – boxed	£400	£1000
Nordost Quattro FII interconnect – 2m set – boxed	£700	£1800

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opeakers.	
Origin Live OL-2 speakers	£250
Kef Concord speakers	£150
Dynaudio Audience 7 speakers & stands	£395
Hales Transcendence 5 Loudspeakers	£2900
TDL RTL3 speakers	£95
Tannoy Westminster Royal HE speakers	£9995
Mordaunt Short MS 902 speakers	£99

#### Pre-amps:

Naim Nac 92 with Nap 90/3 amp	£595
Proceed PAV pre-amp	£995
Mark Levinson 26S balanced pre-amp	£2500
Mark Levinson ML28 with phono stage	£995
Audionote M8 pre-amp with phono stage (£19,500)	£9995
Audionote Zero remote control pre-amp (new)	£695

#### Amplifiers:

7	
Audionote Neiro mono-blocks	£5495
Mark Levinson ML383 integrated amp	£2995
Classe CA201 amp	£1995
Arcam Alpha 8P power amp	£195
Kora Triode 100SB	£3500
Mark Levinson 432 Power Amp	£4995
Mark Levinson 20.5 Reference Monoblocks	£4500
Exposure 15 integrated amp	£345
Mark Levinson ML33H monoblocks	<b>£POA</b>
Audionote Kegon monoamps, mint (£28,000)	£1 1995

#### CD Players, Transports and DACs:

Denon DCD 590 CD player	£60
Sony CDP M41 CD player	£60
Micromega Drive 3/DAC1	£495

#### Miscellaneous:

Hitachi FT5500 Mk11 tuner	£125
Sony ST-SE 570 tuner	£60
Technics ST-GT550 tuner	£65
Winds stylus gauge	£425
Transparent Musicwave-plus speaker cable 10ft, pair	£425
Nordost Red Dawn SE interconnect	£150
Mandrake balanced interconnect	£295
JPS 'The Power Plus' 2m power cable	£195
Sony FM/AM ST-SE370 Tuner	£75

#### Turntables, Cartridges and Tonearms

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Audio Tekne cartridge with step-up transformer	£2495
My Sonic Eminent cartridge (new)	£2750
Project 9c S carbon fibre silver wired arm	£375
Trichord Delphini phono stage	£250

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Actam D0721 back REDUCED
Actam D073 REDUCED
Actam CD23 Shier, excellent
Audo Anabuge Masstin 19224 et dem
Audo Anabuge Masstin 19224 et dem
Audo Synthesis franscord Relffaar biscriete Var
AVI 2000 DAC very rare oft board until REDUCED
Ayre Acoustics CX7, as new bored, beautiful
Cambridge Audo 560C, et remole bored
Chord DACS4, superb upgrade
Consonance CD Rel 22, et dem bored
Relf RAV300CD, as new bored
Marant CD Relf 23, et dem bored
Krelf KAV300CD, as new bored
Marant CD Relf X Syndrius, excellent
Marant CD Relf X Syndrius, exce

Radio and Recorders AVI Lab Seres vgc, er dem
AVI S2000 Tuner vgc boxed REDUCED
HArman Kardon Ug/90 C.AB/F.M New
Lnn Nudos excellent
Nakamich CRIE
Pure 701ES, new
Coud 99, as new boxed
Rega Rado REDUCED
Revou 8790, crecitent
Sony 777ES DAB Tuner
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Technics SUMD150, sought after mindisc recorder
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Amplitiers

Acoustic Arts Amp 1 er, bored
Acoustic Arts Amp 2HP er, bred
Acoustic Arts Pet 1 and Pow 1, excellent, £6x + new
Acom Anbar AMI C30 Peamp er bored REDUCED
Arcam ABS er bored REDUCED
Arcam ABS er silver overmode
Arcam 2HP 2HP er PET ALL
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#### Speakers

Speakers

Acoustic Energy AE2, er black
Acoustic Energy AE3, er black
All Nakeution, call for details
BBW CDMSE
BBW 704, excellent boxed
Castle Richmond 3, excellent boxed
Celestion SL65, excellent example of semnal standmount
Duvel Bella Luna details to flow
MEF GD, as new wahrut
Luna Kelta, absolute baggan
Lun Kelta, absolute baggan
Lun kobank excellent
Luning Voce Audforum, er boxed
Mirage FRigb, boxed in beech of wadrive subs, megal NOW
Misson 735F, in rosewood excellent
Montion Audio GS20 as new
Montior Audio Box Box excellent
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Linn LP12, LVX arm, good order
Mantione Manitra, RB250, excellent bargain
Michell Dore, Uni version AC motor
Michell Scorlera, excellent pound
Mission 774 criginal ariston
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DIGITAL	Audio Synthesis DAX Decade 22 Bil Balanced 5/H audio Synthesio DAX Decade 22 Bil Balanced 5/H audio Synthesio DAX Decade 22 Bil Single ended 5/H doX Syntia La Scala Transport / Isplampler x demo d5.5 Bilgar Plus Firevire IEF 134° DAX a demo d5.5 Bilgar Plus Firevire IEF 134° DAX a demo d5.5 Bilgar Plus Firevire IEF 134° DAX a demo d5.5 Bilgar Plus Firevire IEF 134° DAX a demo d5.5 Bilgar Plus Firevire IEF 134° DAX a demo d5.5 Bilgar Plus Firevire IEF 134° DAX a demo Mostal Fidelity No. 415 d. Da Dilayar F./H Mostal Fidelity No. 415 d. Da Dilayar F./H Printer VID COU DP Dilayar a demo Dythesis Iabx Zero CO Palyar a demo Dythesis Iabx Zero CO Palyar a demo Simy CDP 3440 SAKCD Plager 5/H Thesis Plus Bildax Dilayar F./H Thesis Central row Balanced 5/H Wadio 320 Billar 4 demo		Was 3500 2999 2600 9500 9500 9500 9500 9500 9500 9500 14995 2999 4600 795 2700 2700 2700 2990 4000	Naw 1799 1499 1499 4999 4999 2995 3290 1699 2999 499 1999 249 1299 685 2999
ANALOGUE	Crown Jewel Ldt Edition MC Cartridge (10thrs: Clearaudio Envision Tunzblak) Package X demo (Clearaudio Envision) Package X demo Hecd Audio Choti 1 TT PSU New B Boxel Kuzma Stally Krogi S Tuntballs New6 Boxel Lehmann Audio Black Cube SE 5/H Mc Cormack Micro Drive Phono Stage 5/H Rega P2 7 Blas Tuntable 5/H Rega P2 7 Blas Tuntable 5/H Rickon Xersa Alphason Xenon XPSU S/H		2650 650 599 225 N/A 499 650 270 N/A 499	1499 499 299 179 1399 285 399 179 549 299
PREAMPS	Audio Analogue Bellini Remote Preampiliter X demo Audio nesserio ISS Nyemore semplet SYM.  Audio nesserio ISS Nyemore semplet SYM.  Conrad Johnson PVI QBL. valve Preampiliter x demo Conrad Johnson PVI QBL. valve PVI QBL. valve X democrad Symbol P		625 1798 2999 1299 2199 4000 6000 1100 689.8 3200 2299 2699 2300 7600 6995	399 649 1699 799 1750 1799 2299 2499 1999 985 1299 1599 4999 3499
AMPLIFIERS	Audio Research CLOS Re Bails 518 Audio Research WAZO 518 in word Audio Research WAZO 518 in which was a second and a second a second a second and a second a s		1050 N/A 9000 6.400 2.899 2.899 2.500 8.000 1.800 5.200 1.800 5.200 1.800 1.800 5.200 1.800 5.200 1.800 6.40	599 1299 7499 3999 1899 1895 5999 3999 999 2999 749 2999 1799 2999 1799 2999 179 2999 2999
LOUDSPEAKERS	Audio Physic Yara Monitor Cherry is demo Audio Physic Rober Proglet & Genero Cherry and Cherry Cherry and Cherry C		1000 549 1699 4700 479 2800 1000 3189 6999 995 2700 925 6500 699 310 599	649 109 1199 3750 2400 499 2400 3500 699 1299 1299 1399 199 199 199
CABLES & ACCESSORIES	Audio Note 1 m Navy AS-FEBU SABarred Digital S/H Audio Note 1 m Navy AS-FEBU SABarred Digital S/H Audio Note 1 m Navy AS-FEBU SABarred Digital S/H AUDIO Navy AS-FEBU SABARRED	oued INIB INIB S/H	179 9 165 165 165 165 165 165 165 165 165 165	69 299 899 299 499 499 299 299 299 299 299 299 409 499 499 499 499 499 499 599 599 599 59
TAPES	) Magnum Dynalab FTR remote/Tuner for Etude S/H   Isotek Substation special version S/H   Isotek Qube2K S/H   PS Audio Ultimate Outlet S/H		850 395 1600 1495 328 875	599 199 795 849 169

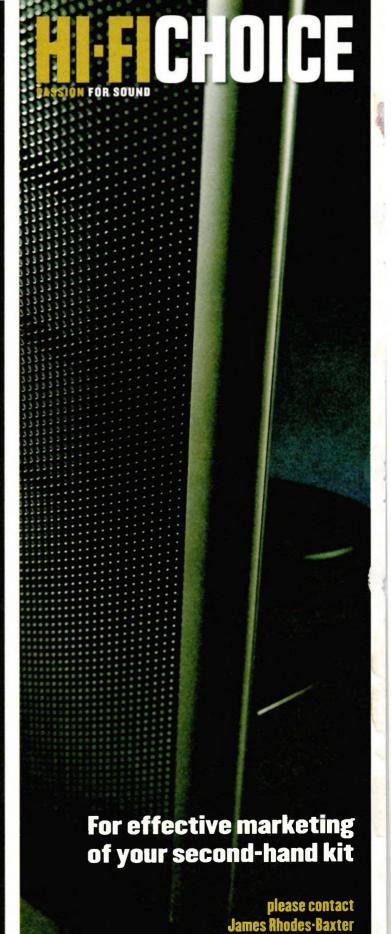
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#### FOR SALE

#### **AMERICAN MAGAZINES (49)**

The Perfect Vision, the Absolute Sound, Surround Professional, Widescreen Review and Stereophile Guide to Home Theater. Buyer collects, make an offer for the lot. Scottie 07762 021618 (Sussex).

**ARCAM 8R** integrated amp, 8P power amp, 8&W DM602 S2 standmount speakers, £450, or may split. 07710 737232 (East Lothian)

**ARCAM DIVA CD72** CD player. 24-bit DAC, CD Text. What-Hi-Fi? Awards product of the year 2001. Excellent condition, boxed with remote/manuals, £250ono. 020 8907 3246 (London)

**AUDIOSYNTHESIS** Transcend CD transport, £1,350. Perpetual technologies PIA/P3A modright signature II power supply upgrade, £1,150ono. All items mint and boxed. 01455 212362 or 07795 671932 (Warks).

**AVI TRIO** excellent floorstanding speakers. Almost new, series nr13-07. Components from Scanspeak-Vifa- Volt. Available for tests with or without your electronics, cherry colour £1,800. +0039 022150930 or email fedepenzo@hotmail.com (Italy).

**B&W DM601 S3** speakers, unmarked, as new condition in sorrento. Boxed etc, £180. Apollo Olympus 50cm stands, mint work very well with B&Ws, £35. May deliver, readvertised due to time waster. Chris 01766 781211 (Hatlech)

**B&W 604 S3** black, four months old, boxed, mint condition, (£800) £600. Thomas 07835 056237 (Notts)

**B&W 704** in rich American Walnut. 18 months old, perfect condition and boxed, £800. Naim flatcap x2, 10 months old, only powered CD player, perfect condition, boxed, £400 delivered in UK. 07729 458836 (Northern Ireland)

**BONNEC TIMPANO** preamp with phono stage. Latest spec, £3,500. Linn Klout power amps x2. Can split, £850 each. 01704 536852 or 07736 269707 (Mersevside).

#### **CHORD CHAMELION**

interconnects, 1x5m, 1x2m phono to phono, ideal for active subs. Can seperate, make me an offer. Buyer collects or pays postage. Scottie 07762 021618 (Sussex).

CYRUS DVD7 mint condition, silver, with Russ Andrews Oak Cone Feet. Excellent sound and picture and fantastic with CD playback. Can demo, £350. 01234 306930 (Bedford).

CYRUS CD8 with PSX-R, Audiolab 8000S and 8000PX pre/power, Mission 753 Freedom very good condition, £1,500, may split. 07881 601783 (Berks).

**DENON CDR-M30** CD recorder £120. Nordost Cineflex speaker cable, 2x6m, £50. Toshiba SD350E DVD player £50. Denon RCD-100 CD/amp/tuner in one box, £175. All excellent condition. 01285 862539 (Cirencester).

EPOS M12 plus Epos original stands, cherry, (£495/£130) £299ono. Chord DAC 64 Mk1, (£1,995) £899. Email: pbjernkl@yahoo.co.uk or call Paul 07748 485668 (London).

HARMAN KARDON HK3370 receiver, 70 watts, AM/FM, remote, manual, £50. 020 8979 1484 (Surrey)

**GRYPHON CALLISTO 2200** integrated amplifier. 200 watts, vgc, terrific clarity and dynamics.

(£4,500) £2,250. 07968 189647 (London)

**KEF 2QDS** rear dipole speakers, maple finish, 120 watts. Boxed, excellent condition, warranty, (£400) £200. Yamaha subwoofer YST320, 250 watts, (£375) £200. 01782 256087 (Stoke on Trent)

**KRELL KAV-250A** Two stereo 250 watt power amps in very good condition, owned from new. Single ended and balanced inputs and outputs. (£3,250) £1,600 each. REL Storm III in very good condition. Light oak finish, owned from new. Unused since service by REL. (£1,000) £500. 01253 729944 evenings. (Lancs).

**LINN KLIMAX** power amplifier, pair of 500 solos, £6,500. Pair of Chakra 500 twins, £2,750 each. Excellent condition, boxed, interconnects. Call for more info Barrie 01323 487781 (East Sussex).

**LINN SONDEK LP12** Lingo PSU, Ittok arm, Dynavector Karat 17D2 (new). All mint and superb sound, £1,250ono. Custom made six-tier equipment rack, spiked top and bottom. Looks great sounds better, (£700) £210. Call for more information Andy 0115 9126424 (Midlands). ▶

#### WANTED

ATLAS OR NORDOST Red Dawn interconnect. 07810 1039008 (Yorks)

**AUDIO TECHNICA** AT1100 tonearm, will pay £50. 01462 456006 (Herts).

**BRYSTON 3BST** power amp 01803 523553 (Paignton).

**MUSICAL FIDELITY P150** power amps, will collect, must be vgc. 07733 167226 (W.Yorks).

#### **MUSICAL FIDELITY TRI-VISTA**

DAC 21 in mint condition. Willing to pay good price. No scratches or dents please and fully functioning 07772 291425 ((Tyne and Wear).

**PINCH ROLLER** part number 642-001 for Ferrograph Series Y open reel tape deck. 01592 750643 (Fife).

PIONEER A300R precision amplifier. 1970's Sugden A21a. Onyx AO21. Nytech. Naim Nait amp. Inca Tech Claymore Sonneteer Campion amp. Nordost Red Dawn. 07810 103908 (West Yorkshire)

**STAX OMEGA** electrostatic earspeakers up to £1,000 for mint condition example. 01333 311247 (Scotland).

**WHARFEDALE 708** speakers 023 8073 8935 (Essex).

#### **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 dem, and judge the seller as well as the goods!

#### **FOR SALE**

**■ LUXMAN D322** CD player with variable output, boxed, in as new condition with manual and remote, £150ono. John 07855 121587 (W.Yorks).

#### LS3/5A ORIGINAL BBC

Chartwell speakers on stands, offers. KEF Concerto speakers, £80. Marantz CD63 MkII K1, £175. Kenwood KX-5010 cassette recorder, £50. Denon TU66OL AM/FM tuner, £55. 01865 882507 (Oxon)

MARANTZ PM66SE amplifier, £75. CD52 MKII CD player, £45. Trio KT1000 tuner, vintage 1970, professional re-fit in 2005, £70 0113 2506743 (W.Yorks).

**MERIDIAN 200** CD and 203 D to A, pair of Linn Kaber 500 speakers powered by Linn LK1 preamp and Dirak power supply. Linn LK280 power amp, spark power supply, tri-wired, all in unmarked condition in original boxes. Needs to go, best sensible offer secures. 01242 577777 or 07831 762500 (Cheltenham)

MERIDIAN M2 active loudspeakers, two 70 watt amps in each enclosure. Mint with original stands. Gladly demo bring your own CDs, £425 ovno. Lecson HL1 horn loudspeakers,

mint, and very rare in this condition, £375ovno. Call for more information 020 8678 1930 or 07985 520619 (London).

MICHELL GYRO SE SME IV arm, van den Hul One special, Trichord Dino phono stage, QC power supply, £1,600. AVI Neutron speakers, £100. Sony SCD-XE670 CD player £50, excellent. 07780 853839 (London)

**MUSIC FIRST** passive preamp, (£1,500) £895. Hegel H2 power amp 150 wpc, balanced/unbal outputs, (£2,500) £795. Linn LP12 turntable, afromosia, no arm, vgc £192. 01202 767873 (Dorset)

### **MUSICAL FIDELITY X-DAC V3** £275. X-10 v3 £175. X-PSU v3,

£275. X-10 v3 £175. X-PSU v3, £150. Or all three together, £550. 01603 440405 (Norwich).

**MUSICAL FIDELITY X-PRE V3** preamp and XP200 power amp, mint, boxed, £1,250. Saverio 01332 843758 (Derbys).

MUSICAL FIDELITY A3 Dual Mono amp, £430. A3.5 CD player, £500. A3.2CR power amp, £500. All mint condition. Brian

07747 664742 (Dumfriesshire) **MUSICAL FIDELITY KW25** two-box CD player, new boxed,

superb sound, (£4,000) £3,125. Sondek LP12 black, Lingo, Cirkus, Attok, Dynavector 17D2 (new) mint, £1,200ono. Six-tier equipment support spiked top and bottom, £175ono. Andy 0115 912 6424 (Notts).

NAD 524 CD player, £125. T562

DVD, £125. Both remotes and instructions. Optimum 6000AV stand, chrome legs, £150. Buyer collects 07976 956298 (Devon). **NAIM CDS2/ XPS**, 1999, black, £3,000. NAC52, 1996, Supercap, 1998, black, boxed, £3,000. NAP135 (pair), recapped in 2001, boxed, £1,300. 0191 4217905 (South Shields).

NAIM LINN LP12 (modded)
Naim Armageddon power supply.
Naim Aro tone arm, £750, good condition. 01453 750183
evenings or weekends.
(Gloucester).

NAIM NAC 82 preamp (1999), with black style napsc, remote, leads, plug-ins, manual, box. Can demonstrate, £1,025 ono. 07973 785360 (Sussex)

QUAD L-SERIES subwoofer, boxed, one month old. High gloss rosewood finish, 300 watts, £450ono. 01580 241491 (Kent). QUAD 31/306 pre/power amp Grey, heavy duty speaker connectors and new caps. Excellent condition, £250 pair. 0121 382 0145 (Birmingham). QUAD 99 preamp, £375. 99 FM tuner, £350, mint boxed, free Thorens TD160 turntable if both

bought. Spare 99 remote, £20.

Russ Andrews four-way Yello

power block, £30. 023 8073

8935 (Essex).

**QUAD 33/303** power amp and preamp, with matching Quad tuner, all mint condition working perfectly, bargain, £295. Luxman L30 integrated amp, excellent sound, £50 +003531 2954076 (Ireland).

QUADRASPIRE Q4 hi-fi table. Standard four-shelf in maple finish with silver supports, mint, £200. 0292 042 6883 (S.Wales). ROTEL SYSTEM; RCD-02 CD player, RA-01amp, (£630) £350, silver, two years old. QED Qunex 3 interconnect, (£40) £20. Wharfedale 9.1 speakers in beech (£180) £95. Only a couple of months old. All items boxed, mint and can be posted or collected. Lee 01384 412234 (West Midlands)

**RUSS ANDREWS** Powerblock with Megaclamp, eight sockets, one year old, perfect condition, £165ono. Audioquest Indigo + speaker cable, 2x3mtr pairs, fitted with 4mm QED Airloc banana plugs. Excellent condition, £60ono. Ray 01900 606650 (Workington).

SONAB OA14, two pairs for spares or repair, £100. Leak FM tuner £65. Pioneer F91,£110. Mark, after 8.30pm 01474 708631 (Kent). TOTEM ARRO, Dreamcatcher, centre, Lynx dipole, rears. Maple, boxed, mint, £1,450. 07891 533084 (Swansea)

### **TOTEM DREAMCATCHERS** and Apollo AZ6 stands, maple, six months old, as new with guarantee

months old, as new with guarantee boxes and books, (£595) £395. 01823 401181 (Somerset)

#### TOWNSHEND ISOLDA DCT

speaker cable 2x2.5 metre pair, will split, (£300) £150 Also Townsend DCT interconnects, un/balanced and call 01208 76455 (Bodmin).

VAN DEN HUL FROG moving-coil cartridge, £725. New March 2006, only 60 hours use. 07729 626598 (Essex)

williams HART mono block power amps professionally upgraded with remote power supplies and upgraded parts; Black Gates, Vishays, Shotkkies etc. 90 watts per channel plus phono inputs. Mike Booth 01457 83 4465 (Manchester).

WILSON AUDIO 5.1 Watt/Puppy

loudspeakers. VGC. Gloss black finish, manual and crates, £5,750 ovno. 01926 653421 (Warwick).



Above: Cyrus CD8 CD player

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