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◀ Brilliant new CD player

PRIMAIRE DVD30  
◀ The best universal yet?

WILSON BENESON  
◀ Superb new cartridge

# HI-FI CHOICE

PASSION FOR SOUND WWW.HIFICHOICE.CO.UK | MAY 2004

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DEFINITIVE IN-DEPTH TEST

# THE LINK EFFECT

Sony's new SACD player and all-digital amp – is this the future of hi-fi?



## EXPAND YOUR HORIZONS

Nottingham Analogue's new entry-level Horizon turntable digs our groove

**GUESS WHO??**

This amp costs £895 and sounds superb. But you'll never guess who makes it...

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MAY 2004  
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Media with passion

## ULTIMATE GROUP TEST SPEAKERS

- FEATURING...
- ✓ ATC SCM12
  - ✓ Avance Dana 670 AV
  - ✓ B&W 705
  - ✓ Epos M15.2
  - ✓ Focal-JMLab Chorus 726 S
  - ✓ Polk Rti10
  - ✓ Triangle Antal 202
  - ✓ Vienna Acoustics Bach





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# HI-FI CHOICE

MAY 2004 ISSUE 253

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To make sure you get the best advice, *Hi-Fi Choice* employs the most talented and experienced writers in the business.



### JASON KENNEDY

Jason previously edited *Hi-Fi Choice*, but can now be found swanning about the wilds of Sussex indulging himself with the very best hi-fi money can buy. His own system is simply sensational (trust us) and his love of music knows no bounds.



### PAUL MESSENGER

A former editor of *Hi-Fi Choice*, Paul has been writing about his beloved hi-fi hobby for some 26 years. In that time he has become one of the world's most respected sonic scribes and probably the UK's foremost loudspeaker reviewer. He also writes for respected US hi-fi journal *Stereophile*.



### RICHARD BLACK

Richard is one talented guy: a professional musician, experienced recording engineer and a highly knowledgeable hi-fi enthusiast to boot. He's particularly nerdy about cables. It's probably Freudian.



### ALVIN GOLD

Alvin cut his hi-fi teeth in the retail trade, and has now been writing about his obsession for more than 20 years. In that time he has contributed to almost every hi-fi periodical you can think of (and several more besides). Few can match his encyclopedic knowledge of all things audio.



### DAVID VIVIAN

An award-winning journalist of considerable experience, David's sharp ears and equally sharp powers of description are a valuable mix for *Hi-Fi Choice*. He also writes about cars, but who needs to take the latest Lotus for a spin when you've got the finest hi-fi to test drive?

These are fascinating times for audiophiles. If it sometimes feels like technology is steaming into the horizon with all the finesse of a rhino on speed, the concept of studied sound quality left trailing in its wake, there are plenty of examples to show that the practice of applying new-tech for pure audiophile gain is still alive and kicking.

Take Sony's new 9000ES SACD player and all-digital amp (p32). The amp is a revelation; a high-end multichannel integrated which maintains off-disc data in its digital form right up to the output filter. Then there's the player, a 'purist' audio-only SACD/CD spinner capable of quite stunning music making – free-breathing, fluid and all-enveloping, with multichannel SACD in particular.

But the real trick comes when you fuse the two together. Connected via Sony's latest iteration of the i.Link wideband digital interface, the player can stream DSD data from SACD discs (and PCM data from CDs, for that matter) to be amplified without lossy conversion. Only at the amp's output is this data transformed into analogue, ensuring the purity of the DSD concept remains unsullied right through to the speakers. One day all hi-fi will be made this way...

...Or perhaps not! Despite such paradigm shifts, traditional analogue tech will continue to reserve a special place in our heads, hearts – and also our wallets! Such diversity, nailed together with the common pursuit of musical excellence, is at the heart of what *Hi-Fi Choice* is all about. We've heard an amazing selection of top-quality new gear this month, cherry-picked and tested rigorously for your personal edification. So turn the page, it's time to get it on...



Tim Bower **editor**

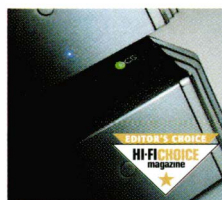
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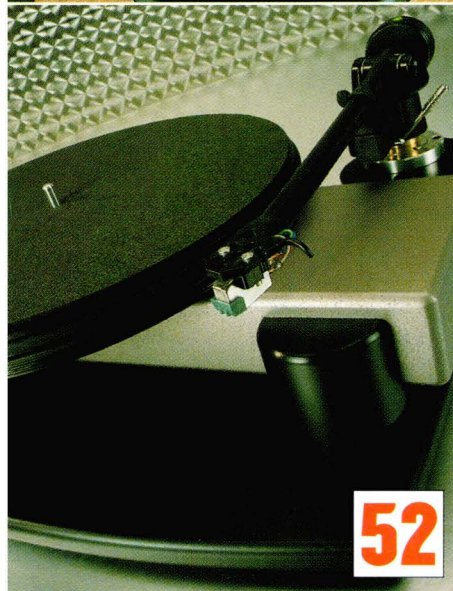
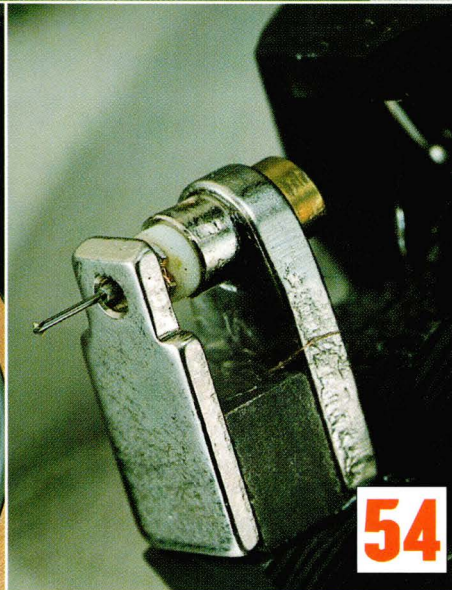
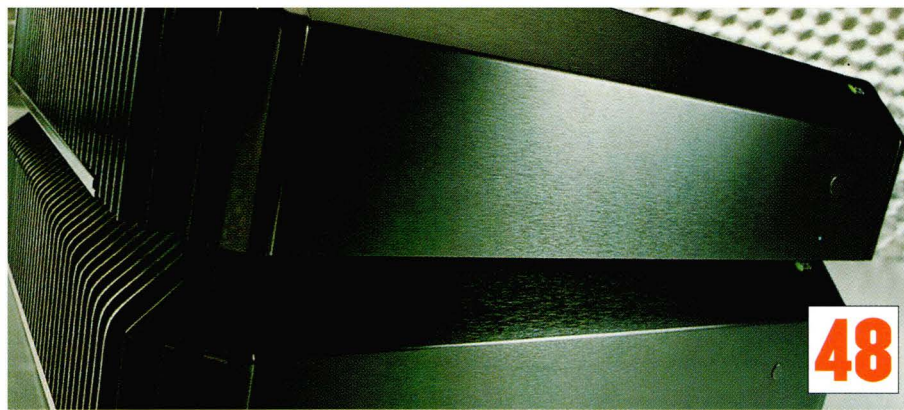
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EST. 1975

**HI-FI CHOICE**  
magazine

**Hi-Fi Choice** is your essential guide to audio excellence in the home, from vinyl records to the latest digital music formats. For 29 years, our unique tests have brought you the most thorough and reliable hi-fi journal around. And our mix of rigorous group tests and in-depth solo reviews continues to ensure that **HFC** is the magazine you can trust. Published 13 times a year, it's the *smarter* hi-fi read...

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**THE PRIME MOVER**

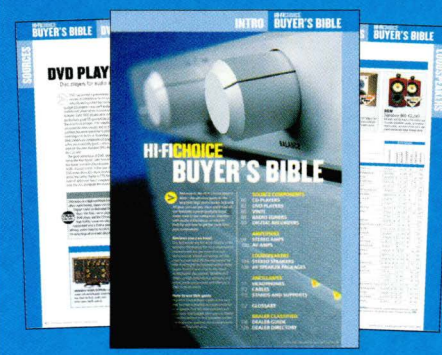
The Prime30 is a superb DVD player. It's a player for those who care about the degree of subtlety in its capability of producing its own unique musicality.



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



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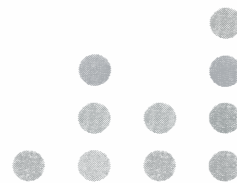
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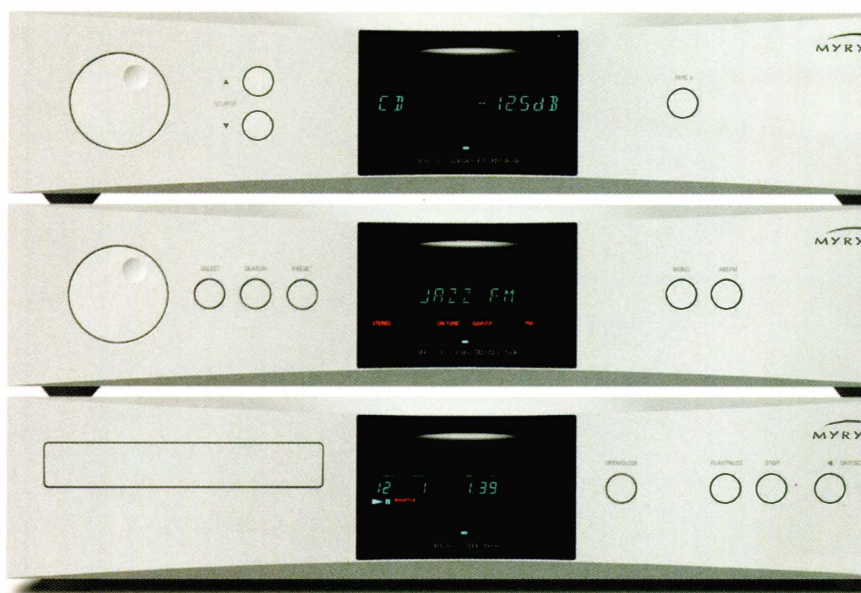
HUGE RANGE OF HI-FI ON THE WAY FROM THE SOUTH COAST

▶ Myryad is set to capture audiophiles' attention with a comprehensive range of new electronics to replace the ageing M-series. The new MX-series includes a CD and DVD player, AM/FM tuner and a huge range of amplifiers, including a new digital preamp.

The MXC6000 CD player (£1,500) uses a 24-bit/96kHz DAC with dual differential outputs, while the £1,000 MXV3000 DVD player sports a 24-bit/192kHz chipset with PAL progressive scan video compatibility. Myryad also has seven new off-the-shelf amps plus a range of modular power amps starting at £1,100 that are based on a new 150-watt mono and 80-watt stereo module. The same modules also appear in Myryad's integrated amplifiers – the MXI2080 (£1,100) and the MXI2150 (£1,800).

New preamps include the stereo MXP2000 (£1,000) and the MDX6000 (£3,000) – a multichannel preamp/processor with the full gamut of onboard audio decoding and a comprehensive array of connection configurations. Features across the range include proprietary low-distortion 'DC5' circuit configurations and multiple separately regulated power supplies (up to 14 in the MXC CD player). All are available now in silver or black.

☎ 020 8863 9117 🌐 www.myryad.co.uk



## MUSICAL FUSION

FISSION OF MX RANGE BRINGS FUSION

▶ The new Fusion range of entry-level speakers

from Tannoy will replace the longstanding MX-series. The range includes two floorstanders – the Fusion 3 (£230) and 4 (£350) – plus the Fusion 1 and 2 standmounts (£100 and £150 respectively), with a centre speaker and compact rears. Tannoy uses a 25mm soft-dome tweeter and fibre-coated paper cones for the mid and bass drivers. Cabinets are MDF with a thick 19mm baffle and come in various vinyl finishes.

Complementing the Fusion range are two compact active subwoofers – TS8 (£250) and TS10 (£400). Both subs use Tannoy's BASH Class D/ AB amp circuit topology – a digital hybrid in a class of its own!

☎ 01236 420199

● www.tannoy.com



## CINE NADS

NEW NADS HAVE LOTS OF JUICE

▶ The latest pair of NADs to leave the assembly line includes a new multichannel preamp/tuner and seven-channel power amp. NAD's T163 (£900) is described as an "AV tuner preamp" and offers the latest audio decoding via 24-bit/192kHz DACs as well as HDCD decoding and a bypass mode for two-channel playback. The preamp claims uniqueness through the inclusion of an AM/FM tuner that uses a MOSFET front end and full RDS facilities.

A partnering seven-channel power amp, the T973 (£1,200) uses NAD's proprietary PowerDrive topology (auto impedance/power matching for speakers) and a monoblock construction said to be capable of delivering 140 watts per channel continuous, with all seven channels driven. Features include Class A input and driver stage circuits and a special transformer with a high-efficiency core.

☎ 01908 319360 🌐 www.nadelectronics.com

# ATC GOES ORBITAL

## NEW SPEAKER PACKAGES FROM GLOUCESTER

⊗ ATC's new 5.1 channel loudspeaker systems will offer audiophiles a serious solution to high-fidelity multichannel sound. There are two new packages – the passive Concept 3 (£4,877) is based around four SCM12s, while the Concept 5 active system (£9,396, pictured) uses four of the larger Active 20s. Both packages share ATC's C4 subwoofer – a high power unit with a 300mm (12-in) driver and 1,000 watts of on-board amplification.

The SCM12 (reviewed on p58) and Active 20 main speakers both share a 25mm soft dome tweeter plus the latest version of ATC's

150mm bass/mid driver, comprising a 75mm midrange dome coupled to a 150mm bass cone. Both systems are ready now – expect a review soon.

☎ 01285 760561 ☎ www.atc.gb.net



**audiofile**  
⊗ PRODUCT NEWS

⊗ **Soundbites**



**DENON** has upgraded its flagship **AVC-A1SR** multichannel amp (Editor's Choice, HFC 232) after two years of production. The new **AVC-A1SRA** (£3,000) features **Dolby Pro-Logic IIx**, **DTS Neo:6** and **HDCD** decoding. Described as 'Denon Link 3 ready', the new amp will be fully compatible with Denon's forthcoming high-resolution proprietary serial interface as well as every known decoding format to date.

☎ 01753 888447

**TOSHIBA** has announced details of a new universal DVD player, at present limited to the US market. Named **SD-4960**, the player is set for launch in June and will retail for just \$180 (£95). The product marks Toshiba's entry into the universal DVD player market with more models expected soon.

☎ 0870 220 2202

**BLACK RHODIUM** has improved its **Super Mains Power Management block** (£330). The latest version has a new high-frequency filter claimed to give greater attenuation of HF noise, with improved imagery and clearer sound. The block has eight sockets and comes with two metres of Super Mains cable.

☎ 01332 361390

**RESOLUTION LOUDSPEAKERS** of Dorset, has a new transmission line model. The **Resolution** (£1,200) uses a tri-axial point source driver said to offer low distortion and high efficiency. The 26kg mahogany-clad floorstander houses an eight-foot transmission line within its cabinet.

☎ 01202 470184

☎ www.worldsbestloudspeakers.com

**COLDRAY** isolation feet are the latest upgrade gadgets offered by **Lars Kristen**, designer of the **Nordost Pulsar** points. **ColdRay** feet use a steel or ceramic ball held in a cup over which an aluminium cone is placed. **ColdRays** are designed to act as 'tuned resonators' and are claimed to improve audio dynamics and transparency. Prices start at £50.

☎ 0870 241 2469

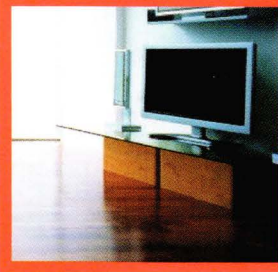
## B&W GO FLAT

### WALL-MOUNTABLE FLAT SPEAKERS FOR AV SYSTEMS

⊗ **B&W** is the latest speaker company to introduce new flat panel speakers to complement the growing number of plasma and LCD screens available. The **FPM** (Flat Panel Monitor) series comprises four models, three of which equal the height of today's 42, 50 and 60-inch screens, plus a rear wall-mount model. The two-and-a-half-way models use three drivers – two Kevlar mid/bass units surround B&W's 25mm metal dome tweeter. All FPM models have aluminium enclosures with integral wall brackets. Prices start at £250 for the FPM 2 rears and they're in the shops now.

☎ 01903 221500

☎ www.bwspeakers.com



## REL OF A TIME

### BASS KING'S LATEST SUBWOOFERS



⊗ Sub-bass specialist **REL** has two new subwoofers – its first new models for three years. The **Stamper** (£550) and **Strata 5** (£700) use a digital control system for optimised performance, a downward firing custom-designed drive unit and beefy 30mm wood veneer cabinet. Both have a front-mounted blue LED display and DC-coupled amps with MOSFET output devices.

☎ 01656 768777

☎ www.rel.net



## X-RAY SPEC

### MUSICAL FIDELITY X-RAY CD PLAYER

⊗ A new upsampling CD player is to join Musical Fidelity's revamped X-series. The £900 **X-Ray<sup>v3</sup>** is said to use the same DAC and upsampling principles as the flagship **Tri-Vista SACD** player, and features MF's now familiar custom-extruded aluminium casework and fitments along with an internal resonance-damping sub-chassis. The player joins two amps, the **X-80** and **X-150** (HFC 252), and the existing **X-LPS<sup>v3</sup>** phono stage and **HFC** Award-winning **X-Cans<sup>v3</sup>** headphone amp to form the diminutive X-series product range.

☎ 020 8900 2999 ☎ www.musicalfidelity.co.uk

**Soundbites**

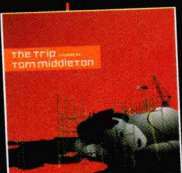
**DENON** has a new micro DVD system available in 2.1-channel configuration. The £500 ADV-M71 compact DVD receiver resembles the highly-regarded D-M31 CD system and can be bought individually or with the SYS-A2.1L speakers (£250). ☎ 01753 888447

**USD** (Unique Solutions Distribution) is a new name on the custom install scene. The Bedfordshire distributor will import the Belgian brands ART Sound (speakers) and Niko (audio distribution systems). ART Sound has a range of speakers including standmounts, sub/sat systems and waterproof designs for outdoor use. ☎ 01525 877707

**ERRATUM:** In last month's *Ultimate Group Test*, we incorrectly stated that the Creek CD50 mk2 costs £1,000. It does in fact cost £850, as stated at the start of the review.

**CD GIVEAWAY!**

We've teamed up with Family Recordings to give you the chance to win one of ten copies from the latest in the *The Trip* series of mix CDs. Tom Middleton's contribution is chock-full of skilfully mixed tuneage and cheeky samples - this twin CD is already an office favourite here at HFC. To enter, send your name, address, and daytime telephone number to - Score me a Trip, Hi-Fi Choice, Future Publishing, 99 Baker Street, London, W1U 6FP. Closing date is 16 April.



**Hi-Fi diary**

- MAY**  
 20-23 High End 2004  
 Munich, Germany  
*The dog's danglies at the former Frankfurt show*
- JUNE**  
 1-4 Cedia Expo 2004  
 ICC, Birmingham  
 01462 627377  
*Custom install showcase*
- SEPTEMBER**  
 24-26 The Hi-Fi Show and AV Expo  
 Heathrow, London  
 020 8774 0847  
*London's established hi-fi show*
- OCTOBER**  
 23-24 Home Entertainment Show  
 Manchester  
 01524 36991  
*Premier show in the north west*

**MINI IPOD RIVAL**

PHILIPS TAKES ON APPLE WITH NEW PORTABLE

Philips will be tackling Apple's iPod Mini head on with a small 1.5Gb hard disc portable at just £170. The HDD060 audio jukebox can store up to 375 MP3 tracks or 750 songs in the Windows Media format. What's more, the dinky player weighs an incredible 95g (the iPod Mini weighs 104g) thanks to its lightweight magnesium body.

The player boasts a large LCD backlit display with scrolling search keys that navigate the internal menus, and users can expect ten hours listening time between charges. What's more, the HDD060 can connect to PC by USB, which gives it broader appeal than the iPod Mini which requires the more exclusive USB2 or FireWire. Check it out - it's in the shops now.

☎ 0870 900 9070  
 www.phillips.com



**LEX GET PHYSICAL**

NEW POWER AMPS FROM LEXICON

Lexicon's latest five and seven-channel power amps will add a bit of welly to flagging multichannel systems. The THX Ultra2 certified CX amps offer 140 watts per channel with four custom output transistors and balanced and unbalanced connections. Priced at £2,750 for the five-channel CX-5 and £3,500 for the seven-channel CX-7, both amps feature gold-plated terminals and DC speaker protection.

☎ 01423 359054  
 www.lexicon.com



**CAN I GET A REWIND?**

PAUSE AND REWIND DAB DIGITAL RADIO

From this summer, DAB fans will be able to pause and rewind digital broadcasts courtesy of the ReVu technology found in Pure's new Legato compact system. ReVu allows users to rewind a broadcast back to a favourite moment, or take a break and continue in the same place. The Legato system features a DAB/FM radio, CD player with MP3 playback and a timer, which combined with the digital optical output allows users to record radio to a sync-record-supported CD-R or MiniDisc player. Legato comes supplied with a pair of speakers wrapped in cherry veneer and will cost £350 when it goes on sale this summer.

☎ 01923 260 511  
 www.pure-digital.com

**PULSATING SOUND**

NEW FLAGSHIP MONOPULSE FROM SPEAKER SOLOIST

Allan Hendry, the speaker enthusiast behind MonoPulse, has introduced a new flagship speaker to the three-strong range. The new MonoPulse 42A is a modded version of the existing 42 with a new bass driver said to give greater extension and control, and a claimed sensitivity of 92dB. Akin to the MonoPulse 32, reviewed in HFC 245, the 42A uses a steel-enclosed construction bolted to a wood composite enclosure in a choice of colours. It's priced at £995 per pair and has power handling of up to 100 watts - expect an HFC review in a few months time.

☎ 07785 558238  
 www.monopulse.co.uk









## WOODEN CONE WONDER

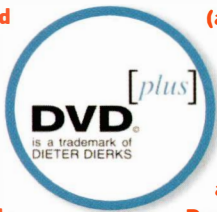
It's been 20 years in the making but JVC has finally produced its first wooden speaker cone. Mr Imamura, one of the company's engineers, has created a solid birch cone drive unit in an attempt to produce a loudspeaker that can better emulate the sound of wooden instruments such as violins, guitars and pianos.

In order to make the birch pliant enough

to be stamped into a cone shape it is first soaked in Sake (Japanese rice wine), a process adapted from that used in the catering trade. The driver has been housed in a compact wooden cabinet and is being sold as part of the JVC EX-AX1 micro system – a DVD-Audio-playing, digital amp-powered 30-watt stereo system costing around £400.

## DVD PLUS VS DUALDISC

DualDisc, the DVD/ CD hybrid now on sale in targetted US territories, could infringe the patents of an alternative dual-format disc called DVD Plus, developed by Dieter Dierks in Germany two years ago and already commercially proven. Dierks has stated that he "bought from WEA [Warner] their two-sided hybrid DVD/ CD patent in April 2000, because they didn't believe in the format". One clause in the contract between WEA and Dierks clearly states: "WEA agrees to use the logo DVD Plus as specified in Schedule B worldwide on all two-sided hybrid DVD-CD discs manufactured by WEA



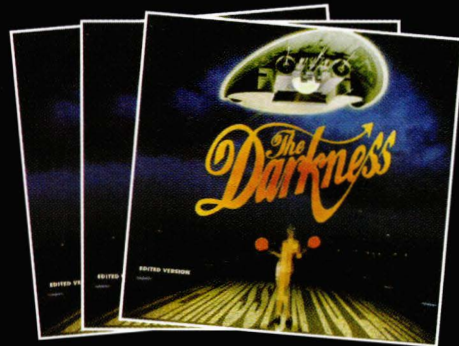
(as specified in 5.3) according to the Patent Applications."

There have also been questions about the capacity and compatibility of DualDiscs. For a CD or

DVD to be compatible with most players it cannot be more than 1.5mm thick, and as DDs are made of two layers bonded together each one is significantly thinner than a standard disc which affects its capacity - there are doubts as to whether the CD side will be able to store over 74 minutes of audio or if either side remains within spec at its outer edge.

## DAB BREAKS THROUGH

2003 was the breakthrough year for DAB (Digital Audio Broadcasting) radio with many retailers reporting that sales had overtaken analogue radios for the first time. Sales of DAB receivers jumped by 222 per cent compared to 2002, with table-top models being a major factor in the boom. The persistent pushing of the medium by the BBC will no doubt have had almost as great an effect. According to the Digital Radio Development Bureau (DRDB), 300,000 DAB radios were sold last year and with prices dropping below £70 for models like the Acoustic Solutions Portal 1 (left) this number is bound to rise. The fact that there are now more DAB-only services (190) than simulcasting stations (172) should also help. Coverage is also slowly increasing with Capital Radio's south coast multiplex and The Wireless Group's Swansea multiplex having come on-stream at the start of February.



## CD SALES ON THE RISE

Online music sales might actually be driving up album sales in the UK. Last year legitimate downloads of singles outnumbered all other formats except CD – according to the Official Charts Company which has been tracking online music sales, this is the first time that virtual music has outsold any of the conventional formats. Yet the BPI reported that deliveries of CD rose 5.6 per cent in 2003 despite an 11 per cent decline in the middle of the year. Singles sales declined quite dramatically by 31 per cent but overall album sales across all formats were up 4.9 per cent. The BPI attributes this to low prices and the strength of acts such as The Darkness, Dido and Busted. Could it also be something to do with the effectiveness of downloads for 'product sampling', perhaps?

## 10.2 FAR

B&W's room at the Sound & Vision Show in Bristol (see report p12) made a distinct change from the other exhibitors at this or any other show. Instead of merely displaying the latest kit, it commissioned a 10.2-channel recording comprising more than 70 separate audio tracks and tuned the mix in the 'dem' room. Called DivideByTen, this full-immersion audio experience consisted of an hour-long loop played via two Rotel RB-1080 amps, with ten B&W 705 speakers (pictured) and two ASW700 subs. Given the asymmetrical nature of the room there was no sweet spot as such, and a very different experience could be had depending on where you were. Created by Bob Burgher, Paul Ellis and David Kelly, DivideByTen was not designed as a surround demonstration but shows one of the more interesting options for audio kicks in the future. Visit [www.dividebyten.com](http://www.dividebyten.com) for more info.



# Kandy

It's not all  
black and white.



Roksan, for those with a little more grey matter.



## AUDIO ANALOGUE PRIMO CD/ PRIMO SETTANTA

**What are they?** CD player and integrated amplifier  
**When are they available?** March 2004  
**Price?** £475 each  
**Why are we excited?** These delightful Primo compact separates flaunt exemplary build quality and bring the lush Audio Analogue sound into newly affordable territory.



## PMC GB1

**What is it?** Loudspeaker  
**When is it available?** April 2004  
**Price?** £995 per pair  
**Why are we excited?** At less than a grand the new slender GB1 with its transmission-line bass system and OB1/FB1-inspired design looks like a real bargain. The transmission line is said to give an extra octave of bass over conventional ported speakers.

# BRISTOL HOT 10!

## THE BRISTOL SHOW REPORT 20-22 FEBRUARY 2004

Bristol's Sound & Vision Show is one of the UK's biggest hi-fi expos. Here's our take on the best new kit at this year's show...



## MARANTZ PM7200 KI SIGNATURE

**What is it?** Integrated amplifier  
**When is it available?** March 2004  
**Price?** £500  
**Why are we excited?** Legendary Marantz 'brand ambassador' and technical guru Ken Ishiwata has breathed upon the already excellent PM7200, adding a larger transformer, rebuilding the chassis with masses of copper and upgrading all the wiring. And that's not all... read our exclusive review next month.

## O'HEOCHA D1-F4 RF

**What is it?** Wireless active loudspeaker system  
**When is it available?** September 2004  
**Price?** Around £10,000 per pair (active)  
**Why are we excited?** Until now wireless audio has involved serious compromise. O'Heocha's military-spec system uses a proprietary digital RF protocol and requires no cables or mains leads. Each speaker is battery powered with a 100-watt audiophile class A/B power amp.



## REGA P5 AND P7

**What are they?** Turntables

**When are they available?**

April 2004

**Price?** £698 (P5), £1,298 (P7)

**Why are we excited?** Rega's lovely P5 is a direct replacement for the P25. It has a new RB700 tonearm, glass platter and redesigned motor, while the even funkier P7 has a ceramic oxide platter, low-mass plinth and the same arm.



## WA LOUDSPEAKERS WA-14

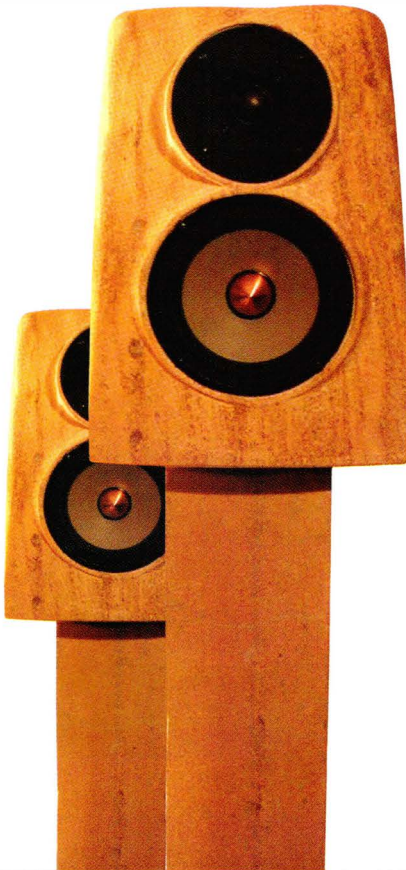
**What is it?** Loudspeaker with integral stand

**When is it available?** March 2004

**Price?** £4,200 per pair

**Why are we excited?** You don't get many limestone-encased loudspeakers to the pound – this compact model weighs 39kg without the stand.

Unusually, the crossover is housed in the stand, which makes the sound even more rock solid!



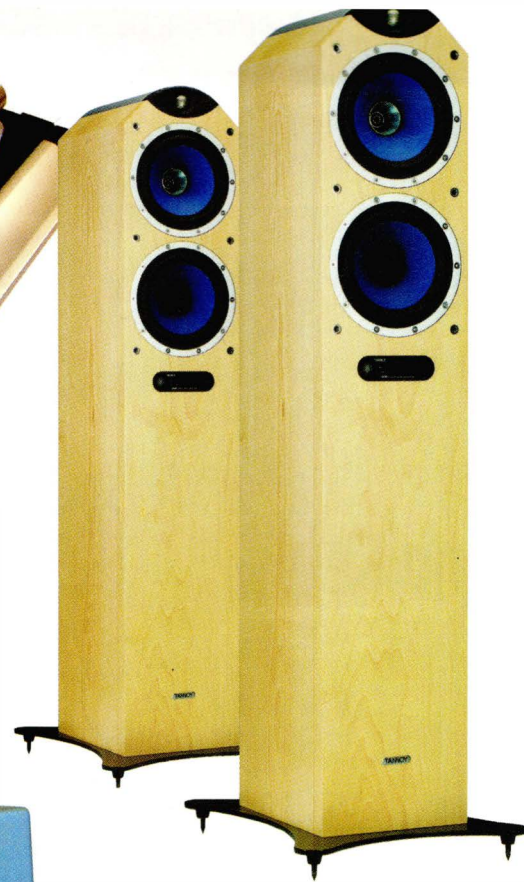
## TANNOY EYRIS IDP 5.1

**What is it?** Active multichannel loudspeaker system

**When is it available?** March 2004

**Price?** £20,000 (5.1-channel system)

**Why are we excited?** This is the first domestic active system from Tannoy. In fact, it's more than that – the IDP system incorporates room EQ technology so that the speakers can be tuned precisely to match the listening environment. Stereo systems will follow soon.



## CYRUS DAC XP

**What is it?** Digital preamp/DAC

**When is it available?** June 2004

**Price?** £2,000

**Why are we excited?** This is Cyrus's most ambitious DAC so far with 24-bit/192kHz conversion and true balanced operation throughout. The fact that it comes with a fully digital preamp is more than a perk – it puts Cyrus into another league.



## TOWNSHEND TA 565

**What is it?** Universal DVD player

**When is it available?** April 2004

**Price?** £2,200

**Why are we excited?** This new SACD/DVD-Audio player works on the same principles as its predecessor, but the elastomer suspension system requires no pumping up and the sound is even more stunning.

## SPENDOR S9E

**What is it?** Loudspeaker

**When is it available?** March 2004

**Price?** £2,895 per pair

**Why are we excited?** The original S9 was impressive, but this newcomer has totally redesigned drive units plus linear flow reflex ports, and is the largest in Spendor's new updated S Series. A three-way that takes no prisoners.



## ALSO WORTH WAITING FOR... ACOUSTIC ENERGY AELITE Curvaceous range of speakers with alloy drivers

AUDIO ANALOGUE MAESTRO Revamped 24-bit/192kHz CD player and phat integrated to replace existing gems

REGA R9 Flagship Rega floorstander comes out of hiding priced at just £2,500

SONY HAR-LH500 Sony's new full-size 80GB hard disc allows recording from digital and analogue sources

PATHOS IMPOL2 Stunning flagship integrated valve amp just arrived in the UK

CLEARAUDIO ANNIVERSARY TURNTABLE Another audio/visual delight from Germany, with Unify arm and Reference MC cartridge

CANTON KARAT REFERENCE 6 Exciting Reference floorstander – alloy cones with a large side-mounted 220mm bass driver

NAIM DVDS £2,300 DVD player joins the hi-fi specialist's ranks

VELODYNE DD Subwoofers with in-depth set-up software so that their bass matches your room

INCA DESIGN KATANA Great looking British CD player due for delivery any moment

WILSON BENESCH THE CURVE Gorgeous cut-down version of the ACT speaker reviewed last month – see next issue for the definitive review

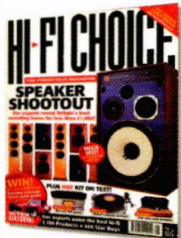
## TIME MACHINE FIVE YEARS AGO

Hi-Fi Choice  
May 1999

It's been five years since Audio Note launched its Zero range of compact hi-fi, mixing traditional valve and up-to-

the minute digital technology for very little money. Some of you may also remember the sinister-looking Mana Stealth monoblocks, ancestors to the

ECS amps reviewed on p48 of this issue. We were enjoying the first incarnation of Cyrus's aCA7/aPA7 pre/power combo which demonstrated impressive gain and stability while retaining plenty of oomph. Best Buy speakers from our group test were distinctly European and included the legendary Dynaudio Audience 40, and Triangle's Zephyr II.



## TEN YEARS AGO

Hi-Fi Choice  
May 1994

Naim hit the headlines with the CD3, its first sub-£1,000 CD player. This classic disc spinner used Naim's pullout

drawer transport system from the CDs, with a design that paid much attention to eliminating microphony and vibration – much the same as now!



Dinky standmounts got the Lab Test treatment with the Celestion 3 MkII and JPW Gold Monitor romping home with the coveted Best Buy honours. In the days before DVD, two-box CD players (transport and DAC) were still flavour of the month – in a transport-only group test, Arcam's Delta 250 and the Theta Data Basic led the way.

## SYSTEM BUILDER

EACH MONTH, WE PICK A FAVOURITE DISC AND BUILD A SYSTEM TO SHOW IT AT ITS BEST



### QUEENS OF THE STONE AGE

*Songs For The Deaf* Interscope 180g vinyl

*Songs For The Deaf* made it into the tabloids last year when a group of genuinely deaf people allegedly demanded a refund at the gig after they realised their mistake! It's one of the most exciting and accessible rock albums to emerge from the last five years, like a glam Black Sabbath on amphetamine. We were surprised to find it on 180-gram vinyl so soon and lapped up the opportunity to extract all the extra feel and information available from this luxury format. QOTSA's infectious drive is more raw-bloodied rock 'n' roll than metal, with an energy that is utterly engaging and attributable to the talents of the renowned rockers behind the instruments. The album is a highly polished affair with lots of layers, detail and midband information – it requires nothing more or less than a balanced system that can capture all the energy without adding too much colour. Here's a low cost suggestion...

### TURNTABLE

**GOLDRING GR1** £140

One of the bargains of 2004, the GR1 is a great way to start an affordable and inspirational vinyl system. It's virtually a Rega P2 and shares many component similarities despite the pocket-money price.



### AMPLIFIER

**ROTEL RA-02** £350

Rotel's 'budget' stereo model has a built-in phono stage and delivers 40 watts of delicious, transparent power that's engaging, agile and very capable.



### SPEAKERS

**EPOS ELS 3** £200

A firm *Hi-Fi Choice* Best Buy, the little standmount ELS3 shares many of the traditional Epos sonic hallmarks – speed, neutrality and a super-clean midband. It's a convincing and musical little box that tells no lies.



## WEBSITE OF THE MONTH

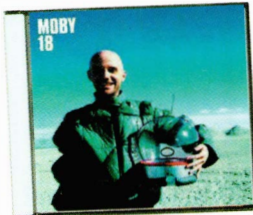
[www.highfidelityreview.com](http://www.highfidelityreview.com)

We really shouldn't have kept this a secret for so long. Highfidelityreview.com is an invaluable guide to the latest news, views and reviews of high-resolution audio formats, both DVD-Audio and SACD. If you want to know what's out there, and, more crucially if it's any good, you can trust the reviews submitted to these pages.

We love the links to all the music labels involved and the fresh supply of news releases on the latest discs. It doesn't end there though. The news pages are one of the best resources for breaking technology news stories anywhere – well worth a few visits between your monthly fixes of *Hi-Fi Choice*.

## READERS' DEMO DISCS

YOUR FAVOURITE MUSIC FOR HI-FI AUDITIONS



### MOBY

18 V2/BMG

"I've always found that electronic music offers the best tool for evaluating hi-fi. With clean sounds, punchy mid/bass transients and plenty of sub-bass, Moby's 18 will poke, prod and probe the boundaries of every bit of kit that provides

a pathway to the music. It's the more spiritual follow up to *Play*, containing gospel samples, rap and a veritable feast of old-skool rhythms. I like to think that at some point on the album there's the perfect track to test every conceivable aspect of sound quality – for me there is no better test tool."

Spencer Levy via email

**What's your favourite disc for hi-fi auditioning?** Why not write in and tell us – 100 words on what and why – we'd love to hear about it. Email your choice to dan.george@futurenet.co.uk or write in to Classic Demo Discs, Hi-Fi Choice, Future Publishing, 99 Baker Street, London W1U 6FP.

## JIMMY'S TWEAKS #19

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



### Play it all

Sometimes you'll see a loudspeaker described as being "great for rock 'n' roll", for example. And then again you might find another that's described as being best suited to classical music. Of course, different types of music can place completely different sorts of demands on the equipment you're using. The person who

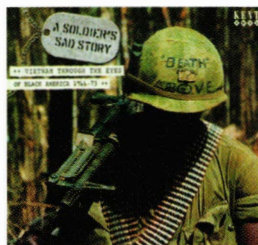
mainly listens to chamber music at moderate volume is going to have completely different requirements to someone who likes rock played at ear-splitting levels.

However, most of us probably have fairly eclectic tastes in music. We like a wide variety. Therefore a good hi-fi system is one that copes successfully with extremes – delicate and refined for naturally recorded acoustic instruments, and big and ballsy for rock. The more your system encompasses such extremes, the better it is.

## ON THE OFFICE STEREO

MUSIC THAT AMUSED US WHILE CREATING THIS ISSUE

The Church Forget Yourself  
 Various Artists A Soldier's Sad Story  
 Squarepusher Ultravisitor  
 Drew Songs From The Devil's Chimney  
 Smadji Take It And Drive  
 Paul Weller Paul Weller  
 Grant Lee Phillips Virginia Creeper  
 Duran Duran Greatest  
 Scratch And The Upsetters Super Ape  
 NSM Turn It Up  
 Fonda 500 Spectrumatricalogical Sounds  
 Viktor Krauss Far From Enough



## NEW MUSIC IN THE STUDIO

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



### GOMEZ

**Title:** *Split The Difference*

**Release date:** late May

For the last 18 months the one-time Mercury Prize winners have been working in their own studio in Portslade, Sussex during which time they've recorded around 50 songs. Thirteen of them have been selected for their fourth album, produced by Tchad Blake, whose credits include Tom Waits and Crowded House.

### JJ CALE

**Title:** *To Tulsa And Back*

**Release date:** May

It's been eight years since JJ Cale gave us a new studio album, but then he always had an enviable reputation as the most laid-back southern rocker of them all. He's finally stirred himself to record *To Tulsa And Back*, 13 original blues shuffles and country-soul ballads that find him sounding little different than he did 30 years ago when he wrote *After Midnight*.

### WILCO

**Title:** *A Ghost Is Born*

**Release date:** 8 June

Wilco's *Yankee Hotel Foxtrot* moved far beyond their alt-country genre beginnings to become their best-selling album. Their next is produced by Sonic Youth member Jim O'Rourke and engineered by Chris Shaw, who worked on Bob Dylan's *Love and Theft*.

### GARBAGE

**Title:** tbc

**Release date:** late summer

Former Nirvana drummer Dave Grohl dropped by the studio last month to play on a track on Garbage's new



album – the first time Grohl and the band's Butch Vig have worked together since the Garbage man produced Nirvana's epoch-making grunge manifesto *Nevermind*. John King of the Dust Brothers is producing and the result is "a lot noisier and darker" than 2001's pop-oriented *Beautiful Garbage*, according to singer Shirley Manson.

### PATTI SMITH

**Title:** *Trampin'*

**Release date:** 26 April

The veteran New York art-rocker's first for Columbia features her regular band, including guitarist Lenny Kaye, while her 16-year-old daughter Jesse makes her debut on piano. The title track is a spiritual song popularised by the late opera singer Marian Anderson. The other ten are all Smith originals.

### ALSO COMING SOON...

#### ROCK/POP

**Kathryn Williams** Relations (May), **Public Enemy** tbc (summer), **Bebel Gilberto** tbc (June), **Sonic Youth** Nurse (Jun)

#### CLASSICAL/JAZZ

**Andrea Bocelli** Travatore (May), **Joseph Calleja** Tenor Arias (May), **Bugge Wesseltoft** Filming (May), **Angélique Kidjo** Oyaya (Jun)

**BELOW**  
FRESCO CENTER / REAR CHANNEL  
MOSAIC LOUDSPEAKERS  
GROTTO SUB WOOFER

**LEFT**  
PRODIGY LOUDSPEAKER

**BOTTOM**  
CLARITY LOUDSPEAKER



# MARTIN LOGAN

EYE TO EAR CO-ORDINATION

**ABSOLUTE SOUNDS'** commitment to Martin Logan has been rewarded with a line of hybrid electrostatic speakers so comprehensive that it now encompasses every permutation of home theatre and audiophile performance, and a price band from entry-level to cutting edge. Because of their sheer beauty - both aural and visual - the Statement Evolution 2, Prodigy, Odyssey, Ascent i, Aeon i and Clarity have established hybrid electrostatic technology as the obvious choice for those who want state-of-the-art sound without suffering a profusion of ugly boxes.

All of the speakers are immediately recognisable as Martin Logan products because of the peerless, oft-imitated, room-friendly appearance, with the captivating see-through panels and furniture grade finish. Best of all, the sound is as clear as the panels themselves. This year, in recognition of its astonishing performance and sensible price, the Clarity - the 'baby' of the line - won the coveted EISA award, proving that the Martin Logan look and the sound are acknowledged across Europe.

For the new season, Martin Logan has applied its years of experience to even smaller, room-friendlier systems suitable for a wider range of applications, by launching a second hybrid technology called ATF. Martin Logan had already demonstrated its skills with home theatre applications with the Theater i and Cinema i centre-channel models, the Script i main and surround speakers, the awesome Descent self-powered subwoofer and its baby sister, the Depth.

Thanks to ATF, an even wider audience can savor the Martin Logan experience. The ultra-compact Fresco hybrids can be used horizontally or vertically, wall- or shelf-mounted above or to the sides of plasma or other flat-screen display, while the Mosaic and Montage floor-standing models have the look of a 'baby Clarity'. Even the subwoofer's size has been addressed: the new ATF designs work wonderfully with the Grotto, literally a miniature Depth!



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www.absolutesounds.com info@absolutesounds.com





▶ **ESSENTIALS** Our regular round-up of hi-fi accessories



## ART Q-Ring £20

▶ Ferrite noise absorbers are well established in audio and datacomms – you'll find one on the lead of most computer monitors, for instance. Electrical interference on the cable is absorbed and/or reflected (depending on frequency and other variables) and generally prevented from reaching sensitive equipment which might be adversely affected. It really works and is easy to apply. This particular ferrite is smartly encapsulated in plastic and surrounded by damping compound, which reduced the 'zingy' sound most ferrites make when you tap them. But you'd have to have an astoundingly hi-res system for the benefits of that to be strongly audible. As for interference suppression, the Q-Ring's generous 20mm internal diameter allows cables to be looped through two or three times, making it more effective than most clamp-on ferrites. By contrast, the latter are generally better when fat plugs prevent more than one loop being taken. The Q-Ring is a lot smarter, though!

☎ Choice Bits 0870 240 7228 🌐 www.choicebits.co.uk



## Monacor Exstatic Record Brush £8

▶ Among the myriad LP cleaning products, this kind of plain carbon-fibre brush is probably the one with greatest day-to-day utility. It's not much use on really ingrained dirt and a complete liability on records contaminated with any kind of sticky goo – use a serious wet cleaner for those – but for quickly lifting a light accumulation of dust it's ideal. The argument against fibre-only brushes is that they simply move the dust round the disc and don't lift it, but a deft flick of the wrist has always worked well for us. Fibre-plus-velvet brushes are all very well but velvet can on occasion pick up and retain grit and with low-torque turntables will usually stall the motor. Monacor has thoughtfully made the brush captive on the base: it's hinged and the action of turning it from park to operating position and back knocks off any dust picked up on the fibres. It's well enough made not to drop fibres on the disc and cheap enough to make purchase a no-brainer.

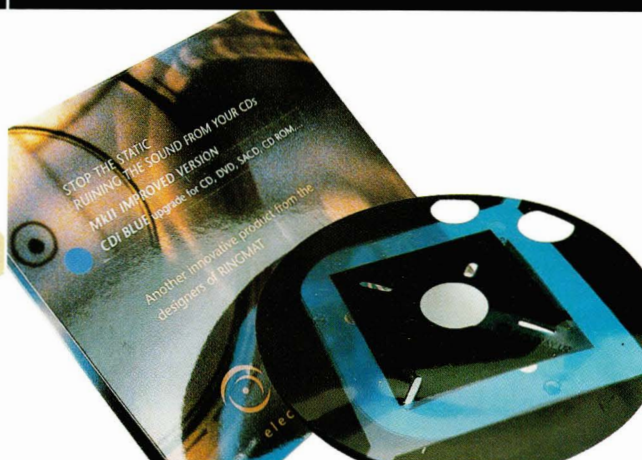
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## Ringmat Domes £22.45

▶ Yet another equipment foot, this time made from a natural material, cork. Actually it's a little more subtle than that, because one of the feet in the pack of four is impregnated with synthetic rubber binder to give it a slightly denser texture. Put that foot under the heavy corner (where the mains transformer sits!) of an amplifier or source component and there's less danger of wobble. As usual, bear in mind that there's more to isolation than simply preventing transmission of vibration from shelf to equipment. It's at least as important to damp vibrations within the equipment's case, and hence there may be a significant difference in the performance of these domes depending on which way up they sit. In fact, the ideal configuration may feature some convex-face-up, some the opposite. Putting one or two on the top face can be worthwhile too. This is an effective product that's perfect for a little harmless and entertaining tweak experimentation – you'll probably end up ordering another pack.

☎ Ringmat Developments 01277 200210 🌐 www.ringmat.com



## Ringmat Statmat CDi Blue £37.50

▶ This is a disc of thin, floppy plastic – actually, in this latest version, two discs joined together – that you put on a CD before playing it, which claims to dissipate static charges on the disc, bettering the sound due to improved disc-reading accuracy. Now there's no scientific evidence for this and the somewhat hand-waving explanations advanced by its manufacturer raise as many questions as answers. And yet... it does seem to do something to the sound. Whether it's due to static or some other effect related to absorption of scattered laser light within the disc's substrate it's impossible to determine, and some quite sensitive tests failed to show any difference in jitter or audio distortion – and certainly not in data integrity – with and without the disc, but we'd swear we heard something. It might have been a subtle increase in resolution, or a touch more depth to images – if you've a pretty well-tweaked system already this could be a useful last fillip.

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# Digital amplifiers

What they do, how they do it, and why you should be interested. Richard Black investigates

**D**igital – it's the future, innit? So digital amplifiers must be the way to go. Well, perhaps. Already several manufacturers have shown us more-or-less high-end digital amps, and Sony is the latest to join their number, with various models ranging from the mighty STR-DA9000ES (see review, p32) to prototype 200-watt-amps smaller than a CD Walkman. But is there serious audiophile potential in all this, or is it just so much hype and hope?

First, what exactly is a digital amplifier? The answer is not always entirely straightforward. In its strictest sense, the term applies to amplifiers which accept a digital input and have no analogue waveforms anywhere until the output filter. However, the term 'digital' is often used more loosely to apply to any amplifier with an output stage that switches hard on or off rather than varying linearly in direct response to the input. As long ago as 1970, the designation 'Class D' was coined to describe such outputs, and in general it's probably best to stick with that, retaining 'digital' for amplifiers which operate entirely in the digital domain.

Class D outputs can in fact work perfectly well with analogue input stages and analogue feedback systems, and there are many amps that work that way, especially where high power and high efficiency are requisites. Switching amps tend to be very much more efficient than linear ones because the output transistors are either on or off, and in either state dissipate little power.

The trick is to switch them on and off fast so that the average amount of power passing through is the same as would be output by a linear stage – a passive filter on the output does the averaging with little or no loss so that the speaker responds, ideally, just as it would to a linear amplifier.

In a true digital amp, a Class D output stage is driven by digital electronics upstream, the audio signal represented at all points within the amp by digital code rather than an analogue voltage level. However, one must still be careful with the word 'digital'. Ideally, a digital signal is either on or off. Usually, one can take that literally, but in many cases it's necessary to bear in mind that there is also an analogue quality to any real waveform – it takes a finite time to switch from 1 to 0 and in the process covers the range of intermediate voltages, and in some cases voltages greater than 1 and less than 0.

It's also necessary to be a little cunning about how a suitable digital waveform is generated. Let's look at the case of CD-format audio – 44,100 samples per second with 16-bit accuracy. On the face of it, our switching output stage must define a new output state every 22 microseconds, to an accuracy of one part in 65,536: since voltage is fixed, we can only vary time to produce a required output level by averaging. That means that each 22µs time interval must be further subdivided into units of about 350ps (picosecond – one million-millionth of a second). Well,

## EFFICIENCY

In theory, classic linear amplifiers can achieve 78 per cent efficiency. In practice, with real music, it's much worse. We analysed five seconds of music (a loud bit of *The Mavericks*) and found that when reproduced at flat-out level by a 100-watt Class AB amp the average power into the load, per channel, was six watts and the average power dumped as heat 20 watts. With a Class D amp of the same rating, delivering the same level, the waste heat fell to about four watts. 'Nuff said.



the latest Pentium processor chips do actually operate at that kind of speed, but switching tens of volts and several amps that fast is simply not on. Just to put that into context, in 350ps light travels about four inches, and electrical signals in high-quality cables travel just under three inches. Clearly, any practical circuit that has to respond that fast had better be very small, smaller in fact than the dimensions of most power transistors. So much for that idea.

## TRICKS OF THE TRADE

A variety of digital and analogue tricks must be used to make Class D outputs behave with anything like real fidelity. First, our old friends truncation and noise shaping, familiar from years of one-bit (and low-bit) DACs, help enormously in fully digital amplifiers, reducing the required precision at the expense of added noise. The noise, being 'shaped' so that its spectrum is predominantly above the audio band, can be filtered off by the same filter that performs the output averaging.

The really hard part, though, is to get the output switches – which are fairly meaty power transistors of less-than-ideal speed and linearity – to behave well enough to give good fidelity. This isn't easy and accounts for the frankly appalling sound of the very earliest Class D amps in the 1970s. In analogue Class D amps, clever applications of feedback can help reduce distortion and switching noise, as in one very ingenious-looking circuit from Dutch manufacturer Mueta, whose Class D amps claim distortion specs comparable with some of the best analogue amps.

It's possible to apply feedback in digital amps too, though it's harder than in analogue ones because of the unavoidable time delays associated with all 'clocked' circuits. However, it is rather easier in digital applications to build in some sort of pre-compensation for output imperfections, given a knowledge of what the imperfections



**Left:** The TACT Millennium was the world's first 'Digital Class D' amp – we raved about its potential in our exclusive review in 1998 (*HFC* 178)

## HOW IT WORKS

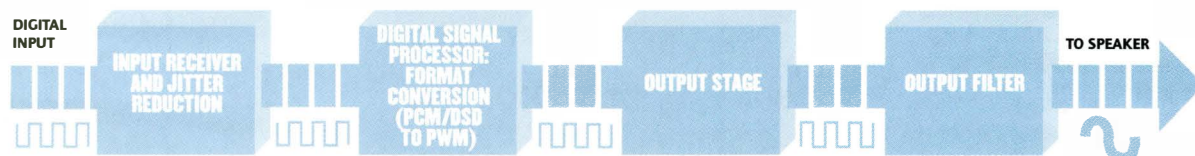
### ANALOGUE AMPLIFIER



At every stage of the amplifier, the voltage from moment to moment follows the trend of the input, give or take amplification factor and absolute phase. Ideally, what comes out at the end exactly resembles what goes in, just bigger.

### DIGITAL AMPLIFIER

**KEY:**  ANALOGUE WAVEFORM  
 DIGITAL WAVEFORM



The input is a digital representation of the original (analogue) sound wave encoded in some suitable fashion (PCM or DSD). Within the amp this is converted to a digital code which can be simply averaged by the output filter to reveal a facsimile of the original.

## “Digital amps with small heatsinks and small overall dimensions will inevitably win out.”

are, and this approach is used for example by Tripath, whose ‘Class T’ amplifier modules have been used successfully by audio manufacturers.

Tripath uses a number of novel techniques that distinguish its amplifiers from normal Class D, and Apogee Digital, another digital amplifier module vendor, also has some unusual features in its units, including ternary (three-level, as opposed to binary, two-level, coding). Of the rest, most use either Pulse-Width Modulation or Pulse Density Modulation to achieve the desired averaged analogue output: PWM applies longer or shorter pulses to achieve higher or lower output voltages, while PDM applies more or less pulses to achieve the same end.

Among the few true digital amps we’ve looked at over the years in *HFC*, the TACT Millennium from 1998 uses PWM and the Sharp models use PDM. Sony’s S-Master amps use ‘Complementary Pulse Length Modulation’, which sounds like a variant of Pulse Width Modulation. In fact, if Sony’s patents are anything to go by, it’s exactly that, the clever part in

this case being a scheme to make sure that both halves of the push-pull output switch absolutely in unison, thus avoiding problems with switching noise which degrades the output, upsets the power supply and causes radiated noise to escape. Conversion from PDM (aka DSD, the input stream from SACD) is a task for the digital signal processing module within the amp.

Sony’s literature on the latest S-Master amps highlights some other problems that generically affect switching amps, including jitter – due to the finite speed mentioned earlier – and power supply stability. Both of these require careful attention, and it’s the combination of all these little features that makes switching amplifier design a particularly demanding science – hence the decided non-profusion of affordable high-end digital amps. Interestingly, Sony effects a volume control in its S-Master models not by digital signal processing of the data but by Pulse Height Modulation – in other words, varying the voltage on the power rails. This works because the power supply is switch-mode regulated

and so much more efficient at low levels than a conventional linear supply.

### AND THE RESULT IS...

So how do digital amps compare with analogue ones? Sound-wise there’s simply no rule of thumb. Analogue amps vary in approach, in particular sonic aspects and in overall success, and we can expect digital ones to do likewise. However, the power efficiency gains of digital amps are considerable and this will most surely lead to their slow takeover wherever moderate power is required cost-effectively. Heatsinks are unavoidably expensive, and heavy amps are unavoidably expensive to transport, and digital amps with small heatsinks and small overall dimensions will (once overall market forces have eventually brought their price down) inevitably win out. In the high-end arena, analogue amps will stick around for decades yet – just look at the longevity of valve designs! – but the competition that’s sure to arise from the digital newcomers can only help inspire analogue designers, in turn, to new heights. And that’s good news all round. **HFC**

Turn to p32 for a review of Sony’s new multichannel digital amplifier

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# HI-FI CHOICE COMPETITION

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Cambridge Audio has been in the hi-fi business since the seventies, consistently producing some of the most reliable, innovative and best value hi-fi products available in the marketplace. Its latest product range, the Azur series, has received rave reviews in *Hi-Fi Choice*, and we're delighted to offer four lucky readers the chance to win a £500 Azur CD and amplifier combo.

Each prize includes Cambridge Audio's superb Azur 640C CD player (Best Buy *HFC* 249) and the equally excellent Azur 640A integrated amplifier (*HFC* 250) – a combination good enough to beat a good many CD/amp combos at twice the price.

The 640C is a sophisticated player based around the Wolfson 24-bit/192kHz chipset and is capable of holding its own in very elevated company. Its all-round finesse and relaxed resolve is unmatched at this price point. Just as impressive is the 640A amp, which delivers 65 watts of power and digs out bags of detail in a steady and engaging fashion. Winners will be drawn out of the hat after correctly answering the simple question below. Good luck!



### HOW TO ENTER:

Answer the question by circling the correct answer, then fill in your name, address and daytime telephone number below. Please also take the time to fill in our small questionnaire – we want to make *Hi-Fi Choice* as good as you deserve, dear reader.

### QUESTION

What is Cambridge Audio best known for?

- a) Bicycle bells
- b) Student discos
- c) Hi-fi

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What type of hi-fi product you intend to buy next? \_\_\_\_\_

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Please tell us if there's anything you don't like. \_\_\_\_\_

### COMPETITION RULES

The closing date for this competition is 16 April 2004. Winners of the Cambridge Audio competition will be judged from all correct entries submitted, and drawn at random after the closing date. Winners will be notified by post. The Editor's decision is final and no correspondence will be entered into. The Cambridge Audio competition is not open to employees of Cambridge Audio, Future Publishing Ltd, nor their suppliers, agents or associates. We regret this competition is only open to UK residents. No cash alternatives will be offered. By entering the competition you will be bound by the rules. We reserve the right to substitute alternative prizes with equivalent value to those shown, in the unlikely event of stock being temporarily unavailable. All entries must be on this official coupon, but photocopies are acceptable. Only one entry per household.

### Send your entry to:

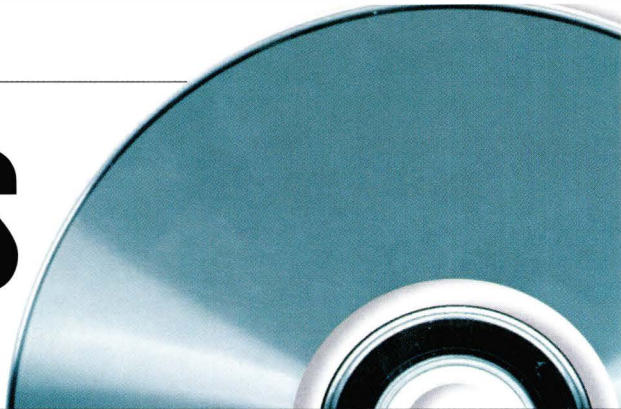
**Cambridge Audio Competition, Hi-Fi Choice, Future Publishing,  
 99 Baker Street, London, W1U 6FP.**

# ChoiceCuts



This month's varied musical morsels

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



## AUDIOPHILE VINYL

### JEFF BUCKLEY & GARY LUCAS

Songs To No One

Knitting Factory/Simply Vinyl 2x180g vinyl  
Music: Jeff Buckley did the record industry a great disservice by dying after producing just one fully formed album. But it was a blinder and since his untimely demise no stone appears to have been left unturned in the quest to uncover additional recordings. This collaboration with one-time Beefheart cohort Lucas marks the period when Buckley first moved to New York. This collection of demos and rehearsals includes early incarnations of two classics, *Mojo Pin* and *Grace*. Lucas's playing is less rock 'n' roll than on the familiar versions but the similarities are greater than the differences. More left field than *Mystery White Boy*, better sounding than the demos on *My Sweetheart The Drunk*, this is a worthy addition to the ranks. ★★★★★  
Sound: Quality varies quite dramatically but has a raw edge that you won't find on studio albums. ★★★★★ JK



### BOB DYLAN

Blonde On Blonde

Columbia/Simply Vinyl 2x180g vinyl  
Music: Undeniably a classic, Dylan's 1966 double album is one of the landmarks of his transition from folkie to folk rocker. It's a far more rambling and disparate collection than earlier works and the songs themselves are less precise, but it has been hailed as a turning point in both his career and in rock music as a whole. Standout tracks include *Stuck Inside Of Mobile...*, *Sad Eyed Lady Of The Lowlands* and *Visions Of Johanna*; few have touched its intensity of lyrical content save perhaps Eminem. Backed by a group of musicians including Al Kooper and Robbie Robertson, this is a lively album with some great playing. Tracks like *Most Likely You Go Your Way...* are almost jazz, backed albeit in an anarchic, swinging style. ★★★★★  
Sound: The mix on this pressing puts the vocals centre stage, much more so than old regular pressings, which affects the feel of the album if not its content. ★★★★★ JK



These and other audiophile LPs are available from Simply Vinyl: ☎ 0208 545 8580  
www.simplyvinyl.com

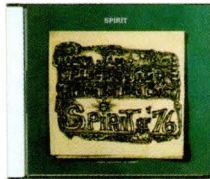
## COMPACT DISC & VINYL



### ERIC CLAPTON

Me & Mr Johnson

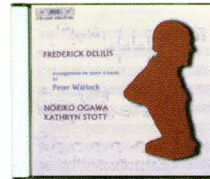
Reprise  
Music: Clapton's collection of Robert Johnson covers is only his second all-blues album in three decades as a solo artist. Much of it sounds as you would expect. The guitar solos are blistering, there's a thrilling, bottomless thump to electric tracks like *Travellin' Riverside Blues* and the acoustic outings on *Me And The Devil Blues* and *Come On In My Kitchen* are as pleasingly moody as anything on his excellent *Unplugged* album. The surprise comes in his voice, which in the past has tended to sound unconvincingly thin. Here he's developed an authentic blues growl that is revelatory. ★★★★★  
Sound: Atmospheric rather than hi-tech, Clapton's attempt to replicate the earthy Chicago blues sound forged by the Chess label in the 1950s is largely effective. ★★★★★ NW



### SPIRIT

Spirit Of '76

BCGO  
Music: One of the greatest West Coast bands of the sixties, Spirit were masters at mixing jazzy time signatures and the meticulous acoustic/electric guitar playing of Hendrix peer Randy California with the added spice of electric keyboards and synths. *Spirit of '76* was released in 1975 during a period of creative resurgence for a group that had been wracked by drugs. But listening to the jazz-lite of *Guide Me* followed by the Hendrixy *Veruska* and then on to the most sublime *Hey Joe* you'll ever hear in your life proves that there's a curiously timeless sheen to their music and that musical genius is hard to keep down. ★★★★★  
Sound: Long out of print, this is an analogue transfer job and all the warmer for it. ★★★★★ MP



### FREDERICK DELIUS

Arrangements for piano four hands by Peter Warlock, Noriko Ogawa, Kathryn Stott

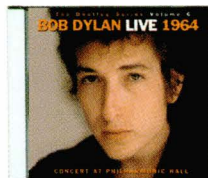
BIS CD-1347  
Music: Delius was not strongly associated with the piano, but these reductions by Peter Warlock – an assumed name for musicologist, composer and author Philip Heseltine – skilfully retains the essence and flavours of his music. It is hard not to recognise parallels between the music of this great English composer and the piano music of Ravel and Debussy. The works on this disc offer a lively, contrasting and thoroughly engaging programme. ★★★★★  
Sound: It is hard to think of two performers who could approach this music in a more sympathetic way. They play as one, giving plenty of space for the music to breathe. The recording is excellent too. ★★★★★ AG



### BOB DYLAN

The Bootleg Series Vol 6: Live 1964

Columbia  
Music: No apologies for this month featuring a 40-year-old recording, now officially released for the first time. This is solo Dylan, the "voice of his generation" at the height of his genius, accompanied only by acoustic guitar and harmonica. Self-confident, witty and relaxed, his rapport with his audience is extraordinary, and captured in a unique moment – just before the folk hero's transformation to electric messiah, as searing, early protest songs such as *A Hard Rain's Gonna Fall* compete with prototype outings of future career-changing landmarks like *Mr Tambourine Man*. Nostalgic, perhaps. But despite a thousand imitators since, the original has never been better. ★★★★★  
Sound: Unlike all the murky-sounding Dylan bootlegs, this was recorded straight from the board by Columbia engineers for a planned but then shelved official release. You can even hear his spectrum drop. ★★★★★ NW



### KEITH CHRISTMAS

Timeless & Strange

Castle  
Music: Mister Christmas was – and in fact still is – a singer-songwriter who got signed up while still a student in the late sixties. None of his early, folkier stuff ever managed to achieve any serious sales but most of his 1969-1971 psychedelic urban blues folk, as featured here, was – and still is – great (and it was also obviously an influence on his mate Bowie). Urgent seven-minute cuts like *Waiting For The Wind To Rise* and *Lorri* are true epics, songs that you live. ★★★★★  
Sound: This is a classic British acoustic recording that stays pure, sincere and clear, even when the full band with drums, bass and pianos kick in – perfect for that live-in-your-lounge feel. ★★★★★ PS



## THIS MONTH'S CLASSIC HI-FI TEST DISC "A bright, shining diamond of an album."

**JONI MITCHELL** *Hejira* Asylum Records 120g vinyl

**Music:** *Hejira* is an Arabic word meaning flight and this was Mitchell's definitive homage to the road and the escape it represents. With top-notch musicians including John Guerin, Larry Carlton, Victor Feldman and Jaco Pastorius, this is a bright, shining diamond of an album. If *Blue* was Mitchell's best folkie album this is the peak of her jazz-influenced output. The songs have a longing and depth that is rare and the playing is beauty itself. While all the tracks are

good, *Coyote*, *Black Crow* and *Refuge Of The Roads* would be the ones to try for the newcomer. For reasons that defy logic, *Hejira* has not been reissued on heavyweight vinyl, yet few albums deserve it more. ★★★★★  
**Sound:** Clean and crisp with lovely nimble bass and open, transparent vocals, this is a luxury analogue recording which doesn't lay its character on too thick but lets you hear right into the music. ★★★★★ JK



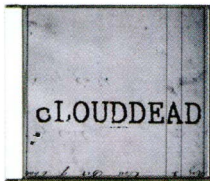
### CLOUDEAD

Ten

Big Dada

**Music:** Think hip-hop and chances are you'll think of gurning gangstas, possibly a spot of pop rap or even a bit of ambidextrous scratchosity courtesy of DJ Shadow and his fellow turntablists. But none of that prepares you for the left-field ingenuity and plain weirdness of cLOUDDEAD. The Oakland, California-based trio of Doseone, Why? and Odd Nosdam (their assumed stage-names) may not be 'funky' but they're not afraid to experiment, pulling in all manner of found samples, mixing in real and electronic drumbeats and employing their own vocal percussion techniques to produce a bizarre, beguiling, enthralling, infuriating treat. ★★★★★

**Sound:** Often lo-fi and scrappy, but never simple, there's an awful lot of tone and nuance packed into these densely layered songs, though the gleefully thrown together po-pourri of influences and sound sources will make for uneven listening on many systems. ★★★ DO



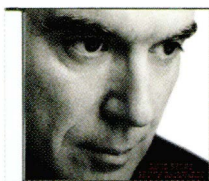
### DMITRY SHOSTAKOVICH

*Viola Sonata, Cello Sonata (for viola)*  
Annette Bartholdy (viola), Julius Drake (piano)

Naxos 8.557231

**Music:** The beauty of budget labels like Naxos is that the low cost of the discs makes it feasible to experiment without much risk. Each play of these often overlooked works reveals new insights into the music. The case of the viola sonata in particular, written just the composer's death in 1975, is a masterpiece. The music is frequently elliptical, sometimes virtuosic for player and accompanist, and it springs more than a few surprises. ★★★★★

**Sound:** Recorded at the Henry Wood Hall in London, the sound is ripe and clear, with a strong piano sound balancing the viola, whose light, introspective tone suits the music well. ★★★★★ AG



### DAVID BYRNE

*Grown Backwards*

Nonesuch/EastWest

**Music:** There was always the suspicion that Talking Heads' experimental pop could barely contain their leader's ambitions and since their 1988 split he's moved increasingly into stage and film work as well as a few unusual global alliances. But his latest album sees a return of sorts to his pop roots – more polished than the Heads but still full of great pop hooks, albeit with something of a pop classical feel. His low-key attempts at a couple of arias (by Bizet and Verdi) work surprisingly well, as does his take on Lambchop's *Man Who Loved Beer*. ★★★★★

**Sound:** Lush yet cosy, the extensive instrumental line-ups on many of the songs are belied by the intimate atmosphere of the production. ★★★★★ DO

## DVD-AUDIO & SACD

### MEDESKI MARTIN AND WOOD

*Uninvisible*

DVD-Audio (24/48 surround, 16/48 stereo, DTS-ES 5.1)

Blue Note/DTS

**Music:** MMW are what has been termed an alternative jazz band – they may not fit into any conventional genres but their style of Hammond organ-powered grooves is quintessentially jazz. On *Uninvisible* they have a sound that's reminiscent of the sixties but essentially contemporary, an upbeat but darkly textured vibe that is difficult to pin, with assistance from DJ P Love on turntables plus assorted brass players and the Spillane-esque voice of Colonel Bruce Hampton on the memorable *You Are Snake Anthony*. It can get a little dense at times, but it's an issue that the multichannel mixes sort out very effectively. Something like a modern take on Booker T or an electric EST, MMW have an unstoppable groove. ★★★

**Sound:** A little dense and murky in 16-bit/48kHz stereo, this disc comes alive with a good surround system. The mix is original but doesn't distract from the music and the sound is rich and organic. ★★★★★ JK



### HOLST

*The Planets, The Mystic Trumpeter*

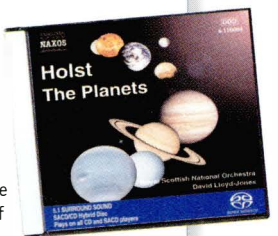
David Lloyd-Jones (cond), Royal Scottish National Orchestra, Ladies of RSNO Chorus, Claire Rutter (sop)

SACD (stereo/multichannel SACD plus stereo CD layer)

Naxos 6.110004

**Music:** The sometimes ethereal and always brilliantly orchestrated *Planets* suite needs no introduction here, the only pity being that it is not the astronomical qualities of the planets that is the subject here, but their astrological properties. The work receives an excellent performance, placing it high up on the extensive list of available recordings of the work. The filler, *The Mystic Trumpeter*, is a substantial setting of a Walt Whitman piece, nearly 19 minutes long, and although not instantly recognisable as being in Holst's style, it is surely an unjustly neglected work. ★★★★★

**Sound:** *The Planets* turns out to be an inspired choice for the first Naxos multichannel SACD, the multichannel mix emphasising the sense of space and scale in the music in a way that no stereo recording can match. Try the opening of *Mars*, or the final dying chords of *Neptune* for proof. ★★★★★ AG



### MARVIN GAYE

*Let's Get It On*

SACD (stereo/multichannel SACD plus stereo CD layer)

Motown

**Music:** *Let's Get It On* followed two years after Marvin Gaye's career-defining *What's Going On*, an acclaimed album produced by Gaye himself. His luxurious mid-career seventies soul is some of the sweetest and most universally approved music ever recorded – the songs are warm, laid-back and beautifully arranged, with string sections and piano all finely interwoven with Gaye's pure-silk vocal. In 1973 the man opened his heart once more, and we all listened – this time while recording, Gaye met his next wife Janis Hunter and laid down a new wave of emotions to an expectant master tape. ★★★★★

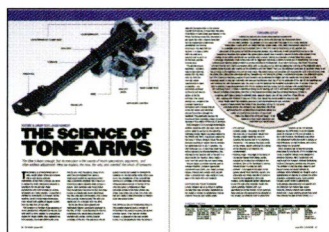
**Sound:** Lush, rich, warm and all-engrossing, the multichannel mix is masterfully distributed across the five-and-a-bit speakers. The sweet soul stays intact, with arguably more groove and insight, though as with many legacy recordings, there's only so much that can be done to the original recording to expand it to the multichannel format. ★★★ DG



# ChoiceMail



Write to: Hi-Fi Choice, Future Publishing Ltd, 99 Baker Street, London W1U 6PP



Above: Our detailed study of the intricacies of tonearms from HFC 244

## VINYL SOLUTION

How can I clean up my old LPs and 45s? I remember reading about a Keith Monk's Diskwasher but I have a few gaps in my *Hi-Fi Choice* collection and think I may have missed some product reviews. Have you any suggestions? I intend to clean 500 records.

**Ben Cowell** via email

**HFC:** We highly recommend Knosti's superb Disco AntiStat record cleaner (HFC 229). You can buy one for £45 from HFC's very own accessories shop – give Choice Bits a call on 0870 240 7228 or visit [www.choicebits.co.uk](http://www.choicebits.co.uk).

You can also fix the problem of gaps in your magazine collection and receive a £40 QED Qunex 3 interconnect into the bargain simply by subscribing to *Hi-Fi Choice* – you'll save a whopping 36 per cent on the shelf price too! See p76 for details...

## REV HEAD

I read your review of the £600 Mission V63 speakers (HFC 245, pictured right) and you've summed them up to a tee. You said they are best placed away from the wall and I agree. However, I tried a reverse cone placed in the bass port and this has tamed the problem bass 'thump' you were on about. I know it sounds a bit odd but I have been working in engine development for 20 years and have applied

some tuning principles to the physics behind speaker design. A bit of fine-tuning can make a big difference!

**Keith Whiting** via email

## NO ARM DONE

I've read the Science of Tonearms feature (HFC 244) several times and can't get over the fact the Michell Tecnoarm is rated ahead of Origin Live's more expensive Silver Tonearm in the overall score, and just short of it on sound alone. Given the price difference the Michell looks like the preferable buy.

Does this put the Tecnoarm ahead of the fully modded Origin Live RB250?

**Steve Bailey** via email

**HFC:** In our opinion yes, the Michell is certainly better value than the Origin Live. In fact it is better value than everything bar the RB300 in its standard form, and that's always been a bargain. If you can afford the asking price of the Origin Live, you would arguably be better off with the Roksan Tabriz Zi (£500).

## THEN AND THEN

I've been keen on hi-fi and music for years and have enjoyed numerous systems over the decades. It's struck me though that it's nearly always the recordings that let the side down. I have a Buddy Holly album containing a track recorded 40 years ago which is brilliant –



**"It's struck me that it's nearly always the recordings that let the side down"**

## LETTER OF THE MONTH

### OLD FOR NEW

I am thinking of upgrading my current system. It is quite old, yet it cost me around £2,500 at the time. How much do I need to spend to improve on the system – would it be possible to get better sound for as little as £1,000? I am reluctant to change every component unless I have to – Cyrus 3 amp, Cura CA10 speakers and Meridian 206 CD player.

**Edward Hill** via email

**HFC:** This is a common question Edward – we get dozens of letters asking if new gear is significantly better than old. Although it's hard

to imagine today's £1,000-worth of gear trouncing yesterday's £2,500 worth, we have heard some excellent budget systems based around affordable kit such as

Marantz's £330 PM7200 amp and B&W's £180 DM303. The only way to find out is with comparative testing.

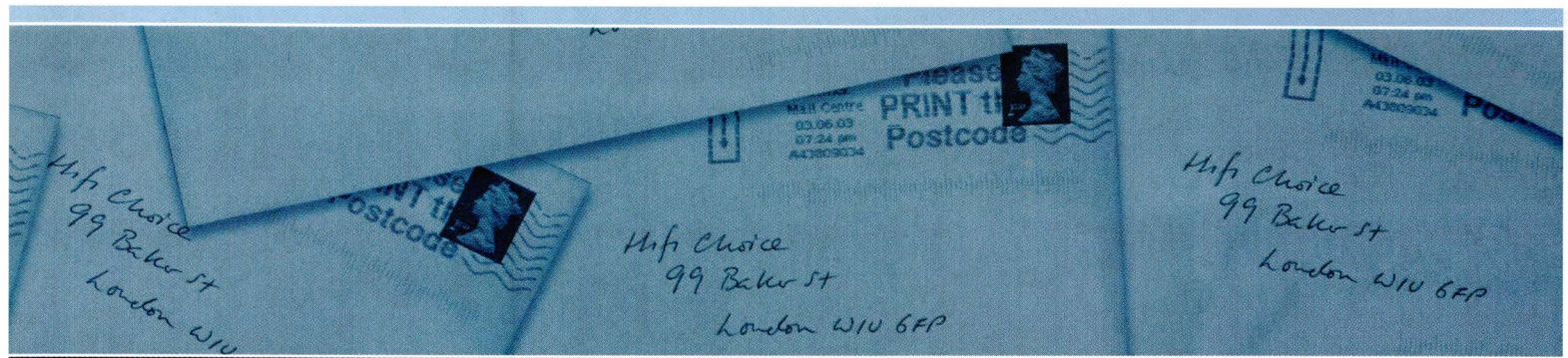
The ideal would be to take your rig down to your dealer on a quiet Monday afternoon and compare it with a £1,000 system. This may seem like a chore but you could end up saving £1,000 and a lot of unnecessary worry – surely not bad for half a day's work?



**WIN IXOS INTERCONNECTS!**

The author of our letter of the month receives a free pair of Ixos XHA606 interconnects worth £60, featuring Gamma Geometry and silver plated OFC conductors for superior sound. So get writing! (250 words max please...)





Or email your letters to [dan.george@futurenet.co.uk](mailto:dan.george@futurenet.co.uk)

You have mail



why is it that many later albums in the seventies were so poor? Is it because the sound engineers were deaf or incompetent, do you think?

**Mick Whelan** via email

**HFC:** We have similar complaints against a number of cherished albums, and since there are such a huge number of variables involved in recording and pressing a CD (or indeed, LP), it's extremely difficult to give a single reason why many should be 'bad'. There were of course just as many duff recordings in the fifties as there have been in subsequent decades – it's finding the good ones that's the trick. That said, we've also heard industry insiders state that a particular engineer has 'cocked up' an album and that's why it sounds awful. So it's a bit of a lottery, but have you ever heard a remastered disc or high-resolution format (supposedly improved) and hankered after the original because it seems to have more charm? You're not alone.

### BBC SOUND

I have a cherished pair of KEFs that I bought after many an audition a few years ago. I've also heard some great music through a friend's modest set-up with a pair of Spondor BC1s from the seventies. Intrigued, I borrowed them and their stands while my pal went away for a fortnight. Although they were inefficient and hard to drive by today's standards, the transparency and neutrality was breathtaking. I was spellbound by the captivating midband. Sure, my KEFs do some things better, but I could happily live with either speaker. BC1s sell second-hand for about £250. Why can't manufacturers make speakers this good any more?

**Paul Meoff** via email

**HFC:** We too have been impressed by the BC1 in systems that have a bit of welly. There are some speakers available with similar characteristics – have a listen to the £1,700 Harbeth Super HL5 (*HFC* 233), it's got a cracking midband and even looks the old-school part. You could also look at Epos, whose speakers have fine midband performance, while designs from B&W and Dynaudio also tend to have strengths in this department.

### SAMSUNG VS LEVINSON

The Samsung HD935 was awarded DVD player of the year 2003/2004 by EISA – and rightly so in my opinion. But it might as well have been awarded CD player of the year. I connected it to some real high-end



## ONLINE FORUM

A few choice comments plucked from our online forum. Join in the fun at [www.hifichoice.co.uk](http://www.hifichoice.co.uk)



At last my Marantz PM7200 KI has arrived – instantly it sounds much more muscular than my Arcam A80. I had my doubts that Class A mode would drive my speakers but it kicks the proverbial. It looks like it is going to be an absolute bargain. **Madamimadam**

Just noticed that my Sony SACD player has little plate on the front saying "UK tuned". Anyone know what that's supposed to mean? **DaveWhit2**

**HFC:** Some products from big multinational brands are 'tuned' locally to suit specific markets. Sony UK has made a habit of tinkering with the internals of certain kit to better suit British tastes and our perception of 'musicality'. It also adds a certain kudos.

I have an Audiolab 8000A which I'd dearly love to get a manual for. Any ideas?

**Happy Elephant**

You can get reprints of some Audiolab manuals from:

[www.instruction-manuals.co.uk/category/amplify/audiolab.htm](http://www.instruction-manuals.co.uk/category/amplify/audiolab.htm) **Maddog 2**

Got a REL strata 3 and it's sweet. Anyone who wants heart-pounding bass really ought to get a good sub. I'm also getting better balance, sweeter treble and more low-level resolution. And it makes a good coffee table and footrest when placed correctly. **GT Wace**

amplification through the coaxial digital output and got a real shock. How can a player at this price (about £275) sound this good? I used to listen to CDs via a Mark Levinson 390S (pictured below). Not anymore.

**Peter Holm** Denmark

### DIMINISHING RETURNS

I've spent thousands of pounds over the years on hi-fi and now home cinema. One conclusion I've reached, along with the law of diminishing returns, is that there comes a point when spending more on hi-fi becomes pointless unless you listen to music recorded and produced using the highest quality methods. Most of the mainstream CDs I buy are badly produced, poorly transferred and badly recorded. You reach a point when your hi-fi is so revealing that it simply starts to expose the shortcomings of the material on the disc. I've reached my spend limit.

**Rixta** via email

**"You reach a point when your hi-fi is so revealing that it starts to expose the shortcomings of the material on the disc."**



AUDIO ANALOGUE MAESTRO CD PLAYER  
OPERA QUINTA LOUDSPEAKERS | £5,995

PATHOS LOGOS INTEGRATED AMPLIFIER

# La Dolce Vita

*A gorgeous Italian combo you can't stop looking at. Or stop listening to*

**W**e're back in Italy this month. Home of the 200mph supercar, the 17-course lunch and sublime, sumptuously-crafted hi-fi. Ooh... And, indeed, ah...

Maidstone it is, then. Fortunately, if you can take care of the Ferrari and a table at London's Caldesi restaurant, I think I can rustle up the sounds. Last time we plundered the vaults of Italian esoterica distributor UKD we kept things small and exquisitely formed in the shape of a modestly-powered but compellingly musical Unison Research/Diapason combo.

But it would be wrong to get the idea that only *piccolo* is *bellissima*. Appropriately, the land that gave us Pavarotti does 'big' with rare panache, too. And here's the system to prove it. By any standards, it's a mutha. With each imposingly lofty Opera Quinta floorstanding speaker weighing 31 kilos, we're talking back-busting mass. Not to mention shadow-casting scale. If you like your CD players slim and slinky, you may find the following description disturbing. Audio Analogue's 'statement' contribution to the world of high-end digital replay, the Maestro CD player, isn't just large, it looks like a small building and tips the scales at a barely believable 20 kilos, making a sturdy support table a necessity.

True, there's a lot to fit in, not least a heavy-duty power supply with nine regulators and two toroidal transformers, one of which is dedicated to the analogue circuits. The 24-bit/96kHz upsampling uses two Analog Devices AD1855 DACs in parallel, with an "extremely low jitter" Crystal Semiconductors CS8420 sample rate converter (previously the preserve of professional kit, apparently). The

analogue stage uses high-quality discrete components: polypropylene and Os-Con capacitors, high precision (0.1%) low noise resistors, and high linearity field effect transistors (FETs). The aim is wide bandwidth and low overall feedback. The circuit offers both unbalanced outputs via gold-plated RCA connectors and balanced outputs using XLR sockets.

Press a button on the front panel and the Maestro can even be used as an external DAC for a separate transport, CD player or other digital source. On the back panel you'll find digital input and output sockets, even a loop option that allows an external digital effects or EQ device to be plumbed in – though why anyone outside of a recording studio would want one is a moot point!

## HEAVY MAESTRO

The Maestro's weight is partly a consequence of its 3mm-thick sheet-steel chassis and 20mm-thick silver satin aluminium fascia. Together, they form a very rigid support structure that helps both the mechanical performance of the transport and the control board beneath it. The large VFD display is easy to read so long as sunlight isn't shining directly on it. But although the infrared remote is easy to use, it looks and feels cheap and flimsy.

Statement products don't have to be behemoths, of course – witness last month's titchy but brilliant Chord Choral components. Depends on the statement though, I suppose. Audio Analogue talks proudly about the vibration damping qualities of that "heavyweight chassis" and claims the Maestro is capable of "the finest CD replay available today". Guess you've got to supersize something like that.

**"Audio Analogue's Maestro CD player isn't just large, it looks like a small building and tips the scales at a barely believable 20 kilos."**



**Audio Analogue Maestro CD player £995**

Statement player from high-end specialist Audio Analogue, the Maestro is built like a nuclear blast bunker but sounds rather more angelic.



**Pathos Logos integrated amp £2,750**

Already established as one of the great high-end bargains, the Logos has style to die for and sonic talents that stand comparison with amps costing up to twice as much.



**Opera Quinta speakers £2,250**

Opera is best known for its immaculately-crafted solid wood standmounters. Take the meticulous engineering and construction, scale it up, and the results are superb (and extremely heavy).



The result, physically, is almost absurdly impressive – and beautifully finished too.

And yet, incredibly, it looks almost self-effacing next to this system's amp which, quite simply, is one of the most distinctive and glamorous we've seen. (Not to mention big and heavy.) The word 'icon' springs to mind – if it isn't one now, then it will be in a few years. Fact is, you don't easily forget an amp that spells out its name, in an Art Deco-style script, with the heat sinks running down either side of its casework. Have you guessed what it is yet?

Of course you have: the Pathos Logos. Pathos Acoustics, based in Vicenza (the same town as Unison Research, by the way) specialises in stunning looking valve/solid state hybrid amps. Pathos says the Logos is the result of two years R&D. Its all-valve preamp section runs in pure Class A and has its own power supply. The MOSFET output stage is configured in true dual-mono and depends on massive transformers and power supplies to deliver high current. Power is rated at 110 watts into eight ohms and 220 watts into four ohms. Pathos doesn't believe in selling its wares on the basis of nerdy technical details, it merely says: "The electric network has been laid out in a feedback-free, 'natural' way according to the fundamental principles of the Pathos philosophy".

Part of that philosophy is that hi-fi should look as good as its sounds – and not in a cop-out minimalist, 'classically elegant' kind of way. Brimming with inventive detail, the Logos tries hard to be handsome and succeeds spectacularly. It really is a feast of contrasts for the eyes: light and dark metal, chrome and matt, the soft glow of valves, the crisp-edged red LED digits, the inevitable (but frankly wonderful) slab of real wood – the Pathos makes them look and feel as complementary as a Guinness and its head. The killer aesthetic twist is what happens in and on that triangular hardwood insert. Sunk deeply into the front is the volume knob and its 0-99 integral digital display. Not so much a knob, actually, more a digital, 100-step volume control system: if you don't feel like using the sensual, wood-encased remote, just flick it right or left for up and down. The control is resistive and returns to centre, while the display reads out the volume level. Dead neat.

The brace of chrome-caged valves sitting just back from the volume control are as pretty as a picture but, when you get down to eye level, they appear to be just two in a forest of identical valves. Just reflections created by the V-angled, mirror-finish sheets behind them, but the overall effect is hugely impressive.

### SPEAKER SMOOTHIES

It's tempting to go for broke, here. There are plenty of fancy and elaborate Italian speakers that could compete with the visual fireworks of the Pathos. Opera's new top-of-the-line floorstander, the Quinta, isn't one of them. And, on reflection, it's probably a good thing. It is possible to be too distracted. In many ways, the Quinta is the antithesis of the Logos: tall, slim and understated. Understated even by mid-market speaker standards. No bowed surfaces, no stuck-on super-tweeters, no high-tech materials – just very heavy and exquisitely finished solid hardwood in a conventional rectilinear shape. Inside, the Quinta is a full-range three-way design with four drivers: two ported bass units, one for the mid range and a soft dome tweeter – good enough, says Opera, to give a frequency response of 28Hz to 22kHz. Claimed sensitivity is high at 90dB (it's a four-ohm load); the 110 watts of the Logos should be more than adequate.

So here's the conundrum. We all want easy listening. Not necessarily in the Tony Bennett sense, but certainly in the 'hard to go to bed' sense. This is where misconceptions tend to creep in. An unfatiguing sound is often characterised as warm and analogue-like, one from which harshness and grit





## “Real ‘natural’, of course, can be as ugly as it is beautiful, as cutting as it is cuddly, as grungy as it is graceful.”

have been banished. Thing is, it doesn't have to be strictly neutral or natural. Benign distortions, euphony and tonal aberrations can all apply the right sort of manipulation for a comfortable listening experience. And it's true, a presentation thus buffed and balméd is easier to relax into than one that's bright, edgy and in-yer-face.

### FINESSE

For a time, anyway. In the long run, though, it can be just as unsatisfying, just as uncomfortable – the aural equivalent of being made to drink an entire bottle of Baileys. You're struggling after the third glass, starting to feel queasy after the fourth.

People who remember their old radiograms with fondness and prefer their music easy like Sunday morning often crave this type of sound, but it probably isn't the answer. And for those who just can't be doing with having their lustre lacking, it's a non-starter. Real 'natural', of course, can be as ugly as it is beautiful, as cutting as it is cuddly, as grungy as it is graceful. It has the capacity to make you jump out of

your skin as well as soothe your brow. What keeps you listening is the enthralling sense of realism, not the fact that you're hearing something that will never set your teeth on edge or scare the cat.

That said, under the general heading of 'natural', there are subtle variations of style. Some systems are forensically analytical, others are looser, more fluid; they just get on with the job and unerringly make the best of what they're fed. The Audio Analogue/Pathos/Opera combo is one of those. It's a smoother and more glamorous sounding system than, say, last month's Chord Choral ensemble but it's in no sense manipulative. All right, you could argue that the Maestro CD player doesn't have quite as many tonal colours in its palette as the remarkable Chord Blu/DAC 64 pairing for example, and can't quite match its dynamic range, but it manages to sound remarkably weighty and controlled and has a deep, assured, 'architectural' bass quality.

There is a boldness to the sound, befitting the stature of the speakers,

but just as apparent is their fabulous finesse and poise (not to be confused with politeness). The Quintas played Welsh nu metal merchants Lostprophets at hurricane force without flinching. The sound was fulsome, visceral, propulsive. If the bass sounded a trifle slow at times, it was hard to mind. Especially as the bass quality is truly effortless and stays in control at high sound levels.

Switching to classical, *Rachmaninov 2* sounded as achingly lovely as it should, the Operas creating a sense of stillness and tranquility you hardly ever get with smaller speakers. Plenty of height and good ambient specificity to the image as well. Perhaps, here, the system lacked the last ounce of treble definition but the natural textures, shadings and absence of grain are almost magical.

Yes, this system fulfils the *Beautiful Systems* brief to the letter. Visually, it's more Maserati than Ferrari, but that's no bad thing given Ferrari's recent efforts. Sonically, seldom has the iron fist felt more comfortable in the velvet glove. Gucci, of course. **HFC**

David Vivian



# audio

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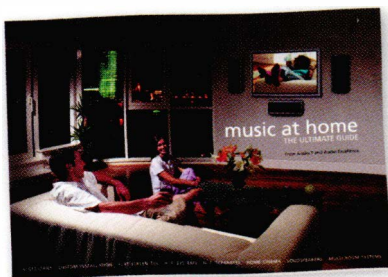
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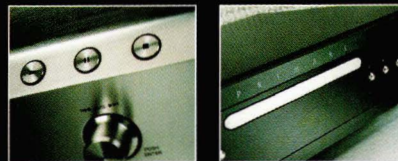
# REVIEWS



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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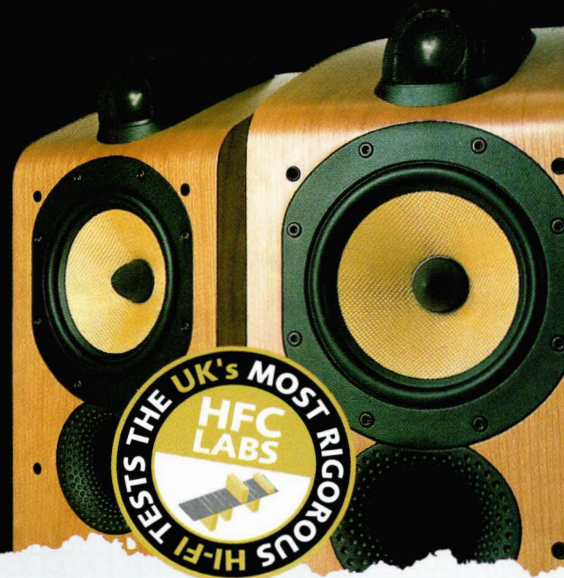


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## ULTIMATE GROUP TEST

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## OUR RATINGS EXPLAINED

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

...nor an... we liked... point here is... to the job of... recommend you

...this unit... Marantz's £800 player, the 17 MkII M, which has excellent build and is a very good impression in HFC 243. At the same price there's also the Cyrus 7, a very all-rounder in a compact case. After trying the Heart with the standard speakers we switched over to the Siemens grade, a comparison somewhat muddled by the fact that it was a cold for hot swap – the latter had been on for several days with the

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

You can find more civilised players for the money. But few combine dynamics with fine timing skills as effectively as this. HFC  
Jason Kennedy

**VERDICT**

**SOUND** >> 83%

**FEATURES** >> 85%

**BUILD** >> 85%

**VALUE** >> 85%

**CONCLUSION**  
This is a highly understanding and colourful player at a competitive price. The build quality is good and the feature list... it's not the most subtle £750 player but if you're looking for a speaker to inspire you, it could prove a bargain.

**HI-FI CHOICE** >> **84%**  
OVERALL SCORE

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.



Editor'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.

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# DIGITAL REVOLUTION

A quantum leap from Sony with the brand's first high-end all-digital signal chain from disc to speaker

**PRODUCT** Sony SCD-XA9000ES and TA-DA9000ES

**TYPE** Multichannel SACD/CD player and multichannel integrated amplifier

**PRICE** £2,400 (player) £2,600 (amp)

**KEY FEATURES** (Player) Size: 43x13x39cm  
 ◊ Weight: 16.2kg ◊ i.Link-encrypted digital output  
 ◊ (Amp) Size: 43x 24x48cm ◊ Weight: 28.5kg ◊ 7.1 channel S-Master digital amp ◊ 200W/8 ohms  
 ◊ i.Link-encrypted digital audio input

**CONTACT** ☎ 08705 111999 @ www.sony.co.uk

**N**obody could complain about any lack of innovation in today's multichannel market, and the two new flagship components from Sony tested here have more firsts to their names than most. The SCD-XA9000ES multichannel SACD/CD player is the first from Sony with an encrypted i.Link digital interface for DSD (SACD) data, allowing off-board conversion, in addition to which it is a stunningly built and specified player of true reference class. The TA-DA9000ES is something else, the first high-end amplifier from Sony to provide an all-digital signal chain. Individually, each of these components has more than enough going for it to whip up a great deal of interest. Together, they establish what amounts to a new benchmark by eliminating D/A conversion and analogue processing from the signal path all the way from the disc to the final stage of power amplification.

You'll get a shock when you try to lift the SCD-XA9000ES, a dedicated SACD/CD player with no DVD capability and no video circuitry – it weighs more than 16kg, over three quarters of your flight baggage allowance. One explanation for the extraordinary weight is the frame and beam chassis, which uses thick-section, high-strength components, internally reinforced and with subtle decoupling to reduce vibrational modes. Separate R-Core transformers are specified for the servo and digital systems, and for the audio. The main interest, however, is in the painstaking approach to the electronics design. The key i.Link interface and associated HATS jitter reduction process is discussed in the *Sony's i.Link* box (right).

Those without an i.Link-equipped amplifier like the TA-XA9000ES will be at the mercy of the player's internal D/A and analogue stages. This is one of the very few SACD players that can perform bass management and related functions, and moreover without a lossy conversion to PCM. The digital converter applies 8x oversampling and noise

shaping for CD, and generates a signal upsampled to 2.8224MHz, the same clock rate as SACD. DSD filtering is applied for SACD sources, and from this point on, all signals are handled in the same way using a multiple-parallel one-bit processor that avoids the jitter problems of the 1-bit conversion, and the low-level linearity problems of multibit. Six DACs are used for each channel in noise-reducing differential mode, and two per channel in multichannel mode.

The TA-DA9000ES all-digital amplifier is truly something else. At its most basic, this is a 7.1-channel, 200 watts per channel integrated amplifier with all the standard flavours of Dolby and DTS processing, excluding Dolby Pro Logic IIx, and the ability to emulate Hollywood dubbing soundstages. All digital inputs are assignable, and high definition component signals can be switched.

Why all-digital? Digital amplification can mean a simpler circuit and a massive reduction in heat output, and heat-induced modulation of output distortion, as well as eliminating zero cross (aka crossover) distortion and open-loop distortion, which is normally corrected with negative feedback ▶



## SONY'S i.LINK

The i.Link interface is based on IEEE1394, a connection standard which has been used for years for data transfer, for example with camcorders. More recently, i.Link with DTCP (Digital Transmission Content Protection), which is incompatible with previous i.Link incarnations, has been mandated for six-channel non-compressed digital audio transmission of DSD data from SACD, plus control and ID data, to a similarly equipped outboard processor. DVD-Audio (and upsampled CD) data may similarly be passed, but as yet Sony's implementation is not DVD-A compatible.

The 9000ES components are the first from Sony with this interface, and join similar (but not identical) implementations from Pioneer, Denon and Yamaha. On test, we confirmed that Pioneer i.Link players do interoperate with the Sony amp, with the player's model name correctly identified on its display.

Communicating high-speed DSD data exposes it to timing errors, which Pioneer for example addresses by slaving the player to the processor's master clock. Sony instead has developed a sample-and-hold circuit called HATS (High quality Audio Transmission System) which provides variable speed data transmission from the player to keep a buffer memory at the receiving end topped up, and which is then clocked out according to the dictates of a local master clock, effectively eliminating jitter.



# Q & A

HFC talked to Eric Kingdon, European Technical Marketing Manager for Sony UK



**HFC:** What was your part in developing the 9000ES products?

**EK:** My involvement was from the first testing of the 9000 amplifier which took place in late 2002. At this stage the amplifier was not even in the final chassis form. Since that time we have made many revisions to various design elements and components. At the Heathrow Show we demonstrated the almost final sound version. Speaking personally, this amplifier has been a fascinating piece of development work and there was a steep learning curve involved in implementing the various technologies that were involved with my good friend and colleague, Kanai-san in Tokyo, who masterminded the whole project.

**What do you see as the possible future of digital amplification – can we expect any more analogue amplifiers from Sony for example?**

Certainly, you can expect more analogue amplifiers from us, but also an increasing number of digital models based on S-Master technology. It's important to state that an experienced knowledge of design, tuning and whatever similar term you might associate with analogue amplifier development is, I believe, a prerequisite for successful amplifier development in the digital domain.

**Why did you not include DVD-Audio across the i.Link connection – and when will it be available? Also, will it be a free of charge upgrade for existing owners of the 9000ES products?**

The reason why the i.Link connection does not offer DVD-A is not a political one. It was simply a question of timing for the amplifier design. We felt it was more important to aim to keep to the development schedule, rather than delay the introduction. The issue of a DVD-A interface is something we will keep a close watch on and good dealer plus customer feedback about the necessity of this feature will determine any future action we may take.

**How much of the signature of the sound of the 9000ES products is down to analogue components such as the MOSFETs?**

Quite a lot. For example, the pulse power stage uses pairs of MOSFET devices and these can bring their own character to the performance of an amplifier. In this instance, the TA-DA9000ES uses metallic core type modules, with copper etching and special bonding of the devices on gold plate. We managed to achieve a remarkably stable thermal and electrical character for these high-power devices, together with a directly audible effect.



which induces transient intermodulation distortions of its own. A digital amplifier is essentially just a power supply, a high-speed, one-bit switch, operating here at DSD's native 2.8224MHz, output transistors (MOSFETs in this case), which in effect are switched directly by the amplified DSD datastream, and a low pass filter to eliminate the switching artefacts, which in the process recovers the original analogue waveform. Analogue inputs are processed by an A/D converter before subsequent processing. You can find a fuller account of Sony's S-Master digital amp technology in our special *Digital Amplifiers* report (p18). Simple as it is in principle, the detailed execution is extremely sophisticated.

Unlike previous Sony one-bit digital amps, which are mostly entry-level home theatre products, the aim here is much more purist. Hence the elaborate motherboard-daughterboard construction similar to that used in PCs, which minimises path lengths and radiated noise problems. Hence the sophisticated measures taken to lock the output to a precisely regulated local master clock, "eliminating" jitter according to Sony. And hence the unusual method of mounting the cool-running output devices directly onto the main circuit board, which reduces signal path lengths.

Hence also the strictly analogue power supply, built around a massive toroid transformer capable of delivering up to nine amps per channel. And also the sophisticated volume control, which eliminates truncation of lower-level bits when the volume is turned down by adjusting the regulator that supplies voltage to the pulse generator that controls the volume. Remarkably, the digital circuits that drive the TA-DA9000ES are really no

bigger than the size of a credit card. Most of the rest of this 28.5kg monolith consists of power supplies and peripheral circuits.

## SOUND QUALITY

For most of the test period, we used the two Sony components together, which maximises the signal path length over which the signal remains digital, and minimises the analogue section of the circuit, in this case to the loop containing the output side of the output MOSFETs, speakers and associated cabling. On a very simple-minded interpretation, this could be taken to suggest that the signal deterioration only takes place within that final loop, but this is clearly not quite the case. There are all kinds of effects that have to be factored in, such as the absence from a digital amplifier of the unusual low-frequency group delay (see DC phase lineariser comment, below), which is traditionally allowed for in loudspeaker designs.

As a CD player, the SCD-XA9000ES is an extremely fine performer when used via its analogue output, using the internal D/A converters. The Sony is almost clinically precise and incisive, and a little lighter and leaner in balance than the £6,945 Mark Levinson No390S, but arguably slightly less so than the £4,244 Krell SACD Standard when used in CD-playing guise (which as an analogue-output player has a slight edge on the Sony). But there is a real feeling of subtlety combined with space and architecture from the Sony using recordings such as the Respighi disc (from Reference Recordings) reviewed last month, and the passion and muscularity of the Emerson's



landmark Shostakovich string quartet recordings are beautifully articulated and full of strength. The fluid grace and warmth of the *Bruch Kol Nidre* (the CD player playing the hybrid SACD from Pieter Wispelwey on Channel Classics) is nothing if it not affecting.

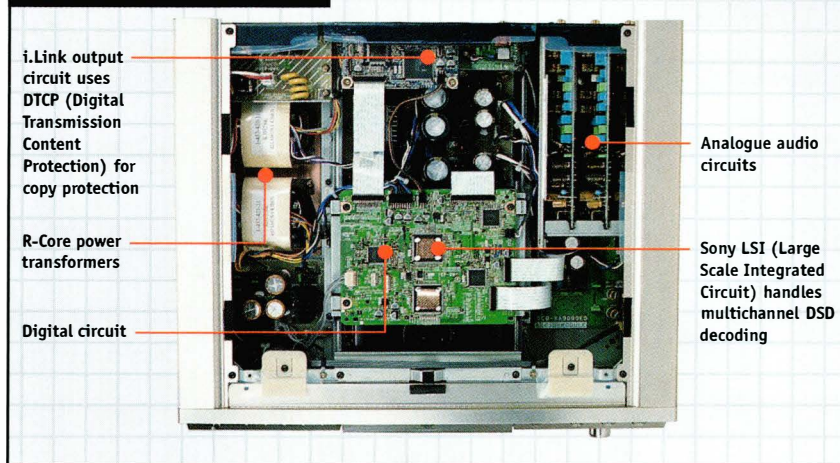
But not as much as the SACD version. One of the persistent criticisms of SACD is that it can sound a little too lush, too lacking in detail and drive, but the SCD-XA9000ES shows that if this is valid, it relates to certain players rather than the medium as a whole, and this one is palpably very special. Again using its own D/A converters, and limiting attention to the stereo SACD track of hybrid discs, there is a special passion about the sound of the Bruch recording which was mirrored with a number of other discs. The player came closer to the heart of the music when playing SACDs than with CDs in the same two-track format. What is more, even in stereo, orchestral quality of large-scale works – Benjamin Zander’s *Mahler 6* for example – more than hinted at spatial envelopment in a way that CD could not quite match. In full multichannel form the spatial effects are nothing less than exquisite, the Zander recording displaying an unequalled depth, the opening of the Naxos *Planets* exquisite space and scale, and even at its most hushed, the sound retains an impressive presence.

Using the i.Link digital output instead of analogue adds a certain firmness and precision to the sound. The player doesn’t sound overly coloured from the analogue output, but somehow the digital version is even less so, even more transparent if you prefer, and musical dynamics are just that bit better expressed than when using the same amplifier via its multichannel analogue input. Dolby and DTS processing is as good as must, and perhaps helped by the amplifier’s unusual clarity, but it is the performance of the amplifier that dominates, even with films, rather than the spatial processing.

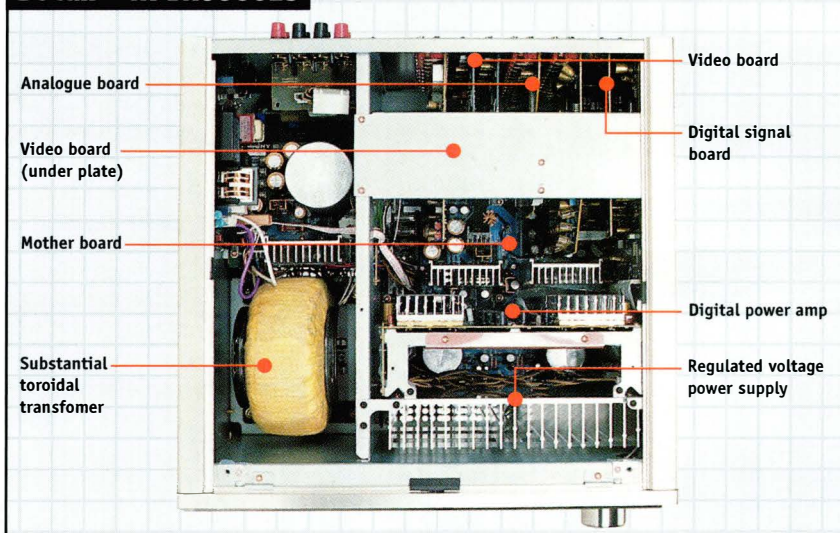
Musically, this amplifier is clearly a landmark product, arguably the first truly satisfactory digital amplifier in many respects. It breathes like a good audiophile amplifier, and its bass is especially muscular, the mid and top expressive and clean. It at least holds its own with other high-ranking multichannel amplifiers in the same price area, from Pioneer and Denon in particular, with even more of the feel of a precision instrument. By home cinema standards it is a truly remarkable achievement.

But in certain respects it is difficult to get to grips with this amplifier. First, it takes an inordinately long time to come on song, a fact which Sony readily acknowledges. In addition to this, it is a potentially uncomfortable match to traditional speakers, and is at a disadvantage with analogue source components, again a fact that Sony is well aware of. On balance we tended to prefer

**Detail – SCD-XA9000ES**



**Detail – TA-DA9000ES**



**“Musically, the TA-DA9000ES is clearly a landmark product, and arguably the first truly satisfactory digital amplifier.”**

the default DC phase lineariser (STD-A) setting, but the reality is that the differences are fairly subtle, and don’t really turn the amplifier from its clipped, ultra-clean digital persona into a simulacrum of a traditional amplifier. It breathes, but in a slightly different way. By traditional standards it is leaner, tauter, but rather flatter spatially and tonally dry, and this tends to impact on music reproduction. In the future, when more amplifiers are digital, loudspeakers will probably be voiced for the task, but today’s speakers are not, and the result is a sound that is better to the extent that it is all very precisely and cleanly regulated. But the sense of front to back depth is foreshortened, and the lack of warmth can present an almost subliminal listening barrier. **HFC**

*Alvin Gold*

**VERDICT – SCD-XA9000ES SACD player**

<b>SOUND</b> >> 94%	<b>BUILD</b> >> 98%
<b>FEATURES</b> >> 89%	<b>VALUE</b> >> 91%

**CONCLUSION**  
Superb SACD player with full bass management and also an excellent CD player, with extra performance gains via i.Link.

**HI-FI CHOICE OVERALL SCORE**  
**>> 93%**

**VERDICT – TA-DA9000ES multichannel amp**

<b>SOUND</b> >> 87%	<b>BUILD</b> >> 95%
<b>FEATURES</b> >> 92%	<b>VALUE</b> >> 90%

**CONCLUSION**  
Not a complete answer as a stereo amp, but sets standards in many areas for multichannel amplification.

**HI-FI CHOICE OVERALL SCORE**  
**>> 89%**



# SECOND TIME AROUND

Michigan's digital audio wizards have revised their acclaimed 'base' model CD player, but why?

**PRODUCT** Wadia 302

**TYPE** CD player

**PRICE** £3,995

**KEY FEATURES** Size (WxHxD): 43x12x37cm

◉ Weight: 8.6kg ◉ Digital outputs: S/PDIF (BNC)  
◉ Analogue outputs: balanced (XLR), single-ended (RCA) ◉ Digital volume control ◉ Variable maximum output voltage

**CONTACT** ☎ 01992 573030 # www.wadia.com

**W**adia has been at the forefront of CD player design since the eighties, introducing the first standalone high-end DAC (digital-to-analogue converter) to the market and producing one of the most respected integrated players in production, the 861. As a company it overstretched itself by trying to produce

behemoth digital amps in the late nineties and had to revert to its core market; players, transports and DACs, as a result. Perhaps this is why Wadia is unusual among high-end American brands for not having dived into the multichannel arena despite the scale of that market.

The Wadia 302 is the brand's least expensive player and a revision of the 301 reviewed in early 2002 (*HFC* 228). For a company of this size and inclination that's quite a swift model change – the upmarket 861 for instance has not seen a radical change in five years, and not surprisingly the change to the junior model was the result of outside forces. The 301, along with other Wadias, was one of the few players on the planet to use a Pioneer stable platter

transport mechanism, aside from Pioneers of yore that is. Now that this technology is no longer being used by Pioneer, supplies of the mech have dried up and Wadia has had to go elsewhere for this fundamental component. What it has ended up with is a Philips VAE 1250, a more prosaic but entirely capable mechanism that Wadia has modified with a 'box style' transport mounting bracket. The line goes that the "sonic performance of this mechanism demonstrates that high performance can be achieved from a moderately priced transport".

The only physical change to the 301 is the display which is now blue, a fine enough colour in itself but one that has a tendency to clash with the red of the transport control key illuminators. The 3-series casework

remains the same, an over-the-top multi-element design that goes a way toward justifying the price of the player but makes one wonder just how much of that price is accounted for by heavy chunks of aluminium. But it wouldn't be a Wadia without it and we're not complaining.

There are some other changes under the skin as well as the transport. Both digital and analogue circuitry has been updated to include the Digimaster 3.1 upsampling algorithm, 24-bit Burr-Brown 1704 DACs and Wadia's Swiftcurrent IC and DirectConnect technologies. The digital volume control and optional digital inputs of the 301 remain, as do combined balanced and single-ended outputs with which you have the option of connecting directly to a power amp.

Digimaster is Wadia's name for its filtering and upsampling system which in its latest guise upsamples the 44.1kHz sampling rate of a CD to 705.6kHz (16x) and interpolates (or smooths the digital wave in other words). As Wadia was one of the first brands in the upsampling game it knows more than a thing or two about the art and its emphasis on the time domain is one reason for its success.

The Swiftcurrent IC is a current-to-voltage converter which avoids negative feedback while DirectConnect is a typically American name for a digital volume control. The latter works by reducing the number of bits used to represent the signal and because the 302 uses a 24-bit converter you can theoretically 'spare' eight, or a third, of these to reduce output level before you start eating into the 16 bits that represent what is encoded on the disc. In practice this means you have a limited volume range between a displayed 67 and 99. Adapting a hi-fi system so that this is practical is aided by variable maximum output voltages – micro switches on the rear panel which select between 0.5 and four volts unbalanced or two and eight volts balanced. Whether this is a wide enough range will depend on the gain of your amp and the sensitivity of your speakers, but the result is worth both the potential level limitations and the single-source compromise (unless you opt for digital inputs of course)

#### SOUND QUALITY

The first thing that strikes you when the 302 gets into its stride is the bass. This is a player for bass heads of all ages – the degree of solidity it can produce is remarkable, and this through Living Voice speakers that aren't renowned for their capabilities in this department (though our REL Stadium sub bass system does of course help underpin affairs of the nether regions). The Wadia's brilliant bass skills are apparent

with virtually anything you care to play, be it the electronic beats of Fila Brazillia or the double bass and drums of EST – both electric and acoustic bass reveal more of their weight and power in this player's capable hands.

Part of the reason why this quality stands out is because of the speed and agility which the player has across the band – even with digital components, swiftness and depth are a rare combination in the bass. The timing delivered by the Wadia is remarkable for its

precision without glare, with clear-cut leading edges and no sense of undue 'bite' or 'zing'.

By the standards of our reference (£2,850) Resolution Audio Opus 21 this is a slightly conservative sounding player in tonal terms. Its higher frequencies seem slightly muted – you don't get as much shine from bells or trumpets for instance. Yet it is explicit in terms of detail. Four Tet's *concrète* beats had rare weight, density and richness through the 302, with a sound that was full of energy yet never over-aggressive, even ▶



**“This is a player for bass heads of all ages and the degree of solidity it is capable of producing is quite simply remarkable.”**

Q & A

John Schaffer, VP sales and marketing, discusses the thinking behind Wadia's approach



**HFC:** The 302 has excellent bass resolution and power. How do you achieve this?

**JS:** Relative to our other products the bass performance is on a par with or at least very close to models such as the 861. When we moved from the 301 to the 302 we didn't just replace the transport mechanism, we added everything that we had learned in the intervening two years. The 302 has an entirely new power supply which provides ten times the power required by the player, and this is our first switching PSU. We also reworked the ground scheme to reduce the noise floor and restructured the power filtering from a parallel to a series approach. There will shortly be an upgrade for 301 owners which incorporates many of these changes.

**Was the 302 purely a reaction to the need to change transport supplier?**

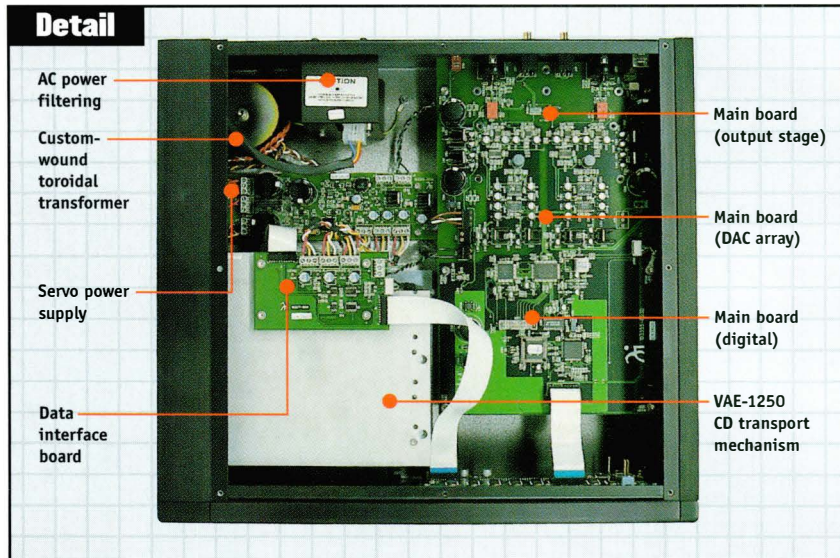
Yes, Pioneer were happy to produce the Stable Platter mechanisms for us but the tooling had finally worn out. There are also some nice things about the new Philips mechanism; we have been able to 'ClockLink' the drive so that rather than using the native clock on the servo board we put our own more accurate clock on the DAC which feeds back to the transport. This virtually eliminates jitter. We have also put the transport in a robust aluminum enclosure which has the advantage of shielding the servo board as well as providing great mechanical isolation.

**Given the ascent of SACD, is there still a market for a single-format player such as the 302?**

As a company we are in favour of higher resolution formats but our philosophy is to provide product that meets our customers' needs, and at present CD is the standard format. CD has remained strong for Wadia because our products are in a price category whose customers are more concerned with getting the job done properly than with having the latest technology.

**Does Wadia have any plans for a high-resolution format player – SACD or DVD-Audio?**

We are working on a DSD (SACD) engine that will initially feature in our forthcoming reference decoding computer, a three-box design with mono DACs and a separate controller. I can't tell you when it'll be launched but it's imminent.



when the mix gets dense. It tracks micro dynamics with a rare precision, which means you can hear right into artfully produced recordings with real clarity.

While reverb of both natural and artificial varieties is well served, the high frequency restraint means that some aspects of spaciousness are less explicit. There is less openness than the Resolution Audio can deliver, but notably stronger bass. Which is most important will depend to an extent on the type of music you prefer – the Wadia's strengths seem particularly well disposed to electrically amplified music while the Resolution revels in acoustic recordings. The Wadia cracks a mean orchestral whip nonetheless and Shostakovich's *Jazz* suites reveal a level of detail that is rare, especially when you let the player do its party trick by taking the preamp out of the equation. The benefits are not to be underestimated – vigour,

tone colour, bass weight, timing and stereo solidity all improved markedly, and this compared to a very decent Border Patrol valve preamp. The extra precision and resolve is highly gratifying and

enough to sway all but the vinyl enthusiast into leaving the system sans preamp for good. Indeed, hearing the remarkable skills of

Marshall Mathers and Dr Dre on the track *The Real Slim Shady* via just the 302 and a pair of ECS monoblocks (see p48) is nothing short of a revelatory experience.

There are lots of lovely things about this new 'baby' Wadia. Its build is exemplary, the remote control, though not very clearly marked, does everything – including phase, balance, volume and most importantly, drawer opening! The option of adding digital inputs means that in many systems you don't need a separate preamp, and then there's the superb sound it elicits from the humble CD. The new high-res formats are technically superior yet a dedicated CD player like this has little to worry about until specialist high-end brands like Wadia can afford the technical and licencing costs to produce an SACD or DVD-A player. Krell was the first to get to that point (see review, *HFC* 251) and strangely enough at almost the same price as the 302 – it would be intriguing to hear both players side by side. But if you have a large CD collection and value diversity of musical choice, top-notch CD players like this remain an truly worthwhile investment. **HFC**

Jason Kennedy

**VERDICT**

**SOUND >>> 93%**

**FEATURES >>> 90%**

**BUILD >>> 94%**

**VALUE >>> 83%**

**CONCLUSION**  
The 302 upholds the Wadia tradition of making CD a more dynamic and gripping format than some might think possible. With bass to die for and resolution that's fully capable of changing your listening habits, this is a serious contender.

**PRO**  
Strong, swift and highly coherent sound combined with a great remote and a lovely bit of casework.

**CON**  
There are arguably more 'natural' sounding players available for less money.

**HI-FI CHOICE OVERALL SCORE >>> 90%**

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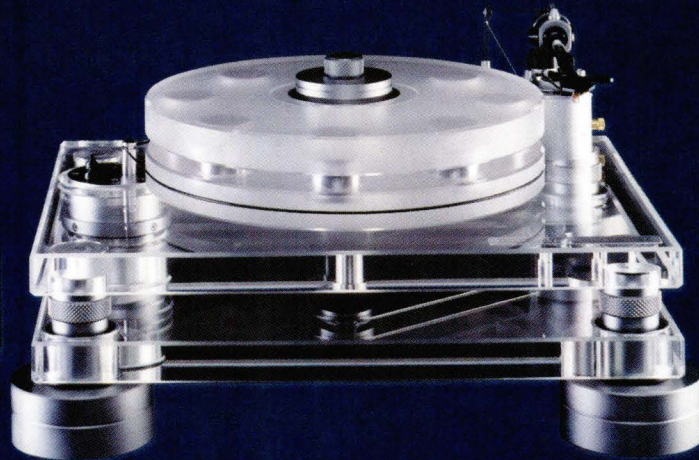
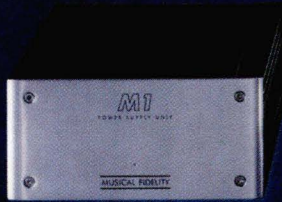
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# SPIRIT LEVELLER

*Thule may be a little-known brand in the UK, but this excellent amp deserves to make a splash*

**PRODUCT** Thule Spirit IA60B SE

**TYPE** Stereo integrated amplifier

**PRICE** £895

**KEY FEATURES** Size (WxHxD): 42x10x29cm  
⦿ Weight: 11 kg ⦿ Fully balanced 75W per channel (65W in standard non-SE version) ⦿ 'Floating' balanced XLR line input, three RCA line inputs and two tape loops

**CONTACT** ☎ 01462 689140

🌐 www.thule-audio.com

**T**hule is one of the lesser-known hi-fi marques from Denmark, the land of Jamo and Bang & Olufsen. This is a shame – the brand deserves considerably more respect, as it makes some impressive products at very reasonable prices.

The Thule Spirit IA60B SE is a perfect example of this. The 75-watt, five-line-input integrated amplifier (that's the reason for the 'SE' title, as the standard Spirit IA60B delivers just 60 watts) costs just £895, yet has a true balanced circuit, complete with an XLR balanced line input. It's also neatly designed, solidly built, easy to use and comes complete with a remote control.

It's certainly very minimalist, especially on

the front panel. All you have is a big central silvery-grey volume knob, a little button to run through the sources and a simple red display. Oh, and a logo. In fact, you can perform other operations, too – standby, by pressing in the source selection button for a second or so and bass, treble and balance can be controlled through the remote handset. But anything more exotic than adjusting the bass is strictly out of the window; even the power on/off button is relegated to the rear of the amp. This implies the amp should be left constantly powered, which fits its audiophile profile. However, it does run warm to the touch – less so in standby, but in operation the temperature of the casework does rise, albeit not alarmingly.

Build quality is extremely solid, the amp's case featuring a 1mm thick steel chassis with 8mm anodised front plates, which enhances the impression of high quality. The spartan heavy black finish offset by simple silver (or gold) controls also adds extra butchness.

But it's the balanced operation that really sets the Spirit IA60B SE apart from the competition. The extensively surface-mounted printed circuit board is of sufficient quality to allow a true high common mode rejection circuit (usually such designs are limited to

more expensive models), with the single-ended (RCA phono) inputs running on balanced lines, alongside the fully-balanced XLR input, rather than the more commonly seen pseudo-balanced operation. This helps to lower the noise floor, as the balanced circuit is inherently noise cancelling (in fact the balanced stages effectively 'float', by being physically isolated from the power supply), and gives the amp a considerably more dynamic sound, as in essence the IA60B SE features two power amplifiers per channel.

The component line-up is extremely solid for such a relatively inexpensive amp. Under the hood lies a 500VA toroidal transformer, 30,000µ of power supply reservoir capacitance, a brace of eight Sanken power transistors and a dozen Burr-Brown OPA2134 op-amps scattered around the circuit. Once again, these all point to a higher than average build quality. If you chose the slightly less powerful IA60B with its 60-watt power delivery, the only main change is a 350VA transformer and 10,000µ less capacitance. The rest is unchanged.

In fact, the only real criticism of the amp on aesthetic grounds concerns the remote control. It's ugly and dated and although it might be quite weighty, it looks like something you might have found with a cable TV decoder of a dozen years ago. Yuk! In fairness, it does spew a wide spread of infrared and it will



**BEST BUY**  
**HI-FI CHOICE**  
magazine  
★





operate the amp even when pointed well away from its location. The remote also supports basic operation of a Thule CD player and/or tuner, but it certainly could have been prettier!

**SOUND QUALITY**

The Spirit IA60B SE has a very 'big' sound, delivering an expansive soundstage and solid images. It's also faithful to the recording and the artist's musical performance.

This fidelity is a goal of many an amp at all price levels. Otherwise, it wouldn't be called 'high fidelity', would it? Sadly, few below £1,000 can truly claim such an achievement, but the Thule is one of the exceptions. It really does everything the phrase 'high fidelity' suggests; not in the same league as the likes of Krell at the true high end, but with an absolute honesty that is refreshing and highly unusual at this price level.

What it lacks compared to the true masters of the amplifier art – aside from even more power and grip over the sound – are only a few sins of omission, which is always a good sign. But whenever you begin to think "it doesn't have the performance of a...", the product you compare it to is routinely more expensive than the Spirit IA60B SE.

It's no friend of lo-fi recordings. Black Rebel Motorcycle Club sounded absolutely dreadful, but you'd expect this – an amp that pretties up a CD cut in someone's shed is being too nice to the recordings. Similarly, the IA60B SE doesn't suffer CD player fools gladly, often returning a sharp sound from less than fine examples of digital audio art. But the upside of this is that honesty pays off when you have a good recording played on a good player. Then, the sound opens out with a big, powerful bass that underpins a well-crafted,

**"It doesn't suffer CD player fools gladly, often returning a sharp sound from less than fine examples of digital audio art."**

detailed and cerebral performance. The soundstaging too becomes wonderfully open, wider than the speakers and with a fair degree of image depth. Best of all, it gets remarkably close to mimicking much more costly high end models – Damien Rice's delicate lyrics had all that high-end sheen that American audio does so well, but without the huge price tag.

The sound of balanced audio via the XLR input is a notch better than through the single-ended sockets. Balanced is even more solid – but not stodgy – and has a bigger, more detailed presentation. It makes single-ended operation seem a bit weedy by comparison. This is not a big difference, but it's clear the amp is first and foremost as a balanced design and that is where it sounds most at home.

Let's put the sound into perspective. Most amps at this price introduce more character into the mix. They add excitement, warmth or brightness disguised as extra detail. This may be for a reason; many speakers at the price don't have the performance to cope with an amp of such stark clarity and heft. The solidity is often undermined by the lack of low-frequency extension of mid-price speakers, while the speakers lack the resolution to parse the level of detail and accuracy the Thule produces. There are exceptions, of course (traditional speakers from old British names like Spendor and Harbeth, along with comparative newcomers like PMC), but they are few and far between. But here's a tip – try

using it with speakers that are reasonably amp-chummy, but neutral and cost around the £3,000 mark. You'll be surprised at the performance the IA60B SE can eke out.

If you want immediate excitement, look elsewhere. Aside from big bass, this amp won't stir the blood overnight. But the Spirit IA60B SE is a grower, with a faithful and dynamic sound that will keep you entertained long after the initially exciting models begin to pall. **HFC**

*Alan Sircom*



VERDICT	
<b>SOUND &gt;&gt; 89%</b> [Progress bar]	<b>PRO</b> True balanced design makes this one of the most 'high fidelity' amps at the price. Performance is honest and accurate, with a big, natural sound and lots of detail.
<b>FEATURES &gt;&gt; 82%</b> [Progress bar]	<b>CON</b> Needs to be used in balanced mode to really fly. Remote control is a bit cheap. Perhaps too honest-sounding for many speakers at this price.
<b>BUILD &gt;&gt; 86%</b> [Progress bar]	
<b>VALUE &gt;&gt; 91%</b> [Progress bar]	
<b>CONCLUSION</b> True high-end sound quality and true high-end features without a true high-end price tag. The Thule's biggest limitation is that it's likely to be used with the sort of CD players and speakers too cheap to show what it can really do.	
<b>HI-FI CHOICE OVERALL SCORE &gt;&gt; 90%</b>	

# KOOL FOR KATS

*One-time vinyl avenger Linn Products is embracing the multichannel future with gusto*

**PRODUCT** Linn Akurate 242/212/225/221

**TYPE** Multichannel loudspeaker system

**PRICE (5.1 SYSTEM)** £13,750

**INDIVIDUAL PRICES** 242 floorstander: £5,750 per pair • 212 standmount: £3,500 per pair • 225 centre speaker: £2,250 • 221 subwoofer: £2,250

**CONTACT** ☎ 0141 307 7777 🌐 www.linn.co.uk

**T**he Akurate range is pretty serious stuff even by Linn's high standards, and at a shade under £14,000 sans stands, the 5.1 multichannel set-up costs more than most of us spend on our kitchens. The range was designed by Phillip Hobbs who also produced the Kaber and current range-topper Komri – you'll notice a similarity in the mid and treble driver array between the two. The goal with Akurate was to "combine world-class sound with a reasonable degree of portability" (that's portable relative to the 80kg Komri of course). Akurate is the penultimate speaker series in the Linn hierarchy but a slightly bigger one, Artikulat, will shortly see the light.

The Akurate system is based around four models. The £5,750 242 is the floorstander that forms the main left and right channels, and features twinned bass drivers alongside the distinctive aluminium-housed '3K' driver array, with twin reflex ports around the back and a disarming array of six speaker terminals. The 212 standmounts (£3,500) that form the rear surrounds have a mere four pairs of terminals and take their bass driver and 3K array from the 242. The £2,250 225 centre speaker goes big on terminals with six pairs and has a driver array to match the 242 in a smaller (though still hardly 'small') box. Finally, the 221 active subwoofer combines 500 watts of servo-controlled power with an eight-inch driver in a compact 21-litre box.

It initially seems odd to combine such a compact 'Bass Extension Loudspeaker' (as Linn dubs the £2,250 221) with 42-litre

floorstanders, but the 242 in passive mode claims a modest 49Hz as the beginning of a frequency response said to extend to 33kHz. Going Aktiv, as Linn calls it, takes the bass down to 40Hz but you can still see why the 18Hz reach of the 221 would come in handy. All the main speakers in this system can be run actively with individual outboard power amplification, which is where the extra terminals come in handy to directly drive each of the units within each speaker. You could use a separate speaker cable to connect each driver to a single amp – penta-wiring, perhaps – but how you'd get five cables into one output at the amp end is not obvious!

What differentiates this range from most other Linns is the 3K driver array – an aluminium casting with a polymer midrange dome, tweeter and super-tweeter. It's the latter that's responsible for that tremendous high-frequency extension, which makes the Akurates better suited to SACD and DVD-Audio than much of the competition. You'll note that these drivers sit in front of a precisely calculated, bowl-shaped 'Skoop',

which is designed to improve dispersion.

The 165mm bass drivers in this range have sandwich construction cones made up of three polymer layers that hide behind mesh grilles. The cabinets are asymmetrically braced and feature double-flared reflex ports with a rifled design to reduce turbulence – which makes a change from dimples!

A dedicated stand is made for each Akurate speaker (£275 each, but included with the 242), and in the 242's case this is a pair of aluminium castings which bolt to the base and extend the footprint. The cast base comes with a set of the chunkiest spikes in the business, M10 threads and massive lock rings, the only drawback being that the spikes are so broad they have trouble piercing carpet.

## SOUND QUALITY

For the test we used a Kisto surround processor and two AV 5125 (5x125-watt) power amps. Installed in a smaller room than might be desirable, the surround channels being a little close to the listener, the results were pretty spectacular nonetheless.





KEY FEATURES

**AKURATE 242 FLOORSTANDING SPEAKER**

Size (WxHxD): 21x100x38cm • 2x165mm polymer bass cones • 75mm polymer midrange dome • 25mm polymer tweeter • 13mm polymer super-tweeter

**AKURATE 212 STANDMOUNT SPEAKER**

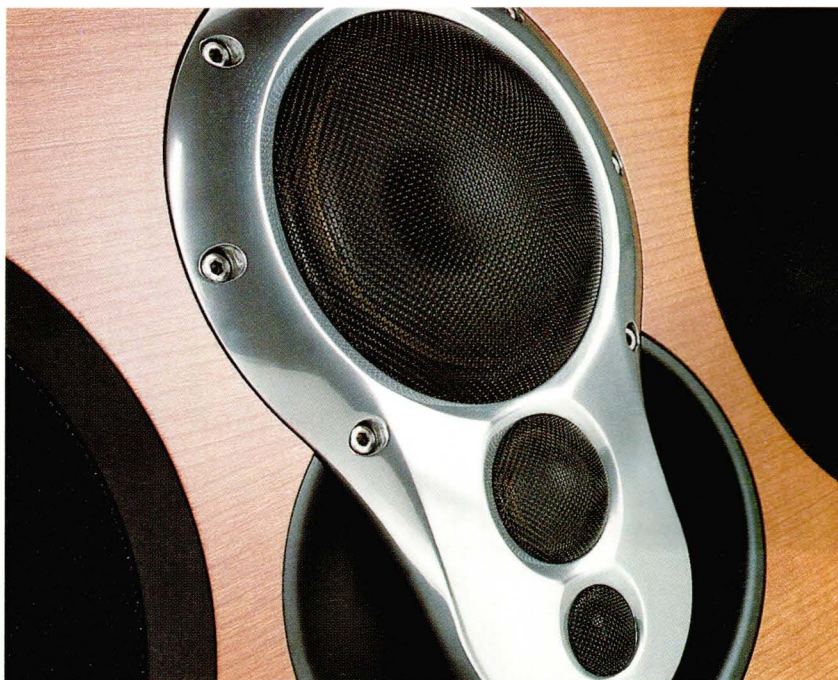
Size (WxHxD): 21x35x30cm • 165mm polymer bass cone • 75mm polymer midrange dome • 25mm polymer tweeter • 13mm polymer super-tweeter

**AKURATE 225 CENTRE SPEAKER**

Size (WxHxD): 60x25x30cm • 2x165mm polymer bass cones • 75mm polymer midrange dome • 25mm polymer tweeter • 13mm polymer super-tweeter

**AKURATE 221 SUBWOOFER**

Size (WxHxD): 32x32x32cm • Eight-inch (20cm) driver • Built-in 500W power amp



**“The Akurates generate studio-type levels with ease and are as explicit in their transparency to detail as any at the price.”**

SACD formed the first tranche of the experience and made a very strong case for its full surround self, the Akurates having a remarkable ability to sonically disappear, while the sound produced remains wholly three-dimensional and expansive. Close your eyes with a good disc and you can't tell where the speakers are, even with a centre channel that's only six feet away. This happened to a greater or lesser degree with nearly all the SACD discs: Beck's *Sea Change*, Peter Gabriel's *Up* and Arvo Pärt's *De Profundis* to name but three. The latter, an all-acoustic recording, is stunning when played in full surround, the organ providing a solid foundation for voices to soar over while surround channels are only used for ambience, so there's no distraction of instruments behind the listener. The Akurates provide an enveloping sound that seems to expand the room and recreate the full scale of the ecclesiastical venue of the recording. For once the rather hackneyed phrase 'close your eyes and you're there', is spot on the money.

One of the advantages of a good multichannel system is the extra firepower of multiple drivers and the headroom that confers, assuming you've got the power to drive them of course. Norah Jones for example stands behind and above the centre channel in almost holographic fashion, more effectively even than the stereo rendition of this recording, which is pretty good in this respect.

Moving over to DVD-A with avant-jazz trio Medeski, Martin and Wood's *Uninvisible*

reduces the ability of the speakers to disappear but is not without its charms. One track places drums on the right and keyboards on the left – the *whole* left and right from front to back – with bass and horns spread around the room, a novel effect that expands the soundstage and delivers plenty of grunt. It's one of many discs that uses rears as much as fronts, emphasising the need for good-quality, wideband rear channels like the 212s, which would make fine stereo speakers on their own. Missy Elliott's *Miss E* is another DVD-A with heavy rear-channel usage, one of the best mixes around in this respect and one which really kicks in solid, clean and tight fashion via the Akurates. They generate studio-type levels with ease and are as explicit in their transparency to detail as anything in their price ballpark. This is the only occasion on which we've played this non-parental advisory version of the album where the censorship hasn't gotten in the way of the music – this system is seriously diverting.

Going back to the reference stereo system with BP control unit and Gamut D200 power amp, the 242s on their own deliver a solid, tight and clear picture of events. The upper mid and treble are highly revealing while the bass is gratifyingly solid and seemingly deeper than the spec would suggest. There is a dryness to the balance compared to the Living Voice reference and this detracts a little from the charm of some material, but there's no denying the level of information that comes through. Take the preamp out of the

system and drive the Gamut with a Resolution Audio Opus 21 CD player and you get a grip and intensity that is addictive. Eminem has rarely sounded so aggressive nor Outkast so funky as when replayed in this manner.

Is the Akurate system accurate? For the most part, yes. The midband is a little recessed, which reduces its emotional impact but you hear changes in the system every time. Is it worth the asking price? That's more difficult, as the 3K array seems to add a fair chunk to what are otherwise fairly standard boxes. But few systems offer the ease of active upgrading available here. If you want to go the whole hog this system will let you. **HFC**

Jason Kennedy

**VERDICT**

**SOUND >> 93%**  
 >> SUB RATINGS  
 STEREO 91% MULTICHANNEL 95%

**EASE OF DRIVE >> 70%**

**BUILD >> 95%**

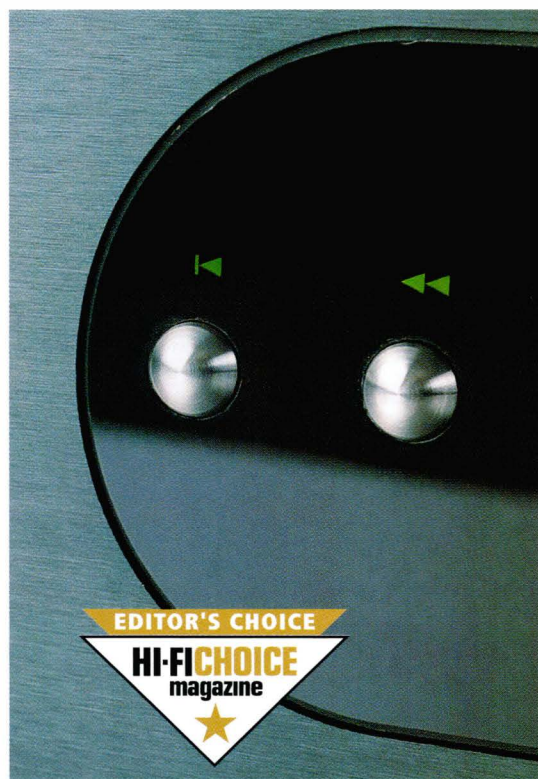
**VALUE >> 81%**

**CONCLUSION**  
 An extremely capable 5.1 system that offers new insights into the potential for multichannel audio, good enough to convert even the hardest bitten sceptics to surround. The stereo pairs make very fine two-channel speakers too.

**PRO**  
 Wide bandwidth, low coloration and utterly seamless system that revels in the finery of high-resolution multichannel audio. Equally good with music and movies.

**CON**  
 The balance may be a bit on the dry side for some, and the price a little high.

**HI-FI CHOICE OVERALL SCORE >> 88%**



# THE PRIME MOVER

*No flashy digital outputs, but Primare's first universal player is more of a musical maestro than most*

**PRODUCT** Primare DVD30

**TYPE** Universal DVD-Audio/Video/SACD/CD player

**KEY FEATURES** Size (WxHxD): 43x10x38cm

◉ Weight: 7.5kg ◉ PAL/NTSC progressive scan video  
◉ Extensive proprietary circuitry ◉ Balanced (XLR) stereo out  
◉ 5.1 audio out ◉ Optical/coaxial/XLR digital audio outs ◉ Component/S-Video/composite video outs

**PRICE** £2,000

**CONTACT** ☎ 01423 359054 # www.primare.net

**P**rimare is one of the latest manufacturers to have started off in the purist two-channel stereo arena, and which is now in the process of transition to something else. 'Something else' in this case doesn't quite mean full-bore multichannel, but something closer to the kind of evolutionary shift seen from Naim Audio, or some years earlier from Arcam. Primare's multichannel ambitions are to produce equipment that does multichannel to a standard that appeals to its core audience of stereo buyers looking to expand into multichannel, but who want to avoid throwing the baby out with the bath water by sacrificing sound quality in the process. Of course, this means multichannel with sound quality comparable to their existing stereo standards, but for Primare it also means

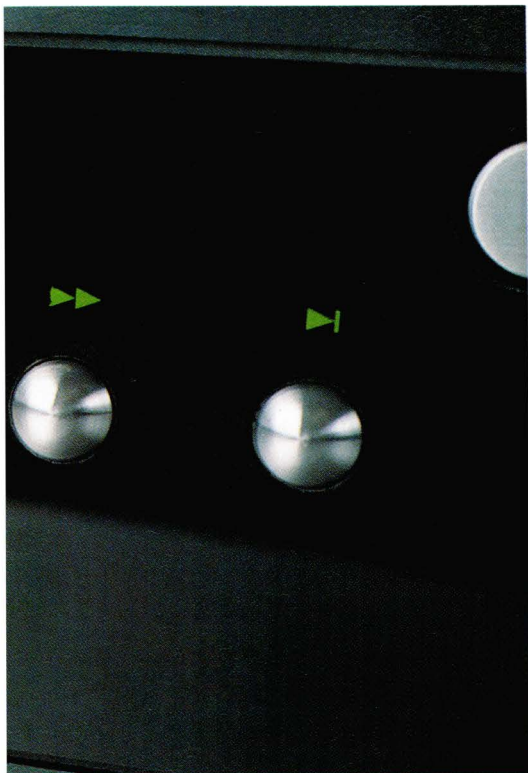
something else. It is about retaining the key simplicity and purposefulness both of Primare products from the past, and of their stereo components from the present.

So far the designers have done remarkably well at this, by producing models with a track record of performing similarly to their stereo models. Visually, it is virtually impossible to distinguish a Primare DVD player from one of their CD players, or an AV amp from a stereo one without looking at the back panels. The set-up menus are very simple too, though perhaps not quite idiot-proof. Internally, there is the same emphasis on large, well regulated power supplies and good quality components, although the firmware is Primare's own. The range of features on offer, though not noticeably lacking, is towards the bottom of the range when judged by price. Sound quality, however, has generally managed the trick of being near the top – a classic trade-off designed to appeal to the audiophile.

As you'll have guessed, all this is highly relevant to the Primare DVD30 universal player, which has internal Dolby and DTS 5.1 decoders, and which fits the pattern set by other Primare components. But there is one significant change, a new cosmetic scheme with includes a large, blacked-out oval display

area, which was deemed more appropriate for AV equipment. In this case the displays remain far from verbose, but each of the controls has its own discreetly illuminated label. Switch off, and the display area becomes practically invisible.

The hardware side of the story is impressive, starting with the heavy gauge non-ferrous case which is supported on three feet. The internal clockwork includes a large custom built-transformer with independently regulated windings for the transport, video, audio, digital and control sections feeding 11 separate supplies, but it is the analogue audio that takes the lion's share of what is available. The mechanism, which is mounted on its own mechanically isolated subchassis, along with the dual-wavelength laser pick-up and much of the digital chipper, comes from Pioneer and includes 12-bit/108MHz video D/A processing and progressive scan with 2:3 pulldown, apparently from 2002/03's DV-757Ai generation. Special high-quality capacitors from Sanyo are specified for the power supply to the DACs, the progressive processor and also in the audio section, and the main processor is mounted in the stand-off at the front of the case to provide extra shielding and reduce RFI interference.



FORMAT COMPATIBILITY			
DVD-AUDIO	✓	DVD+R	✓
DVD-VIDEO	✓	DVD-RAM	✗
SACD	✓	MP3 AUDIO	✓
CD	✓	WMA AUDIO	✗
HDCD	✗	AAC AUDIO	✗
CD-R/RW	✓	VIDEO CD	✓
DVD-R/RW	✓	JPEG PICS	✗

The different disc formats use different analogue filtering, the SACD filter in this case being of Primare's own design. All circuit boards are of the surface-mount type, and are designed by Primare.

Jitter management is another area where Primare has rolled its own, with a PPL (Phase Lock Loop) circuit developed by its own research team. Video buffering and filtering is from Analog Devices, and is designed so that each of the video outputs – composite, S-Video, RGB and component – can be connected and used simultaneously without loss of performance. Component video is handled by a detachable daughter board, which is apparently part of a strategy, to allow the player to grow with evolving video standards. An obvious move would be to add encrypted digital interfaces like DVI and HDMI – Primare says that these are in the pipeline as retro-fittable upgrade options, though no timescale has yet been announced.

Each audio channel has its own single-ended (RCA) output, but if used as a two-channel player, the audio DACs

## “The Primare’s sound has natural grace and warmth, but when called for it can deliver a cutting edge to its performance.”

are connected in differential mode, two per channel, to drive XLR-balanced outputs.

### SOUND QUALITY

‘Comfortable as an old glove’ was the phrase that sprang to mind, and the obvious connotations of an easy, relaxed demeanour and of a sound that is somehow comfortable in its own skin is just about right. But this simile could be stretched far enough to imply that the Primare is predictable and lacks the capacity to surprise. This, however, would be to do it something of an injustice.

Taking each of the three main audio formats in turn, DVD-Audio performance is still difficult to judge in the context of a dearth of well-recorded material. It doesn't matter how many recordings the DVD forum claims to have, it's plain enough from the release

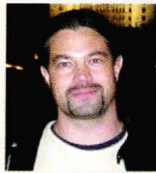
schedules put out by the major record companies that in the real world almost nothing is happening out there for those not living out second youth with tired old 1980s pop and rock. (Perhaps this will change with the advent of the hybrid CD/DVD DualDisc?) However, what we have heard is encouraging, and the Primare made an excellent fist of some of the better DVD-Audio discs we tried, and even some of the less inspired examples. Barenboim's Beethoven symphonic cycle still sounded grainy and raw, but through the Primare the music shone though, and at times the result was a compelling (if flawed) musical experience. The grace and depth of Bach's *St Matthew Passion* (Harnoncourt) was beautifully articulated, framed by a more coherent acoustic than is the norm.

SACD is much better served with ▶



**Q & A**

Björn Bengtsson, marketing manager of Primare, talked to HFC about the DVD30



**HFC:** The styling of the DVD30 has changed somewhat from previous Primare models. Why?

**BB:** We wanted a way of differentiating the AV models from the two-channel ones, and decided that a larger display would be sensible. When it's off, the fascia is completely black, and when on, the control legends light up against a black background, making it clearer what each control does. But we were keen to retain the key elements of Scandinavian design – the simplicity and elegance – and I think this has been achieved.

**What were your main performance priorities?**

The key priority was the audio, which we wanted to be as good as possible, and to this end the power supplies and the analogue circuitry were designed in much the same way as our CD players. Unlike many players, the power supply is not a switch-mode design. It uses a large toroidal transformer with independent windings for each of the functional areas – transport, video, control, digital and analogue audio. SACD and DVD-Audio were treated on an equal basis with CD. Each has its own analogue filters, the DVD-Audio one adapted from the CD filters with the wider bandwidth taken into account.

**Where does the video technology come from?**

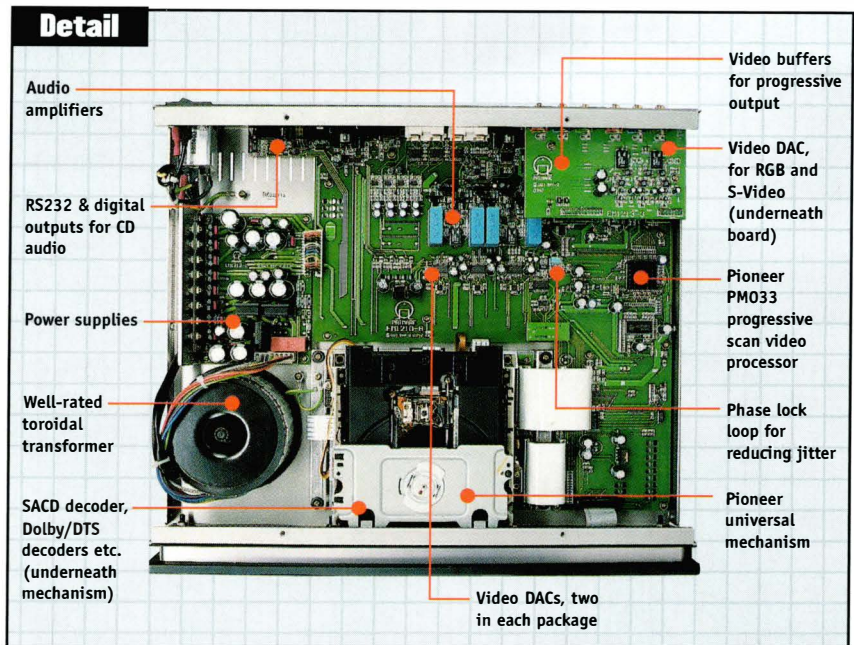
The mechanism comes from Pioneer, which we identified as a convenient way of accessing good picture quality from multiple formats. The Pioneer scalars and video hardware are well tested and proven, and are highly reliable.

**What other measures have improved the sound?**

Though the multichannel outputs are unbalanced, we were able to use two 24-bit/192kHz DAC converter chains for each channel when playing stereo from CD, and the player provides a fully balanced stereo output on XLR sockets, which can be used with our amplifiers with balanced inputs.

**What is the reason for building the component video output onto a removable PC board?**

It is to allow for future upgrades, though exactly what and when is not possible to say at this time. We're obviously looking at the possibility of digital interfaces like DVI and HDMI, which you can expect to see as retro-fittable upgrade options, but we'll have to wait to see which way the market settles before firm details are announced.



high-quality discs, and at the time of writing seems to represent a more viable alternative to compact disc. Somehow the sound lacks the laser-like sharpness and precision of DVD-Audio at its very best, but the sense of image scale and envelopment is simply breathtaking. No better example comes to mind than the hushed opening of the new Naxos *Holst Planet Suite*, which sets up a soundstage of a breadth and scale that simply can't be matched by any other format. A measure of the difference between the two can also be gauged from the SACD and DVD-A versions of Chie Ayado's *Life*, but with the obligatory health warning that the provenance of the original recording and of the PCM and DSD masters is not fully known, so perceived differences may arise from different causes.

In some ways the Primare's performance as a CD player was the most impressive of all, and of course it provided access to a vast range of music and performances unavailable in other forms. This is a player with a natural grace and warmth, but when called for it can deliver cutting edge. Since we had no Primare CD player for comparison it is impossible to be definitive, but the DVD30 may well be in the same ballpark, or not far short.

**VIDEO PERFORMANCE**

Video performance is commensurate with the audio. It isn't leading edge – it lacks the smooth, ultra-low noise appearance of the latest Pioneers when using the HDMI interface with a similarly equipped display.

But it is clean, detailed and has a good tonal range across the band. It also has a very filmic appearance, so any shortcomings there tend to complement rather than contradict the picture element. Even without adjusting picture controls, the colour palate is entirely in keeping with the overall impression of a genuinely cinematographic performance.

As a package, the Primare DVD30 is an impressive debut into the world of universal players. Taking performance and build quality into the equation, and specifically its ability to act as a rather good legacy stereo CD player when driving an analogue amp, the DVD30 is a very attractive proposition. **HFC**

*Alvin Gold*

**VERDICT**

**SOUND >> 89%**  
 >> SUB RATINGS  
 CD 90% SACD 87% DVD-A 89%

**VISION >> 85%**

**FEATURES >> 84%**

**VALUE >> 83%**

**CONCLUSION**  
 Though lacking some of the whizzer features of the latest Denons and Pioneers, this well rounded player has a welcome touch of musical warmth to counter the sterility of some rivals. Via analogue connections, few universal solutions come close.

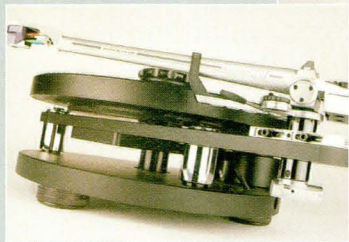
**PRO**  
 Audiophile-quality universal player which works unusually well with CD and which also has a strong video performance legacy inherited from Pioneer.

**CON**  
 Analogue outputs only, but this is hardly an issue when used with a good quality amplifier.

**HI-FI CHOICE OVERALL SCORE >> 85%**

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**Pathos New Classic One** This valve hybrid amplifier has many of the qualities of the Logos but at an affordable price £1275.

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# STEALTH BOMBERS

*The brutal styling of these ECS monos can mean only one thing – business, heavy business*

**PRODUCT** ECS EA-1

**TYPE** Monoblock power amp

**PRICE** £6,000 per pair

**KEY FEATURES** Size (WxHxD): 44x11x43cm

- Weight: 22kg each
- Power output: 180W/8 ohms
- Inputs: Switchable balanced XLR or unbalanced RCA
- High-quality, hand-made power cable

**CONTACT** ☎ 020 843 8880

@ www.ecsamplifiers.co.uk

**E**CS, you may recall, is the company that made an amplifier called the Stealth for Mana Acoustics a few years back. Since then it has taken to beating a more direct path to the music lover's door with the EA-2 stereo power amp and now its doppelganger, the EA-1 monoblock power amp.

ECS is a West London-based PCB manufacturer which makes custom circuit

boards for a wide variety of applications, one being amplification. After the Mana debacle it decided to continue making power amps and after a bit more work on the design came up with the two models currently in production, each of them wholly designed and manufactured in this country.

On the outside, stereo and mono models look identical, only the rear panel giving away the single-minded nature of the EA-1. This features high-quality single-ended phono and balanced XLR sockets with a switch to select between them. There are two sets of WBT speaker terminals for easy bi-wiring.

It's a very similar story under the lid too, as the mono is essentially a stereo with only one output board. You get the same power supply driving one rather than two channels, and as power supplies are the engine of an amplifier

you are getting twice the capacity, albeit delivering only slightly greater power in terms of watts. The stereo EA-2 gives 180 watts a side whereas the mono EA-1 delivers 200 watts from four bi-polar output transistors. Apart from that there are no other specs to suggest that the monoblock is any different to the stereo – it's a pity that distortion measurements aren't included, as they would reveal the advantages conferred by all that extra capacity.

The EA-1 uses an ultra-low-noise FET input stage with a dedicated power supply and high-purity copper PCB track. Being PCB makers, ECS put great store in the effect that the track has on high frequencies and the way that the signal flows. The board naturally has a dedicated ground arrangement. The transformer is a 1500VA monster that makes







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## 'S' series

S3<sup>e</sup>

S5<sup>e</sup>

S6<sup>e</sup>

S8<sup>e</sup>

S9<sup>e</sup>

SR5

C5<sup>e</sup>

C9<sup>e</sup>



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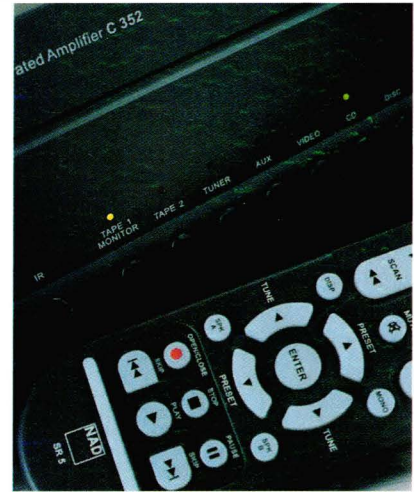
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# NOT SO RAD NAD

NAD's C350 was one of the amplifiers of 2000. Will its replacement prove as successful?

**PRODUCT** NAD C352  
**TYPE** Stereo integrated amplifier  
**PRICE** £350  
**CONTACT** ☎ 01908 319360  
 www.nadelectronics.com

There's a fight going on between two dead philosophers. One – Thomas Kuhn – suggested that scientific and technological developments occur in distinct and radical jumps, while the other – Karl Popper – believed that progress takes place along linear lines of development. This may be a sweeping generalisation, but using the NAD C352 as evidence, Popper's winning.

The C352 builds upon the success of the extremely popular and well-received C350 (Best Buy, HFC 208), with several significant improvements over the previous design. It's a more powerful amp, delivering 2x80 watts, as opposed to 2x60 watts in the older model, and although these are the manufacturer's rated specs, NAD's full disclosure attitude has always made its figures deeply understated. The extra power is thanks to a larger custom-wound toroidal transformer and uprated smoothing capacitors. These are added to a better PCB layout and improved tone controls (contrary to traditional hi-fi wisdom, but undeniably useful in smoothing out poorly produced or aggressively EQ'd recordings).

The C352 uses NAD's proprietary PowerDrive technology, as seen in C320BEE and C370. PowerDrive automatically senses the impedance characteristics of the loudspeaker and adjusts the power supply settings accordingly to best cope with that specific load. In other words, it makes harder to drive speakers easier to cope with.

It's also very feature-rich. It sports seven line inputs, two sets of preamp outputs and power amp inputs. This allows the C352 to act as a step-up preamp or power amp in the upgrade stakes. There's a decent remote control, too. But maybe the most interesting option is the subwoofer output, making it ideal for 2.1 channel systems and reflecting the sub/sat influence of home cinema. Finally, there's a 12-volt trigger for multi-room potential.

## SOUND QUALITY

NAD traditionally has a rich, dynamic and entertaining sound quality; this is sometimes at odds with the modern amplifier zeitgeist, which demands a brighter, more upfront sound. Cleverly, NAD seems to have combined both successfully in the C352. This is a brighter, cleaner sound than 1990s-era NAD, but not so bright as to disenfranchise previous NAD owners. That makes for almost the perfect compromise – so good it doesn't even feel like a compromise.

You get the warm, deep and rich bass that NAD is famous for, but you also get a lovely sense of treble detail and insightful midrange. It has Goldilocks image size – not too big, not too small. This makes for a sound that is solid, tangible and seemingly physically in the room; it is also impressively articulate, capable of defining the vocals of even the most mumbly of singers and differentiating them cleanly from the other instruments.

Take a good modern recording such as *Dear Catastrophe Waitress* by Belle & Sebastian, and the sound is right-sized, effortlessly dynamic and so damn musical you can't help being slightly confused by the combination of boppy perfect pop allied to hyper-depressed

lyrics. That nebulous term 'musical' is painted here with broad strokes – you can even play free jazz and hear what's left of the melody and rhythm without overemphasis.

NAD's amps are usually kept for longer than most (there are still listeners clinging to their original 3020) and it's easy to imagine that the C352 will be the same – it's a real keeper.

There may be no practical reason for C350 owners to 'upgrade' to the C352, but that isn't the rationale behind the improvements. Instead, the subtle evolution in performance and the added grunt makes the revised amp keep up with the Joneses. Or the Marantz. And it succeeds. Brilliantly. **HFC**

Alan Sircom



## VERDICT

**SOUND >>> 85%**



**PRO**

Wonderfully dynamic, powerful and musical sounding amp – once again NAD has read the 'budget' amplifier market correctly with this little wonder.

**FEATURES >>> 85%**



**BUILD >>> 80%**



**CON**

NAD's unique styling exercise continues unabated. This looks a bit too spartan and drab, especially in grey. Er, and there's no phono input.

**VALUE >>> 94%**



## CONCLUSION

NAD has revamped the successful C350 well. The amplifier is more dynamic, more musical and more exciting and will keep up perfectly with the latest fashion statements in hi-fi design. What a pity it looks so dated!

**HI-FI CHOICE OVERALL SCORE >>> 90%**

# BEAMER ENGINE

*Its design may be unusual, but that doesn't stop the new Horizon delivering the vinyl goods*

**PRODUCT** Nottingham Analogue Horizon

**TYPE** Turntable

**PRICE** £529 (inc. Rega RB250 tonearm)

**KEY FEATURES** Size (WxHxD): 42x14x31cm

⦿ Weight: 4kg ⦿ Manual speed change (33/45)

⦿ Badged Rega RB250 arm ⦿ Adjustable VTA arm base

**CONTACT** ☎ 01773 762947 # www.aslgroup.com

**N**ottingham Analogue is a classic small British hi-fi company, a genuine cottage industry based in Underwood near Nottingham and run by a guy who does one of the best impressions of being a nutball in an industry that's not short on competition. But Tom Fletcher, as he's known, is no fool; he has been making turntables and arms for 42 years – not a claim that many can make. Tom realised a while back that longevity depends on keeping demand on a steady, even keel, hence the brand's low profile, but now that he's building a turntable for the newcomer he may have to come out of the closet.

The Horizon is his company's least expensive model yet and it's designed to tempt those who can afford a bit more than the asking price of a Rega or Project and get them onto the Nottingham Analogue ladder.

It's a straightforward, solidly built design based on decent engineering and an unconventional log or beam construction.

Tom's most ambitious turntable, the Anna Log (geddit?), is based on a similar 'beam' design but made out of a length of mahogany rather than the MDF employed here. Here, the beam supports the drive motor, main bearing and tonearm base and sits on three adjustable feet. Supporting these feet is a separate MDF plinth, which with its rubber feet provides an additional layer of decoupling – given the lack of any form of suspension this is more necessary than it might at first appear.

The AC synchronous motor is a tight fit in the beam but not so tight that it can't be moved up and down by hand to get the two-speed pulley precisely in line with the drive belt. The motor is unusual in that it plugs directly into the mains without so much as a transformer and it's possible to upgrade this basic arrangement with most forms of AC filters, or if you want to go the whole hog, an AC regenerator such as the Wave Mechanic.

In the middle of the beam is a hefty bearing for the not insubstantial MDF platter and its dense foam Spacemat. The final element on the beam is a small outrigger with a machined collet to accept an NA-badged Rega RB250 arm. Alternative armboards are available for different arms but the RB250 offers the best price/sound ratio. To aid set-up, the turntable is supplied

with a decent spirit level, appropriate Allen keys and a Polaris Plus alignment protractor, a particularly fine example of the genre.

The set-up procedure is very straightforward and even more so if Nottingham Analogue has supplied one of its cartridges ready-installed. The Horizon came with an Analogue Tracer No.1 (£115) on board so all we had to do was fit the platter, level the beam and set the arm in its board so that it achieved the desired VTA (vertical tracking angle). Even if you have to fit a cartridge, the supplied protractor makes this job as easy as it gets.

Getting the best out of this turntable requires a well isolated surface for it to sit on – a wall shelf or dedicated support of the non-resonant variety. We used a Townshend Seismic Sink stand for this review but put the player on a more basic support and were shocked at the increase in distortion. The same will be true of any non-suspended turntable – a cartridge is designed to read minute vibrations and will reproduce both those stamped into the groove and any others that resonate the platter or tonearm.

## SOUND QUALITY

Once you have worked out that the shiny uncut slab of vinyl that comes with the player is a dust cover rather than the top surface of



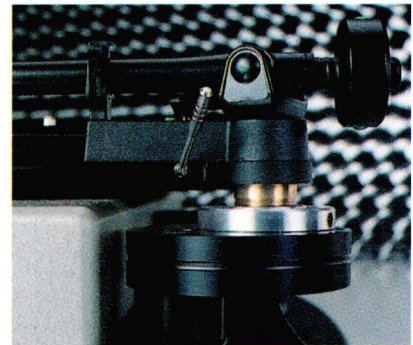
the platter, listening can be indulged with abandon! The Horizon has much in common with its maker's popular Spacedeck – it sounds calm, dynamic and has a good sense of timing. On test, John Fahey's *Railroad* was delivered with a good sense of space around his guitar picking, the music delivered in a relaxed and even manner that you can't help but be drawn into. String tone was good and 'zingy' without being aggressive, while the subtle variations in level between notes were well defined.

The deck's timing is spot on, both perceptibly and according to a strobe check. This means that pieces such as Keith Jarrett's *Köln Concert* are reproduced with a strong sense of rhythmic drive. Admittedly turntables of most varieties have an advantage in this respect over their digital counterparts but the Horizon is stronger than average when compared to its growing collection of peers, among which are the lovely Clearaudio Emotion, Rega P25 and Audio Note TT1. The latter with its built-in suspension has the advantage where a well isolated support is not available, but in other respects the Horizon would have to come very close to the front of this impressive group. This is largely because it has a degree of composure that allows more of the detail to be resolved, with the finer points of complex compositions having a chance to be heard behind whatever the lead instrument or voice is doing. You can identify and follow the quieter instruments in a mix and appreciate what they are playing.

In tonal terms, the Analogue Tracer 1 cartridge supplied for our review has a tendency to favour bass over treble. Cornelius's elastic bass playing sounded tight yet rich with no sense of the mechanical about the replay – the sort of sound that encourages serious volume abuse. This is partly owing to the slight high-frequency roll-off which reduces any tendency toward stridency. A better (probably moving coil) cartridge would perhaps resolve this and so long as you protect the deck from vibration, treble should be open and clean – the RB250 arm is more than up to the job of supporting a Goldring Elite or Sumiko Blue Point Special for instance.

But with the Tracer 1 installed there's still plenty to enjoy, especially if you like double bass. Danny Thompson's playing on Richard Thompson's (no relation) *Old Kit Bag* sounded fantastic next to the guitar – these one-time folkies have a reprieve that suggests many more years together than is actually the case. Another ex-folkster, Joni Mitchell, revealed the deck's capabilities with syncopation. Her *Drycleaner From Des Moines* (from the album *Mingus*), with its brass stabs and gorgeous bass from the hands of Jaco Pastorius, tripped along with surprising nimbleness for a turntable set-up of such modest cost (aided and abetted by Trichord's excellent Dino Plus phono stage).

Next to a typical CD player, or even a highly




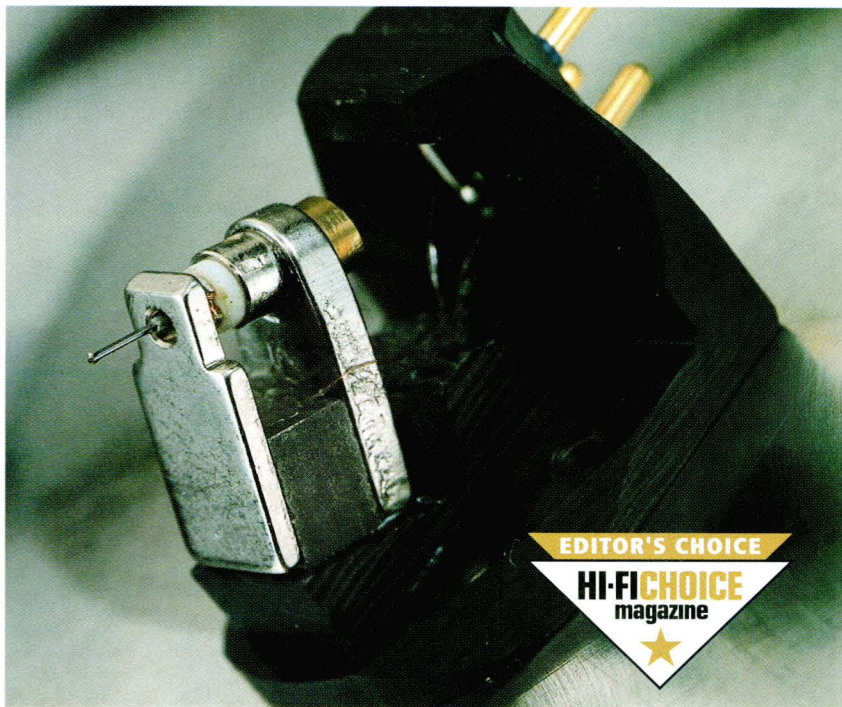
**“Jaco Pastorius’s gorgeous bass playing trips along with surprising nimbleness for a turntable set-up of such modest cost.”**

competent one like Sony's SCD-XA333ES, the Horizon sounds relaxed, warm and smooth – all the treasured qualities of vinyl, including the great sense of body to the sound. It positively relishes a big climax like that on Peace Orchestra's *Double Drums*, the crunchy synth bass oozing from the speakers like rolling glue.

The Horizon is capable of impressive results for what is essentially a £484 turntable (*sans* arm), though it does need decent isolation and/or placement away from speakers. Given this however, it delivers a highly engaging and remarkably assured sound for the price. It does more than most to encourage you to put on your favourite LPs, sit back and bask in the luxurious sound of vinyl. And that, in our book, is what living is all about. **HFC**

Jason Kennedy

<b>VERDICT</b>		
<b>SOUND &gt;&gt; 84%</b>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>FEATURES &gt;&gt; 77%</b>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>BUILD &gt;&gt; 83%</b>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>VALUE &gt;&gt; 89%</b>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p><b>PRO</b> Assured and capable turntable that digs a tight groove like little else at the price.</p> <p><b>CON</b> Sensitivity to the player's supporting surface is not to be underestimated.</p>
<p><b>CONCLUSION</b> If you want to be able to hear all the way into the mix and love to hear a fluid midrange as well as nimble but rich bass lines, then this tidy Nottingham Analogue set-up gives an awful lot of good stuff for the money.</p>		
<b>HI-FI CHOICE OVERALL SCORE &gt;&gt; 86%</b>		



# NAKED KISS

*Wilson Benesch has stripped its Analog cartridge to the bone but there's still plenty of meat to its music*

**PRODUCT** Wilson Benesch Naked Analog

**TYPE** Moving coil phono cartridge

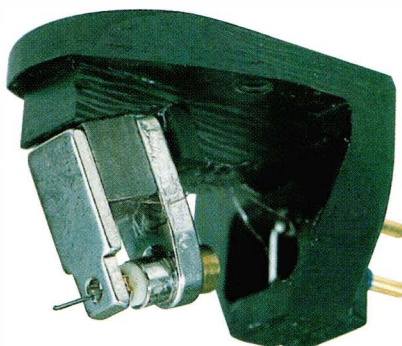
**PRICE** £1,450

**CONTACT** ☎ 0114 285 2656

🌐 [www.wilson-benesch.com](http://www.wilson-benesch.com)

**A**naked cartridge is hardly outrageous these days and stands little chance of competing with Janet Jackson's breast for airtime, but this inherently logical approach to needle management is still in the minority. Pretty much all moving coil (MC) designs look a bit like this when you remove their shells and there are brave souls out there who prize the bodies from regular cartridges to rid this most sensitive device of one potential source of coloration. On the other hand, there are several cartridge makers that use hardwoods to give their creations a certain sound. In most instances the body or shell is there to protect the inner workings from fingers and stray pieces of magnetic material; look at a used open-bodied cartridge under the microscope and you'll be surprised at how many iron filings it has managed to attract.

Wilson Benesch is now offering its Analog moving coil in both covered and Naked form, the latter offering a £400 saving on its brother. The functional ingredients are the same for both – the Analog has an elliptical



stylus tip, boron and alloy cantilever and a carbon fibre mounting bracket. You'll recall that WB are big fans of carbon fibre and use it in their tonearms, loudspeakers and so on to good effect. Using such light, stiff, self-damping material as the backbone for the Analog is therefore a logical progression.

The most unusual thing about this cartridge is the size of the generator, the part which contains the samarium cobalt magnet and anchors the cantilever. By the standards of other open-bodied MCs this is minute. It was developed in collaboration with WB's "Japanese colleagues" and contributes to the Analog's unusually low mass of 4.2 grams. It tracks between 1.4 and 1.8 grams which suggests relatively high compliance for an MC, and a good match for WB's low-mass arms.

## SOUND QUALITY

Installed on a slightly heavier SME Series V tonearm aboard a Model 20 turntable and having its output amplified and EQed by a Tom Evans Groove phono stage, the Naked Analog delivered a stonking performance. The Peace Orchestra sounded upbeat and kicking, the bass proving nimble and suitably juicy if not bone-crunchingly powerful. Keith Jarrett revealed his remarkable sense of timing and the cartridge reproduced the upper registers of his piano with clarity and precision. This particular instrument in its live setting can often sound a bit frizzy at the top but the WB picks out the notes, harmonics and ambience without adding anything of its own. Sweet.

The denser mix of Larry Coryell and band playing a tune called *Scotland* in the jazz rock style was delivered with energy and sonic body – the horn even sounds a bit like a bagpipe, though it's not clear if this is deliberate! Either way the needle tracks the weight and power of Cobham's drumming while allowing the soloists' frenzied efforts to soar over the top. This is clearly a highly capable cartridge that can cope with complexity in an effortless fashion, dealing equally well with the reverb on a horn and the fullness of a bass drum. Lambchop's *Is a Woman* delivered a hefty portion of its cavernous soundstage while allowing the nuances of Kurt Wagner's vocals to be easily understood – well most of them, though it's by no means certain that they all make sense.

The short-lived pinnacle of Jeff Beck's career, *Wired*, features intensity of a variety that you'll rarely hear, and the Naked Analog delivered the kick of the bass drum, the steam coming off the keyboard and his screaming guitar in glorious form. It's about time someone reissued this masterpiece on 180g vinyl.

This is clearly a first-class cartridge and one that will compete way above its price class – if you want to know what turns people into vinyl addicts look no further. The £300 re-tipping cost is just a bonus. **HFC**

*Jason Kennedy*

VERDICT	
<b>SOUND &gt;&gt; 93%</b>	
<b>FEATURES &gt;&gt; 85%</b>	
<b>BUILD &gt;&gt; 88%</b>	
<b>VALUE &gt;&gt; 86%</b>	
<b>CONCLUSION</b>	<p>The Naked Analog is unlikely to be considered a bargain but it puts in a superb performance, its smooth clean highs balanced by a transparent midband and nimble bass. Tracking is also absolutely first class.</p>
<b>PRO</b>	Fast, dynamic and assured – this is what high-end analogue is all about.
<b>CON</b>	Vulnerability is a little higher than usual, and it definitely prefers pristine vinyl.
<b>HI-FI CHOICE OVERALL SCORE &gt;&gt; 90%</b>	



**Sugden Music Master System**

Housed in the distinctive Bijou case design the Music Master has an identical footprint to the other Bijou components and is only slightly taller than the CDMaster. The heatsinks are custom made and anodised in the familiar titanium colour, giving the Music Master a very solid presentation. These attractive aesthetics give the appearance of a solid block of titanium.

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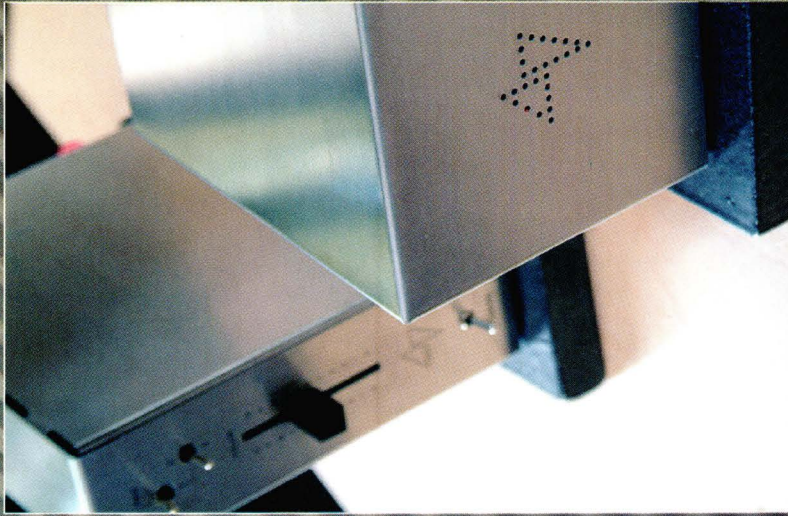
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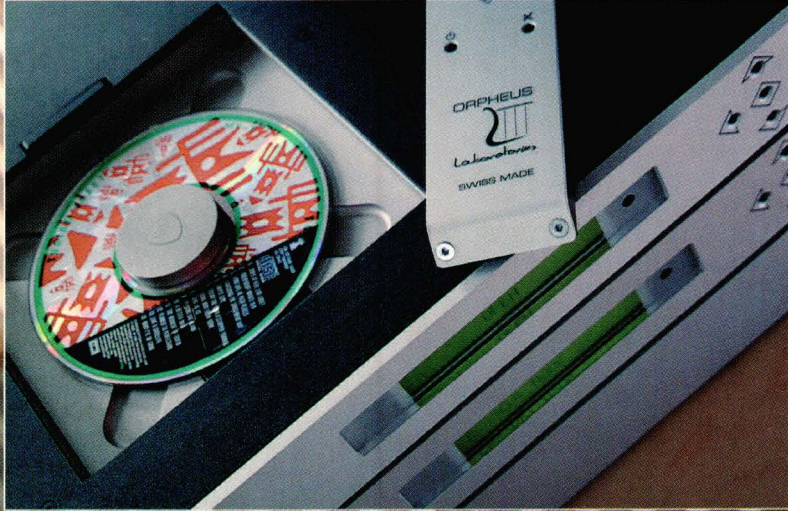


**47 Laboratory**

For some it's Zen - for others, radical. Call it what you will, but at the end of the track, it's all about trusting your ears. About letting the simplicity of design, the energy and flow of the music carry you away.

Small in size, big on sound, and more music than mere audio jewels, 47 Lab distills technology down to its simplest, purest form. And when you listen you'll know that this path - *your path* - is the one to follow. Why? because designer Junji Kimura preserves the life of the music. There are no compromises. No unnecessary flash - no B.S. just dynamic, unadulterated music. Radical? Maybe.

47 Laboratory is now exclusively available at Midland Audio X-change the Shigaraki Line is the first of many solutions to musical wellbeing. Please call John Roberts to find out more about this truly wonderful product.



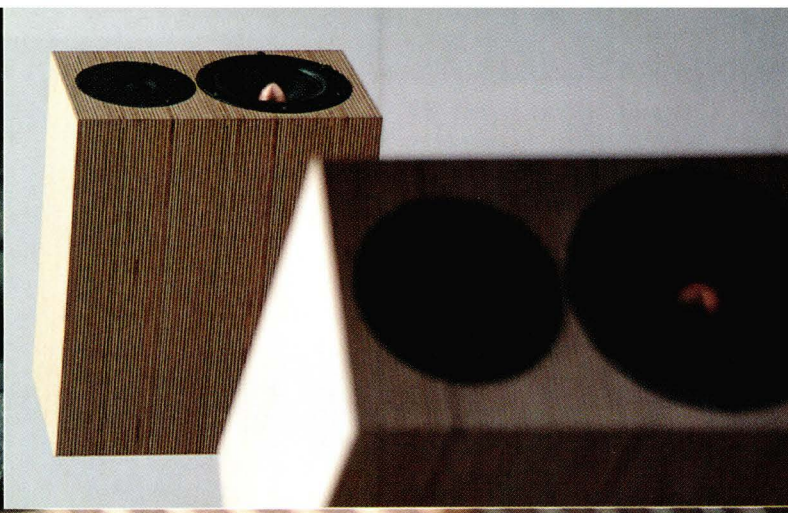
**Orpheus**

Orpheus Zero is an innovative CD drive or player. It reads CD, CD-R and CD-RW formats with 100% precision. Consequently, the standard reading correction mechanism is always switched off during track reading. When used as a player, the incoming data stream is converted into analogue with a 24bit/192kHz component.

Orpheus Two is a versatile multi-channel analogue domain preamplifier with digital control of volume setting. The unit can be configured as a pure stereo preamplifier or as a multi-channel preamplifier. Each input and output channel has an independent volume level set-up to optimise the interfaces between sources having different output levels.

Orpheus Three is an analogue domain power amplifier, 150 W mono and 40 W stereo units are available. They both have XLR and RCA inputs, as well as two speaker outputs (allowing bi wiring of the mono power amplifiers).

Orpheus Three excels with coherence and optimal transient response throughout the whole frequency spectrum, and adapts to every speaker configuration and load.



**Penaudio Charisma**

The Charisma is a small stand mounted loudspeaker for those who want to maximise space and sound quality. The custom-made wood and hand made birch finish make these the most transparent 2 way we have heard. Also now available is the Rebel 2, priced at £395, another great 2 way for the money, truly a giant in a small package, it creates a sound stage and depth you would not imagine. Please take the time to listen to these superb mini monitors.

GROUP TEST & LAB REPORTS: PAUL MESSENGER

# LOUDSPEAKERS

Plenty of variety from this batch of speakers just below the £1,000 mark

Although the prices of the models in this *Ultimate Group Test* are clustered around the £700-£1,000 mark, the speakers themselves are very different from one another, and indeed fall neatly into three quite distinct groups, with absolutely no relationship between size and price.

Indeed, the two compact standmounts are not only the smallest, but they're also among the most expensive, especially if the extra cost of dedicated stands is included. Even without stands, B&W's pretty little 705 comes in at £900, while ATC's more austere and massive SCM12 falls just short of a £1,000 price tag.

If one wonders how these high prices can be justified compared with much larger and less costly four-driver floorstanders, the answer is that bigger isn't necessarily better in loudspeakerland. Simplicity and subtlety are important ingredients, often best served by the smaller loudspeaker, while proof, as ever, generally comes in the listening experience, not the spec sheet.

Physically speaking, the most discrete speakers here are the three compact floorstanders – the two-way varieties from Epos and Vienna, and the super-slim Avance two-and-a-half-way. In terms of driver line-up and/or cone area, these are very similar to the standmounts, and can be expected to perform similarly too.

Indeed, both the two-ways are fitted with internal partitions to reduce the acoustically active volumes of their enclosures – the lowest sections are effectively integrated stands, which may be filled with ballast to improve stability and damping. It could be argued that a dedicated separate stand can potentially offer superior performance, but on both value and cosmetic grounds these ultra-compact floorstanders have a great deal to commend them.

The Focal-JMLab, Triangle and Polk are altogether larger designs, each featuring no fewer than four drive units. They'll move more air, for sure, which is an obvious advantage, but the much larger enclosures will generate more

cabinet coloration too. The extra drivers offer superior control across the spectrum, but add crossover complexity at the same time. In loudspeakerland, effective compromise is all. **HFC**

## EQUIPMENT USED

- ⊕ Naim CDS 3 CD player
- ⊕ Burmester 001 CD player
- ⊕ Linn LP12 turntable
- ⊕ Rega RB1000 tonearm
- ⊕ Linn Akiva, Dynavector XV-1 cartridges
- ⊕ Magnum Dynalab MD 102 tuner
- ⊕ Naim NAC552 preamp
- ⊕ Naim NAP500 power amp
- ⊕ Vertex AQ and Naim cables

## MUSIC USED

- ⊕ White Stripes *Elephant*
- ⊕ Tom Waits *Alice*
- ⊕ Lambchop *Is A Woman*
- ⊕ Mari Boine *Eallin*
- ⊕ Shostakovich *Symphony 11/LSO Live*
- ⊕ Christy Moore *Live At The Point*
- ⊕ BBC Radios 3 & 4 were also used extensively

## ON TEST



ATC SCM12  
£999



AVANCE DANA 670 AV  
£760



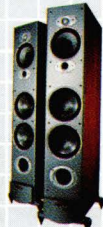
B&W 705  
£900



EPOS M15.2  
£699



FOCAL-JMLAB CHORUS 726 S  
£780



POLK RT110  
£1,000



TRIANGLE ANTAL 202  
£925



VIENNA ACOUSTICS BACH  
£1,000



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## LISTENING TESTS

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

## LAB TESTS

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

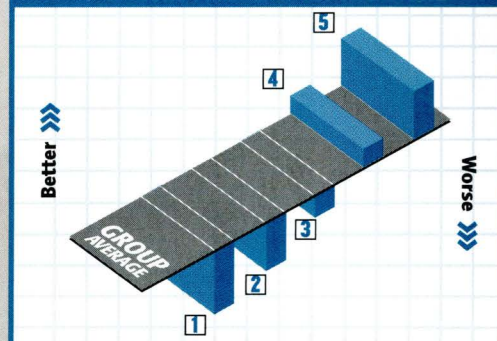
**No other magazine offers an equivalent test and listening programme for comparative tests.**

## LAB REPORTS: THE BAR GRAPHS

Our 3D bar graphs are a simple way of showing how the products compare across five technical parameters. In each case, a percentage is given that falls above or below the group average. In this test, the five parameters are:

- 1] Sensitivity:** A measure of how loud a speaker will go for a given voltage from the amp. It's scaled to 2.83V at 1m (corresponding to 1 watt of power for an 8 ohm load).
- 2] Bass extension:** A speaker's bass behaviour is heavily modified by the room in which it is used. Our figure represents the averaged bass roll-off frequency at -6dB ref the broad midband in a 4.3x2.6x5.5m room.
- 3] Ease of drive:** Peaks and dips both in impedance and phase, along with the average impedance across the audioband, are all considered.
- 4] Overall frequency balance:** These 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.

### OUR BAR GRAPHS: AN EXAMPLE



£999 per pair ☎ 01285 760561 🌐 www.atc.gb.net

# ATC SCM12

Compact standmount features one of ATC's awesome main drivers

A strong whiff of déjà vu emanated from the boxes when this compact monitor was unpacked. Our first impression was that this was a repeat of the SCM20 from 2001. But though presentation and shape are familiar – and these models have plenty of underskin engineering in common too – this more recent SCM12 is a very effective downsizing exercise. Internal volume is reduced from 20 to 12 litres, but more important is the fact that a decent-sized ATC speaker can be sold for less than £1,000 (there is a still less costly SCM7, but a seven-litre enclosure puts it firmly in the miniature category).

ATC is essentially a Pro-Audio-oriented brand, massively over-engineering its drivers in order to survive the notoriously rigorous environment of the modern recording studio. However, true studio monitors tend to be actively driven, with built-in electronic filtering and power amplification, whereas this SCM12 is primarily aimed at domestic users because it's a passive design (with a built-in crossover for driving from a single amplifier).

'Classic' and 'timeless' are the more polite terms for what passes for styling here – a simple wood-veneered box with recessed grille, it could have been manufactured any time in the last thirty years. No disputing its solidity, however, with a total weight of 15kg, the same as the smaller floorstanders here.

Much of that weight is down to the massive main driver magnet and motor, of course, which adopts a 'long-gap/short-coil' approach (to retain linearity under large excursion). ATC's 'Super Linear' magnet technology coats polepieces in a magnetically permeable insulator to inhibit the generation of eddy currents within the motor. The large 75mm voice coil has massive thermal power handling and drives the 125mm diaphragm at its cone/dome junction.

## SOUND QUALITY

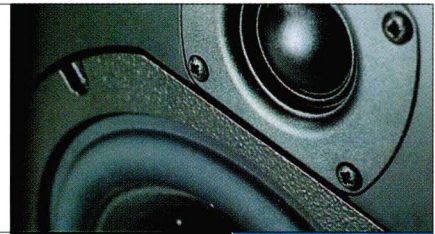
The most impressive thing about this compact speaker is that it doesn't sound anywhere near as small as it looks. This is partly because the designer has traded sensitivity for bass extension, and by going for a well below average sensitivity here, the bass extension can be much greater than the size of the enclosure might suggest.

The SCM12 is also unique in this test group in operating in sealed-box mode, which has several implications, including a bass alignment helped by close-to-wall siting. Even with this bass reinforcement, there's a notably tight and clean bottom end, with impressive ultimate extension and scale alongside considerable grip and convincing authority. There's some lack of warmth and richness through the upper bass and lower midband here, but you'll be hard pushed to find anything cleaner or more informative.

The mid and treble are very well judged indeed, deftly treading the neutrality line and avoiding either forwardness or 'shut in' voicing. The midband in particular is very coherent and expressive, with excellent dynamic tracking, although the top end could perhaps be a little more delicate and transparent.

This very explicit and impressive loudspeaker does sound a little thin overall, but its real strength lies in quite exceptional dynamic grip and subtlety, and the superior linearity of that very classy main driver. Note that the low sensitivity will soak up extra amplifier power, so

carrying out fair comparisons with other speakers can be tricky. **HFC**



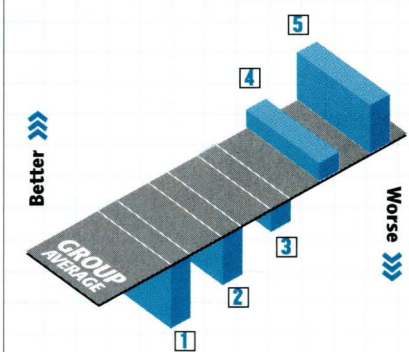
## LAB REPORT

The main driver is oriented towards maintaining accurate linearity and ensuring good headroom when operating continuously at high replay levels. To this end the sensitivity is a modest 85-86dB. Happily the load it presents to the amplifier is reasonably benign, staying above 5 ohms throughout.

The in-room tonal balance, measured under far-field conditions, is unusually smooth, and slightly emphasises the upper midband. The sealed-box bass loading gives a dry alignment with a relatively even output and good ultimate extension. Wall reinforcement will usefully augment the mid-bass, though the upper bass and lower midband regions are likely to remain lean.

The crossover point occurs at 2.8kHz, the acoustic and electrical transitions coinciding on this occasion. The integration is well handled here, with just a slight notch at around 2.3kHz. Pair matching was close enough, though a little below average.

## HOW IT COMPARES



- 1] Sensitivity >> -55%
- 2] Bass extension >> -40%
- 3] Ease of drive >> -20%
- 4] Overall frequency balance >> 15%
- 5] Response smoothness >> 40%

## SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m / 2.83V	85dB	85.5dB
Impedance (nominal / mean)	8ohm	7ohm
Est. bass extension (-6dB, Hz)	62Hz	55Hz

## VERDICT

SOUND >> 85%

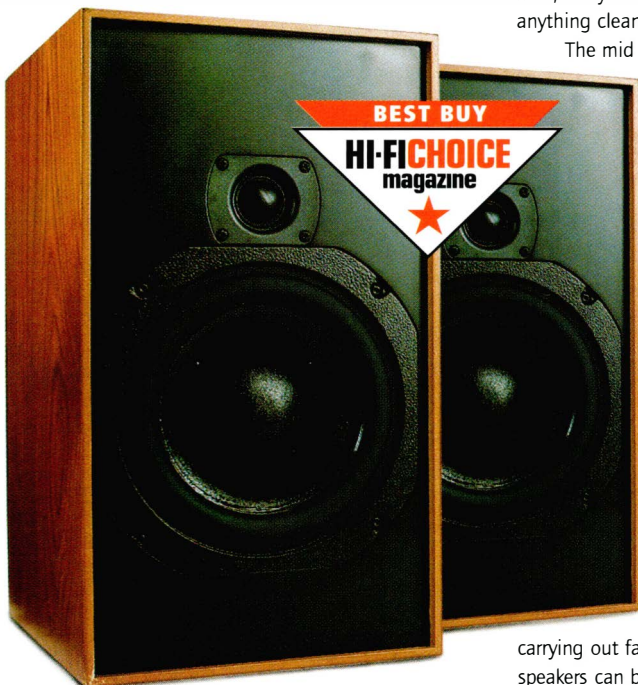
PRACTICALITY >> 85%

BUILD >> 92%

VALUE >> 81%

Massive main driver magnet and 75mm voice coil gives this compact standmount massive grip, headroom and power handling. Best close to walls, it sounds smooth and coherent with great authority, if a little lean in the lower midband.

**HI-FI CHOICE** OVERALL SCORE >> **85%**



£760 per pair ☎ 01462 689140 🌐 www.avance-international.com

## AVANCE DANA 670 AV

*Super-slim Scandinavian floorstander with delicious wood veneer*

The last time we encountered this Scandinavian firm they were showing off some white-finished speakers with enclosures that used some form of concrete. Avance's latest Dana range however, is more conventionally attired – and also considerably better looking – than its forebears. For your £760 you get a quite delectably veneered, unusually slim and very compact floorstander, which – uniquely among those assembled here – even has a little plinth, to improve the aesthetics as well as the stability. Build is clearly pretty solid, in view of the 15kg weight, while the slim front should assist lateral dispersion.

The key to its slim and neat appearance is the use of small-diameter drivers – just 130mm diameter nominal frame size, with cones just 95mm across. There are two of these apparently identical drive units, each

with doped paper cones, moulded frames, fixed 'bullet' metal polepiece extensions, and 25mm voice coils. Operating in a two-and-a-half-way configuration, both these drivers operate in parallel through the bass region, giving a total area a little larger than a single 165mm driver, while the upper one continues up to the tweeter crossover point, its relatively small diameter aiding integration here. Each of these drivers operates in its own separately rear-ported sub-enclosure.

Said tweeter is a 25mm fabric dome device, with short-horn loading. Twin terminal pairs facilitate bi-wiring or bi-amping, and smart brass spikes are supplied for floor coupling, though regrettably without any lock-nuts. As befits its AV designation, all drive units are magnetically shielded so the speakers may be placed close to a TV set.

### SOUND QUALITY

This is a beautifully balanced loudspeaker, and that fact alone ensures a solid score on sound quality grounds. It also has an innate deftness and lightness of touch that seems to make it particularly responsive to subtle nuances through the midband in particular. Stereo images are notably 'out of the box', with fine precision and focus.

It's not entirely smooth – there's a slight upper-mid emphasis which tends to over-sharpen detail a little, and the treble proper sometimes seems to draw a shade too much attention to itself, and can sound a little coarse and untidy with complex or 'splasy' material. Colorations are well controlled, though speech is not entirely clean.

The bottom end has reasonable weight and extension – rather more than one might have expected from the ingredients perhaps. It certainly holds its own pretty well in a group context in terms of weight and extension, though without quite the grip and authority found elsewhere. By the same (or similar) token, dynamic expression is a little muted, and in this respect at least the 670 AV does rather reflect its modest dimensions – small speakers do have a tendency to sound a little weak, dynamically speaking.

This is therefore perhaps not the ideal speaker for the dedicated enthusiast, but it is one of the prettiest looking floorstanders on the market, and it combines those good looks with a very solid all-round sound quality. It's a formidable combination that deserves to put Avance back on the UK map. **HFC**



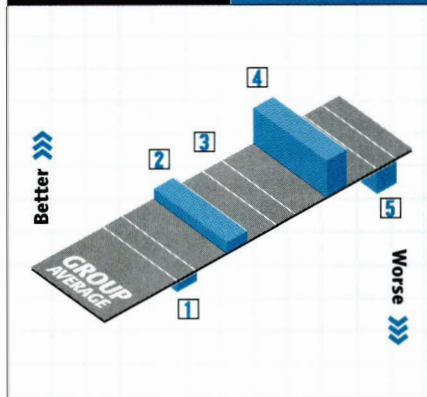
### LAB REPORT

Sensitivity registers a decent enough 88dB, exactly as the specification claims, though this is in the context of a load that dips to 4 ohms at low frequencies, where the two main drivers are operating in parallel. The port here is tuned to 50Hz, and the trace is smooth apart from a slight perturbation at 300Hz.

The far-field in-room averaged response shows a most impressive overall tonal balance, holding within good limits from 30Hz up to 15kHz, albeit without the smoothness found elsewhere. There are modest peaks at 400Hz, 900Hz and 6kHz, and a slight crossover notch at 2kHz. Average output is also a bit weak through the upper bass and lower midband.

Electrically speaking the crossover point occurs at 2kHz, though a wide overlap means that the 3kHz acoustic transition extends from 2kHz right up to 6kHz. Pair matching is pretty good, though not exceptionally so.

### HOW IT COMPARES



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

### SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m / 28 $\Omega$	88dB	88dB
Impedance (nominal/mean)	4 $\Omega$ m	6.5ohm
Est. bass extension (-6dB, Hz)	50Hz	30Hz

### VERDICT

**SOUND >> 81%**



**PRACTICALITY >> 81%**



**BUILD >> 89%**



**VALUE >> 87%**



Beautifully veneered, this ultra-slim and very pretty two-and-a-half-way floorstander has an exceptionally neutral and well-crafted tonal balance, though dynamics could have had a bit more tension and vigour to them.

**HI-FI CHOICE**  
OVERALL SCORE >> **84%**



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# B&W 705

*Classy standmount with external tweeter and advanced enclosure*

The most obvious similarity between B&W's earlier CDM-1NT (of the CDM-NT-series which the 700-series replaced) and the 705 is the external tube-loaded tweeter. But whereas the former's chunky lines were starting to look a little dated, the new 705 has a sleeker, more streamlined look. It has classy real-wood veneer, and neat front-to-back tapering to help avoid the parallel surfaces that 'focus' internal standing waves. The curved single-piece front and top ensures great stiffness alongside good acoustics. There's also a significant price rise – up to £900 from its predecessor's £750.

The external tweeter provides wide distribution for the high frequencies, while also creating appropriate time alignment between the two drivers. Below the 25mm alloy dome tweeter is a 165mm cast-frame bass/mid driver with 120mm diameter yellow woven Kevlar cone. It features what B&W calls a 'balanced drive' motor, with improved magnetic field symmetry and reduced variations in inductance. A front 'Flowport' reflex-loads the main driver, and a foam bung is supplied to block this if preferred – possibly useful if the speaker has to be close to a wall.

With an all-up weight of 9.5kg, it's the lightest in our test group, but still feels solidly built. Our samples came finished in an attractive cherrywood real-wood veneer, but maple, American walnut, 'rosenut' and black ash are other options. Twin terminal pairs provide bi-wire/amp capabilities.

## SOUND QUALITY

The first thing one notices with this 705 is the sort of freedom from 'boxy' colorations that's uncommon at any price, and which could probably give B&W's more costly Nautilus 805 quite a run for its money. It's solid evidence that standmounts offer their own advantages.

The 705 is really best kept clear of walls, in order to take advantage of its fine midband clarity, superior stereo imaging and wide dispersion, even though

that might well leave the bass end a little light and dry. However, as usual it's worth experimenting with positioning, as rooms vary dramatically, and some wall reinforcement might well be preferred in some cases here.

Given the ingredients, it's hardly surprising that this is no deep-bass excavator, and indeed some may find it a little too bass-shy for their taste. For movie replay, additional subwoofery will certainly be required, but for much musical material the little B&W's bass has an attractive clarity and lightness of touch – one might describe it as a Kylie bottom end – small, but beautifully formed.

The midband has a little extra emphasis, as has the lower treble, while the presence – typically of B&W's models – is slightly restrained. While the net result is not strictly neutral, it's a clever compromise that avoids aggressiveness but preserves good detail, alongside a notably wide dynamic range and good expression. A crucial contributing factor is that the top end has a sweetness and delicacy normally associated with more costly models, and this all adds up to a speaker that's both informative and easy to listen to at the same time.

That, above all, distinguishes this speaker. It's always inviting and very easy to enjoy, does very little wrong and most things rather well. Ultimately it's a very fine compromise, which, after all, is what the art of speaker design is all about. **HFC**



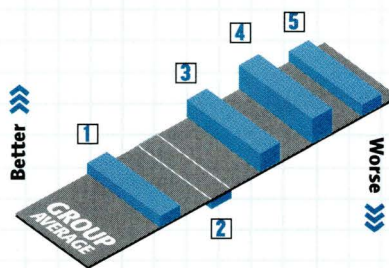
## LAB REPORT

B&W's claim for 89dB sensitivity seems well founded, and is accompanied by a relatively benign impedance characteristic that stays mostly above 6 ohms and never falls below 5 ohms, with just the merest hint of perturbation at 1kHz. The port here is tuned to around 41Hz, and its output seems well damped.

The overall tonal balance looks well enough ordered, though it could have been smoother and is not without certain obvious characteristics. The midband is a shade prominent, 250-800Hz, while the presence zone output, 1.5-3.5kHz, is a trifle shy. A modest 4.5kHz peak will add some top end 'zing'. The bass below 200Hz is a little weak overall, though decent extension is maintained down to 30Hz under in-room conditions.

The 705's crossover point is at 2kHz electrically speaking, though the actual acoustic transition is close to 3.5kHz. The pair-match here was impressively close.

## HOW IT COMPARES



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

## SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	89dB	89dB
Impedance (nominal/mean)	8ohm	9ohm
Est. bass extension (-6dB, Hz)	38Hz	35Hz

## VERDICT

**SOUND >> 86%**

**PRACTICALITY >> 84%**

**BUILD >> 90%**

**VALUE >> 84%**

This pretty little standmount is always inviting and very easy to enjoy. It lacks some bass weight and welly, but is otherwise a very good compromise, with a fine freedom from boxiness and a sweet and open top end.

**HI-FI CHOICE**  
OVERALL SCORE >> **86%**

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# EPOS M15.2

Respected brand's compact floorstander gets a revamp

**A** firm favourite among the audiophile community, this specialist speaker brand was originally founded by Robin Marshall in 1984, ran under a Mordaunt-Short umbrella through most of the 1990s, and is now owned and operated by hi-fi electronics specialist Creek Audio.

This M15.2 replaces the M15, which we reviewed only a little over a year ago in *HFC* 237. Not surprisingly, the two are very similar, though the good news is that the price has come down from £800 to £700.

The most obvious other change is that the moulded front baffle with integral main driver basket is replaced by a more conventional cast chassis driver, allowing the front to be fully veneered. Other changes include retuning the main driver to a lower frequency, to extend the bass response, and a modest increase in enclosure height.

Otherwise, the two-driver, two-way line-up looks entirely familiar. The main driver has a flared plastic cone 115mm in diameter, and is

fitted with a fixed phase plug. The tweeter has a 25mm metal dome under a mesh protective cover and the crossover network here is deliberately minimalist, with just a single capacitor providing the tweeter with protection from low frequencies.

The whole thing is covered by a very classy real wood veneer (in light, dark or black cherry options), and looks that much better for the nicely rounded edges. It's also remarkably solid, weighing 16kg and built from 24mm MDF. The 8mm spikes deserve an award of their own, not only for their sheer class but also for their engineering excellence.

## SOUND QUALITY

The similarities between the M15.2 and its predecessor were obvious on audition. Once again we find a sound which combines directness with good communication skills, but which is somewhat marred by minor but significant tonal balance anomalies.

The coherence and integration through the 'difficult' crossover region is excellent here, and this has much to do with the natural and informative way in which speech and singing communicate. However, there's also a measure of over-projection in the upper midband, coupled with a relative lack of output through the lower midrange registers. Male voices, for example, have a measure of pinched, nasal coloration, and also sound rather 'small', as their natural chestiness seems suppressed. Tom Waits's gravelly tones somehow lacked their usual ruffness and menace.

The overall character, in consequence, is a little 'cool', giving very explicit detail, but insufficient 'warmth' and 'body' through the upper bass and lower midband. Orchestral cellos sound a little undernourished in consequence, and bass guitar harmonics lack some richness. There's some compensation in the fine bass extension and good low-down weight, which is impressive for a 165mm-driven two-way, but in truth, delivering the frequency extremes matters rather less than preserving midband harmonic structures.

This good-looking and attractively compact floorstander shows fine voice projection and coherence. For this Mk2 version the styling has been improved and the price is reduced, yet while the low bass weight is impressive, a lack of output through the upper bass and lower midband remains a significant weakness. The net result is a rather thin sound with a lack of warmth. **HFC**



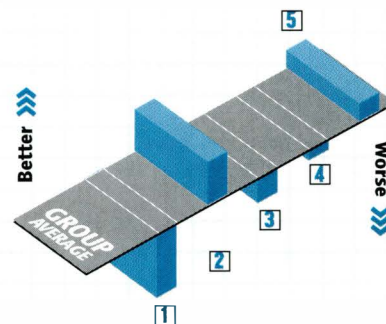
## LAB REPORT

The M15.2 struggles a little to meet its claimed 87dB sensitivity and under our test regime it seems 85-86dB would be closer to the mark. The reasons aren't hard to figure out. First, this speaker has a very benign impedance that only falls below 6 ohms when it encounters very high frequencies. Second, it has unusually good bass extension for its size.

The in-room far-field averaged responses are unusually smooth, but also show a distinct peak is centred on 1kHz, output falling away very slowly either side. Notably strong output is generated in the 30-60Hz bass octave, together with some lack of output between 60-200Hz. Wall reinforcement is worth investigating here.

The impedance reveals a minor resonance centred on 800Hz. The electrical crossover point is around 3.3kHz, while the acoustic transition is deferred until a high 6kHz. The pair-match is good enough, albeit with a slight error around 500-600Hz.

## HOW IT COMPARES



- 1] Sensitivity >> -55%
- 2] Bass extension >> 35%
- 3] Ease of drive >> -20%
- 4] Overall frequency balance >> -10%
- 5] Response smoothness >> 15%

## SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	87dB	85.5dB
Impedance (nominal/mean)	8ohm	9ohm
Est. bass extension (-6dB, Hz)	50Hz	25Hz

## VERDICT

**SOUND >> 75%**

**PRACTICALITY >> 83%**

**BUILD >> 88%**

**VALUE >> 78%**

Good-looking compact floorstander has fine voice projection and coherence, while the styling has been improved and price reduced for this Mk2. Low bass weight is impressive, but lacks high bass and lower midband warmth.

**HI-FI CHOICE 78%**  
OVER ALL SCORE >>



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## FOCAL-JMLAB CHORUS 726 S

*We love its little brothers, but is this three-way worth the premium?*

This leading French hi-fi speaker brand is proving popular with British customers, and while the Utopia models sit at the glamour end of the business, the new S-type Chorus models represent the much more affordable face of Focal-JMLab, so inevitably account for the majority of sales.

In recent months we've tried out both the two-way standmount 706 S and the two-and-a-half-way floorstanding 716 S, and both received Best Buy ratings. This Chorus 726 S logically sits on the next rung up the ladder – a full three-way with one extra driver, a slightly larger box and £200 extra on the price over the 716 S, which seems quite a hefty premium to justify.

The port-loaded box features twin 165mm bass drivers, a subtly different third 165mm unit for the midrange-only duties, plus one of Focal's highly regarded 'inverted dome' tweeters. The bass and mid drivers have cast

frames and 'polyglass' cones, with glass 'microball' damping. The new TNC tweeter has a 28kHz bandwidth, a push-pull double neodymium magnet and aluminium/magnesium alloy 25mm diaphragm. Floor coupling consists of four rubber feet with secure sockets for the supplied 8mm spikes.

If the ingredients are classy, the enclosure is much more basic, not to say rather monolithic, with the long grille in place. The drivers are nicely flush-mounted, and the wood-veneered side panels are finished in a choice of black ash, cherry or calvados, providing nice decoration around the laminated front, back and top.

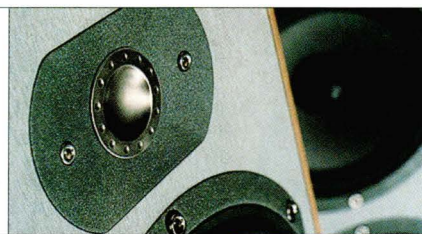
### SOUND QUALITY

As one might expect, this generously proportioned, multi-driver three-way is best kept well clear of walls, though the bass alignment is quite 'dry', so some wall proximity can be tolerated if the room layout so dictates.

The first impression was of the sheer generosity of the Chorus's sound. This is a good sized loudspeaker, and it delivers a similarly good-sized sound, with realistic scale and useful dynamic expression. The bass doesn't have quite the extension and 'slam' one might have expected from the size of this speaker, and there's a little thickening and 'heaviness' in the upper bass region, but these are minor criticisms.

The top end is similarly impressive – very clean and precise, if perhaps a little too inclined to draw attention to itself. Which is precisely what the midrange here fails to do. Given the success of the 706 S and 716 S, it was reasonable to expect that this three-way would perform a similar trick. But the 726 S's midrange proved strangely disappointing, lacking any real grip, brio or excitement, so that the net result proved less than thrilling in terms of excitement and communication. Although it's hard to say why, this 726 S simply lacks the tension and transparency found in the Triangle Antal 202, which is very similar in size and configuration.

Although it wasn't possible to compare the 726 S directly to the 716 S, the evidence of this group test must question whether this three-way really offers superior sound quality to its less costly and essentially simpler range-mate. This larger model has slightly greater loudness capability of course, but it's hard to perceive any other real advantages. **HFC**



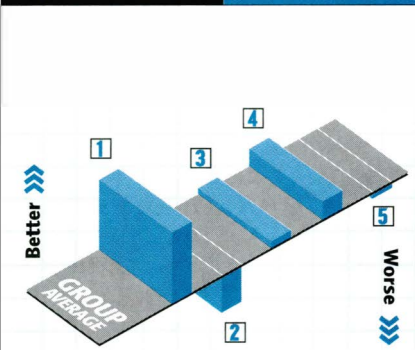
### LAB REPORT

The 726 S registered an impressively high sensitivity of 91-92dB, exactly in line with the 91.5dB claim. Two factors contribute to this: the impedance is low, especially through the upper bass, dipping to a current-hungry 3-ohm minimum at 120Hz; secondly, bass extension is unexceptional, output rolling off steadily below 60Hz, despite the 40Hz-tuned port contribution.

The in-room far-field averaged traces look a little lumpy below 150Hz (where room interaction dominates), with some excess 80-130Hz. Above 150Hz it all looks pretty smooth and well controlled apart from a notch around 480Hz, and a broad but shallow presence depression at 1.8-3.5kHz.

In this three-way the twin terminal pairs separate the bass section from the mid/treble drivers, crossing over at 250Hz electrically. Acoustically the crossover point actually occurs at 220Hz, but with a wide overlap up to 440Hz.

### HOW IT COMPARES



- 1] Sensitivity >> 60%
- 2] Bass extension >> 30%
- 3] Ease of drive >> 5%
- 4] Overall frequency balance >> 15%
- 5] Response smoothness >> -5%

### SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	91.5dB	91.5dB
Impedance (nominal/mean)	8ohm	7.5ohm
Est. bass extension (-6dB, Hz)	45Hz	55Hz

### VERDICT

**SOUND >> 78%**

Very similar to the 716 S, its bigger three-way brother is a decent enough speaker in its own right, and will of course go slightly louder, but lacks the smaller model's midband openness, transparency and dynamic tension.

**PRACTICALITY >> 77%**

**BUILD >> 83%**

**VALUE >> 82%**

**HI-FI CHOICE**  
OVERALL SCORE >> **80%**



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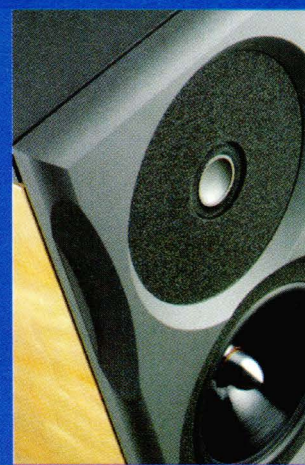


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## POLK RTI10

*Big floorstander has attractively slim styling and plenty of drivers*

One of the biggest speaker makers in the US, Polk might never have managed that level of success in the UK, but its speakers are always interesting, innovative and often good value for money.

These new RTi-series models have large enclosures clad in real-wood veneer, and bags of drivers too, yet the price tags seem far from unreasonable for all that. At £1,000 per pair, this RTi10 is at the top of this test group's range to be sure, yet it's also comfortably the largest and heaviest of those assembled here, and probably the most complex too, especially when you look at the number of plastic mouldings.

Though it looks like a three-way, in fact it seems to work in two-and-a-half-way mode. Twin 165mm drivers with pressed steel frames and 135mm plastic cones perform bass-only duties. These are port-loaded by two large ports, the one on the rear a 'Power Port Plus', which incorporates a large plastic deflector for

some unspecified reason. A nominally similar-size driver with a rather smaller cone is used for bass/midrange, operating in its own front-port-loaded sub-enclosure. A silver-coloured 25mm fabric dome tweeter, whose neodymium magnet has its own heatsink (useful, since neodymium doesn't like it when things get too hot) completes the driver line-up. The drivers are magnetically shielded to avoid interfering with video displays.

The enclosure is slimmer than most, yet unusually deep in compensation, so Polk provides an unusual arrangement for ensuring lateral stability, with a pair of moulded outriggers for each speaker, in combination with large plastic cones in place of spikes. The box is 19mm MDF, braced internally and wrapped in a slightly bland and well polished real cherry or black oak real-wood veneers.

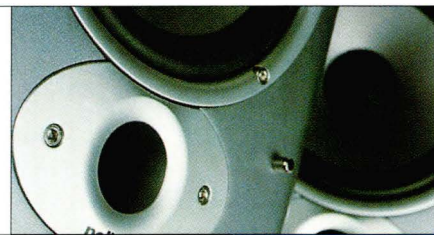
### SOUND QUALITY

If this one's right, the others must clearly be wrong – and vice versa of course. The first thing to grab the attention is the strength of the treble, and that's quickly followed by noticing that there's a lot of bass around too. The real heart of the problem here, however, is actually that there's not enough midrange output, relatively speaking – as the measured in-room response traces amply confirm.

There's no avoiding this tonal balance anomaly, though the ears do adjust to it quite quickly, and it's not particularly unpleasant once one becomes adjusted – just wrong! In practice it's actually a bit like applying a permanent 'loudness' contour – a specialised tone control that's rarely found these days, which boosts the bass and treble zones so as to improve intelligibility at low levels.

And to some extent it works, though there's always a little too much strength in the lower treble and lower midband here. Both of these proved somewhat difficult to ignore, the former adding a general touch of 'sizzle' to proceedings, while the latter makes male voices, for example, sound rather thickened and 'chesty'.

The big and beautiful RTi10 delivers a big and generous sound that's particularly effective at low listening levels, though ultimately its balance anomalies remain a limiting factor. It's interesting to speculate that the transition from line-source radiation through the bass region to the point-source radiation that operates in the mid and treble might be partly responsible. **HFC**

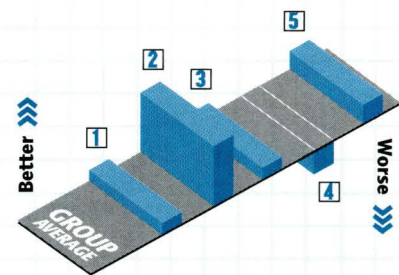


### LAB REPORT

Polk claims a sensitivity of 89dB, which is probably about right for a speaker which, under far-field in-room conditions, is rather stronger than that (around 91dB) through the bass region (below 170Hz) and weaker (around 87dB) through the midband (180Hz–2kHz). The treble subsequently recovers, output at 3.5kHz registering 3dB stronger than 1.4kHz. Each of these portions of the spectrum is smoother than average, but the lack of relative midband output undoubtedly has dramatic subjective consequences.

The load here is quite complex, though it never falls below 5 ohms, while the impedance trace does show the occasional minor resonance ripple. The twin terminal pairs separate the two bass-only drivers from the rest, their roll-off commencing at 110Hz, though they continue to contribute right up to 800Hz, while the bass/mid driver comes into action above 50Hz. Pair-matching was found to be a little below average.

### HOW IT COMPARES



- 1] Sensitivity >> 10%
- 2] Bass extension >> 50%
- 3] Ease of drive >> 10%
- 4] Overall frequency balance >> -20%
- 5] Response smoothness >> 15%

### SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	89dB	89dB
Impedance (nominal/mean)	8ohm	7.1ohm
Est. bass extension (-6dB, Hz)	35Hz	<20Hz

### VERDICT

**SOUND >> 73%**

**PRACTICALITY >> 75%**

**BUILD >> 85%**

**VALUE >> 75%**

Big and beautiful floorstander delivers a big and generous sound, which is particularly effective at low listening levels. It goes loud and has particularly good bass, but ultimately the rather recessed midband is its limiting factor.

**HI-FI CHOICE**  
OVERALL SCORE >> **75%**

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# TRIANGLE ANTAL 202

Not a 'pretty' speaker, but one with very distinctive engineering

This Antal 202 is part of Triangle's range of vinyl-covered 'budget' models, known as Espace, and shows a close similarity to an Antal XS which *HFC* tested – and awarded Best Buy status – back in 2001.

It's not a very pretty speaker, it must be said, lacking the real-wood veneers which are now virtually ubiquitous at the sort of prices this group falls into. Instead you get a convex front panel in black-painted MDF, surrounded and backed by a rather nondescript vinyl woodprint. However, an alternative Espace range, suffixed EX, offers the same models with real-wood veneer at a price premium.

The Antal 202 is a full three-way design, combining a pair of port-loaded 165mm bass-only drivers operating in tandem, with a 130mm midrange drive unit and a 25mm titanium dome tweeter. Triangle uses cast chassis and paper cone diaphragms throughout, and while the two bass drivers

have the normal synthetic rubber surrounds, the midrange driver is unusual in using a pleated surround – an old-fashioned technique which Triangle has long favoured, presumably because it has lower hysteresis (energy storage) than rubber.

Underneath, four little brass domes are threaded for 6mm spikes; regrettably there are no lock-nuts here.

### SOUND QUALITY

Room measurement indicated accurately enough that this speaker was likely to work best when clear of walls, though some close-to-wall reinforcement can also be tolerated with only mild mid-bass excess. Either way, there is a mild tendency towards 'heaviness' that occasionally intrudes where the disc being spun shares a similar character – Lambchop's *Is a Woman* is an obvious example – but for the most part the 202 seems very well judged, while slightly favouring 'thump' over 'weight'.

Whatever the material, the Antal 202 delivers an impressively large and weighty sound. This is a big, warm, and comfortable speaker, but one which also manages to avoid the bottom-end dominance that all too often comes with large and inexpensive three-ways.

However, its best trick lies further up the range, in a midband of unusual clarity and transparency, well able to reveal subtle nuances while also unambiguously delineating delicate dynamic shading. It's not entirely free from coloration – that 800Hz peak measured on the in-room responses is clearly audible as a slight boxiness or nasality on voices, for example – but the coloration doesn't seem unduly intrusive, and doesn't detract from its fine coherence and communication skills.

The top end might not be quite up to the standard of the midband, but it's clean enough nonetheless, well judged in relative level, and seamlessly integrated with the rest. It could be a little sweeter and more transparent maybe, but then this isn't a 'high-end' speaker, and it certainly does as much as one's entitled to expect.

Triangle's Antal 202 shares with its predecessor the observation that it's not the prettiest speaker around, but it also shares a similarly superior sound quality, with a rare combination of scale, dynamic tension and delicacy, ensuring a continuing Best Buy rating for this large three-way design. **HFC**



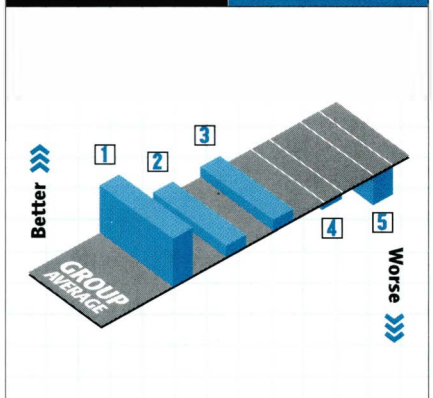
### LAB REPORT

Triangle's claim for a high 91dB sensitivity is confirmed in our tests, though it should be noted that the impedance drops to a lowish 4 ohms around 1kHz. The port is tuned to a low 35Hz here, and the impedance trace looks smooth enough apart from a minor resonance 'glitch' at 200Hz. The twin terminal pair divide the bass from the mid and treble, crossing over just below the 500Hz mark.

However, the bass drivers continue to contribute up to 900Hz, and this probably explains the rather obvious +3dB peak around 700Hz -1kHz, that is the most obvious feature of the in-room averaged far-field frequency response.

That peak aside, the midband is notably flat, from 150Hz right up to 2.5kHz. The bass could have been smoother, and tends to emphasise 100Hz, while the pair match proved a little disappointing, with some variations in both midband and treble.

### HOW IT COMPARES



- 1] Sensitivity >> 40%
- 2] Bass extension >> 10%
- 3] Ease of drive >> 10%
- 4] Overall frequency balance >> -5%
- 5] Response smoothness >> -25%

### SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	91dB	91dB
Impedance (nominal/mean)	80hm	6.7ohm
Est. bass extension (-6dB, Hz)	50Hz	30Hz

### VERDICT

**SOUND >> 87%**



**PRACTICALITY >> 78%**



**BUILD >> 80%**



**VALUE >> 88%**



Triangle's Antal 202 shares with its predecessor the observation that it's not the prettiest speaker around, but it also shares a similarly superior sound quality, with a rare combination of scale, dynamic tension and delicacy.

**HI-FI CHOICE**  
OVERALL SCORE >> **87%**



£1,000 per pair ☎ 01235 511166 🌐 www.vienna-acoustics.com

## VIENNA ACOUSTICS BACH

*An Austrian speaker with a beautiful finish and laid-back sound*

No prizes for guessing that Vienna Acoustics comes from Austria, or perhaps for the observation that it pays particular attention to the highest standards of finish and presentation. Our previous reviews of this brand's Mozart and Schonberg models found that both were noteworthy for their very attractive visual appearance – the lovely rosewood veneer in the former contrasting with the strikingly contemporary curved metal casework of the latter.

Although the Bach is less striking than either of the above, its excellent glossy lacquer finish and high-class, real-wood veneer are again very much in evidence, and a definite incentive to take a close-up look.

In other respects this looks like a fairly conventional floorstanding two-way, port-loaded at the rear. And as is usually the case with such a configuration, the full enclosure height is not needed to load the main driver

appropriately. The lowest 20cm or so is acoustically blanked off, and available for adding some damping and mass loading material like sand – theoretically at least. There's a hole in the base for adding such stuff, plus a bung to stop it all running out again. Mass-loading could well be worthwhile here, especially since floor coupling uses just 6mm spikes, and no separate plinth is supplied to extend the stability footprint.

The main driver has a 170mm cast chassis and a triple-coated 115mm paper cone, while the tweeter has a 25mm fabric dome. Just a single pair of top-quality terminals is used, and these are fixed through a substantial nameplate that presumably mounts the crossover network. The latter uses high-quality components, including air-core chokes, MKP capacitors and metal film resistors.

### SOUND QUALITY

When initially connected, these pretty little floorstanders sounded distinctly muffled, the test programme subsequently revealing that a crossover fault was reducing the upper treble of one of the pair. Our second pair delivered a much more satisfactory performance, though not without its fair share of idiosyncrasy.

The Bach has a similar overall tonal character to those other two Vienna models we've tested recently, with a decidedly laid-back presence band, so that voices, for example, tend to come into focus a little behind the line of the speakers. This is a little disconcerting on direct comparison, but the ear/brain does adjust to the shift in perspectives, resulting in a sound that is both pleasant and notably easy on the ears. The plus side is that there's no way this speaker will sound aggressive, even when playing it loud, but the corollary is that it's sometimes necessary to raise the volume somewhat to hear speech clearly, for example.

That aside, the treble proper is clean, clear and sounds unusually coherent too, so plenty of fine detail comes across clearly. The bass could be more even – it packs a bit of a thump, and could have more warmth, but it remains quite convincing nonetheless, thanks to very well controlled box colorations.

While the price seems a little high in the context of this test group, the Bach's excellent surface finish and quality veneer work is an obvious plus, and its sound has great charm too, especially for those who prefer a speaker with a laid-back sonic presentation. **HFC**

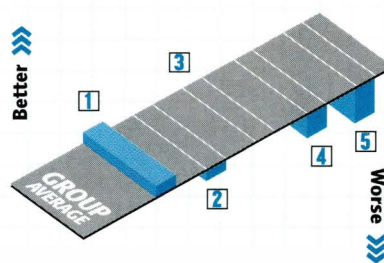


### LAB REPORT

Trouble surfaced when pair-match checking the original Bachs, which showed one of the pair down in the upper treble, and confirmed a crossover problem by a corresponding variation in impedance. The replacement pair showed no such problem, and the impedance was impressively free of glitches.

A sensitivity of 90dB is claimed, and while that seems a shade optimistic, 89dB is just about achieved. The far-field in-room responses are rather unusual: the bass end is well aligned, if somewhat uneven, while the upper bass and lower midband, 150-400Hz, is rather shy. Output peaks up somewhat at 400Hz and 800Hz before declining progressively but quite dramatically into the presence zone: the trough at 3kHz is 9dB below that 800Hz peak. By 6kHz the treble is more or less restored to neutrality. In all, it's a trace which will have substantial subjective consequences.

### HOW IT COMPARES



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

### SPECIFICATIONS

Measurement	Rated	Actual
Sensitivity @ 1m/2.83V	90dB	89dB
Impedance (nominal/mean)	6ohm	7.2ohm
Est. bass extension (-6dB, Hz)	38Hz	35Hz

### VERDICT

**SOUND >> 74%**

**PRACTICALITY >> 82%**

**BUILD >> 91%**

**VALUE >> 72%**

The price can be justified in view of the Bach's excellent surface finish and high quality real-wood veneerwork. The sound has considerable charm too, especially for those who prefer a speaker with a laid-back sonic presentation.

**HI-FI CHOICE**  
OVERALL SCORE >> **74%**

# CONCLUSIONS

*It's not just size that varies with this group – there's a real mix of sonic styles too*

**N**one of the models in this group is perfect, simply because all speakers involve compromise between conflicting variables, but the spread of choice here has a wide range of options to suit all tastes and systems.

The price range is quite modest, so rather than grouping the speakers in price segments, it makes more sense to divide them into types. They fall broadly into three camps: two standmounts, three compact floorstanders, and three large floorstanders.

The two standmounts are among the most impressive sonically, despite their modest size. Each has its own distinct character, and it's difficult to say that one is necessarily better than the other.

The £900 B&W 705 is arguably the better all-rounder. It has a lovely freedom from midband boxiness and a deliciously transparent and sweet top end, though it does lack serious bass grunt and power.

For an extra £100 the ATC SCM12 has a more Pro-oriented

flavour – rather less delicate at the top end, but with great midband smoothness and bass authority, albeit with some leanness in the lower midband.

Of the three compact floorstanders, the two-and-a-half-way Avance Dana 670 AV impresses with its superior tonal balance neutrality, even though dynamics are a little weak. The Epos has very superior voice-band coherence, but is another model that's weak in the upper bass and lower midband, while the Vienna

is most obviously distinguished by its very laid-back presence.

Among the large floorstanders, the Triangle Antal 202 sets the Best Buy pace with its very superior midband tension and transparency. The Focal-JMLab Chorus 726 S can match it through the bass region, but its voice band proved rather dull, while the impressively dressed Polk RTi10 has a very decent dynamic range but sounds rather too recessed across the whole of the midband. **HFC**

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## HINTS AND TIPS

- ⊕ Floor-coupling spikes should have tight lock-nuts, but don't over-tighten these or you'll strip the socket threads.
- ⊕ Standmounts require the best stands to achieve best results.
- ⊕ Finding the right place to put the

loudspeakers acoustically is very important. Do take time and trouble experimenting.  
⊕ Speakers tend to improve steadily over the first 100 hours or so.  
⊕ Use decent speaker cable, if you want your system to sound its best.

## LOUDSPEAKERS AT A GLANCE



MAKE MODEL	ATC SCM12	Avance Dana 670 AV	B&W 705	Epos M15.2	Focal-JMLab Chorus 726 S	Polk RTi10	Triangle Antal 202	Vienna Acoustics Bach
<b>PRICE</b>	£999	£760	£900	£699	£780	£1,000	£925	£1,000
<b>SOUND</b>	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<b>PRACTICALITY</b>	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<b>BUILD</b>	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<b>VALUE</b>	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<b>OVERALL</b>	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<b>CONCLUSION</b>	Magnificent main driver confers great authority and smoothness, but upper bass is a little lean.	Slim and very pretty floorstander sounds neutral and balanced, if less than dynamic.	Deft, delicate and delightful, if a little bass-light, combining clever enclosure and driver engineering.	Competitive real-wood floorstander has fine voice band coherence but lacks lower midband warmth.	Big, generous sound with good dynamic freedom barring some voice-band congestion.	Smooth sounding real-wood floorstander with lots of weight but a rather recessed midband.	Ugly duckling with the voice of a lark – magical midband and plenty of dynamic brio.	Sounds sweet but also very laid back; lovely veneerwork in a delightfully pretty, compact package.
<b>KEY FEATURES</b>								
<b>SIZE (WxHxD)</b>	22x39x26cm	15x95x27cm	22x42x29cm	20x88x25cm	22x100x32cm	20x110x45cm	22x108x30cm	19x86x25cm
<b>DRIVER CONFIG</b>	2-way	2.5-way	2-way	2-way	3-way	2.5-way	3-way	2-way
<b>MAIN DRIVER SIZE(S)</b>	1x165mm	2x130mm	1x165mm	1x165mm	3x165mm	3x165mm	2x165mm, 1x130mm	1x165mm
<b>STAND/ FLOOR</b>	Stand	Floor	Stand	Floor	Floor	Floor	Floor	Floor
<b>CABINET FINISH</b>	Real wood	Real wood	Real wood	Real wood	Real wood/laminate	Real wood	Vinyl woodprint	Real wood
<b>BI-WIRE</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>LAB CONCLUSIONS</b> E = EXCELLENT • G = GOOD • A = AVERAGE • P = POOR								
<b>SENSITIVITY (2.83V/ 1M)</b>	85.5dB P	88dB A	89dB A	85.5dB P	91.5dB G	89dB A	91dB G	89dB A
<b>EST. BASS EXTENSION</b>	55Hz P	30Hz G	35Hz A	25Hz E	55Hz P	<20Hz E	30Hz G	35Hz A
<b>MIN/ AVE IMPEDANCE</b>	5.2/7 ohm G	4/ 6.5 ohm A	4.7/9 ohm G	5.8/9 ohm E	3/7.5 ohm P	4.5/7.1 ohm A	4/6.7 ohm A	4/7.2 ohm A
<b>OVERALL FREQUENCY BAL</b>	+15% G	+30% E	+20% G	-10% A	+15% G	-20% P	-5% A	-20% P
<b>RESPONSE SMOOTHNESS</b>	+40% E	-20% A	+10% G	+15% G	-5% A	+15% G	-25% P	-30% P

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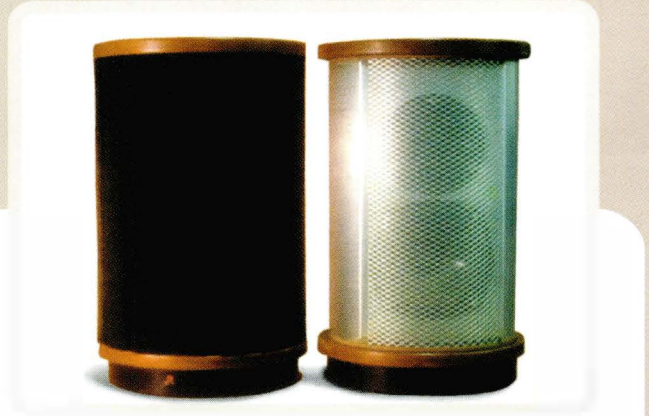
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# RETRO

JR149  
LOUDSPEAKERS



This is the story of an innovative, and for a while highly successful speaker, the JR149, named after its developer Jim Rogers, which was introduced in 1977 and remained available for 12 years.

Actually, there are two stories to tell about the JR149. On one level, it was a domestic version of the LS3/5A small studio monitor, using the same drive unit complement, namely a T27 tweeter and a B110A bass/mid unit, both 15-ohm units. The other story is implicit in the shapes and finishes. The JR149 was an early and spectacularly successful attempt to get out of rectilinear wooden boxes and into something more attractive.

A cylinder is one of the very best shapes for a speaker if you want to reduce cabinet resonances and diffraction. The JR149 had a small (ten litre) enclosure standing 30cm tall and 20cm across, made from a cylinder of heavy gauge aluminium with the front section flattened out to act as a baffle for the two drivers. The top and bottom were fitted with round wooden caps which were cemented in place, and a threaded axial rod was used to brace the assembly. In one of the few times it's ever been done, the crossover was mounted outside the speaker, in an enclosed section in the base, where it was unaffected by pressure changes inside the enclosure, and away from the electromagnetic wash from the bass unit's motor system. The flattened baffle section was additionally braced, and covered with a perforated metal grill to complete the cylindrical shape, and the internal cavity was lined with absorbent material. The result was one of the best controlled and lowest diffraction enclosures in the business. It is remarkable that the shape has remained as rarely used as it has been from the demise of the JR149 to the present day.

The cylindrical shape offered more than just a structural advantage. It was also an excellent clothes horse, and the JR149 became something of a style icon, one of the new speakers that appealed to women. The top plate was available in a wide range of finishes including various wood veneers, aluminium and gold, and a number of leather inlays. The only problem was dressing the cylinder itself. The solution was to use black reticulated foam, which probably looked very good in the factory, and for

**“The JR149 was an early attempt to get out of rectilinear wooden boxes and into something more attractive.”**

the first few months of its life. Eventually however the foam would sag, and the appearance began to look untidy. To the best of our knowledge, there was no complete answer to this problem during its lifetime. Bass unit surrounds also apparently tended to rot over the years, and needed occasional replacement.

Comparison with the LS3/5a are inevitable. The reduced cabinet talk and lower diffraction and certain other construction related differences (the drive units were not mounted from behind the baffle, LS3/5a style, for example) meant that the sound was somewhat smoother in the midband, and the slightly larger enclosure paid dividends in the bass, which was fuller and deeper. The JR140 was also capable of sustaining higher replay levels than the very limited LS3/5a. On the negative side, the more exacting nature of the BBC-inspired design meant that the LS3/5a was ultimately the more polished and refined speaker.

The JR149 went through three major iterations, of which most were apparently Mk1s, though a proper Mk2 featuring a 110mm unit from Focal and a 19mm Scanspeak tweeter was available, but it is not thought to have been commercially very successful. We have no details of the Mk3, and to this day have never met anyone who has heard it, and the presumption must be that it was only produced in very tiny numbers, when the company was winding down.

Although the JR149 in its various versions was easily the most successful JR speaker, it was far from being the last in the series. There was a larger model called the JR150 which used an Audax tweeter and twin bass units. But the most innovative additional models were the subwoofers, which looked like larger JR149s and were available in passive and active versions, making them early examples of their type. [HFC](#)

*Alvin Gold*

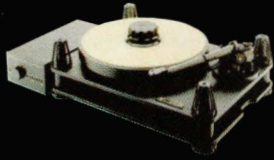
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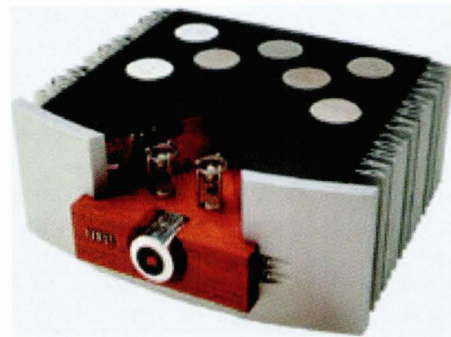
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# M

## MUSO

ELVIS COSTELLO AND  
THE ATTRACTIONS  
BLOOD & CHOCOLATE



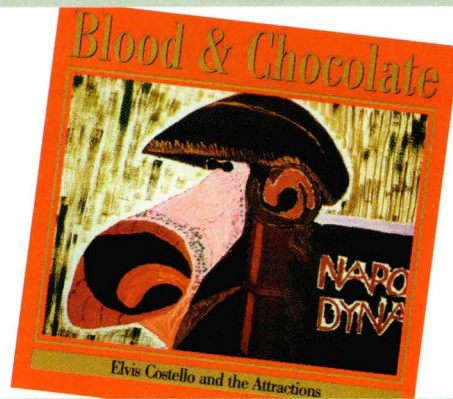
So just what would a group of famously spiky, almost burnt-out, former 'new wave' musicians having a post-divorce mid-life crisis sound like? Listen to Elvis and the Attractions' 11th album, recorded just on the point where they would split and barely speak to each other, let alone play together, for another eight years and you'll get a pretty good idea.

In 1986 the Attractions were approaching meltdown. Simmering rivalries and resentments had come to a head when Costello went off to Hollywood to record his cherished tribute to Americana, *King Of America*, with a string of high-profile session musicians, and next to no input from his regular band of the last eight years. When he came back, six months later, the Attractions were gathered together for one last assault – in more ways than one.

The big idea was to get the album recorded quickly, before Costello and the band's increasingly fragile relationship broke down completely. Producer Nick Lowe's spare, dry production complemented the 'turn it up and go for it' approach, though a cool head in the control room and his past association with the band doubtless helped. As he remembered, "By that time I'd got used to seeing a bass guitar arcing gracefully from one end of the studio to the other, aimed at the drummer's head." In a bid to ease the tension, the musicians were placed as far apart as possible in the studio, with 25 feet between warring bass player Pete Thomas and unrelated drummer Bruce Thomas.

On the sleeve notes to the 2002 remixed reissue of *Blood & Chocolate*, Costello writes of the recording sessions at London's Olympic Studios: "The live room was big enough for a full orchestra, so we filled it with our live monitor system and played at something approaching stage volume."

The arrangement and the volume left little room for subtlety, with everyone playing pretty much full pelt, but the urgency, the anger and of course the quality of the songs cuts through like a bright shining dagger. While several of these are some of the bitterest songs that Costello ever wrote (in, let's face it, what amounts to one of the most acrimonious canons of work in



**“The idea was to get the album recorded quickly, before Costello and the band’s relationship broke down completely.”**

popular music), there are also many of his finest moments – the funereal pace of the stalking anthem *I Want You*, the twisted singalong rant of *I Hope You're Happy Now* and the six-minute spew of bile (and unsurprisingly non-hit single) that is *Tokyo Storm Warning* stand comparison with his very best.

The final bars of *I Want You*, where the music tails off to leave just Costello's fractured voice, was achieved by turning off each of the instrumental tracks to leave the just the vocal mic, with the band remaining in the mix (just) as a ghostly presence due to overspill.

The original version surfaced briefly as a cassette tape, packaged like a bar of Cadbury's Bourneville dark chocolate but was quickly withdrawn, possibly for legal reasons. The remastered series was reissued as part of Costello's reworking of his back catalogue which has been going on since 2001 and featured (as did his other albums) an extra CD of out-takes and associated recordings from the time, as well as sleeve notes by pop's most erudite curmudgeon.

*Blood & Chocolate* crept out in 1993 to mixed reviews, though it still managed to reach number 16 in the UK charts. Many found it baffling, some found it infuriating, few thought it approached his best. But listened to now, it stands out as one of his most perfect records, capturing all the Costello hallmarks of cleverly constructed, splenic lyrics, married to cracking tunes and played by a band that believes in everything it's doing, absolutely. The next time the Attractions would play together with their mentor would be for 1994's *Brutal Youth* and sporadically ever since in between Costello's other projects. But while they're always good together, they've never since matched this record's lethal cocktail of bile, bitterness and bollocks. **HFC**

Dave Oliver

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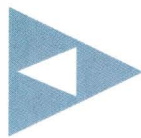
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# DIGITALIA

IF YOU CAN'T HEAR IT,  
DOES IT MATTER?

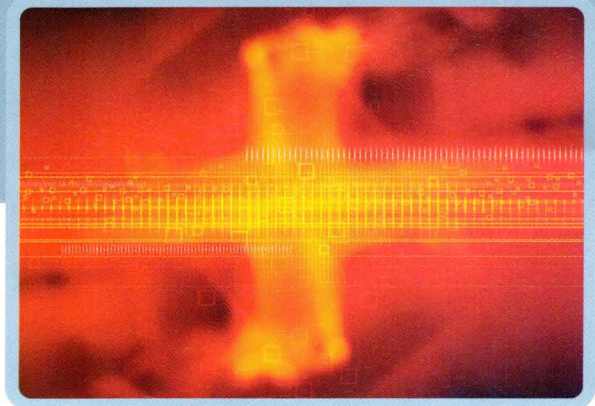


CD, SACD and DVD-Audio: it's been suggested by many commentators that the performance of each format above the audio band is important. Indeed, many regard this as axiomatic. But why could this be? Can we, after all, hear sounds in the ultrasonic? One or two oft-cited studies do seem to bear that out in a very limited way, and in extreme cases we can certainly hear – or at least, be aware of – sounds above 20kHz, when they're loud enough. But to dispose quickly of that, they never are loud enough in recordings of real music.

When SACD was brand new, its relatively high level of ultrasonic noise was flagged up as a possible problem for amps. However, with no known reports of amps going into meltdown or terminal instability when faced with these 'high' levels (quite a lot of dB below full power, in practice), the argument seems to have lost some steam. But the basic concept behind the suggestion was, I think, valid. Plenty of amplifiers out there are less than perfectly distortion-free at and above 20kHz. And there's another significant distortion source: the loudspeaker. It's well known that speaker distortion at bass frequencies can be quite high, but what happens at HF? It's almost never documented, but in fact distortion is far from vanishing.

Consider intermodulation distortion. Put two frequencies, F1 and F2, into a distorting device and out come additional frequencies, the sum (F1+F2) and difference (F1-F2) of the inputs, along with harmonics (nF1, nF2) and all sorts of combinations of the two – F1-2F2, 3F1-F2 and so on. F1 and F2 need not both be audio frequencies: one or both might be ultrasonic. Nevertheless, the intermodulation spectrum may well include frequencies well within the audio band.

You can see where this is leading. Put a combination of nice clean audio and ultrasonic signals into a real-world speaker and the chances are that some kind of distortion will appear within the audio band. The level of this distortion may not be very high, and it may appear insignificant compared with more conventional distortions. But one shouldn't jump to conclusions on this kind of subject: the same could be said of jitter but all



**“Put nice clean audio and ultrasonic signals into a speaker and the chances are some kind of distortion will appear.”**

the evidence points to that as something of a real sonic problem.

So where do these ultrasonic signals come from? They may in fact (in wideband recordings from SACD and DVD-A) be real musical harmonics, in which case they are probably largely harmless. They may however be noise or distortion from various digital sources. In the case of CD, 'aliasing' close to half the sampling frequency can produce distortion within a narrow band, typically 22.05kHz – 23.5kHz. On its own this distortion is likely to be quite inaudible, but intermodulation with 'real' audio frequencies can produce audible results. Elsewhere, I've dubbed this 'alias-intermodulation distortion' or AID. Another possible source of ultrasonic noise on CDs is highly noise-shaped dither, which improves the noise floor in the ear's sensitive regions below 5kHz at the expense of high noise levels above 12kHz.

SACD certainly doesn't suffer from aliasing, but its ultrasonic noise – the level of which varies from player to player – can to some extent be effectively folded into the audio band by intermodulation. DVD-A shouldn't exhibit either effect significantly, but in practice some discs do seem to have relatively high levels of ultrasonics due to the ways in which the material has been recorded and processed. Interestingly, one analogue source suffers quite badly from this problem – FM radio is often corrupted with 19kHz pilot tone leak-through. Listeners under about 30 may hear this directly, but others can often notice improvements when it is removed.

The presence or otherwise of ultrasonic noise or distortion in an audio signal, on its own, proves nothing. However, it is yet another piece of the sonic jigsaw and it behoves us to learn to treat it seriously, just as we did with jitter and, longer ago, transient intermodulation and all the rest. **HFC**

*Richard Black*

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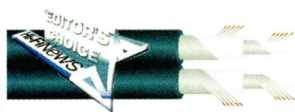
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Voyd turntable standard - ash	£500	£700
Nottingham Analogue Space Deck - with Mystic Mat and psu	£900	£1500
Wadia 850 CD - very chunky chap - means business	£3200	£5400
Avid Volvere Sequel - new - boxed - unused	£2500	£3500
Ariston RD11s with Signet low mass arm - old classic - original box - v. tidy	£300	
Roksan Xerxes Cognesenti - needs service - SME cutout - take it away	£400	
Wilson Benesch ACT1 tonearm - carbon fibre unipivot	£450	£900
Proac Studio 200 - yew finish - MTM 2 way - very nice	£1250	£2150
SME Model 20/2A (includes Series V tonearm) - serious - no flim flam	£3500	£5270
Living Voice Auditorium - cherry	£900	£1500
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Hovland Sapphire - stereo power amp - vgc - give away	£3500	£7000
SJS Arcadia Model 2 - valve rectified, choke input - boffin style line pre-amp - copper casework - interesting, lush and lovely	£1000	£2000
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Canary Audio 309 - parallel push-pull - 300B monos - 45 endless watts of beefy joy - ex dem - perfect condition - champagne - boxed	£6000	£10000
Canary Audio 303 push-pull - 300B monos - 22 watts of loveliness - used only once at US hi-fi show - a joy and a steal	£4500	£7500
Audio Innovations P2 phono stage - MM - collector's item (another one!)	£700	
Canary Audio 301 push-pull stereo - 22 watts - great amp - champagne finish - boxed	£3500	£5400
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Audio Note UK ANJ speakers with Huygens high mass 4 leg stands	£500	
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Revolver 45 speakers - cherry - new	£900	£1200
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# HI-FI CHOICE BUYER'S BIBLE



Welcome to the *Hi-Fi Choice Buyer's Bible* – the ultimate guide to the very best high performance hi-fi and AV gear you can buy. Here you'll find all our favourite current products listed under easy to use categories, together with useful information on what to look for and how to get the most from your components.

### Reviews you can trust

Our test results are the most reliable in the business. We employ the most experienced reviewers and use the most thorough techniques to ensure our ratings are the ones you can trust. All the equipment we rate most highly is contained within these pages, from CD and vinyl to the latest multichannel disc players. Whether hi-fi stereo or high performance surround and vision, these components will take you a step closer to reality.

### How to use this guide

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

Products that score more than 80 per cent overall are automatically featured in the *Hi-Fi Choice Buyer's Bible*. Any Best Buy or Editor's Choice Badges awarded are also displayed.

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# CD PLAYERS

*Audio disc players for music only*



Despite the emergence of new formats and the resurgence of an old one (vinyl), CD is still the king of formats if you require breadth of choice. And despite the fact that other sources will play CDs, if you want to hear your discs at their best there's little substitute for a dedicated CD player.

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.

## 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.

## Q&A

### 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.

## TOP BUYS



**Marantz CD7300 £350**

The latest in a long line of highly successful sub-£500 CD players from Marantz is an absolute beauty. Engaging and sonically refined, there's little to touch it at the price.



**Arcam DiVA CD93T £950**

Few CD players under a grand can match the accomplishment of Arcam's latest beauty. Its sound is neutral but always musical – delicate or vigorous, whatever the disc requires.



## Our favourite BEST BUY EDITOR'S CHOICE **CD PLAYERS**

### Audio-only CD and SACD players

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS							ISSUE NUMBER
				SACD COMPATIBLE	ELEC DIG OUTPUT	OPT DIG OUTPUT	CD-RW COMPATIBLE	CD TEXT	BAL ANALOGUE OUT	HEADPHONE SOCKET	
<b>UP TO £1,000</b>											
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Arcam DIVA CD73T	400	Refined and articulate, smooth and dynamic – a finely judged balance for budget to mid-price systems								247
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Arcam DIVA CD93T	950	The CD33 may technically be Arcam's ultimate CD player, but it's the little brother that really won our hearts								252
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Cambridge Audio Azur 640C	250	This elegant little player can hold its own in very elevated company – a budget system will barely do it justice								249
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Cyrus CD8	1,000	A truly cracking player, particularly when partnered with the optional PSX-R off-board power supply (£350)								252
	Exposure 2010	600	A smooth and substantial-sounding player, a little lacking in refinement but musical all the same								231
	Linn Genki	995	Explicit, rather bright-sounding player with strong multiroom appeal								212
	Heart CD6000 OSE LE	750	Valved-up Marantz makes an entertaining and colourful player that will inspire you to listen longer								245
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Marantz CD7300	350	Astonishingly capable sub-£500 player with effortless bass, detailed mid and treble and vast soundstages								250
	Naim CD5i	825	Taut and rhythmic, Naim's starter CD player will win many fans. A particularly fine partner for the Nait 5i amp								252
	Rotel RCD-02	375	Against some strong competition in the same price area, this Rotel generally holds up well								231
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Sony SCD-XA3000ES	800	A revised and refined version of the SCD-XA333ES that provides an almost holographic sound								248
<b>ABOVE £1,000</b>											
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Audionet ART V2	2,300	Built to last forever, this CD has a dark natural sound with excellent bass and would be cheap at twice the price!								231
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Ayre CX-7 CD player	2,950	Superbly built and natural sounding player that will win you over with its range of capabilities and transparency								251
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	BAT VK-D5SE CD Player	5,495	Superb valve CD player that is smooth and refined but with real guts that doesn't conform to valve stereotypes								251
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Copland CDA 822	1,598	Well built and carefully thought out, if you go for the more sophisticated musical forms it is superb value								241
	Exposure 3010	1,195	What this player lacks in immediacy and punch is offset by its sparkling sense of occasion and musical tension								246
	Exposure XXII	1,395	Natural sounding player, great with voices and acoustic instruments and makes for engaging listening								238
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Gamut CD1R	2,350	Natural, precise and impressively 3D sound that marries precision with emotional communication								240
	Hegel CDP2A	1,500	A technically proficient and masterly-sounding player built by people who clearly know what they are doing								252
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Krell SACD Standard	4,244	A landmark SCD player and an excellent CD player at what by Krell standards is a relatively affordable price								251
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Krell KPS 25sc	24,998	One of the finest CD players available, this is also a state of the art preamplifier with Cast interface technology								236
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Mark Levinson No390S	6,495	Superbly built and comprehensively equipped with genuinely high-resolution sound								231
	Meridian 507	1,195	Unusually precise and considered performer that sounds as different as the discs you stick in the drawer								238
	Musical Fidelity CD-PRE <sup>24</sup>	2,000	Substantial player incorporates upsampling and extensive analogue and digital preamplification facilities								229
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Musical Fidelity Tri-Vista	4,000	Limited edition stereo-only SACD/CD player that is simply the best player MF has ever made								237
	NAD S500i	1,200	A beautifully built machine that treads the fine line between precision and musicality with aplomb								238
<span style="border: 1px solid black; padding: 2px;">EDITOR'S CHOICE</span>	Naim CDX2	2,650	Fine quality one-box CD player, but its best feature is upgradeability via outboard XPS supply								238
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Orelle CD100evo	1,500	Very superior timing, a wide dynamic range, natural sweetness and fine transparency								248
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	Primare D30.2	1,499	Superb high-resolution player gives a strong taste of musical structure and physicality								226
<span style="border: 1px solid black; padding: 2px;">BEST BUY</span>	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
	Roksan Caspian M Series	1,100	An enjoyably dynamic-sounding player featuring a positively unique choice of digital components								252

**SPECS KEY** **SACD COMPATIBLE** Plays high-resolution SACD discs in multichannel and/or two-channel mode. **ELEC DIGITAL OUTPUT** Electrical coaxial output for digital connection to a DAC or digital recorder.

**OPT DIGITAL OUTPUT** Optical Toslink output for digital connection to a DAC or digital recorder. **CD-RW COMPATIBLE** Will play CD-RW (rewritable) discs. most CD players can cope with CD-Rs

**CD TEXT** Will display album and track titles from inserted disc. **BAL ANALOGUE OUT** Balanced XLR output connections for similarly equipped amplifiers.

**HEADPHONE SOCKET** Quarter inch (6.3mm) headphone jack fitted to the CD player. **VARIABLE OUTPUT** Player features both fixed level and variable, volume adjustable outputs.



### Cyrus CD8/PSX-R £1,350

Taken on its own, Cyrus's CD8 is a highly articulate £1,000 CD player. Add a PSX-R power supply and it really takes off – detailed and dynamic, with musical poise and panache.



### Naim CDX2 £2,650

A superb player that mixes rhythm and timing with precision and poise. Add the £2,300 XPS power supply (pictured) to make one of the best CD players in the world.

# 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.

## Q&A

### 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.

## DVD-AUDIO

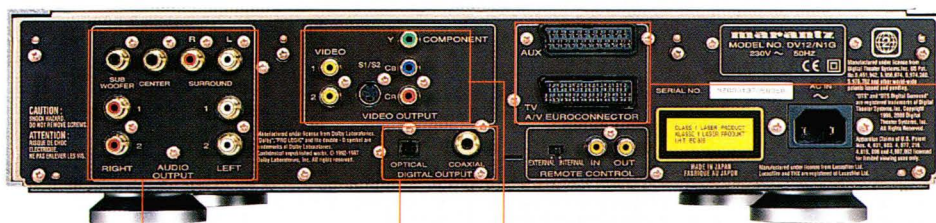
DVD-Audio is a high-resolution format that offers multichannel, stereo and Dolby Digital tracks on dedicated DVD-A discs. The discs can be played on any DVD player, but the CD-beating high-fidelity sound can only be appreciated with a DVD-A player.

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.



## CONNECTIONS



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

**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.

## Our favourite DVD PLAYERS

**BEST BUY** **EC** EDITOR'S CHOICE

### Audio/Video disc players

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS				ISSUE NUMBER
				DVD-A COMPATIBLE	SACD COMPATIBLE	ELEC DIG OUTPUT	OPT DIG OUTPUT	
<b>UP TO £1,000</b>								
<b>EC</b>	Arcam DIVA DV88 Plus	1,000	The first DVD player (just) enabled to deliver progressive scan with UK-spec PAL discs. Superb picture and good sound					238
	Cambridge Audio DVD57	200	DVD-Audio replay, progressive scan pictures and a good performance at a silly-low price. Fantastic value for money.					243
	Cyrus DVD 7+	1,000	Typical Cyrus style – open, vivid and bouncy sound, with moderate picture quality to match					237
<b>BB</b>	Denon DVD-1400	400	Denon's entry point to universal disc playback and a remarkably good one too. Excellent CD replay for a universal player					249
<b>BB</b>	Denon DVD-2900	850	A beautifully built universal player that delivers a strong performance across all formats, all at a remarkable price					248
<b>BB</b>	Pioneer DV-565A	250	Do-it-all 'universal' player is a decent performer with all disc types, and superb value for money considering its range					248
<b>BB</b>	Pioneer DV-668AV	600	HDMI-equipped universal player without i.Link audio output, but still absurdly well equipped and highly capable for the price					252
<b>BB</b>	Pioneer DV-868AVi	1,000	State of the art universal player with next-gen digital outputs – HDMI for video and i.Link for high-resolution audio					252
	Primare V25	1,000	Bold pictures on screen are matched to easy, likeable sound quality and a huge range of outputs					237
<b>ABOVE £1,000</b>								
	Arcam DIVA DV89	1,300	No SACD playback, but CD sounds strong, DVD-Audio is highly engaging and video performance is excellent too					248
<b>EC</b>	Arcam FMJ DV27A	1,900	Very accomplished, clean sounding player with CD, DVD and DVD-Audio alike. Picture quality is equally top-notch					246
	Cyrus DVD8	1,200	An impressive step up from the DVD7+, which includes component video outputs					238
<b>EC</b>	Denon DVD-A11	1,700	Refinement and clarity are hallmarks of this player, which is also as close to being future-proof as they come					250
<b>EC</b>	Denon DVD-A1	2,500	A convincing case for the DVD-A format, battleship construction combined with sonic and visual finesse					230
<b>EC</b>	Meridian 800	10,805	The ultimate in DVD replay, modular construction, buffered ROM drive, upsampling and high-res digital outputs					230
	Roksan Caspian DVD	1,195	A good all-rounder – a solid and propulsive sounding DVD player which is also a surprisingly capable picture-making machine					237
<b>EC</b>	TAG McLaren DVD32R	3,995	An engineering <i>tour de force</i> . It's pricey and plays neither DVD-A nor SACD, but performance – especially video – is top notch					212

**SPECS KEY** **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 jack fitted to the DVD player.

## TOP BUYS



### Pioneer DV-565A £250

A universal player with respectable performance across all formats, at a remarkable price.



### Denon DVD-2900 £850

A universal player that's good with CD and great with DVD-V, DVD-A and SACD alike.



### Pioneer DV-868AVi £1,000

Pioneer's HDMI/i.Link-equipped universal flagship packs an amazing hi-tech punch.



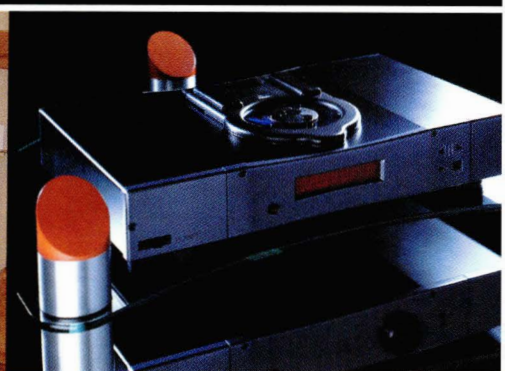
### Denon DVD-A11 £1,700

A superb universal player, made even better with i.Link/Denon Link/DVI digital outputs.

## AVID DIVA - AFFORDABLE HI-END



HFC "Best Buy"  
HFC "Product of the Year"  
Call us to listen.  
tel: 01480 457300  
[www.avidhifi.co.uk](http://www.avidhifi.co.uk)  
Contact us for your nearest dealer



# Five Stars for Value

**Does the best price always mean the best deal?  
Ask our top twenty UK specialist hi-fi dealers.**

**"I thought I had this buying hi-fi business sorted out. I bought all the hi-fi magazines and read them thoroughly, because I reckoned their experts knew exactly what they were talking about - at least a lot more than I did! It was reassuring to see the same product names cropping up regularly and I figured the writers' experience and guidance would steer me straight to the system of my dreams. The trouble is I've ended up more confused than when I started".**

**O**ne reviewer said a product I fancied was absolutely brilliant but another said it was nothing special at all. How can that be? Surely one CD player is pretty much the same as another? And how can a loudspeaker that's one magazine's top recommendation not get so much as a mention in any of the others? I don't mind admitting it, I'm completely lost."

#### **Plan B - I'm going for a deal**

"So, I've decided to adopt plan B. I'm sure there can't be any really dramatic differences between all this gear and it's all bound to work together properly, so I'm going to check the price lists and the adverts and shop around for the best deal. I know getting the right hi-fi is important hey, I'm as mad about music as anyone but if I can get close to the mark and save a few quid, I'm sure I'll end up with a good system and be happy. I know there are specialist shops out there that do demonstrations and reckon they've got all the solutions but, to be honest, I'm a bit scared of going to one. I'd really welcome some advice and guidance but I don't know all the technical jargon and I'd feel daft sitting there trying to 'hear the differences' if I couldn't. Anyway, a friend told me that these shops only sell the really expensive gear and that they're not interested if you don't have loads of money to spend."

And so another hi-fi buyer starts his journey down the road to dissatisfaction, endless upgrades and a permanent overdraft.

There is only one way to buy a hi-fi system that will prove satisfying, reliable and deliver true value for money, and that's

through a specialist hi-fi dealer. Let's face it, you wouldn't think about buying a car if you couldn't take it for a test drive. You wouldn't buy a house solely on the strength of seeing the estate agent's details and a photograph. Even if you're spending far less, say buying a jacket or a pair of shoes, you want to try them on to make sure they fit you.

Buying a hi-fi system is no different. It doesn't matter what the specifications say or what the 'experts' think: if it doesn't measure up to what you want from a system, then it's not the right choice. Knowing that you've bought a room full of five-star favourites or best-buys is no consolation when you can't bear to listen to them for more than five minutes. Even that ten per cent discount on the price won't make them sound any better.

#### **Buying or being sold to?**

Mind you, most of us are easily suckered when it comes to buying hi-fi. Given the choice of venturing into the unknown territory of a specialist dealer's shop and exerting some influence over what we buy, or taking what looks like the easy route having adverts and magazine reviews push us along a path sweetened with discounts and special offers - we opt for the latter. We don't buy a system, we allow ourselves to be sold one. We side-line our own ideas about quality and personal satisfaction and buy someone else's opinion of what's good for us and good value for our money.

#### **Take control!**

Now there's a group of long-established, independent specialist dealers who are



“ You wouldn't think about buying a car if you couldn't take it for a test drive. You wouldn't buy a house solely on the strength of seeing the estate agent's details. ”

totally committed to putting the customer back in the driving seat. They're encouraging the buyer to take control with a little help and guidance provided where required. They know how difficult it can be to establish the true quality and worth of hi-fi and home cinema systems. They know that without experiencing the performance of the systems they offer, you can't possibly assess the value of them. That's why their idea of 'selling' is to play the systems for you and allow you to be the judge.

Listening to your choice of music in a peaceful, well organised demonstration room, you may be surprised and, almost

certainly, relieved to discover how easy it is to hear the differences between components and between systems. With the dealer's help and advice you will be able to make a clear and informed decision about what to buy. It comes down to trusting your own judgement rather than the opinion of a reviewer you've never met ... and who won't refund your money if you're not satisfied or be at the end of a phone to sort out any problems you might encounter.

The story doesn't end there. These shops won't abandon you once you've put your hand into your pocket. They won't leave you to set up the system you've selected as best you can. They'll install it in your home, make sure it sounds great, and make sure that you're entirely happy with the way it works.

#### Why bother?

There is, of course, one question that hasn't been answered: why should you and these dealers go to all this trouble? Well, from your point of view maybe it's because a good deal is about a great deal more than just price. unless you've got money to burn, you'll be living with your new system

## STAR QUALITIES

VALUE FOR MONEY	★ ★ ★ ★ ★
SERVICE	★ ★ ★ ★ ★
FACILITIES	★ ★ ★ ★ ★
VERDICT	★ ★ ★ ★ ★

for years - years during which most of those five star products will probably stop shining quite so brightly. As far as the dealers are concerned, maybe they believe that taking care of their customers properly is a nicer way of doing business than just handing over boxes.

Listed below are 20 of the best hi-fi shops in the country. They all have lots of stars. You'll find them on the shop floor: they're the people waiting to guide customers towards hi-fi that will give them years of musical enjoyment and total satisfaction.

## OUR TOP 20 UK SPECIALIST HI-FI DEALERS

### LONDON

#### N1 GRAHAMS HI-FI

190a New North Road  
020 7226 5500

#### SW11 ORANGES & LEMONS

61/63 Webbs Road, Battersea  
020 7924 2043

### SOUTH

#### Ashford, Kent

#### SOUNDCRAFT HI-FI

40 High St. 01233 624441

#### Chelmsford RAYLEIGH HI-FI

216 Moulsham Street  
01245 265245

#### East Grinstead

#### AUDIO DESIGNS

26 High St. 01342 314569

#### Horsham AUDIO DESIGNS

7-9 Park Place  
01403 252255

### Kingston-upon-Thames

#### INFIDELITY

9 High Street Hampton Wick  
020 8943 3530

#### Rayleigh, Essex

#### RAYLEIGH HI-FI

44a High St. 01268 779762

#### Ringwood, Hampshire

#### PHONOGRAPHY

Star Lane 01425 461230

#### Southend-on-Sea

#### RAYLEIGH HI-FI

132/4 London Road  
01702 435255

#### Southampton PHASE 3 HI-FI

37 Bedford Place  
023 8022 8434

#### Worthing PHASE 3 HI-FI

213-217 Tarring Road  
01903 708810

### MIDLANDS

#### Banbury OVERTURE

3 Church Lane  
01295 272158

#### Birmingham SOUND ACADEMY

152a High Street, Bloxwich  
01922 493499

#### Coventry Frank Harvey

163 Spon Street  
024 7652 5200

#### Leicester CYMBIOSIS

6 Hotel St. 0116 262 3754

#### Northampton LISTEN INN

32 Gold St. 01604 637871

#### Shrewsbury CREATIVE AUDIO

9 Dogpole 01743 241924

### NORTH

#### Cheadle THE AUDIO WORKS

14 Stockport Road  
0161 428 7887

### Oldham AUDIO COUNSEL

12/14 Shaw Road  
0161 633 2602

### Sheffield

#### MOORGATE ACOUSTICS

184 Fitzwilliam St  
0114 275 6048

#### York SOUND ORGANISATION

2 Gillygate 01904 627108

### SCOTLAND

#### Edinburgh

#### RUSS ANDREWS HI-FI

34 Northumberland Street  
0131 557 1672

#### Glasgow STEREO STEREO

260 St. Vincent Street  
0141 248 4079

### N. IRELAND

#### Belfast LYRIC HI-FI

429-431 Lisburn Road  
028 90 381296

# 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.



## TURNTABLE SET-UP

Setting up a turntable varies from model to model, but the general principle is to level the platter by 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.

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.

## TOP BUYS



### Pro-Ject 1 Xpression £210

The latest model from Czech turntable specialist Pro-Ject is remarkable value for money – an Ortofon OM10 cartridge and carbon fibre arm are included in the price.



### Roksan Radius 5 £850

A beautiful mid-price turntable with an impressively well-sorted sound from low bass to high treble. Price includes matching Nima tonearm.



### Avid Diva £1,100

Superbly well engineered for the money, Avid's entry-level deck spins a highly involving musical message – solid, powerful and detailed.



### Michell Orbe SE £1,825

A fine example of the turntable art, the stripped down SE version of Michell's flagship now features a DC motor. Does justice to the best arms and cartridges.

## Our favourite BEST BUY EDITOR'S CHOICE TURNTABLES

### Record players

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS				ISSUE NUMBER
				SPEEDS	SUSP SUBCHASSIS	SWITCHABLE SPEED CHANGE	SUPPLIED WITH ARM	
	Audio Note TT1/ARM1	594	Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price	33/45	●	●	●	203
	Avid Diva	1,100	A solid and powerful sounding deck with fine build, requires a smooth, relaxed cartridge for best results	33/45	●	●	●	247
<span>EC</span>	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
<span>EC</span>	Avid Acutus	5,000	Extremely capable design with no apparent shortcomings. Don't sell your vinyl 'til you've heard it on this!	33/45	●	●	●	194
	Clearaudio Emotion	655	An engaging turntable offering plenty of audiophile credibility for the money (price includes arm and cartridge)	33/45			●	251
	Clearaudio Champion Level 2	1,955	Neutral balance, great looks, but only so-so detail. Benefits greatly from isolation	33/45			●	223
	Goldring GR1	140	The best value 'Rega' yet and a new benchmark for budget turntables. Vinyl nirvana on a shoestring	33/45			●	252
	Michell Gyro SE	1,058	New DC motor-equipped Gyro offers great looks and even better sound. Price includes RB300 arm	33/45	●		●	239
<span>EC</span>	Michell Orbe SE	1,825	A superb turntable, able to mix it with the best at virtually any price. Now features new DC motor.	33/45	●		●	235
	Pro-Ject 1 Xpression	210	Well designed and executed budget deck with an entertaining and revealing sound	33/45			●	248
	Pro-Ject RPM 6	500	Basic, very neutral turntable and arm combination that can take a very expensive cartridge. A high-end bargain	33/45			●	236
	Rega P2	198	Updated Planar 2: just as much fun as ever and now even better value as the competition falls away	33/45			●	214
	Rega P3	298	Updated Planar 3, building on the strengths of the P2 with added subtlety and detail	33/45			●	214
	Rega P25	619	The contemporary aesthetic wins admiration, the sonic assurance turns it into your own personal music shrine	33/45			●	239
<span>EC</span>	Rega P9	2,248	Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm	33/45		●	●	228
	Roksan Radius 5	850	Sophisticated design with accomplished sound quality, excellent imagery, and good isolation	33/45	●		●	248
<span>EC</span>	Roksan TMS2	7,500	Typical Roksan sound, but better: pitch-accurate, lean, detailed and controlled, without the 'bloat' of lesser designs	33/45	●	●	●	246
<span>EC</span>	SME Model 10A	3,411	Elegant and extremely capable design with Series V/309 hybrid arm, superbly built	33/45	●	●	●	195
<span>EC</span>	SME Model 20.2A	5,274	Beautifully built, extremely neutral damped and suspended deck with superb sound. Inc V arm	33/45/78	●	●	●	186

## Our favourite BEST BUY EDITOR'S CHOICE PHONO CARTRIDGES

### MM and MC cartridges

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS			ISSUE NUMBER
				MM	MC	REPLACEABLE STYLUS	
	Clearaudio Aurum Beta S	270	Clear improvement over cheaper Alpha, and good sound all round by any standards	●			223
	Clearaudio Sigma	580	A nimble and revealing cartridge that is more at home in lower mass arms		●		235
	Goldring Elite	250	A remarkably subtle and persuasive design that should tempt anyone		●		235
	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	●		●	235
<span>EC</span>	Linn Akiva	1,800	With fine dynamic expression and a wide bandwidth, what you hear sounds very close to master tape		●	●	242
<span>EC</span>	Lyra Helikon	1,095	Highly capable and highly neutral, this is a cartridge for all seasons, albeit fussy about vinyl quality		●		215
	Reson Etile	485	Plenty of life and detail, and refined with it		●		223
	Sumiko Blue Point Special	250	A no-nonsense performer with engaging musical properties – one of the best around for less than £300		●		192
	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		●		235
<span>EC</span>	van den Hul Colibri XGP	2,699	Phenomenal resolution, custom building to suit hard and software, but needs 500 ohm loading and is vulnerable to damage		●		244

## Our favourite BEST BUY EDITOR'S CHOICE PHONO STAGES

### Phono stages

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS			
				MM PHONO INPUTS	MC PHONO INPUTS	AUJ GAIN	AUJ IMPEDANCE
	Lehmann Black Cube	275	Creates a well balanced sound that has few limitations and plenty of good qualities. Very flexible for the price	●	●	●	●
	Musical Fidelity X-LPS <sup>4</sup>	249	Simple, well turned out valve-driven phono stage lacks adjustability, but sounds sweet, open and well-behaved	●	●		
	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	●	●		
	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!		●		
<span>EC</span>	Tom Evans The Groove	1,800	Plenty of detail, excellent imaging and almost flawlessly neutral: a good choice for maximum information retrieval off any LP		●		
	Trichord Dino/Dino+	498	Relaxed yet resolute with very good image depth and natural balance, not to mention great flexibility	●	●	●	●

**TURNTABLE 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

**CARTRIDGE SPECS 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.

# FREE Hi-Fi Upgrade

hiforsale.com Ltd's AudiophileCandy  
2004 accessories catalogue

## Our NEW Edition Features:

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3 models now available, CP2S suitable for all composite VCR recording. Replica 1 (Scart) & Replica 2 compatible with CV and S video signals - suitable for all VCRs and DVD recorders.

**Digital Video Copy Stabilizers**  
CP-2S (Scart) £39.95  
NEW! Replica 1 (Scart) £79.95    Replica 2 (CV+SV) £79.95

### Not enough RGB Scart sockets on your TV

2 way, 3 way . 5 way Automatic RGB Scart control switches. The Trilogy range give perfect loss free switching of any AV signal - DVD, Digibox, SKY, Game console, etc. Trilogy 1 has additional feature of recording one signal whilst viewing another + Videosender + Audio output connections.

5way RGB Auto Scart Controller Trilogy 1 £89    3way RGB Auto Trilogy 2 £59    2way RGB Auto Trilogy 3 £39

### Turn any PC/LCD screen into a high resolution TV

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# 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 tuner hooked up to your hi-fi already, you're missing out!

### DAB or FM?

Digital Audio Broadcasting (DAB) is said to be available to 80 per cent of the population and the long-term plan is to switch public broadcasting over to digital, 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](http://www.bbc.co.uk/digitalradio) for details.

### TOP BUYS



#### Denon TU260L II £130

The benchmark for all other budget AM/FM tuners, with great sound and features.



#### Cambridge DAB500 £150

A low-cost DAB radio that gets very close to much more expensive digital models.



#### Rega Radio 3 £374

An excellent sound-first FM/MW tuner – low on features but big on sound.



#### Magnum Dynalab MD102 £2,200

If you're serious about radio this superb FM tuner is about as good as it gets.

## Our favourite TUNERS

🏆 BEST BUY 🏆 EDITOR'S CHOICE

### FM & DAB HI-FI SEPARATES

BADGE?	PRODUCT	£	COMMENTS	WAVEBANDS	PRESETS	RDS	REMOTE CONTROL	SIG. STRENGTH METER	ROT. TUNING KNOB	ISSUE NUMBER
	<b>FM TUNERS</b>									
	Cambridge Audio T500	180	Very capable tuner suited to good and less good reception conditions	FM,M,L	64			●●●	●●	193
🏆	Creek T50	499	Very fine results indeed with precision, polish and insight added to excellent basics	FM,ML	128	●●	●●	●●●	●●	251
🏆	Denon TU-260L II	130	The return of the all-time favourite, now enhanced with RDS and sounding as fine as ever	FM,M,L	40	●●		●●	●●	193
🏆	Magnum Dynalab MD102	2,200	Unique remote control analogue FM tuner delivers a superbly transparent sound that makes radio fun	FM	5		●●	●●●	●●	241
🏆	Marantz ST6000	180	Another budget killer from Marantz, with sound well above its class and useful features	FM, M, L	90	●●		●●	●●	211
🏆	NAD C422	180	Admirably free of roughness or other obvious nasties, with just a slight lack of clarity	FM,M	30	●●		●●	●●	250
🏆	NAD S400	600	One of the best around – bass and treble are both well extended and detail is excellent	FM	30	●●	●●	●●	●●	230
🏆	Primare T21	600	Identical to NAD S400 and likewise a very fine tuner	FM	30	●●		●●	●●	230
🏆	Rega Radio 3	374	Unpretentious unit which does what it claims, very well. Unusually fine FM sound in all areas	FM,M	20		●●			242
	Rotel RT-02	279	A highly competent tuner which always sounds appealing and fuss-free	FM,M	30	●●	●●	●●	●●	242
	<b>DAB TUNERS</b>									
	Accam DT-81	650	A very smart and polished DAB performer	DAB	16		●●	●●	●●	221
🏆	Cambridge Audio DAB500	150	Very good sound, plus optional response tweaks, and slickest operation yet	DAB	10		●●	●●	●●	248
	Pure Digital DRX-701ES	250	An excellent introduction to DAB, fine value, simple to use and feature loaded	DAB	99		●●	●●	●●	234
	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	●●	●●	●●	●●	242
	TAG McLaren T32R+DAB	2,290	Classy hi-fi at its best: top sounds on FM and DAB, and a joy to own and use	DAB,FM,M,L	99	●●	●●	●●	●●	230

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

# 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.

## TOP BUYS



**Philips CDR802 £300**  
Multidisc recorder that's slick and accomplished, albeit with a slightly flaky build.



**Marantz DR6000 £400**  
Quality in a box – it eschews gimmickry, but it does a simple job very well.



**Yamaha CDR-HD1300 £600**  
Combining hard disk with CD-R makes CD recording a whole lot more flexible.



**Imerge S2000 £1,599**  
Impressively flexible hard disk music server for multi-room applications.

## Our favourite DIGITAL RECORDERS

BEST BUY EDITOR'S CHOICE

### CD-R/RW, MD and HDD recorders

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS				
				DECKS	HD CAPACITY (GB)	OPTICAL IN/OUTPUTS	ELEC IN/OUTPUTS	ISSUE NUMBER
<b>CD-R/RW RECORDERS</b>								
	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
	Philips CDR802	300	Tacky looks and build notwithstanding, this is a well-equipped and technically sound 3-to-1 autochanger/recorder at a good price	2				233
	Philips CDR951	380	An improvement on previous models, it delivers the musical goods in some style	1				205
	Pioneer PDR-609	270	Classic CD recorder with outstandingly good sound for the money on both record and replay	1				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				218
<b>MD RECORDERS</b>								
	Pioneer MJ-D508	200	Well equipped, but musically sleep-inducing player 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
<b>HDD RECORDERS</b>								
	Imerge S2000	1,599	Intended as the centrepiece of a multi-room installation, this three-output server combines flexibility with good sound	2	80			243
	Yamaha CDR-HD1300	600	Superb combination of high-speed CD-RW drive and hard disk, adding editing flexibility to CD recording	2	80			243

**SPECS KEY** **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 Toslink 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.

# Sevenoaks SOUND & VISION



Sevenoaks Sound & Vision stocks a wide range of Hi-Fi separates, DVD players, amplifiers, speakers, plasma screens, LCD televisions and projection systems from all the leading manufacturers.

From starter systems to custom designed multi-room and home cinema installations, our friendly staff are available in all stores to advise, demonstrate and guide you through the home entertainment jungle. If you're interested in home entertainment and want to avoid the confusion, contact your local Sevenoaks Sound & Vision store and **experience more.**

0% interest free option\* is available on most products.

\*Written details on request. Licensed credit brokers. Minimum balance £400. Subject to status.



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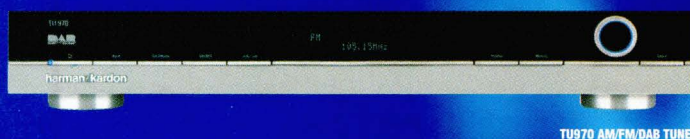
Are you looking to neatly and seamlessly integrate a Home Cinema or Hi-Fi System into your home? Our Custom Installation experts are fully trained in all areas and provide a prompt, reliable and professional service. Whether you're looking for lighting control systems, a dedicated home cinema installation with a retractable screen and built-in speakers or an integrated control system, Sevenoaks Sound & Vision has the solution.



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For over 50 years, Harman Kardon has been at the forefront of musical invention and innovation - it was Harman Kardon that introduced the world's first stereo receiver back in 1958. This unique pedigree is now represented in a NEW range of sleek, beautifully engineered Harman Kardon products available at Sevenoaks Sound & Vision.

This NEW range includes both DVD and DVD-Audio players, A/V receivers and a DAB Tuner. With a musical heritage that is second to none, you can trust Harman Kardon to deliver stunning, ground breaking and uncompromising products that live up to the most demanding expectations. Across the world, professional musicians, sound engineers and producers choose this brand above all others. To find out why, audition Harman Kardon today.



TU970 AM/FM/DAB TUNER



## NEWS

### MUSICAL FIDELITY INTRODUCES NEW X-SERIES PRODUCTS

The X-150 and X-Ray<sup>VS</sup> are the first products from Musical Fidelity's NEW X-Series.

Rated at 75wpc, the X-150 has low distortion, low feedback, wide bandwidth, low noise and excellent stereo separation plus a good quality phono stage. All the hallmarks of a great amplifier. Not only does it look great, its built quality is wonderful - Musical Fidelity having paid close attention the design to maximise reliability.

The X-Ray<sup>VS</sup> CD player, is the replacement for the legendary X-Ray. Design features include 24-bit 96k upsampling, very low jitter and is, from a technical standpoint, the equal of some of the most expensive players on the market.



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- STAINES
- SWANSEA
- SWINDON
- SWISS COTTAGE
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- WATFORD
- WEYBRIDGE
- WITHAM (ESSEX)
- WOLVERHAMPTON

PLEASE SEE PAGE 7  
FOR ADDRESS AND TELEPHONE  
NUMBER DETAILS

# Sevenoaks

SOUND & VISION



## HI-FI SEPARATES

**MICHELL GYRO SE**  
TURNTABLE / RB300 TONEARM  
**£1049.95**



WHAT HI-FI? SOUND AND VISION  
**Best Buy**  
2003  
BEST HOME CINEMA AWARDS

"The Gyrodec SE sounds great, combining the best sonic characteristics of rivals... Quite simply, the Michell Gyrodec SE is terrific. Nothing compares at this price point - it's well deserving another Best Buy."

**CLAIM £50**  
TOWARDS THE CARTRIDGE OF YOUR CHOICE\*



**SYSTEM PRICE**  
**£949.95**

PRICE EXCLUDES CABLES & STANDS



WHAT HI-FI? SOUND AND VISION  
**Best Buy**  
2002  
BEST HOME CINEMA AWARDS  
AMP & STEREO £235.00

**PRO-JECT 1 XPRESSION**  
TURNTABLE (BLACK) **£209.95**



"Compared with a £200 CD player this deck sounds remarkable: dig out your vinyl and give the Xpression a spin."

WHAT HI-FI? SOUND AND VISION  
**Best Buy**  
2003  
BEST HOME CINEMA AWARDS

THE PROJECT RANGE STARTS AT ONLY £119.95

**ARCAM CD73T CD PLAYER £ CALL**



WHAT HI-FI? SOUND AND VISION  
**Product**  
of the year  
2003  
BEST HOME CINEMA AWARDS

FANTASTIC OFFERS ON ARCAM DIVA AMPS & CDS

**HI-FI SYSTEM 1**

**SAVE £149**



WHAT HI-FI? SOUND AND VISION  
**Best Buy**  
2002  
BEST HOME CINEMA AWARDS  
TURNTABLES  
Up to £150

**FREE**  
PRO-JECT DEBUT II TURNTABLE\*

**ROTEL**  
RCD-02 CD PLAYER  
RA-02 AMPLIFIER  
**B&W**  
DM601 S3 SPEAKERS

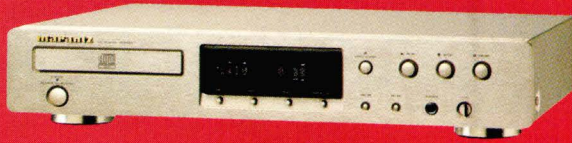
Rotel electronics and B&W speakers are natural partners for each other, giving excellent sound quality and stunning looks. So what better than this combination of class-leading detail with an even and robust sound.

But at Sevenoaks we always aim to offer you more and this means What Hi-Fi? Sound and Vision's Award-winning Project Debut II turntable is thrown in FREE.

HI-FI SYSTEM 1 - NOT IN CONJUNCTION WITH ANY OTHER OFFER OR PROMOTION

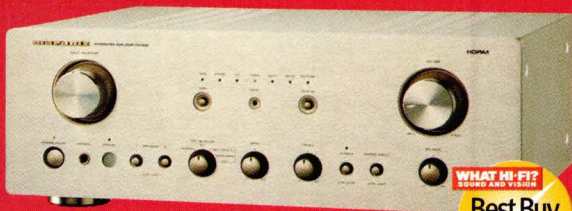
experience more

experience more  
experience more



**MARANTZ**  
CD5400 CD PLAYER  
**£119.95**

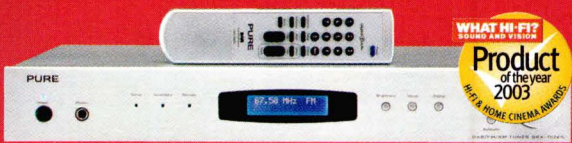
SAVE £30



**MARANTZ**  
PM7200 AMPLIFIER  
**£249.95**

SAVE £80

"This is one of the most powerful amps in its class, at 95w per channel, and it sounds it with anything from dance to a big orchestral work, offering a delicious combination of poise and impact. Stick with fast, dynamic speakers such as B&W DM601 S3s or KEF's equally capable Q1s and the results will amaze."



**PURE DIGITAL**  
DRX-702ES ANALOGUE/DAB TUNER  
**£279.95**

SAVE £50

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## HI-FI SYSTEM 2

### MUSICAL FIDELITY A3 CD PLAYER & AMPLIFIER

### MONITOR AUDIO SILVER S8 SPEAKERS

One of our most popular systems at an amazing price. Full-scale dynamics with a lightness of touch makes this combination stand out.

**SYSTEM PRICE**  
**£2399.95**

PRICE EXCLUDES CABLES & STANDS

HI-FI SYSTEM 2  
NOT IN CONJUNCTION WITH ANY OTHER OFFER OR PROMOTION

**SAVE £379**

## MISSION 780 SE SPEAKERS

### £349.95

"The revamped Mission 780s are hugely enjoyable: anyone with up to £400 to spend should consider these standmounters. Mission's clever move has paid off."

**WHAT HI-FI? SOUND AND VISION Feb 03**  
★★★★★

INCLUDES **FREE** SPEAKER CABLE WORTH £60\*

## MISSION 782 SE SPEAKERS

### £899.95

"Well, with the exception of the alderwood-veneer finish, these floorstanders look identical to the standard model, although there's a new tweeter and crossover design. One of the advantages of the three-way configuration is that each driver deals with only a narrow section of the frequency range, and the designers optimise each unit to perform its respective task. Mission's engineers have excelled in this area: these elegant floorstanders sound beautifully balanced and few rivals under £1000 can match their wonderful levels of clarity. The 'special edition' tag is overused but these talented floorstanders are bona fide sonic stars."

**WHAT HI-FI? SOUND AND VISION June 03**  
★★★★★

INCLUDES **FREE** SPEAKER CABLE WORTH £80\*

# Sevenoaks SOUND & VISION

## ROKSAN KANDY KD1/III CD PLAYER £594.95 KA1/III AMPLIFIER £594.95



"The Kandy KD1/III CD player offers a great array of talents - team it with its amp stablemate and you have something close to the ideal visual and sonic combination."



**FREE INTERCONNECT CABLE WORTH £60**  
WHEN KANDY CD & AMP PURCHASED TOGETHER\*

## KEF Q4 SPEAKERS £399.95

The Q4 is one of the latest additions to KEF's acclaimed Q Series. At the heart of this floorstander lies the Uni-Q driver array - a 130mm die-cast chassis housing a long throw cone and coincident mounted 19mm aluminium dome HF unit. This driver arrangement makes the speaker much easier to place in the room and alleviates the 'sweet spot' found on 'ordinary' speakers. This has been combined with a dedicated 130mm LF unit for extended bass output which belies the size of its diminutive cabinet.



INCLUDES **FREE** SPEAKER CABLE WORTH £60\*

Please Note: Some products may not be available at all stores. Please call before travelling. \*Cable Offer - From range available in-store. Not in conjunction with any other offer. Advertisement valid until at least 07/04/04, E&OE.

"As with most Roksan products, the Kandy integrated amplifier has been regularly refined over its lifetime. The MKIII version builds on the strengths of its predecessors and successfully wipes out their (mostly minor) weaknesses...

Timing and rhythm are excellent. DJ Shadow is delivered with clarity and a tight bass, while at the other extreme the treble is sweet and detailed, getting

the most from Wagner's *Ride of the Valkyries*. The result is a breathtaking Best Buy amplifier that betters its competition with ease."

KANDY KA1/III AMPLIFIER - AWARDS 2003

## QUAD 11L SPEAKERS £379.95



"These world beating speakers are at home with laid-back trip-hop, for example, as they are with large-scale symphonies or banging rock. There's very little more we could ask for!

One year on the Quads are still amazing value for money - no rival speakers come close.

**FREE SPEAKER CABLE WORTH £60** WITH ALL HI-FI SPEAKER PAIRS OVER £299\*  
**WORTH £80** WITH SPEAKERS OVER £499

\*CABLE OFFER - FROM RANGE AVAILABLE IN-STORE. NOT IN CONJUNCTION WITH ANY OTHER OFFER

## HI-FI SYSTEM 3

**SAVE £299**

## CYRUS CD8 CD PLAYER & 8 AMPLIFIER MONITOR AUDIO GR10 SPEAKERS

Another very popular combination that's more than the sum of its already talented parts - and that's before you've examined the upgrade options. The CD8 is a magnificent player (Best Buy - What Hi-Fi? Sound and Vision Awards 2003) and like most Cyrus products its performance can be maximised with the addition of a Cyrus PSX-R power supply.

The beautifully crafted, compact, Gold Reference GR10 speakers (★★★★ - What Hi-Fi? Sound and Vision August 2001) from British speaker specialists Monitor Audio complete the package.

HI-FI SYSTEM 3 - NOT IN CONJUNCTION WITH ANY OTHER OFFER OR PROMOTION



**SYSTEM PRICE  
£2299.95**  
PRICE EXCLUDES CABLES & STANDS

experience more

# experience more

# experience more



## LINN CLASSIK ▽ MUSIC SYSTEM (EX SPEAKERS) £799.95 **SAVE £50**

"The Classik sounds simply marvellous. Boasting fine impact and drive, it retains its grip even as it thumps out rock and dance tracks. Ask it to



play quiet acoustic music and its smooth, liquid presentation impresses still further. The Classik offers the performance you'd expect from high quality separates in one lovely package - this is a very superior product."



## YAMAHA CDR-HD1300 CD-RW/HD RECORDER £479.95 **SAVE £50**



## PIONEER PDR-609 CD-RW RECORDER £159.95

## DENON DM31 ▶ UD-M31 CD RECEIVER £199.95 **SAVE £30**

"The D-M30 was exemplary, as its three What Hi-Fi? Sound and Vision Awards clearly show. The D-M31 is even better, making it phenomenal value for money."

OPTIONAL RECORDERS: DMD-M31 MINIDISC RECORDER • DRR-M31 CASSETTE DECK  
NB - PRICE EXCLUDES SPEAKERS



## HI-FI SYSTEM 4 **SAVE £169**

### ARCAM CD73T CD PLAYER & A65 PLUS AMPLIFIER MONITOR AUDIO BRONZE B2 SPEAKERS



### SYSTEM PRICE £799.95 PRICE EXCLUDES CABLES & STANDS

Arcam and Monitor Audio both have an enviable reputation for producing great sounding kit without breaking the bank. This system shows why with a well balanced sound that's both musically involving and enjoyable.

At the front of this package is Arcam's upgradeable CD73T CD player - a What Hi-Fi? Sound and Vision 'Product of the Year 2003'. We've coupled this with Arcam's complementary A65 Plus integrated amplifier and Monitor Audio's beautifully balanced 'Best Buy' Bronze B2 speakers. According to What Hi-Fi? Sound and Vision (Awards 2003), these compact speakers "Sound superb... Speakers don't get much better than the B2s."

HI-FI SYSTEM 4 - NOT IN CONJUNCTION WITH ANY OTHER OFFER OR PROMOTION



# Sevenoaks SOUND & VISION

## PRODUCT RANGE

An outstanding selection of products are on display and available for demonstration at all Sevenoaks Sound & Vision stores. However, some products may not be available at all stores.

Please call to check availability before travelling.

### TURNTABLES

Goldring GR1	£139.95
Michell Gyro SE/RB300 £50 TOWARDS CARTRIDGE*	£1049.95
Michell TechnoDec	£599.95
Project Debut Phono SB	£169.95
Project Debut II (Black)	£119.95
Project Debut II (Colours)	£134.95
Project 1 Xpression	£209.95
Project RPM4	£319.95

### TUNERS

Arcam DIVA T61	£219.95
Cyrus FM X	£499.95
Denon TU260L MKII	£99.95
Harman Kardon TU970 DAB/AM/FM	£299.95
Marantz ST4000	£99.95
Pure Evoke 1 DAB	£89.95
Pure DRX-701ES DAB	£199.95
Pure DRX-702ES Analogue/DAB	£279.95

### CD PLAYERS

Arcam DIVA CD73T	£ CALL
Arcam DIVA CD82T	£ CALL
Arcam DIVA CD93T	£ CALL
Arcam FMJ CD33T	£1299.95
Cyrus CD6	£599.95
Cyrus CD8	£999.95
Denon DCD485	£119.95
Linn Genki	£1099.95
Linn Ikemi	£2199.95
Marantz CD5400	£119.95
Marantz CD17/II M	£799.95
Meridian S07	£1194.95
Musical Fidelity X-Ray 99	£899.95
Musical Fidelity A3.2	£ CALL
Musical Fidelity A308*	£ CALL
Musical Fidelity Tri-Vista SACD	£3994.95
Quad 99 CD-P	£999.95
Roksan Kandy KD1 MKIII	£594.95
Roksan Caspian M	£1099.95
Rotel RCD02	£379.95
Rotel RCD1072	£594.95

### RECORDERS

Pioneer PDR609 CD-RW	£159.95
Yamaha CDR-HD1300 CD-RW	£479.95

### AMPLIFIERS

Arcam DIVA A65 Plus	£ CALL
Arcam DIVA A80	£ CALL
Arcam DIVA A85	£ CALL
Arcam DIVA A90	£ CALL
Arcam FMJ A32	£1149.95
Cyrus 6	£599.95
Cyrus 8	£799.95
Cyrus Pre X Pre	£999.95

Cyrus Mono X Power	(Each) £1199.95
Denon PMA355	£179.95
Linn Kolector Pre	£574.95
Linn LK85 Power	£544.95
Marantz PM4400	£149.95
Marantz PM7200	£249.95
Musical Fidelity X-150	£799.95
Musical Fidelity A3.2	£ CALL
Musical Fidelity A3.2 Pre	£ CALL
Musical Fidelity A3.2 Power	£ CALL
Musical Fidelity A308	£ CALL
Musical Fidelity Tri-Vista 300	£3994.95
Quad 99 Power	£549.95
Roksan Kandy KA1 MKIII	£594.95
Roksan Caspian M	£999.95
Rotel RA-01	£249.95
Rotel RA-02	£349.95
Rotel RA-1062	£594.95

### SPEAKERS

Acoustic Energy Aegis Evo One	£129.95
Acoustic Energy Aegis Evo Three	£249.95
Acoustic Energy AE1 MKIII (From)	£1699.95
B&W DM303	£179.95
B&W DM601 S3	£249.95
B&W DM602 S3	£299.95
B&W 704	£1399.95
B&W 705	£899.95
KEF Q1	£199.95
KEF Q4	£399.95
KEF XQ1	£999.95
Linn Katan	£649.95
Linn Ninka	£1099.95
Mission m31	£119.95
Mission 780SE	£349.95
Mission 782SE	£899.95
Monitor Audio Bronze B2	£199.95
Monitor Audio Silver S1	£299.95
Monitor Audio Silver S6	£599.95
Monitor Audio Silver S8	£799.95
Monitor Audio Gold Reference 10	£799.95
Monitor Audio Gold Reference 20	£1499.95
Quad 11L	£379.95
Quad 12L	£499.95
Quad 22L	£894.95
Ruark Epilogue II	£344.95
Wharfedale Pacific Evolution 30	£649.95

### HI-FI SYSTEMS

Denon 201 Ex Speakers	£499.95
Denon DF101 Ex Speakers	£299.95
Denon DM31 Ex Speakers	£199.95
Linn Classic Music Ex Speakers	£799.95
Onkyo CS210 Ex Speakers	£199.95
Teac Legacy 600 Ex Speakers	£199.95
Teac Reference 300 Ex Speakers	£449.95
Teac Reference 500 Ex Speakers	£569.95

### DVD SYSTEMS

Denon ADV-M71 Inc Speakers	£499.95
Jamo DVR50/A305PDD Inc Speakers	£549.95
Jamo DVR50/A355PDD Inc Speakers	£699.95
KEF KIT100 Inc Speakers	£1199.95
Linn Classic Movie Di Ex Speakers	£2199.95
Sony DAV-SC6 Inc Speakers	£549.95
Teac Legacy 700/LS-1800 Inc Speakers	£849.95

### DVD PLAYERS

MAKE & MODEL	REGION 2	MULTI REGION
Arcam DIVA DV78	£ CALL	£ CALL
Arcam DIVA DV88 Plus	£ CALL	£ CALL
Arcam DIVA DV89	£ CALL	£ CALL
Cyrus DVD8	£1199.95	£1199.95
Denon DVD-1400 Universal	£ CALL	£ CALL
Denon DVD-2200 Universal	£ CALL	£ CALL
Denon DVD-2900 Universal	£ CALL	£ CALL
Denon DVD-A11	£ CALL	£ CALL
Denon DVD-A1	£1799.95	£1849.95
Harman Kardon DVD25	£279.95	£279.95
Harman Kardon DVD22	£299.95	£299.95
Harman Kardon DVD31	£399.95	£399.95
Pioneer DV360	£69.95	£89.95
Pioneer DV464	£89.95	£109.95
Pioneer DV565A Universal	£169.95	£ CALL
Pioneer DV668Av Universal	£ CALL	£ CALL
Pioneer DV868Avi Universal	£ CALL	£ CALL
Tag McLaren DVD32FLR	£ CALL	£ CALL
Teac DV50	£3999.95	£3999.95
Toshiba SD330E	£69.95	£ CALL
Yamaha DVD-S540	£119.95	£119.95

### DVD RECORDERS

MAKE & MODEL	REGION 2	MULTI REGION
Panasonic DMR-E50 DVD-R	£269.95	£299.95
Panasonic DMR-E60 DVD-R	£ CALL	£ CALL
Panasonic DMR-E100 DVD-R	£ CALL	£ CALL
Panasonic DMR-HS2 DVD-R	£ CALL	£ CALL
Philips DVDR70 DVD+RW	£ CALL	£ CALL
Philips DVDR80 DVD+RW	£ CALL	£ CALL
Pioneer DVR3100S DVD-R/RW	£ CALL	£ CALL
Pioneer DVR5100HS DVD-R/RW	£ CALL	£ CALL
Toshiba RD-XS30 DVD Recorder	£529.95	£ TBA

### A/V AMPLIFIERS

### RECEIVERS & PROCESSORS

Arcam AVR200 A/V Receiver	£599.95
Arcam AV8/P7 A/V Pre/Processor/Power	£5499.95
Cyrus AV8 A/V Processor	£1099.95
Denon AVC-A11SR A/V Amplifier	£1199.95
Denon AVC-A1SR A/V Amplifier	£2199.95
Denon AVR1604 A/V Receiver	£229.95
Denon AVR1804 A/V Receiver	£299.95
Denon AVR2803 A/V Receiver	£449.95
Denon AVR3803 A/V Receiver	£649.95
Harman Kardon AVR2550 A/V Receiver	£ CALL
Harman Kardon AVR5550 A/V Receiver	£ CALL
Harman Kardon AVR8500 A/V Receiver	£1299.95
Harman Kardon AVR330 A/V Receiver	£599.95
Harman Kardon AVR630 A/V Receiver	£999.95
Marantz SR4400 A/V Receiver	£229.95
Marantz SR5400 A/V Receiver	£349.95
Onkyo TX-SR501E A/V Receiver	£ CALL
Onkyo TX-SR601E A/V Receiver	£ CALL
Onkyo TX-NR801E A/V Receiver	£ CALL
Onkyo TX-NR900E A/V Receiver	£ CALL
Pioneer VSX-C301 A/V Receiver	£199.95
Pioneer VSX-C501 A/V Receiver	£329.95
Pioneer VSX-D812 A/V Receiver	£319.95
Pioneer VSX-AX3i A/V Receiver	£649.95
Pioneer VSX-AX5i A/V Receiver	£949.95
Pioneer VSA-AX10i A/V Amplifier	£2199.95
Rotel RSX1065 A/V Receiver	£1799.95
Rotel RSP1066/RMB1075 A/V Pre/Power	£1799.95
Rotel RSP1098 A/V Processor	£2294.95
TAG McLaren AV30R A/V Processor	£ CALL
TAG McLaren AV192R A/V Processor (From)	£ CALL
Yamaha DSP-AX640SE A/V Amplifier	£299.95
Yamaha DSP-29 A/V Amplifier	£219.95
Yamaha RX-V440RDS A/V Receiver	£219.95
Yamaha RX-V640RDS A/V Receiver	£349.95
Yamaha RX-V1400RDS A/V Receiver	£ CALL
Yamaha RX-V2400RDS A/V Receiver	£ CALL

### A/V SPEAKER PACKAGES

Acoustic Energy Aego P5	£369.95
Acoustic Energy Evo 3B	£699.95
B&W VM1/AS1	£849.95
B&W DM300 AV	£899.95
B&W FPM Series	£ CALL
Castle Compact CC3	£999.95
Energy Iake 5.1	£399.95
Energy Encore	£999.95
Jamo D6 PTX	£1499.95
Jamo D7 THX Ultra 2 (from)	£3249.95
KEF KHT1005 £100 FREE CABLE*	£499.95
KEF KHT2005 2 £150 FREE CABLE*	£799.95
KEF KHT5005 £200 FREE CABLE*	£1199.95
KEF Q7 AV £300 FREE CABLE*	£2199.95
M&K K5 £250 FREE CABLE*	£1699.95
M&K K3	£1894.95
M&K Xenon 25	£2249.95
M&K 850/CS35/V850	£3899.95
Monitor Audio Bronze B2 AV	£799.95
Monitor Audio Bronze B4 AV	£949.95

Monitor Audio Radius	£999.95
Ruark Vita 120	£1699.95

### SUBWOOFERS

B&W ASW675	£649.95
B&W ASW750	£1199.95
MJ Acoustics Pro 50 (Black)	£299.95
MJ Acoustics Pro 100 (Black)	£599.95
MJ Acoustics Ref 100 (Blk) £60 FREE CABLE*	£349.95
MJ Acoustics Ref 1 (Black)	£699.95
REL Q150E MKII (Brittex Black) £100 FREE CABLE*	£499.95
REL Q201E (Brittex Black)	£724.95
REL Q400E (Brittex Black)	£999.95
REL Quake (Brittex Black)	£349.95
REL Strata III	£549.95
REL Storm III	£699.95

### PLASMA

Fujitsu P42VHA20 42" (ED)	£2799.95
Fujitsu P42VHA30 42"	£3299.95
Fujitsu P42HHA10 42" (ED)	£2999.95
Fujitsu P42HHA30 42"	£3599.95
Fujitsu P42HHS10 42" (ED)	£3999.95
Fujitsu P50XHA10 50" (ED)	£5699.95
Fujitsu P50XHA30 50"	£5999.95
Hitachi 32PD3000P 32" (ED)	£2199.95
Hitachi 42PD3000E 42"	£2899.95
Hitachi 42PD5000E 42"	£ CALL
Hitachi 42PMA400E 42" (ED)	£2499.95
Panasonic TH37PA20B 37"	£ CALL
Panasonic TH42PA20B 42"	£3299.95
Panasonic TH42PW6B 42"	£2999.95
Philips 37PF9965 37" (ED)	£2699.95
Philips 42PF9965 42" (ED)	£3499.95
Pioneer PDP434HDE 43"	£ CALL
Pioneer PDP503HDE 50" (ED)	£4499.95
Pioneer PDP503HDE 50" (ED)	£5499.95
Toshiba 42WP36P 42"	£ CALL

### LCD TV

Panasonic TX15LT2 15"	£749.95
Panasonic TX22LT3 22"	£1499.95
Philips 17PF9945 17"	£ CALL
Philips 30PF9975 30"	£ CALL
Sharp Aquos LC-13B4E 13"	£ CALL
Sharp Aquos LC-13S1E 13"	£ CALL
Sharp Aquos LC-15B4E 15"	£ CALL
Sharp Aquos LC-15S1E 15"	£ CALL
Sharp Aquos LC-20B4E 20"	£899.95
Sharp Aquos LC-20S1E 20"	£ CALL
Sharp Aquos LC-22SV2E 22"	£1099.95
Sharp Aquos LC-30AD1 30"	£ CALL
Sharp Aquos LC-30HV4E 30"	£2399.95
Sharp Aquos LC-37AD1 37"	£ CALL
Sharp Aquos LC-37HV4E 37"	£3699.95
Toshiba 26WL36P 26"	£ CALL
Toshiba 32WL36P 32"	£ CALL

### PROJECTORS

NEC HT1000 DLP	£3199.95
Sanyo PLV-Z1 LCD	£999.95
Sanyo PLV-Z2 LCD	£1449.95
Screenplay SP4800 DLP	£1199.95
Sharp SP5700 DLP	£ CALL
Sharp XV-291E DLP	£1699.95
Sharp XV-2200 DLP	£ CALL
Sim 2 Domino 20 DLP	£3499.95
Sim 2 HT300 Plus DLP (ED)	£5999.95
Sim 2 HT300 Xtra DLP	£7999.95
ThemeScene H30 Cinema DLP	£1199.95
ThemeScene H50 Cinema DLP (ED)	£1499.95
ThemeScene H56 Cinema DLP	£2299.95
Yamaha LPX-500 LCD	£ CALL
Yamaha DPX-1000 DLP (ED)	£5999.95

## CALL

CONTACT YOUR LOCAL STORE OR VISIT OUR WEBSITE FOR OUR UP-TO-DATE PRICES

## £ PRICING POLICY

SEVENOAKS SOUND & VISION OPERATES A PRICING POLICY SEE OPPOSITE PAGE FOR DETAILS

Please Note: Some products may not be available at all stores. Please call before travelling.  
\*Cable Offer - From range available in-store. Not in conjunction with any other offer.  
(ED) - Limited stock, some could be ex-display. Advertisement valid until at least 07/04/04, £&O.E.



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# experience more

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## SEVENOAKS STORES NATIONWIDE

Within the M25

**BROMLEY** 39A EAST STREET  
• 020 8290 1988

**CHELSEA** 403 KINGS ROAD  
• 020 7352 9466

**CROYDON** 369-373 LONDON ROAD  
• 020 8665 1203 *OPEN SUNDAY*

**EPSOM** 12 UPPER HIGH STREET  
• 01372 720720 *OPEN SUNDAY*

**HOLBORN** 144-148 GRAYS INN ROAD  
• 020 7837 7540

**KINGSTON** 43 FIFE ROAD  
• 020 8547 0717 *OPEN SUNDAY*

**SOUTHGATE** 79-81 CHASE SIDE  
• 020 8886 2777

**STAINES** 4 THAMES STREET  
• 01784 460777 *OPEN SUNDAY*

**SWISS COTTAGE** 21 NORTHWAYS PDE, FINCHLEY RD  
• 020 7722 9777 *OPEN SUNDAY*

**WATFORD** 478 ST ALBANS ROAD  
• 01923 213533 *OPEN SUNDAY*

**WEYBRIDGE** 43 CHURCH STREET, THE QUADRANT  
• 01932 828525

Nationwide

**BEDFORD** 29-31 ST PETERS STREET  
• 01234 272779

**BRIGHTON** 57 WESTERN ROAD, HOVE  
• 01273 733338

**BIRMINGHAM** ARCH 12, LIVERY STREET  
• 0121 233 2977

**BRISTOL** 92B WHITELADIES ROAD, CLIFTON  
• 0117 974 3727

**CAMBRIDGE** 17 BURLEIGH STREET  
• 01223 304770

**CARDIFF** 104-106 ALBANY ROAD  
• 029 2047 2899

**CHELTENHAM** 14 PITTVILLE STREET  
• 01242 241171

**CRAWLEY** 32 THE BOULEVARD  
• 01293 510777

**EDINBURGH** 5 THE GRASSMARKET  
• 0131 229 7267

**EXETER** 28 COWICK STREET  
• 01392 218895

**GLASGOW** 88 GREAT WESTERN ROAD  
• 0141 332 9655

**GUILDFORD** 73B NORTH STREET  
• 01483 536666

**HULL** 1 SAVILE ROW, SAVILE STREET  
• 01482 587171

**IPSWICH** 12-14 DOGS HEAD STREET  
• 01473 286977

**LEEDS** 62 NORTH STREET  
• 0113 245 2775 *OPEN SUNDAY*

**LEICESTER** 10 LOSEBY LANE  
• 0116 253 6567

**LINCOLN** 20-22 CORPORATION STREET  
• 01522 527397 (*OFF HIGH STREET*)

**LIVERPOOL** 16 LORD STREET  
• 0151 707 8417

**MAIDSTONE** 96 WEEK STREET  
• 01622 686366

**MANCHESTER** 69 HIGH ST, CITY CENTRE  
• 0161 831 7969

**NEWCASTLE** 19 NEWGATE STREET  
• 0191 221 2320

**NORWICH** 29-29A ST GILES STREET  
• 01603 767605

**NOTTINGHAM** 597-599 MANSFIELD ROAD  
• 0115 911 2121

**OXFORD** 41 ST CLEMENTS STREET  
• 01865 241773

**PETERBOROUGH** 36-38 PARK ROAD  
• 01733 897697 *OPEN SUNDAY*

**PLYMOUTH** 107 CORNWALL STREET  
• 01752 226011

**POOLE** LATIMER HOUSE, 44-46 HIGH STREET  
• 01202 671677

**PRESTON** 40-41 LUNE STREET  
• 01772 825777 *OPEN SUNDAY*

**READING** 3-4 KINGS WALK SHOPPING CENTRE  
• 0118 959 7768

**SEVENOAKS** 109-113 LONDON ROAD  
• 01732 459555

**SHEFFIELD** 635 QUEENS ROAD, HEELEY  
• 0114 255 5861 *OPEN SUNDAY*

**SOLIHULL** 149-151 STRATFORD ROAD  
• 0121 733 3727

**SOUTHAMPTON** 33 LONDON ROAD  
• 023 8033 7770

**SWANSEA** 24 MANSER STREET  
• 01792 465777 *OPEN SUNDAY*

**SWINDON** 8-9 COMMERCIAL ROAD  
• 01793 610992

**TUNBRIDGE WELLS** 28-30 ST JOHNS ROAD  
• 01892 531543

**WITHAM (ESSEX)** 1 THE GROVE CENTRE  
• 01376 501733

**WOLVERHAMPTON** 29-30 CLEVELAND STREET  
• 01902 312225 *OPEN SUNDAY*



### WHO ARE SEVENOAKS?

Founded in 1972, Sevenoaks Sound & Vision is one of the largest and most successful hi-fi and home cinema retailers in the country.

Each Sevenoaks Sound & Vision store stocks a wide range of quality products, covering all categories of specialist home entertainment, from Hi-Fi separates and systems to DVD players, widescreen plasma televisions and projection systems, all at highly competitive prices.

Friendly staff are available in all stores to advise, demonstrate and guide you through the home entertainment jungle.

### CUSTOM INSTALLATION

Sevenoaks Sound & Vision's Custom Installation Service enables the integration of a home cinema or hi-fi system into your home as neatly and seamlessly as possible. All electronics can be hidden away, speakers discreetly mounted either in the wall or ceiling and the complete system operated via remote control.

Our installation experts are fully trained to the highest standards in all areas and provide a prompt, reliable and professional service. Whether you're looking for a multi-room system, a dedicated home cinema installation with a retractable screen and built-in speakers or an integrated control or lighting system, Sevenoaks Sound & Vision has a diverse range of products available to cater for all your requirements.



### DEMONSTRATION FACILITIES

Our comfortable demonstration rooms are among the finest in the country, many complying with full THX specifications.



### SEVENOAKS WEBSITE

The Sevenoaks Sound & Vision website has news and information on the Sevenoaks group and its stores.

There are regularly updated special offer and stock clearance lists with hundreds of products available and detailed pages to help you locate your nearest store. To find out more, click on [www.sevenoakssoundandvision.co.uk](http://www.sevenoakssoundandvision.co.uk)

### STOCK CLEARANCE

With 49 stores nationwide, the Sevenoaks Sound & Vision group stock and display a wide range of products. As models and product ranges are changed or superseded, the preceding models are made available at a reduced price, for clearance. Visit our Website for an up-to-date list of the clearance stock.

### PRICING POLICY

Whilst we do not claim always to be the cheapest, we try to ensure our prices are highly competitive. Take into account the expert advice, unrivalled product selection, demonstration facilities and excellent pre, during and after sales service and the lower price might not look such good value.

In the event you can find the same products and excellent service at a lower price, please bring it to our store managers' attention. We will always endeavour to offer you the best deal.

**OPENING HOURS:** PLEASE TELEPHONE OR VISIT OUR WEBSITE  
**E-MAIL:** [insert store name]@sevenoakssoundandvision.co.uk

[www.sevenoakssoundandvision.co.uk](http://www.sevenoakssoundandvision.co.uk)

# STEREO AMPLIFIERS

*Integrated and pre/power amps*



Amplifiers come in two basic forms: integrated and preamplifier (pre) plus power amp combinations. Integrated simply means that both pre and power sections are in one box. There are definite advantages to separating the low level, delicate signals in the preamp from the radiations of a power amp, so the more ambitious designs come in two or more cases. In some cases, each channel has its own power amp called a monoblock.

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 transistors can't replicate. If you want to play your music loud, use transistors; 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.

## 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) noise-inducing digital processing of AV amps. AV amps cost three to four times as much as stereo models of a similar quality.

## Q&A

### 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.

## TOP BUYS



### Marantz PM7200 £330

A true budget belter from Marantz – power and finesse in equal measure, plus the ability to switch between Class A and Class AB operation. Giant killing amps are back!



### Rotel RA-1062 £595

Rotel's latest is an affordable taste of the high end, packed with power and detail. It'll drive virtually any speaker and embarrass a good many more costly amps.



### AVI Lab Series £1,399

This AVI's full name is Lab Series Integrated Amplifier Type S21 MI – a lengthy moniker for such a neat little amp with a hugely accomplished sound.



### Exposure XXIII/XXVIII £2,790

A beautifully natural and dynamic sounding pre/power amp combo – a transistor design with a touch of the valve amp sound.

Our favourite  BEST BUY  EDITOR'S CHOICE

## STEREO AMPLIFIERS

## Integrated amplifiers

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS					
				LINE INPUTS	PHONO INPUT	REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (W)	ISSUE NUMBER
<b>UP TO £1,000</b>									
<input type="checkbox"/>	Arcam DIVA A65 Plus	370	Highly articulate and fluent, offers unusual insight for its price	5	●	●	●	40	232
<input type="checkbox"/>	Arcam DIVA A75 Plus	470	Quick, lively and well-presented amplifier, bass is sharper and more tuneful than its predecessor	5	●	●	●	50	224
	Arcam DIVA A80	600	Arcam's most successful mid-range amp to date – sophisticated control system and crisp, detailed sound	6	●	●	●	90	251
<input type="checkbox"/>	Arcam DIVA A90	850	Enhanced replacement for A85, convertible to 7.1 sound with the addition of an add-on module and extra P90 power amps	6	opt	●	●	90	250
	Cambridge Audio Azur 640A	250	Cambridge has a powerful weapon in the battle for budget amp supremacy, it's a lot of musical entertainment for the money	5	opt	●		65	250
	Cyrus 8	800	Impressive at low to medium volumes, and a clear improvement on its predecessor, but deteriorates at high power levels	7		●	●	70	239
	Exposure 2010	599	Neatly turned-out amplifier with mainstream appeal. Sounds musical, if a touch 'safe'	6		●		50	214
<input type="checkbox"/>	Exposure 3010	1,000	A mix of old and new, combining greater power with Exposure's traditionally sweet and enthralling sound	6	●	●	●	120	244
<input type="checkbox"/>	Marantz PM7200	330	High power, plenty of features, and remarkably clear and informative sound with lots of impact	6	●	●	●	105	248
	NAD C320BEE	220	Spirited and enthusiastic amp with slight bass hump and a sound that will suit relaxed speakers	7		●	●	50	232
<input type="checkbox"/>	Naim Nait 5i	699	A trade-off of more power and better connectivity against less inputs works surprisingly well in a grumpy, musical manner	4		●		50	252
	Primare A10	500	Beautifully made, smooth and easy sounding, and though not overtly detailed it is well organised musically	6		●		50	208
<input type="checkbox"/>	Primare I20	750	An amplifier with attitude: punchy fast and secure sounding, with excellent build quality for the money	4		●		70	239
<input type="checkbox"/>	Roksan Caspian M Series	1,000	Improved mid-range model from Roksan is a fine, expressive amplifier – right at the top of its class	6		●		85	248
<input type="checkbox"/>	Rotel RA-02	349	Agile and capable slimline design with an engaging sound that draws you into the music	4	●	●	●	40	232
<input type="checkbox"/>	Rotel RA-1062	595	The pick of this season's crop. Fabulous sound with the ability to drive almost any speaker in its path	5	●	●		95	251
<input type="checkbox"/>	Sugden A21a	899	This single-ended, Class A transistor amp has exquisite resolving ability and presence – an authentic classic	5		●		25	224
<input type="checkbox"/>	Unison Research Unico P	750	Vastly better than preceding models from Unison Research, this hybrid integrated delivers a thoroughly enjoyable ride	4	●	●		50	252
<b>ABOVE £1,000</b>									
<input type="checkbox"/>	Arcam FMJ A32	1,150	Remarkably flexible and well-featured, with excellent sound quality for the price	7	●	●	●	100	228
<input type="checkbox"/>	ATC SIA2-150	2,375	Starkly revealing powerhouse that eats most integrateds for breakfast	5		●		150	228
<input checked="" type="checkbox"/>	AVI Laboratory Series	1,399	Terrific power, control and resolution – effortlessly musical and fine value	6	opt	●		200	241
<input checked="" type="checkbox"/>	Burmester 032	9,100	Bulky, powerful amp sounds delightfully delicate with a lovely natural warmth and superb imaging	5		●		170	252
<input checked="" type="checkbox"/>	Karan KA-i180	3,900	Lean, sharp and articulate, this impressively constructed heavyweight is almost up there with the audiophile pre/power elite	4		●		180	236
<input checked="" type="checkbox"/>	Krell KAV-400xi	2,698	The best integrated Krell yet is quick, agile, solid and finely detailed	5		●		200	247
<input checked="" type="checkbox"/>	Musical Fidelity Tri-Vista 300	3,999	If you audition one, you will want to be one of the handful of Tri-Vista owners	5	●	●	●	350	239
<input type="checkbox"/>	Primare A30.1	1,500	Smooth, detailed singing quality, elegant appearance and healthy power yield	6		●		100	214

Our favourite  BEST BUY  EDITOR'S CHOICE

## STEREO AMPLIFIERS

## Pre/power amplifiers

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS						
				PRE-AMPLIFIER	POWER AMPLIFIER	LINE INPUTS	PHONO INPUT	REMOTE CONTROL	POWER OUTPUT (W)	ISSUE NUMBER
<b>UP TO £2,000</b>										
<input checked="" type="checkbox"/>	Arcam FMJ A32/P35	1,980	One of the few correctly matched integrated/power combinations, the sound has real gravitas and sophistication	●	●	7	●	●	100	227
<input checked="" type="checkbox"/>	ATC CA2	750	Stripped-down version of ATC's range topper delivers considerable transparency and bandwidth. Excellent value	●		5		●		221
<input type="checkbox"/>	Croft Vitali/Series 5C	2,000	Oddball retro style and ergonomics, but truly magical voice coherence and projection, great transparency	●	●	3	●		30	216
	Densen Beat 200/300	1,985	Classy jet black cast boxes pack plenty of punch with good total musical coherence (remote £300 extra)	●	●	6	opt	opt	100	216
<input checked="" type="checkbox"/>	Musical Fidelity A308CR	3,898	Bold-looking design with an absence of sonic signature that proves there is life after NuVista	●	●	4	●	●	250	231
<input checked="" type="checkbox"/>	Naim NAC112/NAP150	1,425	Clean, clever simplicity, plus a very well-balanced sound that's much sweeter than earlier Naims	●	●	6		●	50	213
<input type="checkbox"/>	Rothwell Indus/Rubicon	1,488	Quirky valve combo with passive pre-amp has a lovely neutrality and consistency across a wide dynamic range	●	●	6			10	216
<b>ABOVE £2,000</b>										
	Arcam FMJ C30/P1	2,300	A lot of features, high build and flexibility, with a revealing and detailed sound	●	●	6	●	●	180	251
	Audio Note M2Phono/P2SE	2,698	Wonderfully natural and inviting sound with great warmth and drama, but limited loudness capability	●	●	4	●		18	216
<input checked="" type="checkbox"/>	Audio Research LS25/VT100	12,199	This is not so much a fine valve amp, as a fine amplifier, full stop (LS25 MkII/VT100 MkII)	●	●	6	●	●	100	216
<input checked="" type="checkbox"/>	AVI S2000M	2,398	This preamp/monoblock pairing does most things very well and images better than most	●	●	5		●	150	221
<input checked="" type="checkbox"/>	Border Patrol P20	6,750	Muscular 300B P-P design with fluidity and dynamics to match the best	●	●				20	231
	Bryton BP25/4BSST	4,000	Extremely transparent, high-power combo, you'll listen louder and longer because you can	●	●	8	opt	●	300	241
<input checked="" type="checkbox"/>	Chapter Preface/II+	9,800	Among the finest amps available, the resolution of this preamp and power amp challenges the best at any price	●	●	6		●	300	249

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

**POWER OUTPUT** Manufacturer's rated output in watts per channel.

Our favourite  BEST BUY  EDITOR'S CHOICE  
**STEREO AMPLIFIERS** continued

Pre/power amplifiers

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS						
				PRE-AMPLIFIER	POWER AMPLIFIER	LINE INPUTS	PHONO INPUT	REMOTE CONTROL	POWER OUTPUT (W)	ISSUE NUMBER
ES	Classé CP-35/CA-101	2,797	Very classy Canadian pre/power combo with a natural, open and no-nonsense sound	●	●	4		●	100	237
	Conrad-Johnson PV10BL/MV60SE	4,290	Gorgeous valve combo – preamp may seem a bit dated by today's standards, but both still rate as hi-fi classics	●	●	5			55	250
ES	Exposure XXIII/XXVIII	2,790	Highly natural and dynamic amplifier that offers the fluidity and energy of valves via transistors	●	●	6	opt	●	70	241
ES	Gamut D200 Mk3	3,950	A great power amp that's now even better – one of the best regardless of price		●				200	247
ES	Halcro dm10/dm68	75,900	Extravagant, extreme and massive amp combo will probably polarise opinions, but delivers stunning midrange clarity	●	●	5		●	225	243
ES	Hovland HP-100/RADIA	12,745	Uncommonly musical valve/transistor hybrid transcends stereotypes, one of the genuine high achievers	●	●	9	Opt		125	250
ES	Krell FPB 700cx	14,998	Reference class amplifier may represent overkill in many systems, but when no compromise is called for, this is it		●				700	234
ES	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	●		4		●		238
ES	Linn Klimax Twin	6,000	Super-slim stereo power amp uses advanced switch-mode power supplies to fast, engaging effect		●				125	230
	Naim NAC202/NAP200	2,720	More sophisticated than its forebears with a fleet-footed sound that draws you into the music	●	●	8		●	70	241
ES	Naim NAP500	10,995	Wonderful neutrality, bandwidth and dynamic range, plus Naim's traditional leading-edge definition		●				140	208
ES	Naim NAC552	11,750	Extremely expensive preamp, but still solid value. Magnificent sound with fine flexibility and convenience	●		6		●		233
	Primare PRE30/A30.2	2,400	Beautifully built with great selection of features and serious power delivery	●	●	7		●	120	241
ES	Steinhart DVP 2XR/Fidelio 102 DD	7,440	Brilliantly musical, making even difficult material enjoyable, but gets hot and has ergonomic foibles	●	●	7		●	100	236
ES	Sugden Masterclass AA	5,600	Yorkshire's finest class A kit. Dynamic and tonally rich, this gives even valve amps a run for their money	●	●	7		●	35	246
ES	Unison Research Unico Pre/DM	2,590	Hybrid designs with a rich powerful performance that makes a fine balance between valve and solid state sound	●	●	3		●	150	242

# 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.

## Q&A

### 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 systems are 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 amplification on board 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.

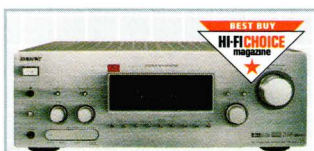
## HI-FI MEETS SURROUND SOUND

With DVD-Audio and SACD offering high-quality 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.

## TOP BUYS



**Sony**  
STR-DB790 £300

It used to be the rule that you had to spend close to a grand to get an AV amp that shines with music. Not any more.



**Pioneer**  
VSA-AX5i £1,200

Trickle-down version of the VSA-AX10i is a superb performer at the price, good with both music and film soundtracks, with the added bonus of i.Link digital connection.



**Denon**  
AVC-A1SR £3,000

Denon's AV behemoth is arguably the best integrated multichannel amp to date – superbly cinematic and one of the very few with genuine 'hi-fi' music credentials.



**Arcam**  
AV8/P7 £5,498

A fantastic achievement from this respected UK brand – a top-ranking AV processor and seven-channel power amp.

## Our favourite AV AMPLIFIERS

BEST BUY EDITOR'S CHOICE

### Multichannel amplifiers

BADGE?	PRODUCT	£	COMMENTS	RECEIVER	LINE INPUTS	7.1 COMPATIBLE	5-CHANNEL POWER (W)	ISSUE NUMBER
<b>MULTICHANNEL INTEGRATED AMPS</b>								
	Arcam AVR200	800	Upgraded AVR100 with Dolby Pro-Logic II and some bass management. Great for stereo, a bit bass-light for multichannel	●	6	●	70	229
	Denon AVR-2803	650	Merely 'average' sound but it's impossible to argue against the flexibility and value of its engineering	●	9	●	130	251
	Denon AVC-A11SR	1,800	Feature-packed with superb spatial processing, combined with powerful, though slightly opaque overall audio quality		11	●	125	235
	Denon AVC-A1SR	3,000	An AV amp with genuine high-res hi-fi credentials. Includes a ground-breaking 'wide bandwidth' digital audio link		8	●	170	232
	Harman Kardon AVR 5550	900	The upgrade to the AVR 5500 comes with features that are actually of some use to the audiophile and a meaty sound to boot	●	9	●	85	240
	Marantz SR9300	2,000	Not a high flyer, just a thoroughly enjoyable, warm and attractive sounding receiver with music and film soundtracks alike	●	8	●	105	252
	Pioneer VSA-AX5i	1,200	Standard setter in its price category, with i.Link digital interface and MCACC auto set-up	●	11	●	100	248
	Pioneer VSA-AX10i	2,700	Seven channel tour de force with automatic speaker set up and eq, excellent with music, movies and DVD-A/SACD		11	●	150	229
	Sony STR-DB790	300	No six channel amplifier has any right to be able to sound this good at such a ridiculously affordable price	●	7	●	112	251
	Yamaha RX-V1400	800	Equipped for every occasion, this is a capable receiver with stereo music and better yet with DVD-A/SACD and movie sources	●	9	●	175	251

### MULTICHANNEL PREAMPS/PROCESSORS AND POWER AMPS

	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	●	90	250
	Arcam AV8/P7	5,498	State-of-the-art processor (£2,999) and seven-channel power amp (£2,499). An excellent fusion of stereo and surround sound	7	●	180	235
	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
	Cyrus AV8/3x Smartpower	2,900	Classic Cyrus sound translated to a multichannel arena, limited features and power, but civilised sound	3		105	238
	EAD TheaterMaster 8000 Pro	5,200	Arguably the most 'musical' sounding AV processor to date – tested with the PowerMaster 8300 multichannel power amp	9	●		242
	Marantz PS-17/2x SM-17	3,400	Classy and capable system, great steering, warm solid sound and high detail resolution, and some great gadgets	10	●	60	238
	Meridian 861	9,833	Powerful surround processor with flexible modular construction, marvellous versatility to drive any speaker configuration	6	●		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
	Parasound Halo C1/A51	8,500	Powerful and flexible processor/power amp combo with impressive sound. Excellent value – processor includes onboard screen	11	●	250	243
	Primare SP31.7/A30.5	4,200	Great all-round system which brings the qualities of good stereo high fidelity to a multichannel world	5	●	120	238
	Roksan DSP/5ch amp/VSU	2,440	Clean, powerful stereo expanded seamlessly, if without distinction, to 5.1 channels	4		80	210
	TAG McLaren AV32R EX	2,994	Flexible AV processor, unusually good with music. Excellent for multichannel systems in standard or seven-channel 'EX' form	6	●		215

**SPECS KEY** **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.  
**5-CHANNEL POWER (W)** Power output in watts per channel of all channels driven by the amp.

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**Pioneer**

**NSDV99**

- DTS • DOLBY PRO-LOGIC 2 • 450 W RMS
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### GUARANTEES

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### FINANCE

- No Deposit\*
- No Payments
- No Interest



### Panasonic

PT-AE200E

- 858 X 484 RESOLUTION
- 700 ANSI LUMENS BRIGHTNESS
- 700:1 CONTRAST RATIO
- SD MEMORY CARD COMPATIBLE
- RGB SCART INPUT FOR EASY CONNECTION
- 120W UHM LAMP • 2.9KG IN WEIGHT
- PROJECTION SIZE 40" - 200" 16:9 ASPECT RATIO
- AUDIO 2W (MONO) • DIMENSIONS 280W X 85H X 280D MM
- 2.9KG IN WEIGHT

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### PT-AE300E Panasonic

- 960 X 540 RESOLUTION
- 800 ANSI LUMENS BRIGHTNESS
- 800:1 CONTRAST RATIO
- SD MEMORY CARD COMPATIBLE
- RGB SCART INPUT FOR EASY CONNECTION
- 120W UHM LAMP
- PROJECTION SIZE 40" - 200" 16:9 ASPECT RATIO
- AUDIO 2W (MONO) • 2.9KG IN WEIGHT
- DIMENSIONS 280W X 85H X 280D MM



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### Panasonic TX-28PS1 INC CAB

- 28" (86CM) TAU 16:9 QUINTRIX WIDESCREEN FLAT PICTURE TUBE
- 50HZ DIGITAL SCAN • NICAM STEREO SOUND
- BUILT-IN DOLBY DIGITAL • SHARPNESS CONTROL
- MACH ENHANCER • DIGITAL COMB FILTER
- AUTOMATIC DIGITAL PICTURE NOISE REDUCTION • QLINK • CHANNEL VOLUME
- CHILD LOCK • GRAPHIC OSD
- OFF TIMER • FAST TEXT
- REMOTE CONTROL



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### Panasonic TX-32PS12 INC CAB

- 32" (74CM) 16:9 QUINTRIX WIDESCREEN FLAT PICTURE TUBE • 100HZ SUPER DIGITAL SCAN
- NICAM STEREO • ARTIFICIAL INTELLIGENCE
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- COLOUR BALANCE ADJUSTMENT
- FAST TEXT • VERTICAL APERTURE CONTROL
- DIGITAL COMB FILTER • VELOCITY MODULATION
- AUTOMATIC DIGITAL PICTURE NOISE REDUCTION
- AUDIO OUTPUT: LEFT AND RIGHT 10WX2
- QLINK • EASY PROGRAMME ACCESS



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### Panasonic SC-HT500 HOME CINEMA

- DVD HOME CINEMA SYSTEM • PLAYS DVD-AUDIO, DVD-VIDEO, DVD-R/VIDEO, VIDEO CD, CD-R/RW, DVD-VOL
- 500W (RMS) TOTAL POWER OUTPUT • BUILT-IN DOLBY DIGITAL AND DTS DECODERS
- 5.1 SURROUND SOUND AND DOLBY PRO LOGIC • SPEAKERS: 280WATT/200WATT
- SUBWOOFER • DVD-AUDIO/NOT FULL BANDWIDTH/DVD-RAM COMPATIBLE
- MP3 PLAYBACK • DIGITAL TUNER WITH RDS AND PRESETS



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### PANASONIC PRODUCT LISTINGS

MAKE	MODEL	MAKE	MODEL	MAKE	MODEL
PANA	TX-47PT10	PANA	TX-32DT4	PANA	DMR-HS2EBS
PANA	TX-42PT12	PANA	NV-VP30EBS	PANA	NV-SV120EBS
PANA	TX-32PS1	PANA	DVD-S75EBS	PANA	DMC-LC40B
PANA	TX-28PS5	PANA	DVD-S35EBS	PANA	NV-HV60EBS
PANA	TX-28DK2	PANA	DVD-LV65EBS	PANA	NV-HS800
PANA	TX-28DK2			PANA	DMC-LC5B
PANA	TX-24PS1				

### Panasonic

TH-42PW6

- 42" (106CM) PLASMA DISPLAY • RESOLUTION: 852 X 480 PIXELS • PROGRESSIVE SCAN • PIXEL PITCH: 1.08MM
- COLOURS: 16.7 MILLION COLOURS
- LUMINANCE: 650 CD/M2 • VIEWING ANGLE: 160 DEGREES HORIZONTAL AND VERTICAL
- CONTRAST RATIO: 4000:1 • 2 X 8 WATTS
- SCART INPUT • REMOTE CONTROL
- INPUT BOARD • SILVER FINISH
- OPTIONAL PEDESTAL STAND AND WALL BRACKET



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### Panasonic TX-28PS5 INC CAB

- 28" (86CM) TAU 16:9 QUINTRIX WIDESCREEN FLAT PICTURE TUBE • 50HZ DIGITAL SCAN
- BUILT-IN DOLBY DIGITAL SOUND • DIGITAL COMB FILTER
- AUTOMATIC DIGITAL PICTURE NOISE REDUCTION • DOLBY DIGITAL / DOLBY PRO LOGIC / SIMULATED DOLBY NICAM DIGITAL STEREO
- LEFT & RIGHT 10WX2 • LEFT & RIGHT TWEETERS 10WX2 • SUBWOOFER 12W • QLINK

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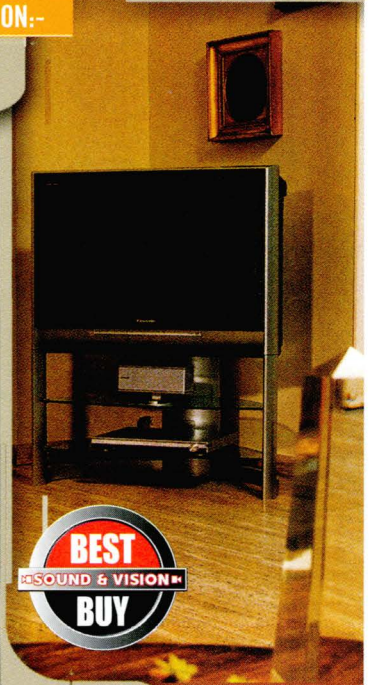
### Panasonic

TH37PA20B

- 37" (93CM) PLASMA TELEVISION WITH INTEGRATED TUNER AND SPEAKERS • 52 X 480 PIXELS VGA RESOLUTION • ASPECT RATIO 16:9 WIDE
- 4000:1 CONTRAST RATIO • 1,070 MILLION COLOURS
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- MACH ENHANCER • QUASI 100HZ SYSTEM
- PLASMA C.A.T.S • MULTI WINDOW
- AR (ANTI-REFLECTION) COATING



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PANASONIC DVDS75EBS **CALL US NOW**



PANASONIC DVD-S35 **LOG ON NOW**



PANASONIC DVDF65 **CHECK US OUT**



PANASONIC DMR-E100HE **CALL US NOW**



PANASONIC DVD-S35EBS **LOG ON NOW**



PANASONIC NV-HS780 **CHECK US OUT**

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### Panasonic

TX-36PD30 INC CAB  
Also Available

- 36" (86CM) 16:9 QUINTRIX WIDE-SCREEN TV
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- NICAM STEREO / VIRTUAL DOLBY
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- AV PICTURE IN PICTURE
- DVD PROGRESSIVE SCAN INPUT
- DIGITAL COMB FILTER
- DIGITAL PICTURE NOISE REDUCTION
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- SMART/ZOOM/4:3/WIDE/14:9 MODE
- AUTO TUNING/AUTO START UP/ONE BUTTON TUNING • AUTO LABELLING/AUTO SORTING
- SMARTLINK FASTEXT • 2 X SCART • 1 X FRONT AV INPUT • CABINET SUPPLIED SILVER COLOUR



## SONY DAV-SC8

- HOME CINEMA SYSTEM • MULTI REGION
- COMPLETE DVD HOME THEATRE SYSTEM WITH FLOOR-STANDING SPEAKERS AND ACTIVE SUBWOOFER
- TOTAL 635W: 100W X 5 + 135W RMS (10% THD)
- DOLBY DIGITAL/DOLBY PROLOGIC 2/DTS 5.1CH RECEIVER! RDS TUNER • MP3 CD-R PLAYBACK • COMPONENT VIDEO OUT • SUPER AUDIO CD MULTI-CHANNEL PLAYBACK
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### SONY KV-36FS76

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- DYNAMIC PICTURE STABILISER (DPS)
- VIRTUAL DOLBY AND BBE DIGITAL
- NEW REMOTE CONTROL
- 4 X SCARTS (2X RGB)
- DYNAMIC PICTURE AND PICTURE
- DYNAMIC PICTURE AND TEXT
- DIGITAL COMB FILTER
- AUTO TUNING, AUTO START-UP, ONE BUTTON TUNING • AUTO LABELLING, AUTO CHANNEL INSTALLATION, AUTO SORTING
- CABINET INCLUDED



OUR AIM IS TO SAVE YOU MONEY

### SONY KV32 FX68

- FACE VISIBLE FD TRINITRON WEGA SCREEN (32" TUBE)
- 100HZ (ABR)
- DIGITAL NOISE REDUCTION (DNR)
- TD SOUND
- VIRTUAL DOLBY + BBE
- 3 X SCART (RGB ON SCART (AND 2))
- UNIVERSAL REMOTE
- CABINET INCLUDED



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- DVD RECORDER • DUAL AW RECORDING (LW, RW, R) • ALL DVD FORMAT PLAYBACK
- VIDEO PLUS • TELETEXT TITLE DOWNLOAD

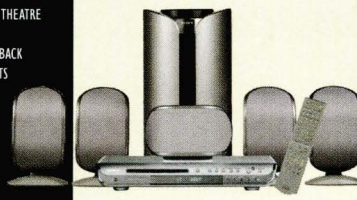


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## SONY

- MULTI REGION • COMPLETE DVD HOME THEATRE SYSTEM • SLIM & STYLISH DESIGN
- DVD/SUPER AUDIO CD/CD/CD-R/RW PLAYBACK
- DOLBY PROLOGIC 2 • DOLBY DIGITAL/DTS
- S-MASTER FULL DIGITAL AMPLIFIER
- TOTAL 550W: 90W X 5 + 100W (RMS 10%)
- FM/AM RDS TUNER ON SCREEN MENU

## DAV-SC5



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## SONY

### KV-32FQ70 WITH STAND

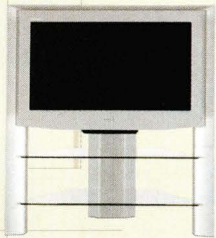
- 76CM VISIBLE FD TRINITRON WEGA SCREEN (32" TUBE) • 100HZ DIGITAL PLUS (ABAB)
- VERTICAL PICTURE STABILISER (VPS)
- DIGITAL NOISE REDUCTION (DNR)
- AUTO NOISE REDUCTION • ARC DESIGN (ONE TONE)
- 3D SOUND • VIRTUAL DOLBY + BBE
- 3 X SCART (RGB ON SCART 1 AND 2)
- PICTURE AND PICTURE (1 TUNER)
- EPG LEVEL 2 • UNIVERSAL REMOTE

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## SONY

### KD-32DX50 WITH STAND

- 32" WIDESCREEN WEGA TV • 76CM VISIBLE FD TRINITRON • INTEGRATED DIGITAL FREEVIEW READY TV ANALOGUE AND DIGITAL TUNERS • ELECTRONIC PROGRAMME GUIDE • SMARTLINK
- IMPROVED DIGITAL TEXT FASTEXT
- VIRTUAL DOLBY SURROUND • AUTO TUNING/AUTO START-UP/ONE BUTTON TUNING • AUTO LABELLING/AUTO SORTING • SMART/ZOOM/4:3/WIDE MODE • 2 X SCART • 1 X FRONT AV • 1 X FRONT S-VIDEO • SLEEP TIMER • AUTO STANDBY



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### SONY PRODUCT LISTINGS

MAKE	MODEL	MAKE	MODEL	MAKE	MODEL
SONY	VPL-W12HT	SONY	KD-32NX200	SONY	DVP-NS930
SONY	KV-32LS36	SONY	KD-36NX300	SONY	DVP-NS330
SONY	KV-28LS36	SONY	KE-32TS2E	SONY	DSC-V1
SONY	KV-44PK2	SONY	SLV-D950GS	SONY	DSC-U50
SONY	KV-17HR	SONY	RDR-GX3	SONY	DSC-U30
SONY	KF-60SX300	SONY	HTP3100		
SONY	KE-S0MR1	SONY	DVP-NS99ESN		



DSC-P72



DSC-V1

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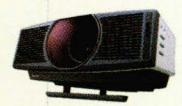


SLV-D950

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DSC-P52



VPL-HS11

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DVP-NS330S

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## SONY

KE-42MR1  
42" Wega  
Plasma TV

- 42" (107CM) WEGA PLASMA MONITOR • PC INPUT
- RESOLUTION: 1024 X 768
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- SUPPLIED SEPARATE TUNER BOX WITH MEMORY STICK • 4 X SCART
- CENTRE SPEAKER INPUT
- SUBWOOFER INPUT
- MEMORY STICK PLAYBACK
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# 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.

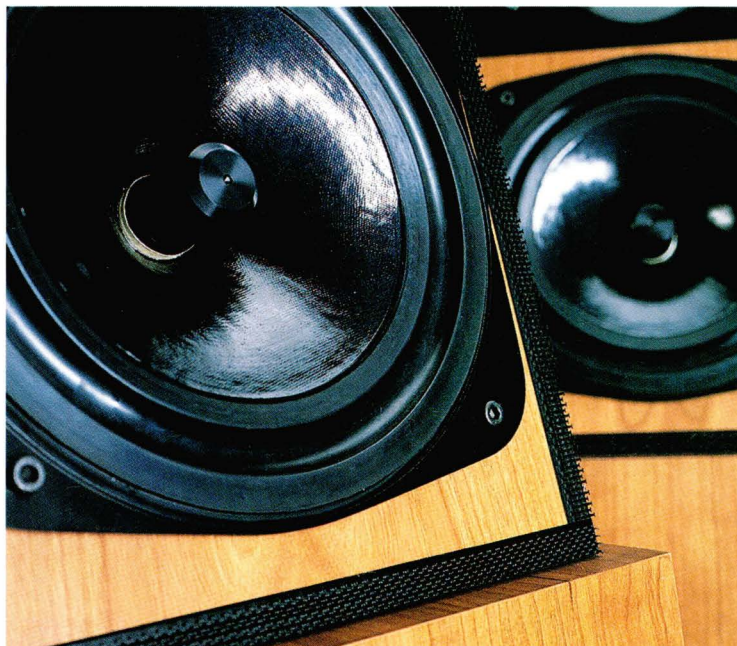
Box speakers are either designed to stand on the floor (floorstanders) or on a stand (stand or shelfmounts). Floorstanders have greater internal volume which can translate into greater efficiency and/or bass extension, but less substantial designs also introduce cabinet resonance and thus distortion. 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.



## 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.

## POWER

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.

## Q&A

### 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.

## TOP BUYS



**Tannoy**  
Sensys DC1 £449

A new dual-concentric main driver plus super-tweeter in a solid standmount box results in a neutral yet expressive speaker at a very tempting price.



**Focal-JMLab**  
Cobalt 816 Sig S £999

One of the best all-round performers around £1,000, combining a lively and dynamic character with an unusually smooth and neutral balance.



**B&W**  
703 £2,000

A hi-tech, three-way floorstander sporting a 'surroundless' midrange driver. Delivers a thoroughly engaging sound with great bass and an expressive midrange.



**Living Voice**  
Avatar OBX-R2 £4,000

Revised in 2003, the top model in Living Voice's Auditorium range is capable of delivering both the music's spirit and also its finest detail.

## Our favourite STEREO SPEAKERS

■ BEST BUY ■ EDITOR'S CHOICE

### Stereo speakers

BADGE?	PRODUCT	£	COMMENTS	SIZE WxHxD (CM)	FLOORSTANDER	EASE OF DRIVE	BASS FROM (W)	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
<b>UP TO £1,000</b>										
■	Acoustic Energy Aegis Evo 1	180	An unusually classy and sophisticated performer for the price; laid-back sound and good looks too	19,36,24		A	30	●		226
	ATC SCM12	999	Transparent, engaging and quick – a revealing, high-fidelity performer that's not afraid to bare all	22,39,25		A	62	●		237
	AVI Biggatron Red Spot	599	Good bass coherence and timing, but the lean and decidedly forward balance won't be to every taste	19,5,37,30		A	30		●	211
■	B&W DM303	180	Chunky looking and lively sounding, with deep bass, a fine midband and a restrained top end	20,33,23		A	23		●	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		A	25	●		234
	B&W DM309	330	Much of the grace and punch of the smaller DM303 – a superb floorstander for the money	20,91,30	●	A	60	●		235
■	B&W DM603 S3	600	Excellent all-rounder, smooth for its price with fine bass and mid, though top might be more refined	20,91,29	●	A-	25	●		231
	Blueroom Minipod	249	Wonderfully blobular styling aside, it's hard not to fall for the Minipod's openness, expression and detail	18,34,17		A	50		●	225
	Castle Durham 3	399	A very attractive near-miniature wallmount with a lively and communicative disposition – lots of fun	19,37,22	●	A	45	●		227
■	Castle Conway 3	930	Lovely real wood finish and a beautifully balanced sound, fine dynamics and transients, but might have more 'air'	22,91,27	●	A+	30	●		237
■	Castle Harlech S2	1,000	Improved Harlech is slightly aggressive, but lots of fun, and very good-looking too	20,96,33	●	A	50	●		219
	Dali Royal Tower	750	Cutely compact floorstander has a delightful liveliness and lightness of touch to match its luxury real wood finish	17,85,22	●	A	25		●	237
■	Dynaudio Audience 42	400	An aristocrat of the vinyl-covered miniature breed. A terrific small speaker for the price	17,29,24		A	40	●		215
	Dynaudio Audience 52	557	Brilliant neutrality, though a little understated dynamically (wood veneered version, as tested – £647)	20,33,26		A-	30	●		250
	Dynaudio Audience 62	729	Pricy but cute vinyl floorstander that is a class act sonically – lightweight, but clean and dextrous	20,86,26	●	A	30	●		231
	Energy Connoisseur C-5	600	Has a marvellously even and neutral overall balance, if a little too laid-back with restrained dynamic expression	20,95,37	●	A+	23	●		240
■	Epos ELS3	200	Few affordable speakers sound as clean and convincing while taking up so little real estate	18,27,19		A-	60	●		241
■	Focal-JMLab Chorus 707 S	350	The size and shape might be unfashionable, but this is an outstanding all-round performer at a very sharp price	23,5,49,30		A	25	●		251
■	Focal-JMLab Chorus 716 S	550	Not the smoothest around, but combines coherent voicing with fine dynamic expression and real authority	22,95,30	●	A	20	●		250
■	Focal-JMLab Cobalt 816 S	999	Great all-rounder – lively and dynamic, smooth and neutral, marred only by a slight treble 'sting'	22,98,31	●	A-	25	●		242
	Infinity Kappa 200	600	Notably artful styling. Some coloration, but good punch and drive with real dynamic propulsion and expression	22,37,36		A	25	●		250
	KEF Q1	250	Stylish if slightly small-sounding stand-mount with fine midband coherence; works well close to a wall	22,35,30		A	30		●	234
■	Mission m73	199	Good-looking floorstander. Dynamics are a little limp, but it has a good overall balance. Excellent value for money	20,88,31	●	A	25	●		215
	Mission 782SE	900	Definitely one of the prettiest speakers around. Very even balance but could sound more exciting	17,80,30	●	A	35	●		242
	Monitor Audio Bronze B2	200	A lively and entertaining speaker with tight controlled bass and pronounced midband	18,5,35,25		A	42		●	238
	Monitor Audio Silver S1	300	Super-quick sonics thanks to the C-CAM metalised drivers. Resolution and speed – a great value box	18,30,24		A	45		●	236
	Monitor Audio Silver S8	800	A thoroughly impressive all-rounder, notable for its wide dynamic range, excellent imaging and fine neutrality	19,90,27	●	A	20	●		237
	Monitor Audio Silver S10	1,000	Timing might be less than the best, but the full balance and fine dynamic range deliver plenty of detail.	20,100,27	●	A+	20	●		242
	MonoPulse 32	695	Very creative style and construction with an unusually vivid and communicative if less than smooth sound	21,98,23	●	A	30	●		245
	Neat Petite III	845	The treble is peaky, but this is still one of the most coherent and communicative miniatures around	20,31,20		A	30		●	211
■	PMC DB1	555	Lacks a little weight and authority, but beautifully balanced, free from boxiness, and loads of fun for a tiny	16,29,24		A	50	●		240
■	PMC TB2	700	A worthy successor to the TB1, which sets a high standard in its size/type for neutrality and transparency	20,41,31		A	30	●		211

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

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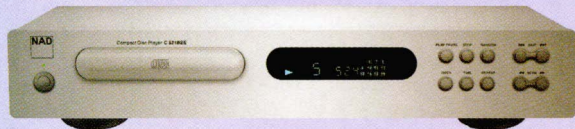
## Pioneer DV668AV DVD player

Wide compatibility universal disc player. HDMI digital video and audio interface. SACD and DVD playback. **£519.95**



## NAD C521BEE CD player

Quality sound from a budget marvel. High-end 'Burr-Brown' DAC. Now available in grey or silver. **£179.95 (Was £199.95)**



## Acoustic Energy Aegis Evo 3B speaker system

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## Project Debut II turntable



Fixed counter-weight design. Supplied with Ortofon OM5E cartridge **From £119.95**

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## Cable Talk Flat 2 Biwire speaker cable

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Rechargeable battery and docking station. Up to 81 hours battery life. LCD remote control. **£79.95 (Was £149.95, Save £70)**



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Kef, Wharfedale,  
Mission, Tannoy  
and more

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# Superfi

Our favourite BEST BUY EDITOR'S CHOICE

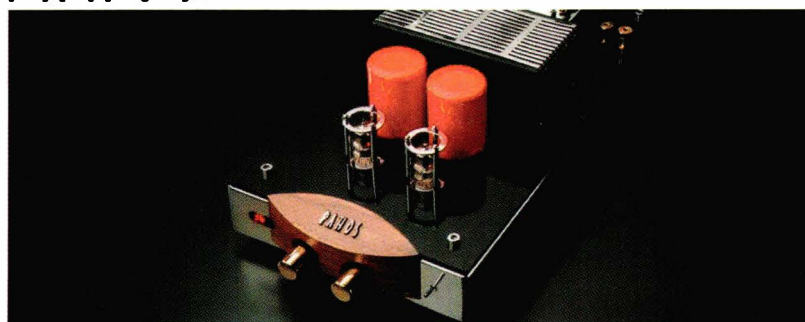
## STEREO SPEAKERS continued

### Stereo speakers

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS					
				SIZE (WHD) (CM)	FLOORSTANDER	EASE-OF-DRIVE	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	Rega Ela	749	Might have more grunt, but few can match its impressive agility, delicacy, and superior musical communication	23,89,30	●	A	28	●	250
	Sonus Faber Concerto Home	999	Looks good and sounds better. Great midband communication skills, well aligned for close-to-wall siting	24,36,34		A	40	●	233
	Spendor S3	600	Beautifully voiced, unboxy, lacks some dynamic and loudness capabilities. Best suited to small rooms	17,31,21		A-	30	●	223
	Spendor SR5	1,000	This wall-mount very cleverly avoids the usual colorations, delivering a very dynamic if rather dry sound	31,31,18		A+	50	●	240
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	Tannoy Mercury mX3-M	229	Beautifully balanced and voiced, with low coloration and good transparency, but could be more dynamic	19,87,25	●	A+	45	●	234
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	Tannoy Sensys DC1	449	Modest sensitivity but beautifully balanced with fine authority at a very realistic price	21,41,29		A	40	●	245
	Tannoy Eyris 1	600	Pricy but very cute standmount miniature; oddball, but has marvellous midband subtlety and delicacy	17,35,26		A+		●	227
	Tannoy Sensys DC2	649	Has impressive scale and weight with fine stereo imaging, but is also rather laid back, lacking easy agility	21,97,29	●	A	20	●	250
	Tannoy Eyris 2	999	This super-slim and cutely different-looking floorstander is very communicative, despite weak treble	17,91,26	●	A	20	●	231
<b>ABOVE £1,000</b>									
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	Acoustic Energy AE1 MkIII	1,690	Luxury miniature has a laid-back but bouncy sound, a marvellous dynamic range and very superior imaging	18,5,31,25		A-	30	●	251
	Acoustic Energy AE3 MkII	4,490	A beautifully neutral speaker with very wide dynamic range and superior imaging, plus lovely Art Deco styling	18,5,99,29	●	A	20	●	251
	ATC Active 10	1,269	Stylish, active powerhouses with plenty of subtlety when required (balanced connection only)	23,39,31		act	45	●	221
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	ATC SCM35	1,999	If you want to hear the uncoloured truth about your record collection in all its glory, this is a speaker to treasure	23,88,30	●	A-	48	●	250
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	ATC Active 20	2,538	30k + 300W equals resolution and bass that most amp/speaker combinations dream about – a bargain	56,28,36		act	45	●	240
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	ATC SCM50 ASL	7,255	350W of power combine with superb drive units and a 48kg cabinet to provide alarming resolution	35,72,48		act	38	●	218
	Audio Note AN-E/D	1,520	This classic large standmount might have throwback aesthetics, but it delivers an exceptional all-round sound	36,79,28		A+	20	●	204
	Audio Note AN-J/SPe	1,675	Retro styling, but a vigorous and dynamic performer that creates fine musical tension	33,59,25		A	38	●	219
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	B&O Beolab 5	10,000	Radical, environmentally independent active speaker has exceptional bass, neutrality, and imaging	49,97,49	●	act	<20	●	244
	B&W Nautilus 805	1,400	A small-sounding loudspeaker dynamically, but very stylish, clean and 'unboxy', delivering loads of detail	24,42,31		A	28	●	199
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	B&W 704	1,400	Sleek and stylish two-and-a-half-way with deep, lively bass, sweet treble, and rather laid-back presence	22,96,32	●	A-	20	●	248
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	B&W 703	2,000	Elegant floorstander with excellent bass drive and mid dynamic range, but slightly strong and obvious top end	23,101,36	●	A-	20	●	247
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	B&W Signature 805	2,500	Gorgeous standmount sounds delicately transparent and laid back with very superior resolution and imaging	24,42,34		A	30	●	247
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	B&W Nautilus 802	6,000	Outstanding example of the high-tech speaker builder's art. Needs real power, but gives real sound	39,111,55	●	A-	34	●	183
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	B&W Nautilus 801	8,500	The 801 is a magnificent loudspeaker in nearly every respect, but it is one that likes to play loud	52,111,69	●	A-	34	●	186
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	B&W Nautilus 800	11,000	Unequivocal challenge for world domination. One of the most revealing speakers around	45,120,65	●	A-	<20	●	231
	Beauhorn B2.2 Revelation	3,984	Magnificent midband and fine overall balance but limited bass is best with small-scale material	34,130,75	●	A+	80	●	244
	Castle Howard S3	1,350	A solid all-rounder with uniquely spacious imaging, bit pricey compared to some though	21,99,32	●	A+	38	●	229
	Dynaudio Contour 1.3 MkII	1,198	Outstanding performer among compact standmounts; neutral, with fine punch and dynamic range	20,38,29		A-	45	●	219
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	Dynaudio Audience 82	1,460	Bulky, with vinyl finish, but offers exceptional neutrality, bass extension, power handling and loudness potential	22,106,36	●	A	30	●	229
	Eclipse TD Lulét 307/316	1,250	Extraordinary satellite plus sub solution sounds a cut above other sub/sats. Can be expanded to multichannel	12,16,16,2		act	40	●	247
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	Ferguson Hill FH001	6,853	Looks and sounds wonderful, with realistic dynamic expression, but needs careful amp matching and sub(s)	90,166,80	●	A+	180	●	242
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	Focal-JMLab Micro Utopia	3,500	New 'Be' version is clearly an exceptional standmount, capable of revealing the innate quality of the music	25,42,5,38		A	50	●	245
<span style="border: 1px solid black; padding: 0 2px;">EDITOR'S CHOICE</span>	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	●	A-	20	●	248
	Graves Audio Koronglay	1,999	Fast and very time-coherent, but rather bass-light and aggressive higher up – valve amps preferred	25,109,36	●	A+	45	●	247
	Harbeth Super HL5	1,699	Looks old-fashioned, but classic monitor combines authority and transparency with good neutrality	33,64,31		A	30	●	233
<span style="border: 1px solid black; padding: 0 2px;">BEST BUY</span>	Infinity Intermezzo 2.6	1,600	Bi-amp speaker sounds laid back and 'disappears' acoustically; highly enjoyable, looks and sounds great	25,38,29		A+	27	●	233
	KEF Reference Model 205	4,000	Great looking speaker with a smooth, neutral and slightly 'cool' sound that could be tauter and more exciting	29,116,43	●	A-	20	●	245
	Leema Xen	1,000	A true micro-mini-monitor with remarkable powers of analysis and great musical insight, if a touch forward	14,22,23		A-	50	●	245

## PATIOS

*'The Classic One is one of the finest amps I have ever heard, of any era, from anywhere. . .'* Sam Tellig, *Stereophile*



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Our favourite  BEST BUY  EDITOR'S CHOICE  
**STEREO SPEAKERS** *continued*

Stereo speakers

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS					
				SIZE (W/H/D) (CM)	FLOORSTANDER	EASE OF DRIVE	BASS FROM (Hz)	FREE SPACE	CLOSE TO WALL
	Living Voice Auditorium	1,700	Gloriously coherent and dynamic midband, though the top end is restrained and bass was uneven in our room	21.5,86,28	●	A-	30	●	247
EC	Living Voice Avatar	2,700	Dynamic and highly resolved, yet physically discreet design with a relaxed balance	22,104,27	●	A+	40	●	218
EC	Living Voice Avatar OBX-R2	4,000	Has Dynamics, tonal colour, detail, space and time resolution in spades. External crossovers require extra cabling	22,100,27	●	A+	35	●	244
	MartinLogan Clarity	2,498	Relatively affordable and easy to live with electrostatic hybrid with class-leading resolving power	26,135,31	●	A-	46	●	245
	Mirage OM7	2,000	Warm, full and laid back Omni has weak stereo focus but brings the musicians into your room	30,115,16-39	●	A-	25	●	247
	Naim Allae	1,990	Chunky little floorstander has a 'cold' overall balance, but remarkable powers of musical analysis	24,94,28	●	A	40	●	229
EC	Naim SL-2	4,995	Delivers magnificent musical analysis and communication skills in a notably discrete physical package	28,103,33	●	A-	20	●	232
EC	Naim NBL	6,925	Elegant, large floorstander is exceptionally informative, with an awesome dynamic range and dry, forward balance	29,116,47	●	A-	20	●	200
EC	Neat Ultimatum MFS	2,995	Wonderful five-driver standmount sounds bigger than it looks. Very spacious and informative, if a little bright	22,38,37		A+	25	●	241
EC	Neat Ultimatum MF9	8,500	Superb musical communicator with splendidly deep and agile bass and fine open neutrality	22,150,40	●	A-	20	●	226
	PMC LB1	1,150	Still fully competitive eight years after our original review, this genuine compact monitor is now a modern classic	17.5,53,26		A-	40	●	199
	PMC FB1	1,410	Has the lively coherence of a simple two-way, alongside impressive bass weight and extension	20,105,31	●	A	20	●	204
	PMC OB1	2,450	Genuinely deep bass and lovely overall neutrality, though mid could have more tension and bass more punch	20,103,33	●	A	20	●	243
EC	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	●	237
EC	Royd Revelation RR2	1,199	Pretty little floorstander delivers genuinely deep bass without 'thump'; lovely clean, open midband too	19,89,18	●	A-	20	●	221
EC	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		A	48	●	246
	Spendor S8	1,700	Classic midband neutrality and transparency, the S8 has great subtlety and fine bass grunt too	23,92,32	●	A+	40	●	229
EC	Spendor S9	2,500	Meaty three-way with superb bass and explicit mid – one for detail fans	24,99,8,38	●	A+	37	●	223
EC	Tannoy Dimension TD8	4,000	This stylish speaker is a splendid all-rounder, with fine dynamics, precise imaging and minimal coloration	30.5,85.5,30	●	A-	25	●	240
EC	Tannoy Dimension TD10	5,000	Extremely competent and rhythmic speaker, a futureproof supertweeter and detail to die for	35,101,37	●	A-	38	●	215
EC	Tannoy Dimension TD12	6,500	Art Deco-inspired style, plus magnificent headroom and genuine monitoring neutrality – a tour de force	42,126,41	●	A-	23	●	225
	Totem Forest	2,390	Low sensitivity but wonderfully open neutrality, at heart a beautifully communicative and musical loudspeaker	19.5,90,27	●	A	25	●	247
	Triangle Zays 222	1,295	Wonderful freedom from time-smear gives invigorating and realistic dynamics, but colorations are also obvious	26,116,32	●	A	22	●	242
	Triangle Naia	1,900	Exciting, vivid and communicative, but also a bit untidy and uneven, the Naia is a whole lot of fun	23,119,32	●	A-	25	●	247
	Vandersteen 2Ce Sig	1,990	Very superior midband neutrality, impressive freedom from boxiness and splendid stereophony. A classic	41,109,26	●	A-	30	●	229
EC	Wilson benesch Discovery	5,500	Innovative three-way with built-in stand, combines great subtlety with weight and headroom	23,47,38	●	A-	45	●	212
EC	Wilson Benesch ACT	8,400	Superb enclosure gives uncanny freedom from 'boxiness'. Well balanced, but top end might be sweeter	23,108,37	●	A	20	●	252
EC	Wilson Benesch Chimera	15,000	Elegant with lovely sonic delicacy and plenty of weight too. Works best at low levels, but a difficult load to drive	24,145,55	●	A-	20	●	234

# 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.

### SET-UP

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.

## TOP BUYS



**B&W**  
600 S3 package £900  
Incorporates 602s, 601s and an LCR 600 centre speaker. Great in both stereo and multichannel surround modes.



**KEF**  
Q AV7 £1,300  
With the latest Uni-Q refinements, this system is astonishingly accomplished and amazing value.



**Mission**  
m5 package £1,450  
A five-speakers-plus-sub package giving a strong performance with both music and film soundtracks. Excellent value.



**Mirage**  
Omni 2 £2,650  
Dark tonality but superb imagery makes this an excellent all-round choice for music and movies alike.

## Our favourite AV SPEAKER PACKAGES

BEST BUY  EDITOR'S CHOICE

### Multichannel speakers

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS					
				EASE-OF-DRIVE	NUMBER OF SPEAKERS	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
	B&W 300 package	900	An excellent compromise between the requirements of music and those of home cinema (inc. subwoofer)	A	6	27	●		241
<input checked="" type="checkbox"/>	B&W 600 S3 (602/601/LCR 600)	900	Unquestionably delivers the sonic goods. High-quality drivers in standmount enclosures	A	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	A	5	28		●	224
	Dynaudio Audience 42	1,142	Multichannel package for hi-fi purists with real authority and imaging, but needs subwoofer for full-bore movie sound	A-	5	53	●		241
	Final Sound Electrostatic	4,875	Slim, attractive, electrostatic panels have clever connections, limited loudness but a breathtaking transparency	A-	6	20	●		251
	Focal-JMLab Electra	3,017	Bold, solid system, tremendous consistency and easy to expand with an added subwoofer	A	5	50	●		232
<input checked="" type="checkbox"/>	KEF Q AV7	1,300	With latest Uni-Q refinements, this system is astonishingly accomplished and amazing value	A+	5	35	●		232
	Mirage Omni 2	2,650	Dark tonality, but superb imagery makes this an excellent all-round choice	A	5	30	●		232
<input checked="" type="checkbox"/>	Mission m5	1,450	Main m52 is a clean, attractive full-range stereo speaker, while the m5as does big bass for movie fans	A	6	28	●		241
	Mordaunt-Short Declaration 500	1,600	Good value vinyl THX Select package with Power Towers. Good authority, but must be 5.1-connected	A	5	25		●	210
	PMC FB1/TB2	2,485	Classy, if bulky and pricey, package has good transparency, coherence and weight	A	5	20		●	210
	Rega Jura/Ara/Senta	938	Classy real wood package does a good all-round job, but sounds bright and might have more surround weight	A	5	25		●	210
	Spendor S-Series	1,650	Ultra-tinies lack some dynamic and loudness capabilities, but beautiful voicing and freedom from boxiness	A-	5	30		●	224
<input checked="" type="checkbox"/>	Tannoy mXAV4	500	Lacks some grunt, but smooth and refined with seamless surround coherence. Excellent value	A	5	20		●	210

**SPECS KEY** **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 SUBWOOFERS

BEST BUY  EDITOR'S CHOICE

### Bass speakers

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS			
				SIZE (WxHxD) (CM)	POWER (W)	BASS FROM (HZ)	ISSUE NUMBER
	Acoustic Energy Aesprit 308	650	Tuneful and dynamic sound with music or movies from this compact sub, which comes with a handy remote	41,37,30	200	35	225
<input checked="" type="checkbox"/>	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	18	246
	Monitor Audio ASW100	300	For the price, this compact subwoofer performed well	32,32,34	120	27	225
<input checked="" type="checkbox"/>	REL Q150E	500	Great value compact 'cube' sub adds genuine weight and drive thanks to superior filtering	29,32,33	150	20	239
	REL Strata III	700	A little more bottom octave might have been preferable, but in terms of agility and coherence, this is a fine hi-fi subwoofer	42, 52, 33	100	20	210
	REL Storm III	900	Excellent sub with powerful, detailed and deep bass. Comprehensive facilities, including flexible filter adjustment	42,62,33	150	18	225
<input checked="" type="checkbox"/>	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
<input checked="" type="checkbox"/>	Ruark CL300	2,000	Shows what a good subwoofer can do: controlled, detailed and dynamic. A delight with music and movies alike	60,52,5,40	300	30	225
	Titan Saturn	800	Very bulky sub has curious styling, but decent filtering gives good weight and headroom	72,48,72	200	20	239

**SPECS KEY** **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

# CABLES



Wires to hook your system together



Hi-fi cables come in two varieties: interconnects and speaker cables.

Interconnects come in preset lengths, generally with RCA phono plugs attached, though some equipment uses XLR connectors for balanced connection. Speaker cable is sold by the metre and can be used without plugs or can be fitted with screw or solder-on types.

Choosing the best 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, but if you are after a smoother sound the light carriers have the advantage, as they do if long lengths are needed (10m+). Optical outputs tend to have Toslink connectors (around 99 per cent), but some electrical digital outputs are of the superior BNC type, which uses a bayonet-type socket. Check which type your digital component has before buying a digital interconnect.

## Our favourite CABLES

BEST BUY EDITOR'S CHOICE

### Interconnects and speaker cables

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS					
				STRANDED	SOLID CORE	COPPER	SILVER	DIGITAL CABLE TYPE	ISSUE NUMBER
<b>ANALOGUE INTERCONNECTS</b>									
	Black Rhodium Illusion	77	An upfront, lively, exciting cable which still manages subtlety when needed. Slight coloration though		●	●			248
	DNM TBB75	75	Bass not always completely consistent, but sound has great clarity and insight			●	●		241
	Ecosse The Composer	30	A high degree of realism and delicacy, and a fantastic price (0.8m)	●			●		211
	Ecosse Reference Diva	100	Very good performance in all areas, with particularly fine, tuneful, bass (0.8m)	●			●		224
	Ixos Gamma Audition II	30	Detailed and neutral, with just a hint of pleasant mellowness	●			●		211
	Kimber Silver Streak	242	Not the cheapest around, but more than justifies itself with terrific poise and balance of virtues	●			●		241
	Kimber Timbre	72	Typical Kimber construction with ditto sound – clean, extended and detailed	●			●		248
	Monster Interlink 400 Mk2	70	Really lively and enjoyable sound	●			●		224
	PM Dragon Tails	600	Targeted at valve equipment, but its virtues, including superb imaging, apply to solid-state duties too	●			●		249
	QED Qunex 1	20	Well balanced and easily rivals more expensive cables	●			●		211
	Townshend DCT100	100	Unusual construction with copper strip conductors, giving very detailed sound, but just an occasional hint of hardness		●	●			241
	Townshend Isolda DCT	300	Unusual construction and cryogenically treated too: whatever the reason, a remarkably capable wire		●	●			234
	van den Hul The Bay C5	45	Terrific detail, nice balance – a great cable	●			●		224
	van den Hul The Well	65	Hybrid cable with carbon-fibre conductors added. Very slight bass coloration does little to detract from fine performance	●			●		241
	van den Hul D102 Mk III	79	Hybrid conductors (carbon and copper) and intelligent construction give strong bass and excellent detail	●			●		234
<b>DIGITAL INTERCONNECTS</b>									
	Audioquest Digital One	35	A neutral and capable cable that adds little or no character to the sound	●			●	E	207
	QED Qunex P75	25	A superbly capable interconnect that's highly detailed and well balanced				●	E	207
	QED Qunex SR75	50	Lots of bass and good clear midrange and treble at a sensible price	●			●	E	234
	Supra Trico	40	Very well made digital/video cable which noticeably improves the sound of a cheap DAC	●			●	E	241
	van den Hul Optocoupler II	49	Noticeably has the edge over other optical leads, but still second best to electrical types					O	234
<b>SPEAKER CABLES PRICE PER METRE</b>									
	Black Rhodium S300	18	Tight, precise and extended bass makes this a great cable for rock 'n' roll	●			●		241
	Ecosse Reference MS2.3	23	Favours excitement over refinement: can be slightly bass-shy, but plenty of life	●			●		227
	Electrofluidics 20/20	45	Excellent bass extension and very fine performance elsewhere – one of the best all-round cables available		●	●			241
	Kimber 4PR	5	Considering the price, this cable's very slight dryness is forgivable when everything else is so right	●			●		192
	Kimber 8VS	18	Beautifully full, open and transparent sound right across the board. Price for 1m terminated pair	●			●		227
	Kimber 8PR	21	Bass very full, just occasionally a touch flabby, but detailed and sweet upper frequencies make this a good value cable	●			●		241
	Kimber 8TC	39	Very capable in all areas, particularly good at imaging and with firm bass. Price for 5m terminated pair	●			●		203
	QED Silver Anniversary	5	A few minor flaws, but overall performance is very assured for this price	●			●		192
	QED X-Tube XT300	10	A natural and well controlled sounding cable that's cost effective for mid-priced systems		●	●			234
	QED X-Tube XT400	20	A practical cable with a liking for lively music, but slightly less assured with subtle classical grooves	●			●		248
	Supra Ply 3.4/S	8	Good in all areas, with rich bass and just a touch of treble roughness	●			●		203
	Townshend Isolda DCT	50	Cryogenically treated 'impedance matched' cable with stabilising components added: great sound all-round		●	●			241
	Wireworld Solstice 5	20	Unfriendly to handle, but makes up for it with very assured sound – heaps of bass and great insight	●			●		248

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



# HEADPHONES

For your ears only



Headphones come in several varieties and some are designed for particular usage. The majority of 'cans' use dynamic cone and coil-type drive units and can be used with anything from a personal stereo to a dedicated amplifier. Other types also exist, most significantly electrostatics that use a charged panel membrane to produce a distinctly refined sound. These are supplied with their own dedicated amplifiers, which tends to increase the price.

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 supra-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.

## Our favourite HEADPHONES

**HB** BEST BUY **EC** EDITOR'S CHOICE

### Stereo headphones

BADGE?	PRODUCT	£	COMMENTS	SPECIFICATIONS				3.5MM JACK ADAPTOR	ISSUE NUMBER
				ELECTROSTATIC	SUPRA-AURAL	CIRCAURAL	OPEN BACK		
<b>HB</b>	AKG K44	20	Lively, enjoyable and remarkably detailed: a bargain					190	219
<b>HB</b>	AKG K270 Studio	129	Pro oriented design which is very transparent and great with acoustic material					270	230
<b>EC</b>	AKG K1000	550	Neutral, analytical and completely out of the head sound, suitable for connection to speaker outputs only					270	244
	Audio Technica ATH-D40fs	105	Detailed and involving sound with a professional 'studio' quality appeal					250	194
<b>HB</b>	Beyerdynamic DT990	160	Impeccable balance, very extended bass and treble, and bags of detail place this model ahead of the pack					250	245
<b>HB</b>	Grado SR60	90	For sheer musical enjoyment these are hard to beat. Retro styling may not be to everyone's taste					200	194
<b>HB</b>	Grado SR80	110	Not perhaps as neutral as some but they communicate well and that's the point of the exercise					200	230
	Philips HP890	70	A remarkably sophisticated and very comfortable headphone					330	219
<b>HB</b>	Sennheiser HD590	160	Assured and confident headphone with very low coloration and great comfort					270	205
<b>EC</b>	Sennheiser HD650	299	Astonishing resolution and hardly less impressive tonal balance make this a true hi-fi experience					260	252
	Sony MDR-CD480	40	Generally neutral and nicely detailed – comfortable too					250	219
<b>EC</b>	Stax System li	400	Luxury option at its price, but the sound delivery is five-star quality all the way					295	205

**SPECS KEY** **ELECTROSTATIC** Uses electrostatic film instead of more common cone or dome dynamics. **SUPRA-AURAL** Earpads sit on ear rather than around it. **CIRCAURAL** 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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# STANDS AND SUPPORTS

Equipment racks and speaker stands



In hi-fi there are two types of stand. One is a rack that holds turntables, amps, CD players and so on and is described as an equipment support, and the other is a speaker stand. The latter comes in three basic varieties, two for standmount speakers: lightweight, multilegged types; and heavy designs with fewer legs and the ability to be mass-loaded for extra solidity. The lighter variety is

said to have a quicker sound, while heavyweights give deeper bass and a calmer sound. The third speaker stand type is a platform that sits under floorstanding speakers or speaker/stand combinations, the pneumatic Townshend Seismic Sink being an example.

There are two speaker-to-stand interfacing options: spikes or Blu Tak in each corner of the top plate. Try both and take your pick.

## Our favourite BEST BUY EDITOR'S CHOICE EQUIPMENT SUPPORTS

### Equipment supports

BADGE?	PRODUCT	£	COMMENTS
	Aavik Furniture A4	350	Good sound and stylish Scandinavian looks at an affordable price
	Alphason A5-G	399	Nice looking, very solid and practical with a pretty well balanced sound, but lacks a little detail
	Atacama Equinox	280	Stable, modular design with style. Excellent bass transients and a fresh design concept
<span style="font-size: x-small;">BEST BUY</span>	Audiophile Furniture Base	615	Price is justified by its earth-shattering sonic abilities – a worthy upgrade
	Avid Isosshelf	1,100	An enthusiast's equipment support stand free from coloration, if a little fiddly to set up
<span style="font-size: x-small;">BEST BUY</span>	Clearlight Audio RDC Aspekt	550	Stunning neutrality and detail from a well-damped design. Its performance makes the price tag good value
	Custom Design Aspect 650	270	Smart looks and practical thanks to adjustable shelves. Sound is fair with some loss of detail
<span style="font-size: x-small;">BEST BUY</span>	Custom Design Concept 400	700	Slightly drab appearance, but good sound and efficient use of space
	Isoblu 'The Stand'	460	Attractive modular design that's as easy on the ear as on the eye
<span style="font-size: x-small;">EDITOR'S CHOICE</span>	Naim Fraim	1,825	Pricy but very classy looking and sounding, with modular flexibility
	Quadraspire Q4 Reference	480	Excellent performance from the school of wobbly racks. Natural sounding and plenty of detail
	Russ Andrews Torlyte Rack	988	Attractive modular system made of very light Torlyte: a touch of added warmth is its only vice
<span style="font-size: x-small;">BEST BUY</span>	Sound Organisation Z560	195	Excellent value rack, five shelves too! Well balanced and under 200 quid!
<span style="font-size: x-small;">BEST BUY</span>	Standesign Design 4	190	An all-in-one support at a budget price, with good sonic performance
<span style="font-size: x-small;">EDITOR'S CHOICE</span>	Townshend Seismic Stand II	1,140	multi-shelf air-suspension support which isolates like few others. Recommended

SPECIFICATIONS					
HEIGHT	TOP PLATE SIZE (CM)	WELDED	NUMBER OF SHELVES	SHELF TYPE	ISSUE NUMBER
80.5	47		4	MDF	193
80	66,46		5	Glass	247
81	50,50	●	4	Glass	217
82	43		4	MDF	193
87.5	48		5	MDF	193
75	53.5,45		4	MDF	217
66	46	●	4	Glass	206
74	48,40		4	Metal	247
47	48,40		4	MDF	247
96	45,34		5	Glass	232
51.5	49,39,5		4	MDF	217
68	54,49		4	Torlyte	240
92	50,40		5	Glass	217
88.5	50.8	●	4	Glass	193
92	58,45		5	MDF	240

## Our favourite BEST BUY EDITOR'S CHOICE SPEAKER STANDS

### Speaker stands

BADGE?	PRODUCT	£	COMMENTS
<span style="font-size: x-small;">BEST BUY</span>	Atacama Nexus 6	60	An excellent all-round performer and a genuine hi-fi bargain
	Custom Design R/S300 MkII	100	A solid stand improving on the original, with better focus and detail
	hne Cableway	399	Looks great, sounds great, so start saving! Clean and sweet, and neutrality is exceptional with orchestral material
<span style="font-size: x-small;">BEST BUY</span>	Kudos S50	115	Formidable bass with real authority, and a wide dynamic range across a broad bandwidth
	Partington ANSA 60	90	Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent
<span style="font-size: x-small;">BEST BUY</span>	Partington Dreadnought	100	Fully welded high-class engineering gives a very clean, open sound at a sharp price
	Sound Organisation Z522	95	Very hefty build for the price helps to deliver a solid sound with good authority and drive
	Townshend Seismic Sink	499	Unique inflatable plinth that works wonders with decent floorstanders, as well as standmounted speakers

SPECIFICATIONS					
HEIGHT	TOP PLATE SIZE (CM)	FILLABLE	WELDED	NUMBER OF LEGS	ISSUE NUMBER
60,50	14,5,18	●		3	202
61,56,51	16,5,18	●		2	202
63	17,20	●		1	220
61	15,20	●		1	220
62	18,15	●		4	232
61	17,15	●	●	5	220
60	16	●		4	220
4	38,48			0	202

**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 KEY** 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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# 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 band – hence 'low bass' refers to the bottom octave (20-40Hz); 'mid-bass' the middle octave (40-80Hz); and 'upper bass' the 80-160Hz octave.

**BI-AMP** (sometimes tri-amp) Loudspeakers equipped with separate access terminals to each drive unit can be driven by separate (matching) power amplifiers for each driver.

**BI-WIRE** (sometimes tri-wire) Loudspeakers with separate access terminals to each driver 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 band 217.5 - 230MHz. 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 (music) waveform.

**DOLBY DIGITAL** A compressed digital audio format that typically contains five or more entirely discrete channels, eg 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** or 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 optical. 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 which is driving it.

**JITTER** An insidious distortion specific to digital audio caused by the clock, used to regulate the conversion of data into analogue audio, being imprecise.

**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 of reducing the number of data bits (density) without corrupting the original description of the musical signal.

**LOSSY COMPRESSION** Reduction in data density by recourse to a 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 160Hz up to 3kHz.

**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 and treble meet.

**QUANTISATION NOISE** A form of distortion or noise resulting from errors in the description of the musical signal by the digital code.

**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 44.1kHz 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).

**THX** Standards system for home cinema set-ups which includes amplifier power and speaker dispersion characteristics. THX Ultra 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.

## DESCRIPTIVE TERMS

**AGGRESSIVE** Forward and bright sonic character.

**AMBIENCE** The impression of an acoustical space, such as the performing hall in which a recording was made.

**ANALYTICAL** Highly detailed.

**ARTICULATE** Intelligibility of voice(s) and instruments and the interactions between them.

**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 channels.

**BODY** Fullness of sound, with particular emphasis on upper bass. Opposite of thin.

**BOXY** The sound of a loudspeaker with audible cabinet resonances.

**BRIGHT** A sound that emphasises the upper midrange/lower treble.

**DARK** A tonal balance that tilts downwards with increasing frequency. Opposite of bright.

**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 equipment.

**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 environment.

**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 amps.

**FAST** Good reproduction of rapid transients which increase the sense of realism and 'snap'.

**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 treble.

**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 best performance from it.

**TWEAKER** Someone who enjoys this process.

**VEILED** Loss of detail due to limited transparency.

**WARM** A fullness in the lower midrange/upper bass.

**WEIGHT** A sense of substance and underpinning produced by deep, controlled bass.

## Welcome to the Hi-Fi Choice accessories shop

Choice Bits is the easy way to buy the best audio accessories available today. Simply pick up the phone, order online, drop us an email or fill out the order form opposite and pop it in the post. It couldn't be simpler!

This issue we're showcasing Nordost's exciting new line of mains cables which have found favour in many publications, not least of course in *Hi-Fi Choice*, where the flagship Valhalla won our coveted Editor's Choice Award.

Hailing from Denmark, we are delighted to introduce Eben Acoustics Cold Rays isolation feet, which are available with either steel or ceramic ball bearings.

And for those of you with damaged CDs, fear not! Allsop's motorised scratch repair system will bring those damaged discs back to life.

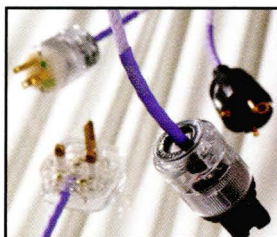
### SHOWCASE

#### Nordost Mains Cables

High quality 'virtual air dielectric' cables

#### Key Features

- Award winning power cables
- High quality production
- Improve the performance of all hi-fi equipment
- High quality silver-plated conductors



#### Nordost Mains Cables

December 2003 saw the long-awaited missing link in Nordost's Micro Mono Filament range of cables. Shiva has joined the Vishnu and Valhalla mains cables, featuring 'virtual air dielectric technology' to greatly enhance the

performance of all components from amps to CD and DVD players.

The cables start at £220 for the Shiva, passing through Vishnu at £450 and concluding with Valhalla, the world's best mains cable, at £1,750. Conductors are silver-plated solid core copper with a thin Teflon thread spiral-wound down its length and inserted into an extruded teflon insulation tube forming the 'virtual air dielectric'. The more costly the cable, the bigger the gauge and the more complex the weave.

**Shiva (2m) £220**  
**Vishnu (2m) £450**  
**Valhalla (2m) £1,750**

#### ART Q-Ring



A high quality ferrite ring surrounded by ART's exclusive Q-Damper compound. The Q-Ring stops RF interference, and is a very efficient means of absorbing and stopping ultra-high frequency noise.  
**Only £19.95 each**

#### Eben Acoustics ColdRay isolation feet



Best known for the Pulsar Points he designed for Nordost, Lars Kristiansen has come up with another cracking new isolation device, this time called ColdRay. There are two versions. One features a steel ball and the other a ceramic ball, which gives improved isolation. The philosophy behind ColdRay is similar to the highly regarded Finite Elemente Ceraballs, with the exception that these are deliberately not damped – instead they act as a tuned resonator at the same frequencies that violin designers look for in their instruments. (Qty 4)  
**Steel £49.95/ Ceramic £94.95**

#### Allsop Motorised Scratch Repair System



The final statement on CD/DVD scratch repair goes to Allsop. This set will help you fix those discs that refuse to play. Gently buff away scratch damage with Allsop's motorised scratch repair technology. This easy-to-use pack comes with everything you need and is highly recommended.  
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#### Clearlight Audio RDC 5 Support Cones & RDC Cone Cups



Did you know you can dramatically improve the performance of RDC1, RDC2, RDC5 or other support cones with the installation of a set of Cone Cups? This tandem combination is a cost-effective and simple way to realise increased audio performance. RDC is a composite material made up of materials with different characteristics – these allow the cones and cups to destroy resonance across the audio range.

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**RDC 5 Cones (x4) £17.95**

#### Richard Black's USHER test CD



This test CD has been compiled by esteemed *Hi-Fi Choice* contributor Richard Black, not only to assist you in setting your system up optimally, but also to help you achieve something considerably more remarkable: improve your hearing! A fascinating hi-fi tool and highly recommended.  
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## FEATURED PRODUCTS

ART Q-Ring	£19.95	<input type="checkbox"/>
Allsop Motorised Scratch Repair System	£29.95	<input type="checkbox"/>
Clearlight Audio RDC 5 Cone Cups (Qty 4)	£17.95	<input type="checkbox"/>
Clearlight Audio RDC 5 Cones Only (Qty 4)	£17.95	<input type="checkbox"/>
Eben Acoustics ColdRay Steel Isolation Feet	£49.95	<input type="checkbox"/>
Eben Acoustics ColdRay Ceramic Isolation Feet	£94.95	<input type="checkbox"/>
Nordost Shiva Mains Cable	£220	<input type="checkbox"/>
Nordost Vishnu Mains Cable	£450	<input type="checkbox"/>
Nordost Valhalla Mains Cable	£1,750	<input type="checkbox"/>
Richard Black's USHER CD	£14.95	<input type="checkbox"/>

## ANALOGUE ACCESSORIES

Anniversary Ringmat	£69.95	<input type="checkbox"/>
ART Head Q-Damper	£16.95	<input type="checkbox"/>
CARA Computer Aided Room Acoustics	£49.95	<input type="checkbox"/>
Cardas 180g Frequency Sweep LP	£21.95	<input type="checkbox"/>
Clearlight Audio Record Puck	£49.95	<input type="checkbox"/>
Clearaudio Exact Stylus Gauge	£265.00	<input type="checkbox"/>
Clearaudio Record Clamp	£69.95	<input type="checkbox"/>
Clearaudio Stroboscopic Light	£69.95	<input type="checkbox"/>
Clearaudio Stroboscopic Test Record	£24.95	<input type="checkbox"/>
Electronic Needle Nose Pliers	£30.95	<input type="checkbox"/>
Graham Bearing Cap	£259.95	<input type="checkbox"/>
Gyrascope Electronic Stroboscope	£224.95	<input type="checkbox"/>
Loricraft Stroboscopic Light	£49.95	<input type="checkbox"/>
Michell Techno Rega Heavyweight	£67.95	<input type="checkbox"/>
Michell Engineering Record Clamp	£22.95	<input type="checkbox"/>
Michell Universal Dust Cover	£44.95	<input type="checkbox"/>
Opus3 4.1 Test Record	£17.95	<input type="checkbox"/>
Origin Live Rega Tonearm Upgrade Kit	£74.95	<input type="checkbox"/>
Pebbles 'The Weight' Modification	£67.95	<input type="checkbox"/>
Polans Plus Stylus Alignment Gauge	£5.95	<input type="checkbox"/>
Pro-Ject Bubble Level	£14.95	<input type="checkbox"/>
Ringmat Developments The Ringmat	£49.95	<input type="checkbox"/>
Ringmat's How to Set Up A Turntable	£7.50	<input type="checkbox"/>
Shure Stylus Force Gauge	£24.95	<input type="checkbox"/>
T Force Ortofon Tracking Force Gauge	£7.95	<input type="checkbox"/>
The Cartridge Man Digital Force Gauge	£199.95	<input type="checkbox"/>
The Cartridge Man Digital Level Gauge	£199.95	<input type="checkbox"/>
The Producer's Cut' Hi-Fi News Test LP	£24.95	<input type="checkbox"/>
Universal Tweezers	£6.95	<input type="checkbox"/>

## DIGITAL ACCESSORIES

Allsop DVD Optimiser/Laser Lens Cleaner	£19.95	<input type="checkbox"/>
AudioPrism CD Stoptlight	£19.95	<input type="checkbox"/>
AudioPrism CD Blacklight	£39.95	<input type="checkbox"/>
AVIA Home Theatre Set-Up & Calibration	£39.95	<input type="checkbox"/>
A-Z CD Clips	£7.95	<input type="checkbox"/>
Chesky DVD Surround 5.1 Set-Up Disc	£24.95	<input type="checkbox"/>
Chesky Ultimate Demonstration Disc	£15.95	<input type="checkbox"/>
Compact Dynamics CD Plus	£14.95	<input type="checkbox"/>
Compact Dynamics CD UpGrade	£14.95	<input type="checkbox"/>
Densen DeMagic CD	£11.95	<input type="checkbox"/>
Furutech RD-2 Disc Demagnetiser	£349.95	<input type="checkbox"/>
Lasertrack CD2000 Set-Up Disc	£19.95	<input type="checkbox"/>
Marigo Orpheus CD Crossbow Mat	£79.95	<input type="checkbox"/>
Opus3 Showcase (HDCD)	£14.95	<input type="checkbox"/>
Ringmat CDi Blue	£37.50	<input type="checkbox"/>
Ringmat The Statmat MkII	£19.95	<input type="checkbox"/>
Sound Improvement Disc (Model 14/15)	£17.95	<input type="checkbox"/>
Tommy Larsen CD-Lift™ (Green/Grey)	£14.95	<input type="checkbox"/>
Ultra Burn-In CD3000	£24.95	<input type="checkbox"/>
XLO Reference Test & Burn-In CD	£24.95	<input type="checkbox"/>

## CD STORAGE PRODUCTS

CaseLogic Hardshell CD Case	£5.95	<input type="checkbox"/>
CaseLogic Koskin 208 CD Wallet	£34.95	<input type="checkbox"/>
CaseLogic Koskin 32 CD Wallet	£9.95	<input type="checkbox"/>
CaseLogic Koskin 64 CD Wallet	£14.95	<input type="checkbox"/>
CaseLogic Koskin 88 CD Wallet	£19.95	<input type="checkbox"/>
CaseLogic Nylon 208 CD Wallet	£29.95	<input type="checkbox"/>
CaseLogic Nylon CD Wallet 88	£17.95	<input type="checkbox"/>
CaseLogic ProSleeves®	£5.95	<input type="checkbox"/>
Tommy Larsen Multi Media Rack	£24.95	<input type="checkbox"/>

## CARE/ CLEANING PRODUCTS

Allsop Carbon Edge Laser Lens Cleaner	£14.95	<input type="checkbox"/>
Allsop CD & DVD Fast Wipes	£4.95	<input type="checkbox"/>
Allsop CD Scratch Repair Kit	£12.95	<input type="checkbox"/>
Allsop Radial CD Cleaner	£10.95	<input type="checkbox"/>
Caig OpticALL	£13.95	<input type="checkbox"/>
CD Radial Cleaner	£9.95	<input type="checkbox"/>
Clearaudio Carbon Fibre Record Brush	£13.95	<input type="checkbox"/>
DeoxIT (DeoxIT 200ml)	£13.95	<input type="checkbox"/>
Goldring Deluxe Record Brush	£14.95	<input type="checkbox"/>
Goldring Exstatic Record Sleeves	£11.95	<input type="checkbox"/>
Knosti Disco AntiStat Record Cleaner	£44.95	<input type="checkbox"/>
Last All-Purpose Record Cleaner	£39.95	<input type="checkbox"/>
Last Power Cleaner	£39.95	<input type="checkbox"/>
Last Record Preservative	£39.95	<input type="checkbox"/>
Last Stylus Cleaner	£19.95	<input type="checkbox"/>
Last Stylus Stylus Treatment	£29.95	<input type="checkbox"/>
Lyra SPT Stylus Cleaner	£24.95	<input type="checkbox"/>
Me-We CD Sound Elixir	£9.95	<input type="checkbox"/>
Nagaoka Antistatic Record Inner Sleeves	£14.95	<input type="checkbox"/>
Onzow Zerodust	£29.95	<input type="checkbox"/>
Optrix CD Cleaner & Clarifier	£16.95	<input type="checkbox"/>
ProGold (ProGold 20ml)	£13.95	<input type="checkbox"/>
Ross Mini Disc Head & Lens Cleaner	£14.95	<input type="checkbox"/>
Turbo Mini Vac	£16.95	<input type="checkbox"/>
Unbranded Inner Sleeves	£24.95	<input type="checkbox"/>

## ISOLATION RACKS - CONES

ART Q-Dampers	£69.95	<input type="checkbox"/>
Atacama Audio Equinox Series (2 shelf base)	£149.95	<input type="checkbox"/>
Atacama Audio Nexus 5 Speaker Stands	£69.95	<input type="checkbox"/>
AudioPrism 2.5 Iso-Bearings	£54.95	<input type="checkbox"/>

AudioPrism 3.3 Iso-Bearings	£84.95	<input type="checkbox"/>
Clearlight Audio RDC Aspekt Rack (Black 4 Shelf Rack Cherry Legs)	£599.95	<input type="checkbox"/>
Clearlight Audio RDC Aspekt Rack (Black 4 Shelf Rack)	£549.95	<input type="checkbox"/>
Clearlight Audio RDC Aspekt Rack (Grey 4 Shelf Rack Beech Legs)	£649.95	<input type="checkbox"/>
Clearaudio Spikes (Each)	£12.95	<input type="checkbox"/>
Foculpods Support Systems (4)	£14.95	<input type="checkbox"/>
IXOS Sorbothane Feet	£19.95	<input type="checkbox"/>
Michell Tenderfeet Small	£12.95	<input type="checkbox"/>
Michell Tenderfeet Tall	£14.95	<input type="checkbox"/>
Nordost Pulsar Points (Aluminium)	£54.95	<input type="checkbox"/>
Nordost Pulsar Points (Titanium)	£294.95	<input type="checkbox"/>
Polipods Support Systems (8)	£14.95	<input type="checkbox"/>
RDC 1 Cones (Qty 4)	£39.95	<input type="checkbox"/>
RDC 2 Cones (Qty 4)	£29.95	<input type="checkbox"/>
RDC 3 Cones (Qty 4)	£44.95	<input type="checkbox"/>
RDC 4 Cones (Qty 3)	£119.95	<input type="checkbox"/>
RDC 5 Cones (Qty 4)	£17.95	<input type="checkbox"/>
RDC Cone Cups (Qty 4)	£17.95	<input type="checkbox"/>
RDP Feet	£54.95	<input type="checkbox"/>
RDC SPP Platform	£109.95	<input type="checkbox"/>
RDC Super Position T	£199.95	<input type="checkbox"/>
Ringmat Feet MkII	£74.95	<input type="checkbox"/>
Spikes M6/M8 (4x M6/M8)	£7.95	<input type="checkbox"/>
Stands Unique Carbon Fibre Isolators	£24.95	<input type="checkbox"/>
Superpods Support Systems	£24.95	<input type="checkbox"/>
3D Seismic Isolation Platform	£234.95	<input type="checkbox"/>
Townshend Audio Seismic Sink Rack Model One (530x400mm / Internal 430x400mm 3 Tier)	£670.00	<input type="checkbox"/>
Townshend Audio Seismic Sink Rack Model One (530x400mm / Internal 430x400mm 4 Tier)	£810.00	<input type="checkbox"/>
Voodoo AIRTEK (430x360mm / 20kg/oak)	£199.95	<input type="checkbox"/>
Voodoo AIRTEK (490x430mm / 45kg/oak)	£249.95	<input type="checkbox"/>
Voodoo AIRTEK (510x480mm / 75kg/oak)	£299.95	<input type="checkbox"/>

## AUDIO BOOKS

Home Theatre For Everyone	£19.95	<input type="checkbox"/>
How to Set Up And Fine Tune A Turntable	£7.50	<input type="checkbox"/>
The Classical Long Playing Record Book	£119.95	<input type="checkbox"/>
The Complete Guide To High End Audio	£24.95	<input type="checkbox"/>
The LP Is Back	£9.95	<input type="checkbox"/>
The Ringmat Support System	£7.50	<input type="checkbox"/>

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**Nobody else** in these areas carries all the following major hifi brands:

Apollo, Arcam(Diva/FMJ), 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), **MJ 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 Calibration**.

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# READER CLASSIFIED

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

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## FOR SALE

**AKG** professional microphone, model D202CS, complete with frequency response curve. Offers. 01785 254283 (Staffs)

**ARCAM ALPHA 10** with DAVE module and Alpha 10P power amps with CR6000 learning remote. Mint £950 ono. 01772 468116 (Preston).

**ARCAM CD72T** £200. NAD C370 £200. Dynaudio Audience 60 £200. Two years old and mint, can dem. 01372 454451 (Surrey).

**ARCAM** system, Alpha 7 CD, 7 amp, 8P power amp, £400 ono. 01902 733821 (W'hampton).

**AUDIOLAB CDM** and DAX (24-bit) perfect cond boxes, manuals, remote, £900 ono. Yamaha DSP-A5 Dolby digital DTS amp/processor, £155. Paul 01483 823193 eves (Surrey).

**BEYER DYNAMIC** professional microphone, model M69N(C). 200 ohms – true hypercardioid characteristic. Offers. 01785 254283 (Staffs).

**BOSTON VRS MICRO** dipole rear speakers, £50. Two Chord Prodac Silver Plus digital cables, £25 each. Allan 01489 570990 (Southampton).

**CHORD SPM 1400E** (x2) mono amps with four Integra legs each. Black, 500W/8ohms, eight months old, mint cond. (£13,600) £8,550. KEF Ref 3-2, Albino Burr, mint cond. (£2,750) £1,550. Ian 01204 460585/07941 424322 or idbrunt@f2s.com (Bolton).

**CYRUS CLS50** standmount speakers, cherry veneer. Beautiful sound and looks. Would go well with Cyrus electronics, (£550) £200. 07753 625783 (Kent).

**LINN MAGIC I** amp, no remote, excellent cond, hardly used, £300. 02392 693686 (Southants).

**MERIDIAN 508** CD player as new £895. ATC SCM 20.2 active speakers, £2,100. Simon 07730 586005 (Suffolk).

**MERIDIAN 541** Pro-Logic excellent surround preamp. Includes Meridian system remote. Boxed, excellent cond, £200. 01926 810519 (nr Coventry).

**MERIDIAN SDP5000** speakers with 500 transport. Immaculate with boxes and manuals, £2,700. 01383 413695 (C Scotland).

**NAIM NAC72** preamp, superb cond. Naic etc included, can dem, £295. Adrian Lyon 07973 358 220 (London).

**NHT ST4** floorstanding speakers. Fabulous, five stars, piano gloss black, 200W. New, boxed, (£1,200) £750. Can deliver. SB3s £450. 01327 706560 (M'lands).

**PIONEER PDS-505 PRECISION** CD player, Best Buy, boxed as new, £150. Musical Fidelity X-DAC, superb cond, £120. 07717 137676 (Berkshire).

**RESOLUTION AUDIO OPUS 21** CD player. Six months old, boxed, as new (£2,850) £2,000. David 01242 517669 (Cheltenham). Ruark Crusader MkII speakers £550. 02390 838935 (S'ants).

**QUAD 33/303** pre/power combination, full Quad service, £250. Leestar TS600 power amp, £270. Linn Mimik CD player, £250. 02892 682561 (Belfast).

**QUAD** Electrostatics, serial no. 2306 and 2309, c.1962. Need attention £150 ono. Mr Halsey 01989 770 744 (Ross-on-Wye).

**ROKSAN** Xerxes 10 turntable, rosewood, Tabriz arm, Corus Black cart. Four years old, light use, vgc. £875. 01582 423791 (Beds).

**ROTEL RC972** preamp, remote, RB981 power amp (130W). Boxed and in excellent cond. Geoff 07905 477834 (Leeds).

**SANSUI QRX 5500** quadraphonic receiver, £200. Kenwood KAF 3030R amp, £70. 01708 457691 (Essex).

**SONY SCD-777ES** SACD player, excellent sound & cond. Boxed, remote, manual, £995. Paul 01942 603678 (Warrington).

**SOUNDSTYLE X100** four-tier equipment rack. Rock red, smoked glass shelves, unmarked as new cond. Top quality with sound and looks to match, (£300) £179. 01766 781211 (Wales).

**TANDBERG TCD 320AV** cassette deck. Recording/playback heads to accommodate control signals associated with multi-projector slide presentations, wooden case. Offers. 01785 254283 (Staffs).

**TEAC 3300SX** tape deck, 10.5" spools, 7.5-15" per second. Electronically sound, but needs

## WANTED

**RUARK EQUINOX** speaker in black ash in exchange for same model in walnut. 02390 838935 (Southants).

**ROSE RV23** valve preamp, must be good cond. 01903 247779 Mr Smith (Sussex).

**MERIDIAN 861**, any version. Meridian 800, one pair of Meridian DSP33s, genuine buyer, will collect anywhere. 07775 855744 (Cheshire).

attention to drive. Wooden carrying case. Any reasonable offer. 01785 254283 (Staffs).

**VERITY AUDIO** Parsifal Encore speakers, piano black, 24 months old, flight cases, excellent cond, (£13,000) £6,000. Henry 07970 020204 (Devon).

**WILSON BENESCH ORATOR** red cherry, latest spec, as new. Upgrading hence £2,300, no offers. Mr Coffey 01268 415017 (Essex).

**WHARFEDALE** Pacific PI-30 floorstanders, birds eye finish, as new, £180. 01978 762903 or email ngparker@talk21.com (Wrexham).

## 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!

LOUDSPEAKERS

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Boulder 2010 Isolated Preamplifier



## H O V L A N D

Hovland products shown from left:  
RADIA Solidstate Poweramp and HP200 Preamplifier.

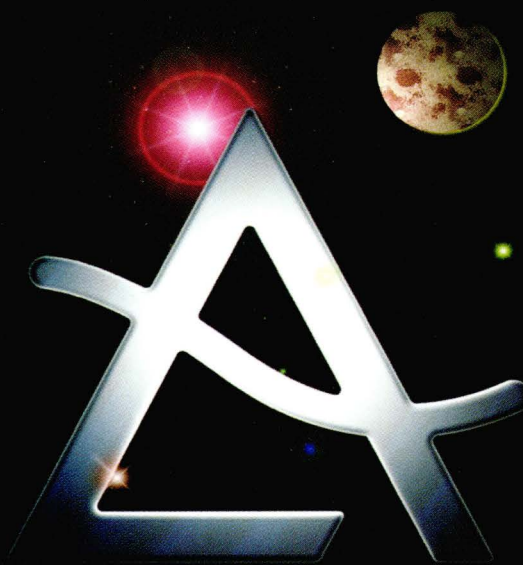
PRODUCT	RSP	NOW	PRODUCT	RSP	NOW
Audio Research LS7 Preamp	£1800	£795	Jeff Rowland Coherence pre.	£14000	£5995
Audio Research Classic 30	N/A	£995	Jeff Rowland Cadence phone	£3500	£1900
Alon V mk3	£5500	£2250	Krell LAT 2 + stands (1yr old)	£12000	£7500
Audio Physic Virgo	£3500	£1500	Krell FPB700CX (10mths old)	£15000	£8995
BAT VK5 SE CD Player (as new)	£5950	£3500	Krell FPB 250MC Mono's	£14000	£6250
Basis Debut-Graham 2.2 deluxe	£12000	£4995	Kuzma Ref. + Triplannar IV	£7000	£3800
Burmester Rondo CD Player	£2000	£900	Mark Levinson 360s Dac	£6995	£3250
Cello Serafin Active Piano Bk.	£7000	£3900	Muse Model Two Dac	£2000	£750
Dynaudio Contour 3 Cherry	£3500	£1500	Oracle Si 3000 Integrated	£11995	£4995
Gamut CD1S (new)	£2950	£1900	Quad 988 and 989's (xdem)	£3800+	Call
Hovland HP100 MC (xdem)	£5750	£3800	Theil 2.3 (mint boxed)	£3200	£1600
Hovland Sapphire Poweramp	£7000	£3900	Gryphon S100 Poweramp	£6000	£1800
Clearaudio Insider MC (2o hrs)	£7500	£1000	Sugden Bijou System (1mth old)	£2850	£2200

For a full comprehensive product listing call Dave or visit: [www.hifiguy.co.uk](http://www.hifiguy.co.uk)

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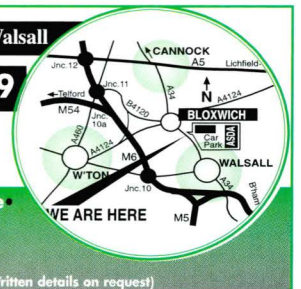
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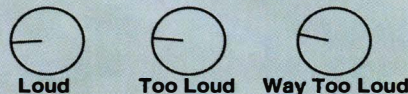
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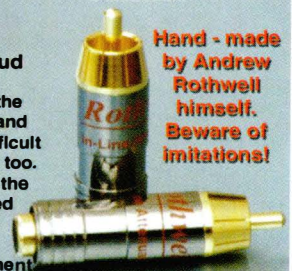
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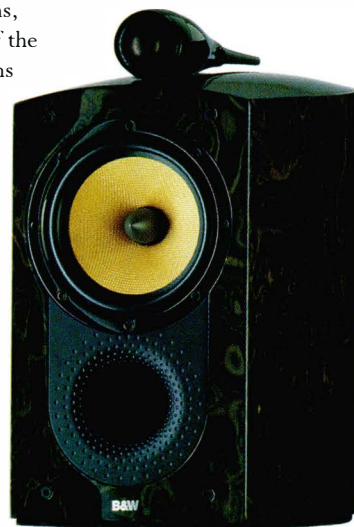


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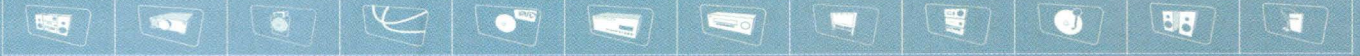
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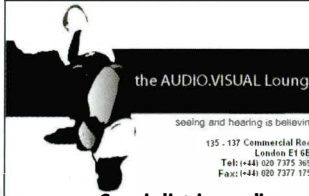
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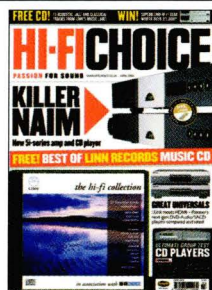
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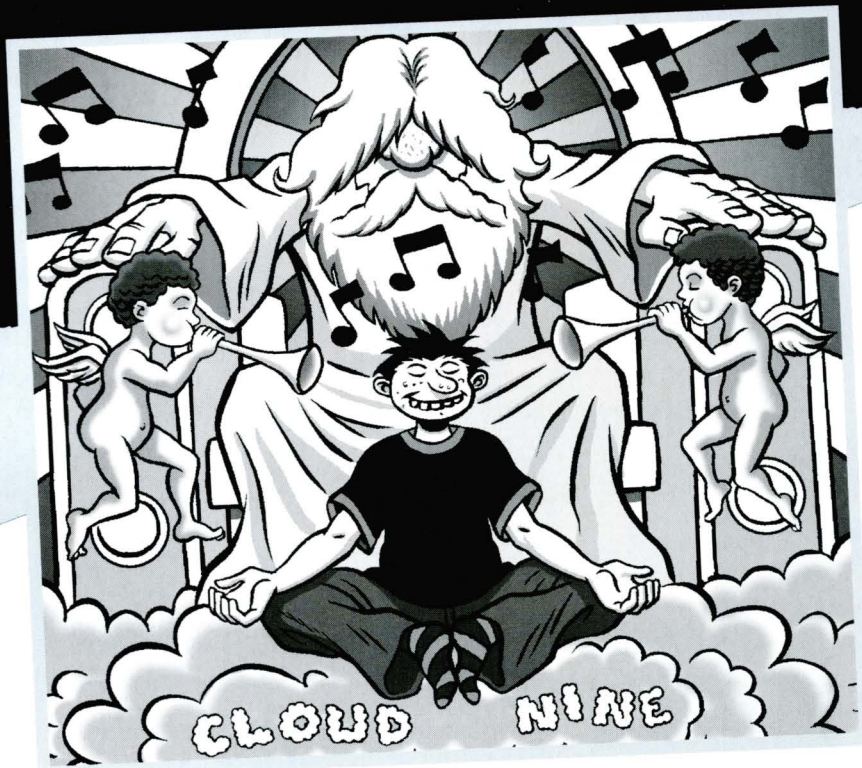
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# HI-FI EXTREME



**“For my first hi-fi I’d want something I could use with my iPod and still form the basis of a high-end system.”**

going for just sixty quid. Heck, I could bag the whole caboodle for £200 and be laughing all the way from the bank to the nearest HMV. Kids have never had it so good.

But that’s too glib – kids really have never had it so good. I had just a turntable 30 years ago. Today I’d expect to have an Apple Mac, a PlayStation 2 (PS3 on order), an iPod and a most excellent personal CD player. Well, I have. Just a spoilt big kid, me. And I’d be thinking a Richer Sounds budget hi-fi – fine value though it is – simply doesn’t cut it. All that tedious upgrading before I owned kit that really rocked. I’d want something a little more radical, something small, cute and cool that I could use with the iPod and the PlayStation and yet still form the basis of a high-end – that’s right high-end – hi-fi.

Then, in the most acute case of happenstance I’ve ever experienced, two products arrived on my doorstep that made the dream a reality. One was a pair of £300 Sennheiser HD650 headphones, undoubtedly the finest cans I’ve heard this side of four figures. The other Eclipse’s £400 Time Domain 307PA active speaker system, baby brother to the TD512s favoured by Brian Eno, The Brecker Brothers and Sting’s sound engineer Simon Osborne. The upshot is this. Plug the HD650s into a classy Sony personal (say the über-sexy DN-1) and you’ve got real high-fidelity sound. Plug the Sony into the tiny but terrific Eclipse amp, hook up the silver egg, single-driver speakers and you’ve got the essential elements of true high-end audio: imaging, focus, timing. Add the optional 316 sub and you’ve got it all, no kidding. Plug in the computer, PS2 or iPod and you’ll bypass cloud nine on your way to hi-fi heaven.

It’s hi-fi for the plug ‘n’ play generation, and it’s sensational. **HFC**

## First time fun

*Your first system, like your first sex, should have something heavenly about it, reckons David Vivian*

**L**ike your first kiss, your first fumble, your first slap in the face, you remember your first real hi-fi system. Chances are that, like those early sexual encounters, it wasn’t very good, maybe even acutely embarrassing. But kind of magical all the same.

Guess you’re itching to know about my first hi-fi. It comprised a semi-automatic BSR McDonald MP60 turntable fitted with a Goldring G800 cartridge, a Trio KA2000A integrated amp and a pair of Koss Red Devil headphones. Which were red.

It’s what budget hi-fi was all about back at the start of the seventies. I had a very small budget – essentially a Co-op shelf-stacking school summer holiday’s worth. There were two options: buy something called a Pye Black Box (a rather mean-looking but mediocre-sounding music centre with speakers that seemed to be made out of folded cardboard) or the very best separate

hi-fi components I could afford and leave the speakers until the next holiday job. Well you know which I went for. And, as the saying goes, I never looked back.

The system served me well for years, latterly with the addition of a pair of Richard Allen Pavanne speakers with dirty great blue paper cone tweeters. Wow. I’d love to hear it now – maybe it wouldn’t sound that bad. Then again. Anyway, the point is this. It got me into real hi-fi – albeit on the bottom rung of the ladder – rather than tat that passed for a stereo system. It was important to know the difference from an early age. It changed my life.

And I’ve been wondering. How would I do it now – if I were 16 again in 2004? Until a few weeks ago, I thought I knew the answer. I’d take myself to a hi-fi dealer, probably Richer Sounds, and book myself a place on the first rung of the ladder again. No need for cans this time, not with Mission M71i speakers

*Beauty*

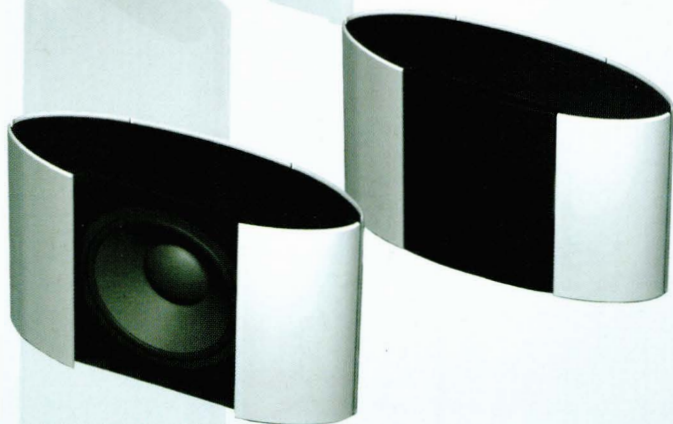


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