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HI-FI MAGAZINE IN THE WORLD AUGUST 2001







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HI-FICHOICE

august 2001 Issue 217

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Paul Messenger likes dance, folk, rock and classical music on vinyl and uses Linn, Naim and Rehdeko kit with gusto.



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HOW WE TEST THE PRODUCTS

Our reviewing process is the most rigorous in the business. We focus on transparency and resolution, mixing traditional hi-fi values with the latest technological developments via a blend of subjective views and scientific analysis. **EENOL TESTS** Our main group test each month concentrates on a key area, with products from across the separates market. The testing consists of three stages: 'blind' listening, hands-on subjective testing and scientific measuring. The latter phase is conducted by our Technical Editor using the QC Suite Functional Testing Station.

GROUP TESTS Each issue features a number of additional tests aimed at narrowing the field in a specific product area. Here the testing involves just the reviewer concerned with no lab or panel testing, but plenty of comparisons.

SOLO REVIEWS As well as group tests we also review single components. In our First Impression section, you'll find brand new products that warrant early exposure, while High Performance concentrates on the latest aspirational, high tech components.

AWARD TAGS

BEST BUYS are considered to offer an excellent standard of performance at an attractive price. RECOMMENDED products are first class components, losing out to Best Buys only because of a higher price or less competitive sound quality. A third award, EDITOR'S CHOICE, is reserved for those products

reviewed solo and awarded where the Editor is convinced that a product offers exceptional quality for the price.

"BOTH FORMATS SOUND SUPERB WHEN IT COMES TO HIGH-RES SOFTWARE. IT'S NOT A WAR, IT'S A CHOICE."



TAKE YOUR PICK EDITORIAL

W

e've got as close as is currently possible to directly comparing the new high-resolution, multichannel formats in our Panasonic versus Sony showdown this month. DVD-A and SACD have the potential to bring into the home the sound that engineers hear in the studio. When we start get-

ting recordings through that have been made for these formats from the ground up, we'll get to hear everything – the window will be wide open. It's a fantastic opportunity for those of us who appreciate great sound quality, and it's up to us, the so-called early adopters, to ensure that these media survive.

Get yourself a decent demonstration of stereo or preferably multichannel high-res and you'll understand why this should happen. Chances are you'll join the small but select ranks of those knocking at the music biz's door asking for more material.

I went over to the Pioneer HQ recently and was treated to a very impressive demonstration of what's possible with DVD-A. We listened to Deep Purple's classic Machine Head album in surround, an initially disorienting experience that soon turned to high entertainment when we'd adapted to the sound of bass and drums coming from rear channels. Clearly there is a steep learning curve for those who are mastering for multichannel and, in the case of remastered classics, there's little else to do but place different instruments in different channels. But some of the recent recordings, such as Joni Mitchell's Both Sides Now (shortly to be released on DVD-A, but also heard at Sony's Las Vegas SACD dem) where the extra channels have been used to reproduce the ambience of the hall, sound alarmingly realistic.

As things stand there is no identical software for both DVD-A and SACD, so it's not possible to make a definitive statement as to which format is best. Even if there were such discs, you would still have the problem that the comparison was essentially of the players on test rather than the formats themselves. And as Paul points out in his test, because of the video playback factor, comparing like-priced DVD-A and SACD players is not entirely realistic. The sensible thing is to get the machine that makes your CDs sound the best – after all, that's still what you'll play the most of – and leave the format war for the market to fight. Both formats sound superb when it comes to high-resolution software. It's not a war, it's a choice.



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REL STADIUM III & Q400E HOW LOW CAN REL GO? BASS IN ABUNDANCE FOR MUSIC LOVERS.

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PANASONIC DVD-RA71 AFFORDABLE DVD-AUDIO FOR THE MASSES?

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GROUP TEST: CD PLAYERS FIVE BUDGET CD PLAYERS COMPETE FOR THE HI-FI NEWCOMERS' ATTENTION.

COVER STORY **GROUP TEST:**

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FIRST IMPRESSIONS

TIM BOWERN AND DAN GEORGE LISTEN TO THE HOTTEST POTATOES IN THE HI-FI OVEN





"THEY'RE WELL BUILT WITH A LIKEABLE BALANCE AND EASY-GOING SOUND."

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29x18x29.5CM (HxWxD), 127mm paper mid/bass cone, 25mm silk dome tweeter, biwirable, 86dB sensitivity, 8 Ohm impedance, three finishes:£50 less for black ash CYRUS ☎ 01480 435577

CYRUS CLS50 LOUDSPEAKER

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espite this speaker being the second model sporting the CLS prefix from Cyrus, it bears no resemblance to its cosmetically-radical bigger partner, the CLS70, looking as it does more like a traditional two-way. Its mission, if you pardon the historical pun, is to compliment smaller hi-fi systems that demand a small cabinet with big performance. Cyrus even goes on to suggest bookshelf placement (gasp!), something we at *Choice* would struggle to advocate, particularly when Cyrus has such a tasty matching wood and glass speaker stand on offer.

The dinky 8.5 litre ported enclosure is constructed from good old MDF with a choice of veneers. Claims are made of high linearity from the 25mm silk dome tweeter thanks to its large surround, which is said to act as a major radiating element. The polymer chassis holding the 127mm paper mid/bass cone claims to help control resonance. Build quality is admirable, and the understated simplicity of the design should appeal to hardcore hi-fi fans as well as quality conscious mini-system users.

Considering the loudspeakers are recommended for smaller systems, the 86dB sensitivity seems a little low, and possibly as a result the CLS50s suffered dynamically. Despite the lack of oomph, the speakers were fairly neutral tonally, and had a slightly laid back balance. While the bass was in some respects impressive – smooth and weighty with fair extension for the box size – they lacked the speed and control of some of the similarly priced competition.

Overall the well-mannered, smooth presentation gave us no major niggles. A smidgen of extra resolution with a tighter bass output could put these speakers on the podium in a future group test. Compared to Dynaudio Audience 42s the CLS50s are a little restrained and polite, better suited to acoustic than electric music. This is a nice little speaker nonetheless, it's well built with a likeable balance and easy-going sound. **DG**

SAMSUNG PHOTO YEPP YVP-P300 SOLID STATE A/V PERSONAL

£399.99

s a fascinating glimpse of the future Samsung's latest pocket gizmo takes some beating. The Photo Yepp represents the next evolutionary step in portable MP3 design – a solid state (SS) personal that can store images as well as music. Like other SS personals, it can hold and play back digital audio files in MP3 form, downloaded from a PC to the player's memory. These files might be music you've got from the Internet and stored on your computer's hard drive, or tracks ripped from CD and converted to MP3. A 64MB memory is built in, providing storage for around an hour's worth of pure audio at a decent quality level (an encoding rate in the region of 128Kbps).

But the thing that's really new here is its image capability. It has a built-in 45mm colour LCD screen, which means you can view digital images as well as listening to audio through the supplied in-ear headphones. Still picture files in JPEG form can be stored and viewed in any sequence – useful, perhaps, if you have a digital stills camera or you want a pocketable way to view images you've downloaded from the Net. Alternatively you can store SMIL files, a form of digital 'slideshow'

MENU

that marries a programmed sequence of images, text and sound (SMIL stands for Simultaneous Multimedia Integration Language). If the images are sequenced closely together, what you get is a kind of rudimentary motion video clip.

Supplied software includes a CD audio 'ripper', an MP3 player for your PC, a file management application and a SMIL Editor so can create your own SMILs. It'll take a while to get your head around, but the Photo Yepp itself is pretty simple to navigate thanks to an impressive menu system which makes use of that hi-res colour display.

It's a fascinating and tasty package, but is it worth buying? If you're an MP3 user and you want a personal player the sound here is well above average – substantial if rather hard-nosed – but it's not exactly compact. And few are likely to find its limited image storage and display capabilities more than a nifty gimmick. But this is another step towards the future for entertainment on the move – add palm-top functionality and 3G mobile phone technology with full Internet access, and you've got something

like the shape of things to come. **TB**

"THIS IS ANOTHER STEP TOWARDS THE FUTURE FOR ENTERTAINMENT ON THE MOVE ."

DATASTREAM

64MB BUILT-IN MEMORY, expansion slot for additional SmartMedia card, compatible with MP3 audio/JPEG image stills/SMIL 'slideshows', built-in 45mm colour TFT LCD screen, built-in microphone for voice record function, Accessories: CD-ROM containing management software, in-ear headphones with in-line remote, USB PC connection cable, rechargeable battery pack and carry case SAMSUNG ☎ 020 8391 0168



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DENON DCD-485 CD PLAYER

140.00

hen the 'Spokesman for a Generation' wailed that "the times, they are a changin'" back in 1964, I doubt he'd even considered the forthcoming popularity of DVD! The times have changed already as the development of DVD hardware in the Far East leaves behind a few casualties, none more notable than the humble CD player. Denon, thankfully, has just given us the budget DCD-485, which for £140 is great news for all newcomers to hi-fi, particularly as it boasts a digital output and CD-R/RW compatibility. Sharing looks and some functions with the bigger DCD-665, the 485 represents the most affordable model in the current range, and for the price we liked the presence of the jog-dial track selector and the display dimmer/off facility.

"THE WEIGHTY, DYNAMIC BASS MANAGED TO KEEP THE PACE WITH EASE."

Once you've put a disc in the tray prepare for a bit of initial whirring: it can be a bit noisy, but things soon quieten down as the disc starts spinning. Metallica got a good airing through the Denon; the punch and crunch was preserved brilliantly, with a generally smooth presentation and balanced tonality. Things got a bit coloured at higher volume on complex tracks, as the treble struggled to keep its composure, but it was far from offensive considering the price tag. In general, the treble was fairly sweet and laid back and, at the other end of the scale, the weighty, dynamic bass managed to keep the pace with ease.

Denon's low-cost option held its ground against more expensive CD players on test, losing out only slightly to its more refined bigger brother, the 665. Plenty of musical detail kept things interesting, and plenty of functions were accessible through the stubby remote. Denon has proved itself a winner again, this time in the budget arena. With CD players like this for under £150, there's incentive for any music lover to become a fully-fledged hi-fi nuts. And, as we nuts all know, once you start... **DG**



DATASTREAM

OPTICAL DIGITAL OUTPUT, CD-R/RW compatible, remote control, headphone socket DENON ☎ 01753 888447

ACOUSTIC ENERGY AEGO 2 MULTIMEDIA SUB/SAT SPEAKER SYSTEM

"WE WERE IMPRESSED BY ITS PUNCHY, SUBSTANTIAL SOUND." ike it or not, the disparate worlds of entertainment media are converging and the demand for high quality, flexible and discreet speaker solutions is swelling.Recently,several respected British hi-fi marques have responded with sub/sat projects, intended to inject a new level of quality into this potentially lucrative market. There's KEF's KMS 2002 package, reviewed in *HFC* 215, and Ruark's Vita 100 combo, due up against a number of sub/sat competitors next month. And now there's this, Acoustic Energy's Aego 2 – two tiny





satellite speakers and a compact active subwoofer, designed to work with any stereo source from music systems to TV sets, PCs to personal stereos, at speaker level (from an amp) or line level (direct from the source). It's a truly multipurpose speaker system, small enough to stick on the wall, the desk or that little corner of the bookshelf, yet sonically bold enough to fill a room with sound.

The satellites sit neatly in the palm of your hand, yet their metal cased form is reassuringly weighty. They're fed from the sub, which in turn hooks to your chosen source via supplied cables. There's a simple three-position bass level switch and volume control, and that's about it. Hardly sophisticated then, at least from the outside. But the surprise is in the performance this combo can conjure.

Far from producing the sort of tacky, lumpy mess you might expect from so-called multimedia speakers, the Aego 2's sound is well-proportioned and musically coherent. The satellites are unexpectedly communicative without straying into thin, harsh excess, and provided you stick with the 'low' bass setting the sub integrates pretty well. We tried it with a variety of sources from a £100 CD personal to some thoroughly unrealistic high-end separates, and were consistently impressed by its substantial and punchy sound.

We should perhaps get some perspective here. Spend £300 on a pair of conventional boxes and you could obtain a superior sound – better soundstaging, more definition, greater dynamic range. And if you're looking for sub/sats to hook to a separates system it's probably worth spending an extra £200 on the KEF product. But the Aego 2 remains a flexible multimedia package of rare quality. It deserves to make a splash. **TB**

FIRST IMPRESSIONS

PRIMARE V10 DVD PLAYER

06 0 198

£699.99

DVD / VIDEO CD / CD PLAYER

f you want to dabble with DVD, but you also value your CD collection, it might make sense to check out a specialist
brand with an established hi-fi pedigree
particularly if you want to achieve

both functions with one box. But getting a DVDcompatible machine to sound good with CD at a realistic price point is notoriously difficult.

While some of the hi-fi specialists say they're waiting for the DVD-Audio/SACD tangle to unravel, others have taken the plunge and launched players compatible with just the video strand of DVD, with particular emphasis on the quality of CD playback. As yet, few such machines weigh in below a grand. But Swedish based Primare is ahead of the game – the new V10 is its second, following the V20 which sells for £1,000. With its slim, stark lines and sturdy build, the

V10 carries obvious appeal for those who like their hi-fi rugged and minimal. It's a long way from the cramped, cluttered fascia of your average player, and Primare reckons it's the same

under the lid. The firm's hi-fi nous has been employed to maintain sonic standards, separating sensitive audio circuitry from the more noisy elements of DVD architecture.

As a DVD-Video player the V10 really is very good indeed. Its picture is crisp with natural

depth and tone, and it's really quite a whiz with typical Hollywood soundtracks. It's got the impact but it has subtlety too – smooth and refined enough to capture those more delicate sonic moments in full.

With CDs, it's better than average, though Primare's claim that this is real audiophile stuff is a little OTT. It's a bit cuddly for that, without the spacious resolution and dynamic contrast of the best dedicated CD players around, say, £400 or £500 and upwards. But it's an unusually substantial sound for a DVD player – an invitingly rich delivery that makes most others sound positively uncouth.

Of course, the lack of DVD-Audio will be a turn-off for those intrigued by the new highresolution music format, and for serious CD users it may still be best to take the dedicated approach. But if you're into DVD-Video and want a refined player of distinctive breeding, this one might prove your ideal choice. **TB**



DATASTREAM

FORMATS SUPPORTED: DVD-Video (Region 2 PAL and NTSC, external decoding required for Dolby Digital/dts surround), CD, Video CD, CD-R/CD-RW, MP3 CD-ROM. Socketry: optical/coaxial digital audio ouputs, stereo RCA analogue audio outputs, S-Video/RCA video outputs, SCART (RGB) A/V output. 24/96 Burr-Brown audio DAC, 10-bit video DAC CSE © 01423 359054 "SOUND QUALITY IS DECENT FOR THE MONEY. WE'VE HEARD WORSE, BUT THEN WE'VE HEARD BETTER TOO."



PANASONIC SC-PM35MD STYLE SYSTEM

(Upper

BR.D.S

SEB 2 BEERE BERREI

here used to be a very clear distinction between audio products from Matsushita's two brand names. Panasonic did the bog-standard stuff: personals, portables, feature packed minis, that sort of thing. Technics had a more specialist focus – hi-fi separates, smart little micros and market-leading DJ gear. But recently the distinction seems to have blurred. Matsushita's latest DVD-Audio player is Panasonic branded and several luscious little micro systems are set to challenge Technics' supremacy at the stylish end of things.

Here's one of them. The SC-PM35MD is real looker. Translucent white acrylic is the order of the day; it curves over the main unit's front panel, covers the speaker's drive units, encases the remote control and even grips the FM aerial wire. It's exceptionally well featured for a unit of its size, with front-loading CD and MiniDisc, an AM/FM tuner and a neat top-loading tape deck too. Performance credentials are allegedly boosted by an internal bi-amping system, wildly unnecessary at this level perhaps, but novel nonetheless. Also pleasing is the attention to detail throughout, from little rubber pads under the speakers to a hinged door on the remote's battery compartment.

Panasonic

04

67:1 Slim

0

Power the unit up and its illuminations burst into life. No bouncing lights, just orange and green buttons that glow under the translucent plastic and a large grey display panel that does what it says on the tin, nothing more. Should even these relatively sparse illuminations prove too bright, a dimmer switch is provided to tone things down. Sound equalisation modes are thankfully frugal too, though you'll still find little use for any beyond the 'flat' setting.

Sound quality is decent for the money. We've heard considerably worse, but then we've heard better too. There's not much in the way of soundstaging going on – some micro competitors from the likes of Denon manage more – and it's a touch shiny up top. But on the plus side its tone is reasonably crisp and fulsome, and vocal projection is really quite impressive for a system of its kind. It's a good 'poppy' sort of sound, and if you add in its excellent style and functionality it might prove attractive as a second system for the bedroom or study. Separates quality it ain't, but stylish it most certainly is. **TB**

DATASTREAM

PLAYBACK SOURCES: CD, AM/FM tuner with RDS. Playback/recording sources: MiniDisc, cassette. Bi-amp configuration with rated power of 18 Watts per channel (THD 10%), four EQ modes, main unit measures 18x24.zx28.7cm, speakers measure 12.8x24x21.1cm (WxHxD) PANASONIC © 01344 862444





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SONY'S UNIVERSAL SOLDIERS

FIRST SONY DVD/MULTICHANNEL SACD COMBINATION PLAYERS REVEALED

Sony is set to launch two more multichannel SACD players this Autumn, hot on the heels of its first – the SCD-XB770, reviewed this issue. However, unlike the 770 these will be true 'combination' players, compatible with the DVD-Video format as well as two and multichannel SACD, and plain vanilla CD. As such, they support the same formats as Philips' impressive SACD-1000 but weigh in at a fraction of the cost.

Sony's DVP-NS700V (above) and DVP-NS900V (below).



The more affordable of the two is the DVP-NS700V, priced at £350 and available in September. Along with full multichannel SACD functionality it also features built-in Dolby

Digital and dts surround sound decoders for the DVD-Video format. The step-up model is the DVP-NS900V, which adds enhanced chassis rigidity,

various audio circuit upgrades and a five-preset video equaliser, for an extra £150. This model will be available from October.

These new Sony models are just two of a growing number of 'combination' (multi-format) machines expected before the year's end. This new breed of player aims to cross the high performance audio/video divide by supporting three or more disc formats for those who place an equal emphasis on music and movies. That usually means CD, DVD-Video and one of the new high-resolution music formats – either SACD or DVD-Audio, depending on which camp the player is from. Politics apart, 'Universal' players supporting both SACD and DVD-Audio are expected in the UK – but there's no sign of exactly when that might be. *Sony* **2** 0990 111999

PULSATING POLES STYLE AND TECHNOLOGY MEET IN JVC'S NEW ONE-BOX SYSTEM.



JVC's FS-DS1000R style system. Well, she likes it.

JVC thinks it'll make waves with the latest addition to its range of one-box style systems. The FS-SD1000R is based around a slim unit containing a top loading CD player, three-band tuner and amp. But the difference here is in the speakers.

Their pole-shaped design contains a rather radical rectangular diaphragm in place of the usual cone type. It's 1cm wide and 9cm high, and made from high-polymer for rigidity and lightness. It was developed, says JVC, out of a desire to make a speaker that radiates sound from a single point source, because "the smaller the point of radiation the higher the definition". This 'track type' diaphragm is attached to a specially developed voice coil and a pair of neodymium magnets for high strength in limited space.

The resulting drive unit is housed in a cylindrical enclosure, promoting fewer internal standing waves and lower external diffraction, which in turn helps sound quality. The result is said to be unusually wide directivity and a smooth spread of sound, wherever the speakers are placed in the room. The complete package comes with an active subwoofer, and it's reviewed next issue.

KIVOR THE ENGINE

CAN HARD DISC AND HI-FI MEET? LINN THINKS SO ...

Linn has become the first British hifi company to offer a hard discbased storage and playback system. Its long-awaited Knekt Kivor is a multi-room sound server solution



able to distribute music individually to up to 128 separate zones individually.

At the front end of the Kivor chain is the Kivor Tunboks, a hard disc source component used to store and playback compressed or uncompressed audio data – up to 1,500 hours of uncompressed music may be stored, more if it's compressed. Next comes the Kivor PCI Musik Machine, a 'high fidelity' sound card that converts the Tunbok's raw data into eight channels of 'jitterless' digital audio. This may then be hooked into a conventional hi-fi with a stereo digital-to-analogue converter, or fed to a Kivor Oktal, Linn's purpose-built 24-bit/96kHz-capable DAC. You then have the option of connecting the source to a multi-room Linn Knekt via a Kivor Linnk control interface, giving up to 16 users control over their music. Expect an in-depth review in the October issue. *Linn* **2** 0500 888909



UNITED FRONT

ALLAE OR NOTHING FROM NAIM'S NEW SPEAKER.

Naim has launched a new speaker called the all*ae*. It features the brand's familiar detached cabinet design, with one enclosure placed on top of another to form a 94cm high floorstander.

The upper enclosure houses a 200mm mid-bass driver with an aluminium chassis and phase plug; the larger-sized lower box incorporates a 19mm soft dome tweeter. The two enclosures are separated by four interfacing pads – the cavity in the lower one acoustically loads the main driver. Four finishes are available and prices start at £1,950. Naim Audio **2** 01722 332266



STRIPPED DOWN SURROUND NAD FOLLOWS UP ITS AWARD-WINNING MULTICHANNEL AMP.

NAD has unveiled a successor to its T760 multichannel receiver, recipient of a *HFC* Best Buy in issue 210. The new £650 T761 promises equally strong musicality with both two-channel and multichannel media, with up to 5.1 channels of amplification available according to the requirements of the source material.

NAD says it employed its usual minimalist approach when designing the T761, eschewing superfluous features in favour of pure sound quality. It's claimed to deliver 80 Watts to each of its five main channels, with NAD's Impedance Sensing Circuitry ensuring optimum current delivery whatever the impedance characteristics of the speakers you're using. Dolby Digital/dts decoding is built-in for home cinema sources, while a 5.1 channel input ensures it's DVD-Audio/multichannel SACD ready.

Tune in next month for a review of the T761's baby brother, the T751. Lenbrook UK 🕿 01908.319360

MINI CD GOES RECORDABLE THE 8cm CD RETURNS WITH PHILIPS MP3

Philips has unveiled the world's smallest MP3-CD player. The eXpanium EXP 401 uses mini 8cm CDs, like the reduced-size CD singles that disappeared in the early part of the 1990s. And because it uses such small discs Philips has been able to shrink its size to around two-thirds that of an ordinary CD personal.

Using MP3 digital data reduction, users can squeeze several hours-worth of music onto a single 8cm disc. But in order to use it you need a PC with a CD drive – that way you can 'rip' tracks from ordinary CDs, downsize using MP3 coding and transfer to an 8cm disc. And if you're wired to the Internet, you can record any MP3 tracks you've downloaded too.

The blank discs themselves are said to cost less than US \$2 (around £1.40), so unlike the memory cards used by solid state MP3 personals you can afford to build a permanent collection. And their small size makes them more portable than full size (12cm) CD-Rs. The EXP 401 is compatible with the AAC audio format along with MP3 and will be available from the Autumn. *Philips UK* **2** 020 8689 2166



IN BRIEF

MISSION has added the m7c1 centre channel speaker to its successful m70 range for use in multichannel systems. The fully shielded, reflex loaded cabinet has twin 110mm woven glass composite cones with a 25mmvoice coil. The contoured ABS baffle claims to give good spatial dispersion and minimise the 'sweet spot' effect. ☎ 01480 423700

LUMLEY has

UNLEY has unveiled the SBS series of loudspeakers. SBS, or Separate Bass System, allows users to combine a choice of midband and treble towers with a selection of separate bass cabinets. 20 01892 539595

GREMLINS got into the system last month: to speak to the team at Croft please call 01746 769156.

SONY has launched a new DVD player with CD-R/RW playback. The DVP-NS400 has an in-built 5.1 channel Dolby Digital decoder and is said to give optimum picture quality due to the Digital Video Enhancer. Sony's precision drive2 system claims to provide faster and more accurate tracking of dirty or scratched discs. Expect to pay around £330 for one. @ 01932 816000

DYNAVECTOR has produced a



MP3.COM is to be acquired by Vivendi Universal. Vivendi aspires to becoming the central point of all digital music distribution and will soon be offering new services to improve the 'music listening experience'. www.mp3.com

IN BRIEF CONTINUES ON P.16





Harman Kardon's new CDR 30.

BURNING AMBITION

WANT TO MAKE CD RECORDINGS IN A HURRY? LOOK NO FURTHER ...

Harmon Kardon has introduced two new dual-tray CD-R/RW recorders into the UK. The CDR 20 and 30 both offer four-speed recording and finalisation, claimed to be the fastest CD-R recording available. Both machines also feature three sets of coaxial, optical and analogue inputs plus front panel coaxial and optical inputs. Text display capability and one-touch single CD track recording is offered by both models and all functions are operational from the remote handset. The CDR 30 improves upon the 20 by offering an AKM 24-bit/96kHz A/D converter, MP3 playback and encoding, and the ability to record HDCD and dts data. Both machines are available now with the CDR 20 at £499, and the CDR30 at £589.

Harman Consumer UK 🕿 020 8731 4670

PHWOAR OF THE ROSES MARK LEVINSON'S NEW HI-FI PROJECT REACHES THE UK.

The Red Rose project from acclaimed US hi-fi guru Mark Levinson has made it across the Atlantic to the UK. Sold through a small, select dealer network, the range currently consists of six amplifiers and three speakers.

The amps start with the M5 integrated at £8,000, and also include two preamps, two stereo power amps and a range-topping monoblock priced at £25,000 per pair. Each model combines a pure vacuum tube (valve) signal path with solid state power supply regulation.

The speakers start at £3,500 per pair with the R3 Baby Reference, stretching up to the R1 Reference at £45,000. All feature newly developed ribbon drive units for upper frequencies, favoured for their good ultrasonic extension, low colouration and wide dispersion.

Red Rose's UK distributors intend to open five or six regional dealers over the next few months, with demonstra-

tions based around the Baby Reference System comprising an M5 amp and R3 speakers. The Red Rose Baby Reference System is reviewed next issue. MDC **a** 01992 573030





JM Lab Electra 926.

FRENCH FANCY GET AN ELECTRA COMPLEX – IN A GOOD WAY.

JM Lab boosts its extensive range of speakers with the new Electra Line. The range includes three floorstanders, a pair of standmounts, two centre channels, a surround, and a subwoofer. The Electra range technology descends from the Utopia project and each model utilises a tioxid-5 inverted titanium-dome tweeter, and W sandwich cones (a laminate of woven glass and foam). The time-aligned drivers are housed in heavily braced MDF cabinets and all the models use JM Lab's OPC crossover technology which claims to give a smooth, guick roll-off at a chosen crossover point. Three finishes are available for the range and two matching stands compliment the smaller models. Available now, their prices had yet to be confirmed as we went to press. JM Lab 🕿 0121 616 5126

IN BRIEF CONTINUED

- PHILIPS will incorporate iM internet radio tuning alongside AM and FM bands on its new FW-i1000 Internet audio mini system. iM tuning allows users to listen to broadcasts from around the world. © 020 8689 2166
- DENON has become an associate member of BADA, whose members offer customers nationwide consumer protection and other associated benefits. 20 01753 888447

PANORAMA Antennas has launched the DAB glass mount antenna, a digital radio antenna for automotive use. Supplied as a kit the Band 3 antenna is just part of a range of home and car antennas available from this British based company. ☎ 020 8877 4477

BLOOMBERG Digital Radio has announced details of two new programmes. A new technology show at 9:30pm weekdays, joins a new Sunday morning show for private investors. www.bloomberg.co.uk/ukradio

MP3 users may suffer under the limitations imposed by the latest version of Microsoft Windows. The Wall St Journal reports that Windows XP creates poor sounding MP3 files compared to existing standards. And Anti-Piracy measures may limit the use of pirated pop.

VAN DEN HUL has released a new hi-fi/AV interconnect, the



Storm Gold Hybrid (pictured). The new cable, priced at £30 for a 0.8m pair, uses a Carbon-Metal Hybrid conductor and high-grade gold plated phono plugs. The Gold Hybrid replaces the Storm II. \cong 0.02 8997 4280 PIRACY is becoming harder now that independent label Fahrenheit is the latest to releases a copy-protected CD. The CD plays like any other but resists the attempts of software 'rippers' who convert discs to MP3 files.

PACKARD BELL has selected Dolby headphone technology for its latest range of notebook computers. The system claims to provide realistic surround sound from stereo headphones.

Dealers

Audio Excellence Bristol 0117 926 4975

Audio Excellence Cardiff 02920 228565

Audio Excellence Swansea

Audio T Brentwood 01277 264730

Audio T Camberley 01276 685597

Audio T Cheltenham 01242 583960

Audio T Epsom 01372 748888

Audio T Reading 0118 958 5463

Audio T Southampton 02380 252827

Audio T Swindon 01793 538222

Audio T Tunbridge Wells 01892 525666

Audio T West Hampstead 0207 794 7848

Audio Illusions Langley 01753 542761

Audio Venue Maidenhead 01628 633995

Doug Brady Hi-Fi Warrington 01925 828009

Leicester Hi-Fi Leicester 0116 2539753

Moores Hi-Fi N Ireland 02891 812417

Music Matters Edgbaston 0121 429 2811

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Northwood Audio Aylesbury 01296 428790

Phase 3 Hi-Fi Worthing 01903 245577

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CAN'T STOP THE MUSIC

IT MAY CALL ITSELF A HOME ENTERTAINMENT EVENT, BUT MUSIC STILL RULES THE ROOST...

fter a year off, the long run of Stereophile-sponsored hi-fi shows returned to New York, this time as Home Entertainment 2001, an event sponsored by the EMAP magazines Home Theater, Stereophile, Home Theater Interiors, and The Stereophile Guide to Home Theater.

For a show sponsored by three home theatre magazines, there certainly were a lot of stereo music-only exhibits.

Analogue and turntables abounded, and good sound seemed the rule rather than the exception. But

there was no question that it was a successful show. Over 12,000 people attended during its three-day run.

Polk's Paul DiComo

debuted a new upscale line of speakers. Ranging in price from \$399 each (for the stand-mounted two-way LSi7) to \$1,499 each (for the floor-standing LSi25, which includes a self-powered side-firing subwoofer), the line features proprietary drivers, quality components, and stylish, rigidly-braced enclosures.

One of the show's most spectacular demos involved Krell's latest speaker, the \$10,000/pair LAT-2 compact monitor. Like its bigger brother, the LAT-1, the LAT-2 is constructed from massive slabs of aluminium, ranging in thickness from 19.0-25.4mm in thickness. The slot-loaded cabinets curve sinuously, measuring only 24.38cm by 32.76cm by 37.33cm (WxHxD). The LAT-2 employs the same tweeter as the LAT-1, as well as an 18cm multi-faceted cone mid/bass driver. These little marvels produced an ungodly amount of sound, including deep, taut, rich bass that had far more slam than the speaker's claimed response of 40Hz-25kHz (+/-3dB) would indicate. They really rocked.

Niro Music Systems made a huge splash at the show. If Niro rings a faint

bell, that's because it's Niro Nakamichi's new company – an outgrowth of the Mechanical Research Corporation he founded in 1998 to investigate the effects of mechanical phenomena upon electronic components.

Nakamichi's design brief was to eliminate all possible external influences on the audio signal and toward this end he employs shielding, free floating PCB mounts, ferrite beads, tuned heat sinks, and even a spring-mounted mains plug.

His Control Engine (preamp) resembles a dynamo and the Power Engine (Power Amplifier) looks like some sort of deep space probe, minus the solar sail. His \$22,000 Niro 1000 Monoblock Power Engine puts out 150 Watts in class-A and sounded impressive under show conditions driving a pair of B&W 801N speakers.

I'm not sure how many DiAural crossover designs have made it to the UK, but Roman Audio had a pair of \$5,700 Centurions on display that were putting a lot of far more expensive speakers to shame using this technology. Using a three-way design employing Focal drivers, the Centurions cast a huge, deep, airy, full-bodied soundstage that was holographic in its detail. Roman is a fairly new company, but the fit and finish of the speakers was flawless and the room was a musical oasis. Of course, Roman's decision to drive the Centurions with a Krell CAST system couldn't have hurt either.

It took me five tries to get into the room featuring VPI Industries new TNT

"THE NIRO POWER ENGINE LOOKS LIKE SOME SORT OF DEEP SPACE PROBE, MINUS THE SOLAR SAIL."



Hot Rod turntable. It was one of the busiest displays of the show. The HR employs a new tool steel shaft, air pod suspension towers, and a single point pulley system. It no longer offers separate arm boards; the table's solid plinth is, instead, drilled for a specific arm – for most customers, that would be VPI's new 12.5inch version of the JMW Memorial unipivot arm. The table costs \$8,400, complete with said arm and SDS speed control/power supply. It was, in terms of buzz at least, the 'debut' of the show – everybody was talking about it.

In the end, Home Entertainment 2001 stood as a clear refutation that audio is an old man's passion. The show was filled with people of all ages and sexes. It may be as old-fashioned as actually sitting down and reading a novel in these multimedia times, but there's life the ol' gal yet.

Wes Phillips is our US news correspondent, blues music lover and vinyl enthusiast.





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ANOTHER BRICK IN THE WALL



"MAX'S SYSTEM IS ONE THAT PEOPLE IN THE INDUSTRY TALK ABOUT - A TEST BED FOR HIS IDEAS, IT'S CONSTANTLY EVOLVING.." WHAT HAS THE MAN WHO BROUGHT YOU THE SEISMIC SINK GOT UP HIS SLEEVE? DAVID VIVIAN GOES TO HAMPTON COURT TO FIND OUT...

f you're into serious hi-fi, you probably know the name. You might even know the man himself; he isn't exactly the shy, retiring type. What Australian is?

Max Townshend made his first bit of hi-fi at the age of eight (50 years ago), pitched up in the UK in 1978 and immediately linked his moniker with innovation through products like the Platter Matter and Elite cartridge alignment gauge. But it was when he decided to manufacture the silicon fluid-filled pickup arm damping trough designed by professor Jack Dinsdale of the Cranfield Institute of Technology that Max grabbed himself some limelight. The heavyweight Rock and Rock Reference turntables that followed remain, in some people's estimation, the finest disc-spinners ever made.

TALK ON CORNERS

Max's system is one that people in the industry talk about. A kind of test-bed for his ideas (most of which make it into production), it's constantly evolving. The reason people talk about it, and like it, is that it sounds more 'real' and palpable than your common or garden high-end music mill, a function in part of the extraordinary seven-foot tall Sir Gallahad speakers – with their 100dB+ sensitivity and subwoofer trashing bass extension – that have necessarily been the mainstay of the system for many years. Necessary because stretching the extremes of bandwidth is a cornerstone of the Townshend philosophy. That and the elimination of vibration, both external and internal.

On this visit, any notion that I was familiar with Max's system took a traumatic beating. The latest improvements – specifically the deep-freeze cables, a new Townshend supertweeter, a monstrously powerful Class T digital power amp and a Pioneer DVD-Audio front end – have simply taken it way out of my span of reference. When I sat down to listen, Max provided the cushion for my jaw.

Given the basic Townshend philosophy of starting from the ground up – eliminating earthborne vibrations and suchlike – and achieving the widest possible bandwidth, one could argue

David Vivian talks to the movers and shakers in the hi-fi industry about the subjects close to their hearts.

that when significantly improved digital technology such as DVD-A does come along, Max is one of few people in a position to hear what's going on. Maybe some people are slightly less enthusiastic because the differences don't seem quite so big to them. Their systems are editing the improvement.

"You're very right," agrees Max. "A lot of people don't have their equipment isolated from external vibration down to very low frequencies. There are a lot of good tables out there but they don't go down to 2Hz. The main noise is between 5 and 50Hz. That's where your nasties are, and most of these equipment supports don't start until about 80Hz. And their systems don't go broadband enough, because everybody said it cuts off at 20kHz and that's the end of it."

THE BIG PICTURE

"To get the sound right, you've got to look at the really big picture, at everything in your whole replay chain. And look to where things can go wrong. And also have the best possible equipment. There are no 'second bests'."

Including the cable? "It's another brick in the wall – to build a system which sounds clear... and that's the object of the exercise.

"We did some interconnects, which were good, but not the best. Then we discovered this process which we're now applying to all the copper for our cables. It can only be used on raw copper and involves taking it down to minus 184 degrees C over about 10 hours, holding it there for about 15 to 20 hours, then bringing it very, very slowly back up to room temperature over a period of about 20 hours. The resultant copper is a completely different sort of stuff. It's just bizarre, so soft. The whole crystal structure is changed.

"And the results are really quite incredible. We've been listening to the system tonight and you're smiling." I am, I can't stop. Another brick, I guess. And the new power amp, on sale later this year for about £6,000, has to be the breeze block.

DIGITAL T POWER

"We always had problems with amplifiers," admits Max. "Looking for the perfect amp has taken forever. But I'm hooked on this Digital Signal Processing Class T amplification which is 98 per cent efficient. I now have an amplifier which is giving nearly 500 Watts per channel flat to 120kHz with intermodular distortion 100 times lower than the best conventional amps. It's got, well, never-ending power, and total control.

"It's been designed by some very, very clever dudes. DSP originates out of having to drive digital lines over long lengths of copper for data distribution. You need the best possible amplifiers with the lowest possible distortion because distortion equals corruption of the digital data. So these guys made these power amplifiers that could drive these lines. And, of course, there's always an audio geek around who says 'Come on, make these drive loudspeakers'. And they [Tripath Technology did. I've made a few mods, though."

In the light of which, ordinary tweeters just aren't up to the job. Max expands: "I've known for years that you need supertweeters. I've had supertweeters here that go up to 100kHz, and I've had ion tweeters that go up to 250kHz and heard this magic. It's vital in a modern speaker, if it's truly going to be 'new digital ready'. If you want to be a wimp you can go to 50kHz but if you want to go all the way you've got to go to 100kHz. I had a design goal of 200kHz. This ribbon I've built is flat to 200kHz and I can still detect stuff at 1mHz, which has shocked me. It's very nice to know that you're not being limited by your loudspeakers."

THE FUTURE'S SO BRIGHT...

Supertweeters will be made as an after-market product – similar to the Tannoy concept – but also incorporated in the forthcoming Glastonbury III (which will sound exactly like the Sir Gallahads in all but maximum volume, claims Max, but stand just 40 inches high).

It's the future that most excites Max. When you hear a new digital format like DVD-A through his system, it's impossible not to agree that there's no going back. "If DVD-A and SACD were to fail," he says, "the fact that there are millions of DVD-Video players out there, with 96kHz/24-bit twochannel stereo capability, means that DVD-V may finish up, by default, being our carrier. It's always there for us to fall back on. And we're not going to be denied." I'll drink to that.

"A SUPER TWEETER IS VITAL IF A SPEAKER IS TRULY GOING TO BE NEW DIGITAL FORMAT READY."



Above: Max Townshend. Below: Tremble, ye mighty! It's the Seismic Sink.



t may be little more than a decade old, but REL has completely changed the British perception of subwoofers, and gone on to play a significant role on the world stage. REL refers to its products as 'Active Sub-Bass Systems', in order to distance itself as far as possible from historically negative associations with the term subwoofer.

REVIEW PAUL MESSENGER

Timing is an important ingredient in the success of any business, and REL had the good fortune to start up at just around the same time that the home cinema bandwagon started rolling. Subwoofers and movie soundtracks make natural bedfellows, but founder Richard Lord has always stressed that his first priority to enhance the performance of hi-fi stereo music systems. If his products do the movie thing well too, that's a bonus.

Breaking with our normal tradition, this test looks at two quite different models from the REL range. In one metaphoric corner is the £1,500 Stadium III, comprising a large reflex-ported enclosure handsomely finished in a classy real wood veneer. In the other is the £1,000 Q400E, a much more compact sealed-box design, in a much more prosaic textured black finish.

The reason for these substantial differences is that REL has two distinct ranges. The longstanding St-series is primarily aimed at the stereo music listener, while the more cost-effective and recent Q-series is oriented more towards the home cinema scene. That said, both subscribe to the same fundamental REL philosophy, so either should really be capable of filling either (or both) roles, though the larger and more costly Stadium III has significantly more flexibility in terms of inputs and filtering.

STADIUM III

The Stadium III sits in the middle of a five step hierarchy, running from Strata III and Storm III up to the Stentor II and Studio II, but in truth this Mk III model is a rather different proposition from its Mk II predecessor, not least because the price has increased from £1,000 to £1,500. That's because the whole thing – enclosure, driver, amplifier and crossover – has undergone significant revision, so this is actually a more or less all-new design.

It's about the same size as a 29inch 4x3 TV set, and I struggled to find space for it in my seriously cluttered lounge (AV has a lot to answer for), but at least the beast is cunningly disguised as a very handsome piece of furniture. You should be able to site it wherever is most convenient, though some experimentation is usually worthwhile – if the 43kg weight isn't too daunting!

Our sample came in a classy American walnut, with neatly postformed edges around the top and bottom edges, so the net result is effectively an extra occasional table or seat, finished in whatever real wood best suits your own furnishings: black or light oak, cherry and 'rosenut' are the other options. The enclosure is actually built from 30mm MDF, and heavily braced.

The unit sits on four plastic feet, threaded for 8mm spikes, and both the 10-inch frame driver and port fire downwards towards the floor. A large metal control panel on one face acts as heatsink for the built in 200 Watt amplifier. It includes four alternative inputs (low level phonos, high level Speakons for speaker cable, or 'studio line' balanced XLR) and five knobs, independently setting high or low level input gain; giving very fine, calibrated adjustment over the low-pass filtering; and selecting the phase and operation mode. Unusually, and potentially very usefully, REL's input arrangements allow you to use the sub to augment the

A TALE OF TWO SUBS THERE ARE SUBS FOR ALL SEASONS, AND THEN THERE ARE RELACTIVE SUB-BASS SYSTEMS

REL STADIUM III & Q400E HIGH PERFORMANCE

EDITOR

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"THE Q400E WAS VERY SATISFYING WHEN USED WITH REGA ARAS, SUPPLYING CONVINCING WEIGHT AND SCALE."

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 bass of regular two-channel stereo, and also replay the LFE (low frequency effects) channel when using 5.1-channel material.

> Room measurements confirmed the accuracy of the low-pass filtering, which could provide substantial cut from as low as 30Hz (handy with large speakers), yet equally capable of operating with miniatures. There is a clear tendency to emphasise the low bass (sub-30Hz).

'Sound quality' doesn't seem quite the right phrase to describe the performance of a component which makes only a tiny contribution to the total sound of the system. Discretion is perhaps the most important virtue, at least as significant as the ability to deliver serious extension down into the nether regions. On both these grounds, the Strata III proved particularly impressive.

Trying to underpin something as large as a pair of Tannoy TD12s is a real challenge, yet even here the Stadium III managed to provide worthwhile extra weight and scale. It was equally impressive operating alongside a pair of tiny Rega Aras, its notable strength being the ability to supply really deep and clean bass without over-emphasising the mid-bass at the same time, giving a 'three-box' combination with massive scale, good agility and very superior imaging.

Q400E

REL's Q-series are all sealed-box units, shaped more or less as perfect cubes, and normally finished in a textured black. This Q400E is the largest and heaviest, representing a logical step up from the cute little Q200/201E models that sell for £600-800 (depending on finish).

Going from a 10-inch to a 12-inch drive unit, and increasing the enclosure to a 15-inch cube drops the cuteness factor. However, it's still a reasonably compact affair, and the Q400E promises significantly more muscle, not only because of its larger driver, but also because the amplifier power is upped from 200 to 400 Watts.

Aesthetically you'll probably want to hide this one behind the sofa, though it does come with four little feet (which may be replaced by 8mm spikes), and a grille to cover the side-mounted driver. The latter is a very classy affair, with a thick, flat diaphragm and heavy-duty surround that should ensure high excursion linearity and inhibit the transmission of standing waves. Because the box is sealed, heatsinking is fitted to the rear panel. There are two inputs here, a low level phono pair and a high level unbalanced Speakon. Four knobs independently set high or low level input gain; adjust the low pass filter; and select the phase for stereo and/or LFE (the '.1' in a 5.1 surround system) operation.

The filter is a variable knob here, inscribed with approximate roll-off points, though in practice the 400E will always deliver a fair amount of output up to 50Hz, and tends to supply rather too much mid-bass at higher settings. Which is probably why results were decidedly equivocal alongside the big Tannoy TD12s – frankly, I preferred not to use the 400E here.

Things were more satisfactory when used with the little Rega Aras – very satisfactory indeed, supplying convincing weight and scale underneath these agile miniatures. Integration was temporally excellent, though there did seem a slightly textural thickening and lack of warmth – or alternatively a slight tendency to 'thump' if the filter is set much above the halfway point.

CONCLUSION

Both these 'sub-bass systems' have plenty going for them, but the Q400E is likely to be happier providing the thump for your movies, while the Strata III's superior filtering is best for your hi-fi system, despite its greater bulk and cost. Stadium III £1,500; Q400E £1,000; REL 20 01656 768 777 Above: The Stadium III's downward-firing driver. Below: The Stadium is easy to adjust for the 'best fit'. Bottom: The Q400E's heatsink, placed at the back of the speaker.

FICHOI

magazine





"THE STADIUM III IS ABLE TO SUPPLY REALLY DEEP, CLEAN BASS WITHOUT OVER-EMPHASISING THE MID-BASS AT THE SAME TIME."



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PANASONIC UNLEASHES A NEW DVD-A PLAYER AT A SUPREMELY AFFORDABLE PRICE – THERE MUST BE A CATCH?

Technics and Panasonic, has as much at stake with the future success of DVD-Audio as the Sony/Philips alliance has with Super Audio CD (SACD). Its first DVD-Audio player was available in two guises as either the DVD-A7 or DVD-A10

atsushita, the giant behind

REVIEW PAUL MILLER





The DVD-RA71's discreet fascia hides a multitude of facilities. These include six channel analogue outputs and extensive DSP power to enhance video picture and CD sound.

with its extra features, but the nuts and bolts of the player were also used by other manufacturers, including Denon, who were eager to test the market. But it seemed to me that both players were discounted quite early in their life-cycle, and now they've been replaced altogether by a new player – the DVD-RA71 – that's both more affordable still and ostensibly better specified.

Just £450 buys you a fully-fledged DVD-Video player with dual-SCART, composite and S-video outputs plus on-board decoding for both Dolby Digital and dts movie DVDs. In set-up mode you use the remote's integral joystick to toggle through a tab-based on-screen dialogue with pages for video (including the ability to output PAL60 from NTSC discs) and audio where the speaker configuration modes are found. Here you select between two and multichannel operation and adjust the relative output and delay of the front, centre, rear and subwoofer channels.

I should point out that when the DVD-RA71 is set to multichannel mode, there is no output from two-channel CDs. To listen to CD you need to select 'two-channel' from the speaker configuration. This seems a bizarre oversight, especially bearing in mind that the DVD-RA71 includes separate stereo outputs (labelled 'TV') alongside its six front, centre, surround and sub outputs. Neither is there any indication of the 48kHz, 96kHz or 192kHz sample rate though the video *bit-rate* can be shown on your TV!

Evidently, there is a deal of DSP incorporated in the DVD-RA71 to accommodate its various picture enhancement utilities – DSP that's redundant when the player is used with conventional CDs. Never ones to miss a trick, Panasonic's engineers have pressed this processing power into service with CD's three alternative 'Re-Master' modes. These modes influence the player's sound by attempting a 'best guess' of the ultrasonic music detail otherwise lost to CD. It's a bit of fun, although our listeners actually preferred the sound of some CDs in 'Re-Master' mode against the rather watery perspective of the player in default mode.

Sadly, this stems from the huge ~8000psec of PSU-related and other jitter which is unaffected by 'audio mode' or other settings. This is a flaw at the core of the product, and one first seen in Panasonic's earliest DVD-V players. Players launched in the meantime were largely cured of this, enjoying a sharper sound, tighter bass and better stereo focus as a result. In this regard alone, the DVD-RA71 has stepped back in time.

SOUND QUALITY

Perhaps it's because we were not born with five ears around our heads, but the relatively new experience offered by multichannel DVD-A (or



PANASONIC DVD-RA71 DVD-A PLAYER HIGH PERFORMANCE

SACD for that matter) can easily disguise the sort of subjective flaws we might more readily identify from conventional two-channel stereo. Panasonic's DVD-RA71 certainly sounds more convincing with all five (.1) channels blazing than it does as a two-channel player, though the *quality* of those extra channels, from a purely technical point of view, is really no different.

DID AUDO VICEO PLAYER DVD-RA71

THE STAR O DAY

Kd lang's *Invincible Summer* has been re-mastered for DVD-A and while the distinctive tenor of her voice sounds as polished and articulate as ever, some of the effects (particularly the frontto-back panning of vocals through *Simple*) are either gratuitous or impressive, depending on your point of view. Still, the range and power of her voice sounds impressive through the DVD-RA71, with no obvious sense of compression or harshness. The Teldec release of Strauss' *Kaiserwalzer* sounds somewhat fuller and richer via the DVD-RA71, capturing the weight and spirit of the performance while lacking a certain delicacy and lightness of touch.

Once again, this is as likely a 'feature' of the recording itself as much as a limitation of the player. As if to reinforce the point that Panasonic's player is capable of a more vigorous, up-front performance, the spirited mix of The Corrs' *In Blue* burst upon our listeners with a refreshing vitality. The bass has plenty of drive and energy, vocals are strongly presented via the

"IT SOUNDS MUCH MORE CONVINCING WITH ALL CHANNELS BLAZING THAN IT DOES AS A TWO-CHANNEL PLAYER."

centre channel while the top-end has a crisp and lively balance. With a twist of irony, although the overall sound is very clean-cut and detailed from all five main speakers, it still lacks the unforced 'atmosphere' or presence already possible from a serious two-channel system. Albeit not one with a £450 front end.

CONCLUSION

Clearly, the full AV compatibility of the DVD-RA71 is a big bonus. After all, the player will handle CD, CD-R/RW, and DVD in all its guises, while offering a fully decoded six-channel output. Pretty impressive for £450. But if the stability of the data coursing through its veins were properly addressed the DVD-RA71 could be even better. £449.99 Panasonic 201344 862444 MPEG DA

SUPER AFFORDABLE SONY LAUNCHES THE FIRST OF ITS NEW MULTICHANNEL SACD PLAYERS AT A VERY ATTRACTIVE PRICE – BUT DOES IT HAVE WHAT IT TAKES?

REVIEW PAUL MILLER





Above, from top: A nifty jogdial handles a multitude of features, beyond the basics; Simple controls make it a breeze to switch between disc fomats; An uncluttered remote deals with all the major features. o sooner had the ink dried on our review of Philips' groundbreaking multichannel SACD player (*HFC* 216), than Sony burst back into the limelight with a six-channel audio player of its own. The SCD-XB770 (here reviewed in its European release) is signifi-

cantly more affordable at just £450 but then it's unable to playback DVD-Video. In fact, it's one of four multichannel SACD players priced £300-£1,300 due for a staggered launch from Sony through the year. There *will* be two combination DVD-V/multichannel SACD players (the DVP-NS900V and DVP-NS700V) to follow, but there are no plans for a hybrid DVD-A/SACD machine.

So, the SCD-XB770 is an audio-only player for the purist. Its dual-focus laser transport will handle single-layer and hybrid SACD discs along with existing CD, CD-R and CD-RW software. It's tempting to think of it as a multichannel version of the SCD-XB940 that we reviewed last year, with consolidation of the core DSD (Direct Stream Digital) technology onto fewer largescale integrated circuits. This brings six-channel SACD decode and playback down to a price occupied by two-channel players. Importantly, while increasing the number of channels, Sony has not compromised on user-friendliness. The rear panel has both two-channel and six channel analogue outputs (Front L/R, Surround L/R, Centre and Sub) with coaxial and optical digital connections for linear PCM (CD) only.

Although both two- and multichannel SACD recordings are pressed onto the same high density layer, the SCD-XB770 still requires you to stop playback before switching between them, unlike the Philips machine which can do this on the fly. All SACD players need to stop and re-read the disc's TOC (Table of Contents) before switching between SACD and CD layers, however. Frankly, Sony's 'multichannel management' is a more valuable feature, providing flexible level adjustment and front-centre-surround balancing options without the need to navigate a tortuous on-screen display. The fact that the SCD-XB770 has no need for a video output is a blessing in disguise!

SOUND QUALITY

Unlike other commentators, I have not seen eyeto-eye with the re-mastering of Mike Oldfield's Tubular Bells which lacks the depth, subtlety and a realistic sense of musical dynamics expected of modern recordings. Nevertheless, while the Sony makes a better fist of things than Philips' SACD-1000, it's not entirely able to escape the sense of percussion and strings soaring into a glass ceiling, limiting the feeling of range and transparency that's possible with both two and multichannel systems. The other extreme of 'surround spaciousness' is realised by the Sacred Feast disc, mentioned last month. On this occasion, it was as if the Sony SCD-XB770 drew an audible sigh of relief as the voices of the choir rose into the room, the ambience of the chapel flooding around them and immersing us in a magnificent acoustic.

Our exploration of surround sound took another turn with the intensity of *Guano Apes* put to good use in five-channel mode. Here, the lead guitar was steered around the backs of the listener's heads, spreading the power of the band rather than focusing the full force of the vocals, strings and drums solely at the front. Of course, there's no guarantee that the two-channel version of a multichannel mix is mastered at precisely the same level, which complicates quick A/B demonstrations. So *Guano Apes* sound more intense in two-channel mode than in full surround...

Our old standby, Joe Beard's *For Real*, demonstrated that the inherently 'easy' and atmospheric quality of SACD is alive and well in the XB770, though the upper octaves of piano did have a little extra bite or edginess in this incarnation. No mistaking the realistically gruff quality of his voice or the precise diction of the guitar but there's arguably too much bite for all

SONY SCD-XB770 SACD PLAYER HIGH PERFORMANCE

MULTI CHANNEL DECOD

tastes. "Almost," suggested one listener, "like he's hitting the keys just a little too hard." Quite.

Multi Channel / Direct Stream Digital

SONY

With this player, the CD layer of hybrid SACDs often appears to have a more direct but less subtle quality. Bass can seem weightier, though it's typically a more one-note affair, lacking the warmth and extension enjoyed with SACD. Indeed, we were often left with the feeling that the CD version was tapping its feet, metronomelike, to the underlying rhythm while the SACD version revealed far more about the texture, colour and timbre of individual notes.

Not coincidentally, my lab work revealed the SCD-XB770 suffering a moderately high 1190psec of power supply-related jitter in CD mode which, ironically, was just the thing to compromise the bass performance of Sony's budget CD players, like the CDP-XE330, for example (see *HFC* 202). Philips' rather costlier SACD-1000 squeezes this figure down to just 165psec, which is far closer to the standard achieved by Sony's previous twochannel SACD machines.

The fact that Sony uses two separate power transformers in the SCD-XB770 to feed both digital and analogue circuits is noteworthy, but a lit-

"SIX CHANNELS OF SACD SOUND AT THIS PRICE REPRESENTS EXCEPTIONAL VALUE FOR MONEY."

tle extra care in this department would surely realise more of the SCD-XB770's potential.

CONCLUSION

Jitter notwithstanding, this is a clear attempt to pitch multichannel music at a price that's tempting to anyone currently looking to upgrade from a budget CD player. Six channels of SACD sound at this price represents exceptional value. *E449.99 Sony* **2** 0990 111999

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Hi-Fi News & Record Review - July 2000

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New Blue Series



The first impression of a tiger is its powerful roar, intended to strike fear deep in the heart. But observe the tiger a little longer, and you begin to notice gentler qualities and subtler nuances. You discover that the tiger is more than the roar.

Loud and Proud?

When you listen to music and watch movies, something similar happens. At first, we may be bowled over by the roar of a loud and proud home entertainment system. In technical terms, the

"roar" is wide dynamic range and high maximum sound pressure level. Both are key elements in recreating the live-ness of recorded music and the impact of movie surround sound. But in the long run, we demand more than the roar for a fully satisfying listening and viewing experience.

Loud and Clear!

Fortunately, like the tiger, the DALI Blue Series has much more to offer. Not just loud and proud, but also loud and clear. As one independent audio journal recently described it:

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THE SOFTWARE BARRIER WITH SACD AND DVD-AUDIO HARDWARE NOW WIDELY AVAILABLE

AT REALISTIC PRICES, PAUL MILLER COMPARES THE FORMATS.

ith DVD-Audio and SACD hammering home the multichannel message, we are now witnessing a full-blown format war. It's worth reminding ourselves just how incompatible the two formats really are. The discs may look the same, but the representation of the data is very different.

TRUTH DECAY

DVD-A relies on the PCM technology established by CD. In this instance, the musical content of the disc can stretch up to half the sampling frequency employed at the time of recording. In Fig. 1 we can see the high frequency energy of a classical DVD-A disc slowly dying away till it reaches about half the 96kHz sample rate (or 48kHz). The same music recorded on CD would not extend beyond 20kHz on this scale.

SACD encodes the audio information as a very high speed stream of single bits which is arguably more efficient than DVD-A and also avoids the need for oversampling filters and the like. But, as Fig. 2 demonstrates, the decay of high frequency musical harmonics is at least partially interrupted by a progressive *increase* in ultrasonic noise (in red). Meanwhile, the lack of directly comparable SACD/DVD-A software makes a clear-cut distinction between our two protagonists fairly tricky. But both performed exceptionally with the better recordings we played. Of course, both the Sony and Panasonic machines *will* handle CD, which gives them a common thread, even if the advantages of SACD's technology are lost when handling the old-time format.

Cassandra Wilson's *Right Here, Right Now* sounded especially forthright via the Sony though its bass was still described by one listener as "a little powdery". Her voice was expansive – perhaps a little too expansive – but lowlevel string detail remained both clear and expressive. Panasonic's player, by contrast, conveyed less interest in the music at hand and painted a slightly less colourful picture as a result.

So while the Sony's bass is arguably too full, the Panasonic sways the other way with a leaner, less committed bottom end. There's less grip on individual instruments, less of a thrill to strings and a crack to percussion, preferring instead a more laid-back style that's less demanding but also less enthralling. Classic symptoms of excessive digital jitter. Ironically, our listeners preferred the added sparkle and punch delivered by "Re-Master Mode 3" to the sound of the player in its default state, even though this was a 'coloration' of the basic data contained on the CD. Frankly, if the D/A path and analogue electronics were engineered differently, then there would be no need of DSP band-aids to pep-up its performance.

FEVER PITCH

Mild jitter notwithstanding, the Sony player won through with its more direct and enthusiastic sound which appears to enjoy just that bit more empathy with the music at hand. Then again, the budget for this player is entirely occupied by audio electronics while Panasonic's machine shares its resources between both video and audio. By rights, we should be comparing the DVD-RA71 with a £200 SACD player, if such a beast existed. Prices are being driven down at a feverish pace, possibly in an attempt to stimulate consumer interest and prompt the software companies to play a more active role. It's a risky strategy, for though both players are great value, neither comes close to showing off the best that its format has to offer.

"WHILE THE SONY'S BASS IS ARGUABLY TOO FULL, THE PANASONIC SWAYS THE OTHER WAY WITH A LEANER, LESS COMMITTED BOTTOM END."



Figure 1. High frequency musical harmonics on DVD-Audio, showing a smooth decay way beyond the bandwidth available from compact disc.



Figure 2. An increase in ultrasonic noise (shown here in red) interrupts a similar decay (and restricts dynamic range) of high frequency harmonics on SACD.

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TO BOLDLY GO.... THESE IRISH LOUDSPEAKERS MAY LOOK LIKE THEY'VE ESCAPED FROM SCIENCE FICTION, BUT THE TRUTH THEY REVEAL IS STRANGER STILL.

O'HEOCHA D2-ISO-5 LOUDSPEAKERS HIGH PERFORMANCE



hen Aengus O'heocha (pronounced O'hoker) launched this brand at the Bristol show last year, he didn't really expect the original D2 'Cluedo piece' model to go down very well. As it turned out, the design over-

shadowed the more conventional D1 designs in the range and went on to be his best seller. Not all hi-fi enthusiasts are as conservative as he, and many others, had imagined.

The D2 is more than a wacky-looking speaker, there is some genuine form following function going on. The head containing the midrange driver, for instance, combines the inherent structural stiffness and vanishing diffraction of a sphere - there are no sharp edges to interrupt airflow. Both factors which help the cabinet to disappear, leaving the drive unit to get on with reproducing sound. The lower chamber is a hemispherical shape that's also inherently stiff. The cabinet is made from spun aluminium, three pieces being welded together to form the whole with an acrylic panel housing the bass drivers and reflex port on the base. The whole lot is held aloft by steel-tipped spike legs to further enhance the alien aesthetic.

This latest Iso-5 incarnation of the D2 adds a second bass driver in isobarik fashion (two drivers operating in parallel, in this case face-to-face clamshell style). It also adds a second midrange unit that operates in push-pull style to increase power handling and add space to the sound. The drive unit complement consists of a 28mm soft dome tweeter in its own housing, two four inch polypropylene midrange cones and a pair of 215mm polypropylene bass drivers.

O'heocha's specs run like this: sensisitivity 89dB/W, impedance 8 Ohms and bass extension 40Hz (-3dB). With 200 Watts on tap, they go pretty loud, but on my A/V system the 35 Watt integrated struggled to produce high-ish levels, suggesting that figures don't tell all. This would seem to be a power-hungry design.

SOUND QUALITY

This D2-Iso-5's sound is almost the opposite of its appearance: it's subtle and modest, declining from making any statements about its character until you've put in the listening time. It's also rather fussy about program quality, it's taste being for recordings of the finest order. This might suggest that the O'heochas are just plain revealing, but that doesn't tell the whole story.

The presentation seems on thw ehole relaxed and a little smooth on leading edges, but put another disc on and all that changes. Miles Davis' Hancock/Carter/Williams period recordings sound as hard as they ever did, while his cool period classics are as smooth as ever. It's not just a balance thing. Compression is dealt with in an equally precise fashion, more expansive recordings sounding significantly better than those that have been constrained. Imaging likewise seems exaggerated, you either get a low, relatively shallow sound stage or a strikingly deep and open one. This is a form of resolution, no doubt, but the restraint with which they produce some otherwise fine sounding recordings suggests that there is some exagerration of the quality gap going on.

But don't get me wrong. The better recordings sound very good, they have solidity, presence and believability. Timing is good too, neither exagerrated nor smoothed over. This is not, on the other hand, a rhythm- and timing-oriented speaker, it deals with all the elements of high fidelity equally.

Their tonal balance sounds pretty flat in-room, and it doesn't change dramatically with degree of toe-in or proximity to room boundaries – though I didn't push them any closer than the 30cm minimum suggested. If anything, there is a slight reticence in the midband, which contributes to a more satisfying result at higher levels and a shortage of absolute transparency when listening more quietly. Its an effect I recall from the time I spent with B&W Nautilus 802s, where the inclination to wind up the wick was almost impossible to resist. These aren't that extreme, but the effect is similar; they spring into life when you are up at levels that demand full attention.

Despite the speakers' compact bass enclosure, the isobaric factor allows the D2-Iso-5s to plumb reasonable depths and do so with a good degree of nimblenes. On more than one occasion I was surprised at the extension they showed in this department. One such example being on the aged Decca LP *España*, which has phenomenal stage depth and rather appealing tympani. If anything, these speakers responded to orchestral material better than most other types, but this may just have been the quality of recording.

CONCLUSION

By no means as showy as they look, these range-topping O'heochas are remarkably sensitive beasts, albeit rather fussy ones. But feed them with a steady diet of excellent recordings and you'll be rewarded with equally impressive renditions thereof. They need plenty of quality power and a readyness to listen at realistic levels, but if you want to listen to music as it was meant to be, realistic is the only way. £2,500.00 O'heocha 20 01564 782502





The tweeter sits in its own milledfrom-solid enclosure, complete with anti-personnel spike.



Send us your views of the magazine and the world of hi-fi: Forum: Letters Hi-Fi Choice 99 Baker Street London W1U 6FP dan.george@futurenet.co.uk

"ACTIVATED CARBON WAS BORROWED FROM THE MEDICAL WORLD, WHERE IT IS DESIGNED TO GET RID OF WIND."

"HOW MANY OF YOU HAVE GOT YOUR NEW SYSTEM HOME, THEN STARTED TO THINK, 'HAVE I DONE THE RIGHT THING'?"

KIPPER15 - NEW PURCHASE PARANOIA

"PAUL MESSENGER BRINGS A WEALTH OF EXPERIENCE TO YOUR MAGAZINE'S SPEAKER REVIEWS."

SEAN ENGEL - UNIQUE PERSPECTIVES



LETTER OF THE MONTH

WELL CHUFFED

I very much enjoyed the comments of Robin Marshall in his interview in the June issue and share many of his views.

The loudspeaker/listening room response has always been the bugbear of musical enjoyment in the home. In my opinion, this is even more significant in the digital age. I, like Robin, hope that there will be a 'revolution' but I'm not holding my breath, I firmly believe that history does not repeat itself, but that some people do indeed like to repeat history, especially in the hi-fi industry.

Some of you might remember the Coles super tweeter which, unlike the Tannoy unit (pictured), cost around a fiver. I added a pair to my KEF Concerto speakers; before getting around to putting them into the cabinets, I connected them perched on top and they impressed me so much that I couldn't wait to install them alongside the other drive units. But having done all that, they never sounded as good as they had before.

Then I came to Paul Messenger's column and wondered if the revolution had arrived in the form of Activated Carbon. But this is not a new invention either, it was borrowed from the medical world where it's marketed under the names Simethicone, Dimethicone, etc, and now it would seem, KEFicone. These medicines are used to get rid of wind in the stomach by removing air. I don't wish to knock KEF's research and wish them success, but I fear that when Paul gets around to reviewing speakers using Activated Carbon there might be comments of more than slight 'chuffing' from the reflex ports! George Macleod, Aberdeen



UNIQUE PERSPECTIVES

After reading April's issue, I couldn't help be struck by Paul Messenger's piece on loudspeakers. Paul really brings a wealth of experience to your magazine. After more than 15 years and having owned almost as many pairs of speakers (I cannot seem to keep a pair longer than a year and a half before I get sick of them!), I think Paul really hit it on the head when he said, "I don't think it's possible to categorically state that one speaker is more right than another".

We have to remember that we are talking ultimately about people, millions of people, all with a unique perspective, all with different hearing responses! Being a classical musician, I used to believe that I had the ultimate perspective, but over the years I have seen such a wide variety of equipment in colleagues' houses that it is impossible to make any correlation! Go figure.

I also notice that the telephone sounds different listening from one ear to the other. Perfect symmetry? Not even close. Could have something to do with having a tuba on my left and a trombone on my right every working day for the past 12 years! *Sean Engel via e-mail*

DUN WITH THEM

I was really surprised when I read the review for the Mirage OM 5. I don't own this loudspeaker but I tried it for two weeks before buying Dunlavey 4s. This was probably the best loudspeaker I heard for the price. The soundstage was even bigger than my Dunlaveys, and the bass and midrange were really amazing. They were just one step lower than what I call the perfect speaker; I have paid three times more to get this perfection. So I thought that this review was very unfair.

I guess that the problem was your reviewer's listening room. The Mirage is a big speaker and it's very difficult to position properly. The minimum recommended space for Mirage OM-5s is a room with dimensions of 6x7m, with the speakers placed about a metre away from the walls!

Dr Kostas Skandalis, via e-mail

The Editor replies... You're right my listening room on that occasion was not 6x7m - it's closer to 4x5m - but the distributor was happy for me to review it in these typically British circumstances. Bi-polar speakers are a lot more room-dependent than most, but obviously they perform well when they have plenty of room to breath.

NEW PURCHASE PARANOIA

How many of you out there have experienced paranoia when you've got your new system home and in the early stages of running in started to think things like, "Should I have bought a different amp or speakers?", "Have I done the right thing buying this stuff?", "Is this the system I wanted?", "Should I have bought something different?", "I wonder if I changed that component it might make an improvement", or that kind of thing!

I'm sure most of us go through this (please tell me I'm not going mad!), having spent not inconsiderable amounts of hard-earned cash on a new system! We all know that hi-fi takes quite while to bed in properly (especially amps and speakers) but I would be interested to know what you think. I mean, is this behaviour normal? Or is it the upgrade bug kicking in already?

I have had my Arcam A75/CD72 combo, hooked up to a pair of Mission m74s, for less than two weeks and so at this stage I'm nowhere near running the system in fully. I seem to recall the last new system I bought (about eight years ago) didn't really come alive for a few months and I remember a certain amount of paranoia setting in at the time then too! *KIPPER15 on the* Hi-Fi Choice *Forum*

The Editor replies... I think you've got it worse than average but don't worry, it's only natural to worry about whether you've made the right decision with a big purchase. The only cure is to indulge in some serious listening, distract yourself with music and get to know your new system. Soon it will start to relax and live and breathe so that you no longer hear it and can get back to the music – albeit hearing more of it than you did before!



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USE IT OR LOSE IT

Specialist hi-fi dealers are something of a rare breed, and the recent explosion of e-commerce, threatens to make them even more scarce! Common problems are customers who spend hours auditioning products at their local store only to leave empty handed with the intention of sourcing the product cheaper on the Internet. Everybody likes a bargain, sure, but at what cost?

Your dealer can offer you a level of service that is unheard of from internet companies and, believe me, after-sales service is not something you should give up in a hurry. Try trading in your hi-fi with an ecommerce site, or indeed getting a unit repaired under warranty – how long do you expect to be without your hardware?

Building a relationship with your local shop is a sure-fire way of getting friendly advice and help on all sorts of ongoing issues including upgrades and suitable partnering. Most will even help you sell your old stuff when you come to make the next step. The **British Audio Dealers Association** (BADA) offers extended guarantees and 10-day home trials, and safeguard your deposit if a shop runs into difficulty. That's the kind of consideration that cyber shopping cannot offer. So do spare a thought next time you're bashing the plastic at the virtual checkout and ponder, are you really getting the best deal?

IT COST HOW MUCH? WHAT'S ROCKING THE BOAT DOWN ON THE HEC FORUM...

O ur forum has gone all Oprah this month as members share reactions to their beloved kit. One browser who takes his copy of *Hi-Fi Choice* into work (that's what we like to hear) is frequently questioned on the cost of his system. When told, his colleagues regularly respond with a double take and the claim that they "could go on holiday for that". Many other readers agree. "Often people say that it's just a stereo," said one. "To which I just shake my head in disgust." The consensus, nicely summed up by another put-upon hi-fi fan, is that "we're mad, but very happily so".

New gear still needs to be justified by its performance. And, fuelled by worry during running in, our members can be stern critics. "The first few days are OK, it's the last day or so that the paranoia starts setting in," claims one. Putting gear through its paces raises tension until any 'out of the box' sound fades. This is "perfectly normal" reassures one user. It's even got a name: "buyer's remorse". But, don't let it get you down.



WEBSITE HI-FIVE

WANT TO LEARN MORE ABOUT SACD AND DVD-AUDIO? CHECK THESE OUT...

www.sel.sony.com/SEL/consumer/sacd

Sony's official site for its co-produced format nicely introduces Super Audio CD for the uninitiated. Plenty of music lists and footage of interested parties as diverse as John Williams and Yo Yo Ma should please the musos.

www.superaudio-cd.com

A good start for those looking for a few SACD discs. Simple design helps you purchase, and the news section will keep you informed of new releases. The artists err on the obscure side though (ranging from Hue and Cry to Dave Brubeck), so don't expect any Robbie Williams or S Club 7. A good thing, perhaps.

www.geocities.co.jp/Hollywood-Kouen/1584/dadsacd.html

With details of artist, title, label, release date and catalogue number this is a simple but in-depth database of DVD-A and SACD discs.

www.pioneerdvdaudio.co.uk

Pioneer leads the way with online DVD-A representation. A superb mix of format explanations, dealer locations, competitions, software reviews and hardware specs make this a winner. Check out the FAQ page to discover how a player could fit into your current system.

www.digitalaudioguide.com

The most comprehensive DVD-Audio site around has news stories past and present, reviews of hardware and software as well as technical pieces on the different types of DVD disc. If you have views of your own it even has a dedicated forum.

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SURROUND SOUND SPEAKERS

67

M

I want to buy a surround sound speaker package that will work well with my stereo music as well as any A/V formats I might wish to use in the future. Six speaker sub/sat packages seem all the rage these days, combining four tiny speakers with a centre channel and a subwoofer. Why are these so popular compared to the full-bodied floor-

> standing variety? My current system is a Rotel RCD-955 AX CD player and RA-980 BX amp. What would you recommend? Kelby Parkin-Smith, via e-mail

The popularity of compact sub/sat speaker systems is mainly down to space and aesthetics - they can be a discreet solution for rooms where space is at a premium, particularly if you're setting up a full surround system. However, though some are able to produce a remarkably full-scale sound from a set of tiny enclosures (eg KEF's KMS/KHT system pictured), few sub/sat systems sound as coherent as a good set of conventional speakers. Music is clearly your priority, so we suggest you equip yourself with a suitable pair of conventional stereo speakers first. Plenty of speaker ranges now have

matching centre speakers, so you could add centre and rears as and when necessary, together with a decent active subwoofer.

They may look good, but are

they the best sonic bet?

AMPLIFIER AND CD PLAYER

I recently bought a pair of Epos ES14 speakers to go with my Sony electronics. Now I want to replace the Sonys – the amp first, and the CD player at a later date. I enjoy rhythm in music, and while I'm not a bass freak, I want emotion and power at both low and high volumes, together with an ability to bang out the choons at parties. Any suggestions? Theodor Ananac, via e-mail

Naim electronics make for a classic combination with Epos speakers. We suggest you try it, given your predilection for a sense of rhythm – it may well deliver the kind of involvement you crave. For similar reasons, check out Rega, Alternatively, you could try something from Epos' new owners – Creek. Though generally warmer and richer, Creek gear can be equally musically rewarding according to taste.



CD PLAYER BE PREPARED

Which CD player would you recommend I partner with a Primare A30.1 amp and B&W Nautilus 804 speakers, with a budget of £1,200? Pedro Lloret, via e-mail

We would recommend you try Arcam's FMJ CD23 for size, along with Sony's SACD-compatible SCD-555ES. Both offer energy and subtlety, and would suit the refined nature of your other components well. Alternatively prepare your system for the future with a multichannel, high resolution player such as the Philips SACD-1000 SACD player or Pioneer's DV-939A DVD-A device. Then save up for more speakers.



CARTRIDGE A NAGGING DOUBT

I have an ageing Dual 505 turntable, with a replacement for the original cartridge. It needs its stylus replacing but I can't remember the make of the cartridge. I know it's Japanese – "Nag..." something – and the model is MP11. Any ideas what it might be and where I can get a replacement? *Andy Barritt, Bradford*

Sounds like your cartridge is a Nagoaka, a brand that is no longer distributed in the UK. We would suggest you replace it with one of the better budget moving magnet catridges. These include the Audio Technica AT-110E (£28), Ortofon 510/P (£38) or the Grado Prestige Black (£49).

SPEAKERS

BYE-BYE BI-WIRE

I have a pair of Chario Academy Millennium 2 speakers, which are bi-wirable. I just want to single single-wire them, so should I use the upper or lower pair of terminals? Mustafa Rahman, via e-mail

Either will work. The best thing to do is experiment with both and see if you think one sounds better than the other. If they both sound the same then fine – you've got nothing to worry about! A quick poll around the office shows most of us tend to use the lower terminals when single-wiring a bi-wirable speaker, but there's no hard and fast rule. With some speakers the top terminals might sound better.

LARGE ONE, SORTED

Any idea which amp would be the best bet to hook up to a pair of B&W DM602s? I'll mainly be pumping out trance and techno, in order to reference my tracks against my Event 20/20 studio monitors. And of course, the odd mixing and ambient session after a hefty weekend of it, I'd be looking at spending around £500. Cheers, ears! *Mitch Davies, via e-mail*

Ah, so you like to large it in the living room. Given your speakers deep and expansive sound, coupled with their

tendency to sound a little 'ploddy' with the wrong amp, go for something with a leanish balance and a spring in its step – the Musical Fidelity X-A2 say, or the Roksan Kandy KA-1. We're very fond of the Primare A10, but it might be a little laid back when pumping out techno.



SYSTEM MATCH-MAKING

I want to buy a separates system – CD, amp, speakers – and for aesthetic reasons I want to buy the CD and amp from the same make. I can spend about £300 on each component. I'm considering models from Arcam, NAD and Marantz, and three speakers – the B&W DM602 S2, Mission 780 and tangent Monitor Eleven. I listen mainly to rock music. Which should I go for? Chris Johnson, via e-mail

For rock, Arcam's Alpha 7SE is a great starting point. You could partner that with an Alpha 8R amp (it's a better bet than the cheaper 7R). For the speakers,

the B&Ws are good but not an ideal match for that amp. Mission's 780s would give you a more sprightly sort of sound, better suited to your music taste. However, though they're distinctly under-budget you might consider giving B&W's new £180 DM303s a go - they'll give considerably more costly speakers a run for their money.



OUT OF MY LEAGUE

I want to buy a multichannel receiver that's good with music and I was about to get a NAD T760. Then I heard about the Arcam DiVA AVR100, but at £800 it's a bit out of my league. Can you suggest any others I should audition in the £600 ballpark? Rodney James, via e-mail

At least prior to this month's Bench Test (check for any additional ideas), the NAD is the best multichannel receiver we'd



heard with music for that kind of money. But bear in mind that NAD is in the process of replacing the T760 with the T761 (the new T751 is reviewed this issue).

WALL-MOUNTING SPEAKERS

CELESTION INTERVENTION I know it's blasphemy, but I'm going to have to mount my

Celestion A Compact speakers on the wall because of a lack of space. Are there any brackets you recommend? Mark Brooks, via e-mail

Wall mounting your speakers isn't exactly blasphemy – in fact, if your wall is suitably sturdy and you brackets well-made, it could well be a pretty effective way of providing isolation, particularly when compared to the bookshelf option. However, good quality floorstanding speaker stands tend to be a more solid recommendation, not least because they ensure your speakers are at the optimum height for listening and it's easier to adjust their position for correct tonal balance and stereo imaging.

We don't have any specific recommendations on the wall bracket front, but if you do decide to go down that route, make very sure you choose ones that are solidly constructed and the correct size for your loudspeakers. Maplin sells a small range, from £10 to £25 each. Phone the company on 0870 264 6000, to get the latest catalogue.

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Trip the Sound Fantastic

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"MAINS ELECTRICITY IS THE FORCE THAT POWERS YOUR EQUIPMENT. IF IT'S DIRTY OR CONTAMINATED, PERFORMANCE SUFFERS." **B** y now, I hope you're all convinced of the importance of pure, clean mains. Mains electricity is the force that powers your equipment. If it's dirty or contaminated, performance suffers. Soundstage closes in, and the music loses its natural open quality. Tonal hardness may result, with upper frequencies developing a thin harsh edge.

With a mains supply free from noise, the sound is subtler and more sharply defined. Enhanced depth and space means voices and instruments sound more like living entities. Music fills the room effortlessly.

The quest for pure mains can reach extremes. The ultimate active devices turn AC mains voltage into DC, and then use it to recreate a completely isolated, pure, selfgenerated AC supply. Inevitably, the cost of such units is very high, and we're not looking at that sort of product here.

The Olson series of Sound Fantastic mains distribution boards are more basic and simply aim to filter-out mains noise with the aid of a passive series inductors and parallel capacitors. The idea is to block high frequency noise and filter it to ground. There's also a VDR (voltage dependant resistor) to deal with mains spikes and power surges.

You can choose between four, six, or eight socket versions, and prices are reasonable; £67.86, £74.26, and £80.49 respectively. Your dosh buys you a sturdy, well-made distribution board.

SNIFFING AROUND

But before doing any listening, I checked to see how noisy my mains was using an Audio Prism Noise Sniffer – available for hire from Russ Andrews. It's a little box with a volume control and built-in speaker that makes a buzzing noise if your mains supply is contaminated.



I plugged the Sniffer into a wall socket and heard the dreaded buzz. No surprises there. But I was slightly taken aback when connecting the Sound Fantastic board to an adjacent socket, leaving the Noise Sniffer plugged in. The buzzing dropped dramatically. Proof that the Olson's parallel filtering works efficiently.

My hi-fi system already has a number of mains purification devices in residence, so where best to use the Olson distribution board? In the end I put it at the start – powering my entire system off it. Despite also using a Trichord isolation transformer and numerous Russ Andrews devices (including the Silencer, Purifier, and Kimber cables), the Olson board made an audible difference. Bass sounded firmer and leaner, with improved focus, plus sharper placement of images in the soundstage.

On the other hand, was there perhaps a slight loss of sparkle and dynamics? Sometimes, reducing high-frequency edge and glare gives the subjective impression of things being less busy and lively. But listen harder; is the extra 'life' you hear actually just added noise?

EAR RING

Actually, the acid test was still to come; how would the Olson board deal with self-generated noise? Quite apart from noise already on the mains, there's a problem with the equipment itself generating noise. For whatever reason, my EAR 859 amplifier creates quite a bit of mains noise – given the Olson's ability to reduce mains interference, would it 'silence' my 859? Alas, it had little or no effect. The Noise Sniffer revealed a slight change in the buzzing noise. But there wasn't the massive drop you get when either a Russ Andrews Silencer or Purifier is plugged into an adjacent socket.

Mind you, the standard Russ Andrews' Powerblock doesn't reduce this noise either – only the vastly more expensive version with built-in Purifier does that. Olson's Sound Fantastic board makes a pretty good job of filtering mains noise at a realistic price. It won't see off elaborate devices costing several times more, but it's excellent value. Olson Electronics **20** 020 8905 7273

Jimmy Hughes will try anything to get the best sound from his household engulfing music collection.





THREE DALI **SURROUND SYSTEMS MUST BE WON**

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et ready to thank Denmark for more than just great bacon. Committed Nordic loudspeaker manufacturer Dali is back in the UK in a big way after a brief period of absence. Hi-Fi Choice has used all its charm to persuade our Danish cousins to give away three sets of multichannel loudspeakers from Dali's Blue series. The handbuilt package includes the Dali 6006 front left/right channels, R1000 rear surrounds, C1000 centre channel and the 120 Watt SWA-12 subwoofer, all serious goodies with a combined price tag of around £1,200!

Dali's Blue series is part of a 10-strong range which includes some very serious designs. including the well regarded Evidence series and the awesome Megalines. The latter a 2.3m high, active design with a full length ribbon tweeter.

If you've always wanted to bring your favourite films to life, or perhaps you're thinking of discovering the full potential of DVD-Audio and SACD, we can help to bring you a step closer. Simply answer the following question correctly to be included in the draw for one of the three multichannel packages.





COMPETITION RULES Competition is Friday 27th July 2001. 2) Winners of the Dali Compe vill be judged from all correct entri submitted, and drawn at random after the Closing Date given in 1) above. 3) All winners will be notified by post 4) The Editor's decision is final and no ondence will be entered into 5) The Dali Competition is not open to employees of Future Publishing Ltd, Dali nor their suppliers, agents or associates. 6) We regret this competition is open

to UK residents only. 7) No cash alternatives will be offered. 8) We reserve the right to substitute alternative prizes with equal value to these shown, in the unlikely event of stock being temporarily unavailable. 9) By entering the competition, you agree to be bound by the rules. 10) No purchase n

TO ENTER Answer the question below by circling the correct answer, then fill in your details on this form. HOW MANY SPEAKER RANGES DOES DALT MAKE?

B) 8 C) 10 D) 12

A) 5

6

OR CALL THE COMPETITION PHONE LINE 0900 9102128

You will be asked to give your answer and a few personal details (name, address, etc). Calls cost 50p per minute and last no more than 90 seconds. Winners will be selected at random from all correct entries received after lines close at midnight, 27th July 2001.

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Hi-Fi Choice Dali Competition, 29 Monmouth Street, Bath BA1 2BW. All entries must arrive by First Post, Friday 27th July 2001. Please remember to tell us whether you are over 18 years of age Name

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STEREO & SURROUND ALVIN GOLD (EARS) AND PAUL MILLER (METERS) GAZE ACROSS THE

ALVIN GOLD (EARS) AND PAUL MILLER (METERS) GAZE ACROSS THE DIVIDE BETWEEN MULTICHANNEL AND TWO-CHANNEL AMPS

his test is designed to reflect the changing nature of the marketplace for amplifiers. For a long time now, it has been possible to buy a nice, simple stereo amplifier or an all-singing multichannel home cinema amplifier. Choosing between them was never difficult; you just counted the number of channels you needed, and the choice was made. If your decision needed any endorsement, a quick listen would be enough in most cases to confirm the superiority of the two-channel article.

1E

DEO CAM INPUT

RECEIVER TX-DS787

In general terms, this group has been put together to test whether or not this situation has changed. The whole question is assuming a new importance of course, because of other changes, and in particular the rising interest in multichannel high resolution audio from DVD-Audio and SACD, formats which require an amplifier that looks and behaves much like a home cinema amplifier, albeit one with a multichannel analogue input and without a surround sound decoder. Of course the latter is invariably retained so that the amp can strut its stuff with DVD-Video multichannel digital sources. The multichannel audio amplifier of the future, therefore, may not end up looking that much different to one of today's mainstream home cinema models.

But there is a real and demonstrable need for a change of emphasis, away from complexity – and in many cases outright gimmickry – and towards something more purist in approach, designed to appeal to the specialist audio buyer. Rather like the quest for DVD-V players that can play CDs as well as dedicated CD players, this is only the beginning of what will certainly turn out to be a protracted search, but it is one that is sure to engage the energies of the audio designers for years to come.

ON TEST Stereo Am

Stereo Amplitiers	
Arcam DIVA A65	£380.00
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Kenwood KAF-3030R	£249.95
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THE LISTENING PANEL

Mark Hockey (Kenwood) Steve Harris (TAG McLaren) Mark Perfect (Ruark) Steve Reichart (Arcam)

MUSIC USED DURING TESTS

Barbara Bonney/Antonio Pappano -Diamonds in the Snow Tom Evans - Still In This World Anthony Michaelson/Ingrid Jacoby/Andrea Hess - Brahms' Clarinet Trio in A Minor David Gray - White Ladder







ARCAM DIVA A65

SOUND 🖬 🖬 🖬 🖬

VALUE 🖾 🖾 🖾 🖾 🖬 £380.00

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he base model in the new three-strong DiVA range of amplifiers, the A65 is relatively low-powered, but it does include full remote control, unlike the previous entry-level model, the Alpha One. The circuit and facilities are very similar to the A75, but with less powerful output stages and a smaller toroidal transformer to suit.

The A65 has only a limited range of facilities – namely a moving magnet phono input (this is an extra cost option: the input otherwise defaults to line status), four line inputs and a tape circuit, two sets of speaker outputs, of which only one is switchable, tone and balance controls and a direct input switch. A preamplifier output is also available, as usual, allowing the use of a second power amplifier for bi-amplified systems. The A65 is available in silver, or with a black fascia and silver controls, which looks great in the flesh.

SOUND QUALITY

On the whole this amplifier gives a very good first impression, sounding rather like the A75, and not completely unlike the flagship A85 except that there is clearly less power on tap: this was one of the only amplifiers to show any evidence of incipient strain during the louder sections of the panel listening test. Some detailed criticisms, notably of the bass, and some suggestion of compression and a certain breathlessness (for example with the clarinet) pulled the overall rankings down a little. Imagery was also slightly unusual, with plenty of width, strong layering in the depth plane but little height. But on the whole, the A65's colourful tonality, smoothness and transparency made it a thoroughly enjoyable amplifier, at least at moderate levels in smaller rooms

There were consistent criticisms of the bass, however, which was variously described as "all over the

THE LAB REPORT

AS THE NEW BABY of Arcam's popular DiVA range, you might expect the A65 amplifier to be the logical replacement for the budget Alpha One, but at £380 it's pitched closer to the old 50 Watt Alpha 8R. Arcam rates the A65 at 40W/8 Ohm which it achieves with a good 45W, both channels driven. This increases to 70W/4 Ohm and 75W, 131W and 212W (10.3A) into 8, 4 and 2 Ohm loads under dynamic, music-like conditions. Short-circuit protection limits any burst output into 1 Ohm to 4-5A. For comparison, the Alpha 8R amplifier was capable of 95W, 170W and 270W into 8, 4 and 2 Ohm loads, respectively, under the same dynamic conditions. Distortion is typically held to 0.005% through the midrange while the moderate +37dB overall gain means you'll get sensible use of the volume control with high output sources like CD or DVD players. Otherwise, the amp's S/N ratio is set at an equally sensible 86dB and the response is almost ruler-flat.

place... plummy... splodgy and horrible... [and] lacking in excitement". As is the way with panel listening tests, there is a tendency to hype up comparatively small differences between presentations: the A65's bass is not horrible at all, but it does lack impact. Dynamically, the amplifier is also lacking: the music tends to happen horizontally more than it does vertically. To some extent, a rather bright presentation helps refocus attention on the other end of the audio frequency band, but even this helps reinforce the suggestion that the A65 is a lightweight.

This silver-and-black A65 has a likeable sound that's perfect for small rooms.

CONCLUSION

Although it's quite easy to criticise, the Arcam A65 is in reality a rather likeable amplifier, which in particular lacks the granularity and edge of many lesser examples of the breed. It is at its best when partnered with sensitive speakers and placed in small rooms, and it doesn't like the loud pedal to be pressed too hard. But within these limits it produces a fluid, organic sound of considerable charm and finesse.

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Ivor Humphreys, HiFi News



DENON PMA-355UK

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his latest UK-optimised, budget amplifier from the Denon stable draws together much of the thinking from previous models in similar positions, and is based on a new off-the-shelf chassis design, with five line inputs, a preamplifier output and custom UK specified enhancements.

The 355's immediate predecessor, the PMA350, had no tone controls, a single tape circuit and a phono input available only as an option, but this model has a phono and two tape inputs, and tone controls too, though the latter is more a means of broadening its appeal than improving its sound. The previous limited-function remote control has also been upgraded significantly for this model, which also boasts separate source and tape selectors, and switching for two pairs of speakers. This is clearly a wellequipped amplifier at a bargain basement price, and it is also an impressively powerful one that delivers well

in excess of the maker's claims. Adding to its appeal, the PMA-355UK uses a number of audiophile components, including Elna reservoir capacitors, metal films resistors and a newly designed transformer and heat sinks.

£229.99

SOUND QUALITY

Although ostensibly quite powerful, especially when compared to previous Denon amplifiers in the same market area, this is not how it sounds. The only obvious explanation for this is the measured change in performance at different levels and frequencies, which means that it lacks the consistency necessary to convince as the music, or simply the volume level changes. Indeed inconsistencies were noted in the listening tests, though perhaps not in the most obvious ways. As examples, the amplifier was felt to be "on the edge of clipping", especially in the David Gray recording (in fact the Tom Evans track

THE LAB REPORT

DENON'S 'UK SPECIALS' continue with this "high current capability" version of the PMA-355 which is rated at 2x50W but actually achieves a full 2x70W/8 Ohm. True to its word, the PMA-355UK delivers 101W, 179W, 280W (11.8A) and a full 328W (18.1A) into 8, 4, 2 and 1 Ohm loads respectively under dynamic, music-like conditions. Nevertheless, the PMA-355UK shows a marked change in distortion with output, reaching a minimum of 0.015% at 3-4A output into any load but increasing at both lower and higher current levels too. This means the PMA-355UK offers lowest distortion at 50-60W into 8 Ohm, equivalent to 40W into 4 Ohm and around 25W into 2 Ohm. Distortion increases by 5-10x outside of this 'optimum' region. This all adds to the Denon's 'character' as does the slightly high 0.25 Ohm output impedance, which will tend to modify the total system response in line with the speaker's impedance trend. Noise is also higher than expected with an A-wtd S/N ratio of just 78dB. was the loudest track, but content is as important as perceived loudness where overload is concerned), and more generally the Denon was felt to happen musically "on one level", with little dynamic differentiation, and the bass was described as "lightweight", though this was a common criticism of the budget stereo amps in this group.

The Denon was only moderately successful in the hands-on testing too. The budget PMA series have always been quite strong performers, but there is something slightly contrived about the PMA-355UK with quality source material. The sound didn't breathe naturally as the music ebbed and flowed, and there were

A thoroughly full-featured amplifier, at a definitely appealing price.

hints of edginess in the mid/treble region with various recordings –of orchestral strings, for example, or female vocalists. All the same, this is a finely detailed, articulate amplifier, atmospheric beyond its price, but arguably not as good value as the PMA-255UK (*HFC* 208).

CONCLUSION

On one level, the PMA-355UK is a lot of amplifier for your money. It's been extensively customised for the UK, but it failed to convince in practice thanks to a sound that is best described as wilfully characterful.

"ALTHOUGH THE DENON AMPLIFIER IS OSTENSIBLY QUITE POWERFUL, THIS IS NOT HOW IT SOUNDS."



"Beauty and A Beast"



Home Theatre systems used to be big, matched voicing centre, left and right cumbersome and ugly. And, their performance speakers, and bipolar rear speakers. It's all was pretty ordinary too. ready to plug in and play, all you need is a

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his amplifier was originally reviewed in issue 205 and has returned to establish whether it still warrants its Best Buy status. The KAF-3030R is a UK design that so impressed 'the powers that be' at the company's headquarters that it pulled of a major coals-to-Newcastle coup, and is now being distributed by Kenwood, Japan into the home market.

The KAF-3030R has a rather retro appearance. Styling is restrained, but is more obviously like a specialised hifi component than usual for a mass producer like Kenwood, and the bulbous front and matter-of-fact control system give an unusually purposeful air. Two speaker circuits, individually switchable, are available and there are six inputs, including two tape circuits and a moving magnet phono input. Interesting touches include the direct input switch, which bypasses the input selector, making a readily discernible improvement for the most favoured source, and the line inputs which have a 100kHz bandwidth appropriate for high resolution media like DVD-Audio or SACD. But I was unable to identify anything in the performance of this amplifier with a handy DVD-Audio player (also from Kenwood) that would either underline or detract from this claim.

SOUND QUALITY

"A tight, well-focussed sound," wrote one, "though it could use more depth", while another felt that the balance was "open and detailed, but on the thin side". These comments were echoed repeatedly by different panellists, and were also borne out by the hands-on testing. The bass is definitely on the lightweight side, but it is not lacking in tunefulness or subtlety, and within its rather obvious limits, it has considerable charm, even finesse, and is likely to pay its way with that class of loudspeaker whose bass is audibly a tad boomy or over-

THE LAB REPORT

ARGUABLY THE MOST impressive amp to emerge from Kenwood in many years, the KAF-3030R benefits from great L/R symmetry. Both channels clip at precisely 67W/8 Ohm and 96W/4 Ohm, both have a matched 84.9dB S/N ratio, a slight - 0.15dB treble loss and matched 0.045 Ohm output impedance through the bass. In Direct mode there's a +0.1dB recovery in overall gain, which is a reflection of the losses incurred through tone, balance circuits etc. Furthermore, the '3030 has just about the lowest dis-

tortion you'll see (or hear) from a sub-£1,000 amplifier through bass and midrange where figures as low as 0.0005% are typical. The increase to 0.02% at the treble extremes seems quite a jump though, in practice, the absolute figure is still very respectable. Power-wise, there's a bonus with increases under dynamic conditions to 92W and 159W into 8 and 4 Ohm, respectively, but limited to 115W (7.6A) and 58W (7.6A) into 2 and 1 Ohm loads through Kenwood's rather conservative current-limit protection. exuberant. With better endowed, more analytical loudspeakers, the bass could seem disjointed at times, and its timing poor, and there were also hints of midband coloration, but the treble maintained its poise better than might be expected of any £250 amplifier. Barbara Bonney's voice in the Grieg test tracks displayed the amp's unusually fine sense of tonality and control.

This level of performance was matched throughout the test programme. The David Gray track had a full measure of the immaculate, driving rhythms that makes it such a satisfying performance, and the amplifier rose to the more stringently architectural challenges set by the The discreet charm of a UK designed amplifier that sounds better than it looks.

Tom Evans track particularly well. It's worth remembering that the main test bed for this and the other amplifiers were speakers costing well over £7,000 a pair.

CONCLUSIONS

This classy Kenwood still warrants high praise and is certainly the brand's most satisfactory stereo amplifier. It is a subtle and engaging design, with plenty of detail and adequate power, and a particularly effective 'direct' input. The NAD may have stolen its BB crown, but that's no reason to underestimate its potential.





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STEREO AMPLIFIERS BENCH TEST



CONTACT 01908 319360

NAD C370

SOUND

he top of the line integrated amplifier in the NAD Classic series, the C370 is a tremendously powerful stereo integrated amplifier, rated ostensibly at 120 watts per channel from its impedance-sensing output circuit, but with plenty of dynamic (short term) power which in practice makes it seem more powerful still. If even more is necessary, the C370 can be bridged, which increases the nominal power rating to 300 Watts/8 Ohms, and with NAD's almost unmatched ability to work happily into low impedance loads, bridging should be possible without excessive load impedance restrictions.

The C370 is well-endowed in other ways too, with the usual tone controls and bypass switching, and a full seven inputs, including two tape circuits and a phono (moving magnet) input, pre-out/main-in links which can be removed to allow independent operation of the two sections, and a second preamp output via a rear panel level controllable over a 12dB range to help fine-tune bi-amplified systems. System control links are fitted, and a simple trigger output, which could be used to switch power on a second power amplifier used for bi-amping, for example. There are two speaker circuits, and unusually, they can be switched from the supplied system remote control.

£449.95

SOUND QUALITY

The strong power yield of this amp comes across at every turn, and did so during the panels test, which for all amplifiers was conducted at strictly controlled levels, placing little audible strain on any of the test amplifiers. According to the panel, the NAD had "great attack, good soundstaging, and an out-of-the-box feel", while explicit praise was reserved for the NAD's "dynamic and atmospheric"

THE LAB REPORT

FOR WHATEVER REASON, NAD has stopped publishing any sort of technical specification in its manuals. On paper, the fact that it's capable of delivering a continuous 2x185W output into 8 Ohm would seem impressive, though the fact that this increases not a jot into 4 Ohm would appear puzzling. In fact it's simply a reflection of NAD's commutating power supply design. This optimises power delivery under the sort of dynamic conditions experienced with 'real life' music. Consequently, the C370 will pump out 252W and 473W (10.9A) into 8 and 4 Ohm with no less than 790W (19.9A) into 2 Ohm and even succeeds in punching through the 1kW barrier with a massive 1139W (33.8A) into 1 Ohm! Hence, the NAD will tackle any speaker you care to throw in its path and, typically, will sound a lot 'louder' than you might expect. Distortion is mainly 3rd harmonic at ~0.004%, channel balance excellent at <0.1dB (re. 0dBW) and the S/N exceptionally (perhaps *too*) wide at ~95dB (re. 0dBW). quality, and for the "large image scale", which one listener felt was slightly "over-size".

www.lenbrook.co.uk

Taking into account the hands-on test results as well, the panel's feeling was that this was perhaps not the most sophisticated amplifier of the group (one complained of a "onenote" bass, and another that the amplifier "lacked something – a fun element perhaps"), but the sheer effortless of the NAD provided its own very real rewards. Vocal intonation was good, and orchestral detail was both smooth and finely detailed, with a characteristically slightly creamy tonality. In short, the NAD was a pleasure to listen to, as well as being musically involving. Imagery

The traditional charcoal-grey NAD looks conceal a powerhouse of an amplifier.

was very well handled, and this is an amplifier that will never sound breathless or out of control.

CONCLUSION

GUARANTEE 2 years

This powerhouse stereo integrated amplifier just about has it all, including a flexible set of operating features – though as usual the tone controls and soft clipping circuits do exact a musical price and should be avoided. The tremendous power output may be overkill in some systems, but on the whole 'too much power' is an oxymoron – surely you can never have too much?

"ON THE WHOLE 'TOO MUCH POWER' IS AN OXYMORON - SURELY YOU CAN NEVER HAVE TOO MUCH?"





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STEREO AMPLIFIERS BENCH TEST



YAMAHA AX-596

SOUND **XXXXXX** VALUE **XXXXX** £299.99

CONTACT 01923 233166

GUARANTEE 2 years www.yamaha-audio.co.uk

he AX-596 includes a front panel cover that conceals the minor controls and a continuously variable loudness control, a CD/DVD Direct switch for the purest sound from sources connected to these inputs, and - just to add extra confusion/spice (take your pick) – a Pure Direct switch. This does something similar, bypassing the tone, loudness, balance circuits and the pre-out and main in signal path, though not of course the additional signal switching required to implement the function, or (presumably) power the unused circuits. A record output selector is supplemented by the previously mentioned pre out/main in sockets which allows access to surround processors, of which Yamaha of course is a major supplier. The AX-596 is also something of a heavyweight (at nearly 11kg, it's almost up there with some of the multichannel home cinema

amps), and it is also powerful, or as Yamaha's book of words puts it, "it has a highly dynamic power, low impedance drive capability". And indeed there seems to be some substance to the claims, as the 100 watt per channel output claim was readily exceeded on test, with plenty of short-term dynamic power to back up the steady state output figures.

Although two pairs of loudspeakers can be connected, the main pair really requires bare wires, though some spade or pin connectors may work. 4mm plugs certainly don't, and I ended up connecting speakers via the secondary outlets, labelled 'B'.

SOUND QUALITY

Although there was some scatter in the comments when the Yamaha was repeated in the panel tests, broadly similar criticisms were made, and on its second outing, the amplifier was correctly identified with its first outing

THE LAB REPORT

YAMAHA'S VARIOUS "Pure Direct" and "CD/DVD Direct" modes bypass tone, balance and other peripheral circuitry but also steadily increase the gain of the amplifier. So, for every click of the switch, the AX-596 gets a little louder (+0.2 dB for Pure Direct and a further +0.6dB for CD/DVD Direct). Just don't confuse an increase in loudness with an equivalent improvement in the amplifier's sound quality.

Gain remains high at +43.8dB to +44.8dB, yielding an A-wtd S/N

ratio anything up to 94.5dB but typically limiting the use of the volume control to where its channel balance is least impressive (audible errors of ~1dB are typical). Distortion is usefully low at ~0.005% and power output very generous at 2x125W/8 Ohm, rising to 188W, 348W, 561W (16.8A) and a full 640W (25.3A) into 8, 4, 2 and 1 Ohm loads, respectively, under dynamic conditions. Second only to the NAD in this regard, the AX-596 will easily tackle tough or multiple speaker combinations.

by one listener, while another strongly suspected its identity without committing himself fully.

"Nice opening bars, but it all went downhill from there" was one comment on the opening Grieg extract, while the David Gray song was deemed to have "an edginess at the top end". The bass was described as "disappointing. There's lots of it, but it wallows, and has a completely onenote quality." The Brahms was described as "thin, bright and uninteresting", and the energetic Tom Evans recording was "never strained", but it is "just what would be expected of a big, mainstream commercial amplifier", with words like "tizz", "awful mid" and "poor

micks a-go-go and heavy as lead, but the Yamaha failed to convince.

bass" scattered liberally among the expletives. The panel was generally kinder the second time out, but the Yamaha was still deemed to "lack dynamics and life", and to sound "rough and ready".

CONCLUSION

Big and powerful, but ultimately crude, this amp's overhung sound and tacked-on minimalist credentials fail to convince. An amplifier without gimmicks will invariably sound better than one where the gimmicks are present but can be bypassed.

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SURROUND AMPLIFIERS BENCH TEST



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DENON AVR-3801

he dts and Dolby Digital equipped AVR-3801 also supports dts-ES Discrete 6.1, dts-ES Matrix 6.1 and dts Neo:6 (cinema and music), which means it can feed a 6.1 speaker array, with surround left and right channels available from an authorised dts surround matrix (much as is used in the cinema) as well as being able to synthesise a dts 6.1 channel-like sound from stereo and other sources.

The problem is that dts-ES is only available from a tiny handful of Region 2 DVD films. You'll struggle and fail to find any mention of it in the accompanying information for the more popular THX Surround EX, based on Dolby Digital coding. The explanation given for this is that the AVR-3901 is not THX certified, and doesn't use THX-style decorrelation to reduce mono-ing of rear surround channels, which instead is addressed by a non-kosher matrix (much like that used in Yamaha models). When the output is limited to 5.1 channels, the extra channels can be assigned to a different zone.

The Denon also boasts component video switching for two sources (but not RGB, which would have been more useful in the UK), a claimed 105 watts/channel with all seven power amplifiers operating, an FM/MW tuner section and a sophisticated digital processor section based on Analogue Devices D/A converters. The Denon is well built, especially taking the very moderate pricing into account, and it is relatively easy to use once set up. This is assisted by a new remote control design which is more ergonomic than previous handsets thanks to sensible control grouping, colour keying and LCD screen.

THE LAB REPORT

DENON RATES EACH OF ITS

front, centre and surround channels *independently* at 105W/8 Ohm. In practice, the AVR-3801 will deliver 2x140W/8 Ohm (2x220W/4 Ohm) and 5x100W/8 Ohm in multichannel mode, all channels driven simultaneously. Good enough, though the amplifier is currentlimited as evidenced by the figures for its dynamic output into 8, 4, 2 and 1 Ohm loads at 180W, 320W, 280W (11.8A) and 155W (12.5A) respectively. Measured in CD (Direct) mode, the AVR-3801 provided a slightly below average (though subjectively preferable) 82.5dB A-wtd S/N ratio, a fine 0.1dB interchannel balance, low 0.004% distortion and excellent interchannel crosstalk of <-100dB. In this latter regard, the AVR-3801 has the best interchannel separation of all the AV receivers in this test. Gain is restricted, quite sensibly, to +35.6dB while the increasing output impedance may affect the overall treble balance of your system, depending on the HF impedance trend of the speakers. SOUND QUALITY

Unfortunately, it was not possible to test all modes of operation - and in particular the only 6.1 channel mode tried was synthesised from standard 5.1 channel sources. With stereo sources, however, the Denon is a success. Although not quite as evenhanded or as atmospheric as a quality stereo amp, it was capable of respectable music quality. This was apparent in the hands-on testing and in the panel tests alike, where the sound was described as "quite smooth" and "large scale", though there were criticisms of a loss of detail, and of a lack of depth and dynamics.

elec.denon.co.jp/europe

Multichannel operation is equally impressive, and this was one of the only home cinema amplifiers to make

The AVR-3801 supports some of the 6.1 channel formats but is not a THX amp.

GUARANTEE 2 years

effective use of DVD-Audio. From a Kenwood sampler, and using a Kenwood multi-disc DVD-Audio player, the Denon amplifier made a great fist of Fleetwood Mac's *Never Going Back Again*, which sounded propulsive and powerful, while avoiding sounding edgy – something which was apparent with some of the other amplifiers.

CONCLUSION

The AVR-3801 doesn't set new standards, but it does establish high ones at what – given the very complete specifications – can only be regarded as a bargain price.







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ONKYO TX-DS787

SOUND 🖬 🖬 🖾 🖾

VALUE XXX

n addition to the standard issue Dolby Digital and dts decoders. This has an FM-RDS/MW preset tuner and a multichannel analogue input of the kind necessary for DVD-A and SACD, special features of interest in this amplifier include THX Select certification, which is essentially a watered down version of the familiar THX Ultra spec, and THX Surround EX. The implementation chosen here uses an internal power amplifier to drive a centre rear speaker, but a pair of line outputs is also available to power two rear speakers which can be driven with a stereo amplifier and placed near the room corners. Given the limited space in most domestic rooms, this is much more likely to be a viable arrangement.

using local power amplification. Remote sensors for the main and remote locations can be connected. Video provisions are very US-centric, and include two component video inputs, which are of virtually no use in the UK, especially with this class of product. There is no Scart socket and no RGB, which would have meant better picture quality than S-Video, which of course is available.

£900.00

can be at speaker level or line level

Ergonomically, the Onkyo is not without merit. Some of the set-up options are well implemented, and a useful degree of control is available to temporarily override programmed settings, but it would be quite wrong to accuse the TX-DS787 of being easy to install or use from scratch.

The TX-DS787 also supports multiroom operation, and unusually this **SOUND QUALITY** On one level, the Onkyo does every-

THE LAB REPORT

PERSONALLY, I FOUND the TX-DS787 the most complex AV receiver to navigate in this survey. Once the unit was configured for either two and five-channel operation, it sustained a power output of 2x135W/8 Ohm, dropping to 5x105W in multichannel mode. There's a maximum of 185W, 310W, 440W (14.8A) and 210W (14.5A) available into 8, 4, 2 and 1 Ohm loads, respectively, under dynamic conditions. Evidently, the Onkyo TX-DS787 has a current-limit of ~14.6A, though distortion starts climbing above 16Vrms output into any load (>30W/8 Ohm and >60W/4 Ohm). Even at moderate outputs (1-10W/8 Ohm), distortion – while not high – is still higher than average at ~0.015% through bass and midrange. Ordinarily the response is pretty flat, but its output impedance increases close to 0.2 Ohm at HF, so there could be some variation in treble balance according to the HF impedance trend of the attached loudspeaker(s). Overall gain is high at +44.6dB and S/N slightly above the norm at 87.3dB (re. 0dBW).

CONTACT 01788 556777

www.onkyo.net GUARANTEE 2 years

thing that could reasonably be asked of it, but it is not high fidelity in the accepted sense, and it is therefore an improbable substitute for a good stereo amplifier for those who want to marry both types of amplifier in a single component. The Onkyo sounds fine at low to moderate levels, but becomes uneven when driven harder, which is not difficult to do as the Onkyo is certainly powerful enough to fill even quite large rooms at high volume levels.

In stereo mode, the Onkyo sounded bass-light and timed poorly, undermining recordings like the Brahms. At best it sounded clean and friendly, but it "doesn't challenge" and it "doesn't excite" as separate panellists put it. On the whole, the mask-

It gives some help in set-up, but generally the Onkyo is not an easy beast to master.

ing effect of multichannel source material was beneficial, and the test system sounded warm and attractive with typical DVD-V films, where quality stereo material was treated unevenly, and without the tonal or dynamic range, or even the uncluttered detail necessary to convince. Neither did it do any favours to multichannel music from DVD-Audio.

CONCLUSION

This is a feature-led amplifier of considerable flexibility, but acquiring a flying licence will take dedication and time, and musically it is only intermittently satisfying.



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SURROUND AMPLIFIERS BENCH TEST



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PIONEER VSX-859RDS

hat used to be called THX is now THX Ultra, but THX Select receivers like this one

are also required to include re-equalisation, timbre matching, adaptive decorrelation, bass management and the other familiar processes that roll off the tongue so readily. The difference is that power demands have been scaled back for smaller rooms. which means significant economies, largely accounting for the lower cost of Select components. The VSX-859RDS also includes THX Surround EX, but curiously not dts-ES, though generic 6.1 or 7.1 channel operation is available from dts or other 5.1 channel sources if required. The extra speaker (or pair) behind the listener requires outboard amplification, in the form of a mono or stereo power

amp, or an integrated amp. An FM-RDS/MW tuner is included.

£549.99

This is yet another receiver that eschews RGB video out in favour of component video, which is not supported by the PAL TV standard. A multichannel analogue input capable of accepting up to eight channels is fitted, a provision which may have some use in future if, for example, DVD-Audio grows extra channels.

SOUND QUALITY

Of all the multichannel amplifiers here, the Pioneer was received best of all by the panel when playing stereo music. "This is the second most involving amplifier we've heard," noted one listener, pointing to the NAD stereo amplifier as the only one to show the Pioneer a clean set of heels. Another was equally

THE LAB REPORT

THE FACT THAT THIS amp's 2x110W into 8 Ohm falls by a relatively insignificant 10% to 5x100W in multichannel mode, suggests Pioneer has invested in a substantial power supply. This is confirmed by the near-textbook increase to 2x200W into 4 Ohm and the fact that there's less headroom than you might expect under dynamic conditions (114W, 218W, 400W (14.1A) and 260W (16.1A) into 8, 4, 2 and 1 Ohm loads, respectively). In terms of PSU and power amp design then, the Pioneer is the antithesis of a

model like NAD's C370, for example. Furthermore, unless both "Direct" is engaged and Signal Select is set to "Analogue", all analogue inputs are routed via an onboard ADC through its DSP. Any EQ or effects may be defeated but the amp's response is limited to ~22kHz (assuming a 48kHz ADC sample rate) while the A-wtd S/N is as low as 77dB. This improves to 86.5dB without either the ADC or DSP in-circuit, though there's no change in distortion which remains low at ~0.005%. enthusiastic: "Hurrah! David Gray sounds open, detailed, dynamic", and the Tom Evans recording was described as having "a big sound without sounding overpowering, and good front-to-back depth", and these set the tone for the rest of the comments. What criticisms remained were subtle but significant. In one case, the piano in the Grieg tended to sound lost in the mix, and the clarinet recording sounded oddly mixed, with some muddle, though the music flowed well enough.

www.pioneer.co.uk

GUARANTEE 1 year

Something of the same was noticed in other tests, especially from digital stereo sources adapted by the Pioneer for multichannel use, which gave a rather obviously processed quality. Digital multichannel recordings, however, which require no A-to-D conversion stage, sounded sharp Utilise the 'Direct' facility and set signal select to 'Analogue' for best results.

and well disciplined, with good spatial effects, an atmospheric quality and strong speech intelligibility.

CONCLUSIONS

There are some curiosities with this model. The listening results suggest less than transparent A-to-D conversion, with clear if subtle signs of unwanted digital artefacts. But in other modes of use, the Pioneer was bold and well controlled, with good surround processing. Dts-ES is not

fully supported, but the decision to exclude power amplification for the rear channel(s) can be justified on the grounds that only those who want this surround extension are forced to pay the bill.





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SURROUND AMPLIFIERS BENCH TEST



ROTEL RSX-972

art of Rotel's new range, the RSX-972 has a mainstream specification which lacks the glamour of some other amplifiers at or even below the same price. Rated power output is a relatively modest 75 Watts/channel in multichannel mode, and 100 watts/channel in stereo. No phono input is available, and although there are plenty of line and digital inputs, video signal handling is restricted to composite, S-Video and component video. 5.1 channel analogue inputs are available, and so is a 30-preset FM-RDS/MW tuner.

The Rotel will unwrap Dolby Digital and dts data, and it can cope with Dolby Pro-Logic and some simple DSP type 'ambience' modes, but Pro-Logic II is not included, and neither is any kind of 6.1 or 7.1 channel output. A second zone output however is available, underlying the US orientated nature of the specifications.

SOUND QUALITY

The Rotel appears to have a slightly declining output towards the high frequency end of the spectrum, while the deep bass is curiously lacking in muscularity, and some of the material played (one example: an unreleased version of the Brahms Clarinet Ouintet - not the work used in the panel tests) lacked grandeur and scale. The panel complained of a collapse of soundstaging, and of a loss of dynamics, not associated with any particular piece of music, but generally. "Vocals are very clear." reported one, "but it's lightweight, and the soundstage is shallow and restricted in height" - though he agreed that it was well-focussed. Dialling in a little extra bass does seem to help.

Hands-on testing showed that there was a gap between stereo and

THE LAB REPORT

THIS RECEIVER HAS sufficient reserves to provide a full 2x105W/8 Ohm (2x160W/4 Ohm) and 135W, 245W, 390W (14.0A) and 455W (21.3A) into 8, 4, 2 and 1 Ohm loads under dynamic conditions. So why is it rated at just 75W/8 Ohm? Because, in multichannel mode, even these reserves are taxed to raise 5x85W before the amplifier shuts itself off by way of protection...

With no DSP modes engaged, the receiver still has a slightly contoured response that's up some +0.2dB through bass and lower midrange before gently shelving off by -0.1dB to -0.2dB through its upper midrange and treble. Noise, too, is rather high in both CD and multichannel modes, yielding a below-average A-wtd S/N ratio of 77dB. Meanwhile, the +60mV DC offset is sufficient to pre-bias the cones of some very sensitive loudspeakers. Otherwise, volume channel matching is excellent and distortion low at 0.005% in both analogue and DSP-based modes (re. 10W/8 Ohm).

multichannel performance. As always multichannel operation has a kind of masking effect analogous to the kind of masking that stereo provides when compared to mono, and in some ways Dolby Digital and dts operation is more seamless and satisfying than stereo. But the Rotel lacks the authority and dynamic range that can turn really good surround soundtracks like Saving Private Ryan into the searing experience they can be. It was also noticeable that the Rotel reduced the normally rather striking difference between the UK R2 Dolby Digital soundtrack and the superior US R1 dts version. The Rotel is a moderately effective tool for DVD-Audio replay,

It pushes out over 400 Watts on musical peaks but is less impressive into 5 channels.

but again failed to rise to the challenge set by the best 24/192 stereo recordings – although it did make good use of some of the 5 channel 24/96 recordings available.

CONCLUSION

Rotel has an excellent track record of making straightforward, wellendowed amplifiers which know how to sing. But its customary assurance seems to have deserted it here in an amplifier that has all the basics, but which seems overpriced for the relatively pedestrian performance.

"DEEP BASS IS CURIOUSLY LACKING IN MUSCULARITY, AND SOME MATERIAL LACKED GRANDEUR AND SCALE."



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Issue 61 on sale Thursday 14th June

SURROUND AMPLIFIERS BENCH TEST



CONTACT 01923 233166

YAMAHA RX-V1000RDS

VALUE 2222 £799.99

SOUND 🖬 🖬 🔛 🔛

his middle-ranking Yamaha home cinema amplifier majors on support for dts-EX and the Dolby Digital equivalent, which if it was THX certified would be called THX Surround EX, but which they choose instead to call Dolby Digital/ Matrix 6.1. It uses a matrix to enhance channel separation between left and right speakers, or a vanilla version of what THX describes as decorrelation. External power amplification is required for the extra channels.

Obvious differences between the Yamaha and other similar amplifiers – apart from the proprietary nature of the technologies involved – include Yamaha's traditional concentration on named DSP acoustics, and its elegant, pared-down user interface. This latter may not make the amp easier to get to grips with in the first instance, but

it does make life more straightforward in day to day use. The Yamaha also has a number of potentially useful minor features, such as a graphic equaliser for the centre channel (which may help make non-matching centre speakers usable), streamlined system set-up, and - usefully - the ability to set the dts LFE levels separately from the Dolby Digital LFE level. Again though, RGB video is dumped in favour of component video. The remote control is coded for other components and can be programmed using its learning facility, and the LFE level can be adjusted temporarily from the remote control.

SOUND QUALITY

Although clearly not the best-sounding home cinema amplifier in the group, the Yamaha RX-V1000RDS escaped on the whole with only rela-

THE LAB REPORT

ON THE FACE OF IT, Yamaha's RX-V1000RDS matches the twochannel AX-596 with a 2x120W/8 Ohm power output. In practice it's slightly less comfortable with lower impedance loads (178W/4 Ohm) and provides a 'slimmeddown' dynamic output of 170W, 295W, 410W (14.3A) and 350W (18.7A) into 8, 4, 2 and 1 Ohm loads, respectively. So it's not quite as beefy as the integrated AX-596 while (as we saw with Denon's PMA-355UK) there's an optimum power output – around 75W in this case – where the amp enjoys its lowest distortion of 0.002%. Incidentally, in multichannel mode, the simultaneous output is closer to 5x75W/8 Ohm. Other 'Yamaha-esque' features typically include a very wide S/N ratio, but here the figure is reduced to ~86dB, still very respectable but about 9dB short of the AX-596. Otherwise, the response is flat and channel balance good to 0.1dB (re. 0dBW) despite the overall gain being pretty high at +44.9dB (x175).

tively minor criticisms. In the panel tests, one listener described it as sounding a little harder than the better stereo amplifiers. He did, however, praise the strong dynamics, good intonation and expressive overall quality, though he also pointed to an apparent rounding off of leading edge transients, impacting on clarity and separation, particularly in the clarinet recording. Writing about the Tom Evans track, another wrote that the Yamaha produced "a big sound, with a strong sense of depth and image scale", but said that it "lacked atmosphere and presence".

www.yamaha-audio.co.uk

The Yamaha has particularly strong spatial processing, which with many Dolby Digital and dts DVD recordings led to particularly subtle and wellorganised imagery and a strong sense of wrap – and, incidentally, Surprisingly this is not quite as beefy in stereo mode as the integrated AX-596.

GUARANTEE 2 years

independence from the speakers themselves. With multichannel music recordings from DVD-Audio, though, the Yamaha was slightly less satisfying. No spatial processing is involved here of course; everything relies on the integrity of the audio signal path, and by the best standards the Yamaha lacks gravitas and consistency at anything other than moderate volume levels.

CONCLUSIONS

The Yamaha is best suited to a role in a home cinema set-up. In the final analysis, its slight hardness and lack of atmosphere makes it less convincing for multichannel (or stereo, for that matter) music.







CONCLUSIONS SO, IS IT TIME TO SWITCH OVER TO A MULTICHANNEL AMP FOR YOUR MUSIC? ALVIN GOLD ROUNDS UP...

he main question in this test was whether today's multichannel amplifiers can come close to matching purist stereo amps. The bottom line is that, on the evidence presented here, the answer is still no. There is evidence that the two groups are drifting closer together - and, in one or two cases, it is the home cinema amplifier that looks like the better proposition. That is to say, some manufacturers offer multichannel amps that at least rival their own equivalent stereo models for value, if not absolute sound quality. In this group, both Yamaha and Denon come into this category, but in both cases the stereo amplifier is open to criticism that may make the results unrepresentative. So there is work to be done, and it is not hard to see where. It is difficult to avoid drawing the conclusion

STEREO AMPLIFIERS AT A GLANCE

			HI-FICHARDER	HEST BUY HEST BUY HERE	H in Hirthright
MAKE MODEL	ARCAM DIVA A65	DENON PMA-355UK	KENWOOD KAF-3030R	NAD C370	ҮАМАНА АХ-596
PRICE	£380.00	£229.99	£249.95	£449.95	£299.99
SOUND . VALUE	×××≈≈≈ ×××≈≈≈	×××\$\$\$\$ ××××	★★★★ ★★★★	* * * * * * * * * *	 ★ ★ 速減益 ★ ★ ★ 送送
CONCLUSIONS	Not the most controlled, and lacking in power, but the mid- band and top of this amplifier are poised and colourful.	Low-cost stereo amplifier is extensively customised for the UK, but music fails to 'breathe' naturally.	On its second airing this is still a subtle and engaging amplifier, with plenty of detail and adequate power.	In the best NAD tradition, this is an enormously power- ful stereo amplifier with superb overall sound quality.	This Yamaha amp is a tad crude musically, perhaps because there are too many unnecessary gadgets.
GUARANTEE	2 YEARS	2 YEARS	1 YEAR	2 YEARS	2 YEARS
THE LAB REPORT	ſ				
DYNAMIC POWER OUTPUT					
SPEAKER LOAD TOLERANCE					
AUDIBLE DISTORTION					
NOISE					
OVERALL RATING					
MEASUREMENTS					
POWER OUTPUT, 8 OHM, 1 KHZ	50W	70W	67W	185W	125W
POWER OUTPUT, 4 OHM, 1KHZ	70W	98W	96W	190W	195W
Dynamic Headroom, 1kHz	75W	100W	92W	250W	188W
MAX CURRENT (10MSEC, 1% THD)	103A	18.1A	7.6A	33.8A	25.3A
THD @ 10W/8 OHM, 1KHZ	0.004%	0.03%	0.0006%	0.004%	0.005%
A-WITD SIN RATIO, RE. ODBW, L/R	85.8dB/85.9dB	77.5dB/78.0dB	84.9dB/84.9dB	94.3dB/94.8dB	92.3dB/94.5dB

that many of today's home cinema amplifiers are grossly over-equipped, with extra channels, complex DSP based algorithms and more. There is also strong evidence, from this and other tests, that the presence of video circuitry has a strong deleterious effect.

Some brands attempt to make up for this by providing bypass switching and direct inputs. With the availability of Scart interconnections, it is about time that more manufacturers introduced home cinema amplifiers without video signal routing. For quite different reasons, where video is retained it would be helpful if it corresponded to the standards that are established in Europe, which means supporting Scart and RGB. Not one of the test models was so equipped, but you can bypass the amplifier all together.

Another approach that can work very well - but

which is not available from the suppliers in this group – is to design stereo amplifiers with bolt-on support for extra channels. Arcam has produced several models with features of this kind, though the A65 from this test is not one of them. So have Roksan and Cyrus, though, again, neither was represented in this group.

There is a substantial difference in average prices of the stereo and the multichannel amplifiers in this group. Look around and you'll find even cheaper amplifiers in both categories, but perhaps not if you limit yourself to current models from what might be described as primary sources, companies with the status and track record of those chosen for this test.

With all this in mind, then, this test makes for some interesting reading – but the final answer would still seem to be to stick to a stereo amp for stereo music.

MAKE MODEL	YAMAHA RX-V1000RDS	ROTEL RSX-972	PIONEER VSX-859RDS	ONKYO TX-DS787	DENON AVR-3801
PRICE	£799.99	£1,000.00	£549.99	£900.00	£799.99
SOUND VALUE	大大大学(学校) 大大大大学(学校)	★★★菜菜 ★★菜菜菜	★★★★ <u>◎</u> ★★★★★	★★★業業 ★★★業業	**************************************
CONCLUSION	Inexpensive 6.1-channel amp has elegant interface, but is not at its best with stereo or multichannel music.	Slightly disappointing under- achiever from a respected stable; lightweight and lacks resolving power.	Can sound hard-nosed, but this well priced home cinema amplifier is an easy class leader in our group.	THX Select amplifier offers THX Select EX, but can sound bland, and isn't a good choice for music.	This amp with 6.1 channel support is impressive, with music as well as Dolby Digital and dts recordings.
GUARANTEE	2 YEARS	2 YEARS	1 YEAR	2 YEARS	2 YEARS
THE LAB REPORT					
DYNAMIC POWER OUTPUT					
SPEAKER LOAD TOLERANCE					
AUDIBLE DISTORTION					
NOISE					
OVERALL RATING					
MEASUREMENTS					
POWER OUTPUT, 8 OHM, 1KHZ	120W	105W	108W	140W	140W
POWER OUTPUT, 4 OHM, 1KHZ	178W	160W	200W	200W	223W
DYNAMIC HEADROOM, 1KHZ	170W	135W	1 14W	185W	180W
MAX CURRENT (10MSEC, 1%THD)	18.7A	21.3A	16.1A	14.8A	12.5A
THD @ 10W/8 OHM, 1KHZ	0.004%	0.005%	0.005%	0.013%	0.004%
A-WTD S/N RATIO, RE. ODBW, L/R	85.7dB/86.3dB	76.7dB/76.5dB	86.5dB/86.4dB	87.4d8/87.2dB	82.9dB/82.7dB

SURROUND AMPLIFIERS AT A GLANCE



COMPACTOR DISC DISCOVER NO AND THE STATE OF THE SUBJECT OF THE SUBJECT OF THE SUBJECT OF THE SUBJECT OF PLAYERS

budget CD player is certainly the most common source component in today's hi-fi systems. Perhaps within the next two or three years DVD players of some sort (and thereby hangs a tale...) will start to take over, but for the moment CD has it all the way. And why not? There's a staggeringly large back catalogue of discs – probably the widest selection that's ever been available – and virtually all new music is on CD.

The sound quality of DVD players (when used as CD players) is improving, on average, but it remains true that few can take on the better CD players from the sub-£300 area. The pity, though, is that there are already signs that some manufacturers regard CD players as an area not deserving of any real R&D, with all the development going into DVD. In fact there are areas where CD could be improved for very little end-user cost, thanks to continually improving understanding and the relentless advance of semiconductor technology, if the will was there.

All of the manufacturers represented in this group have on many occasions shown that they do indeed have the will to go the extra distance with their audio products, so this is likely to be a strong bunch of contenders. The represented price spread of £180-£300 is wide, in industry-think terms: so important and so closely-fought is the market that it is divided into 'price points' barely £20 apart. But fascinating though it might be to compare, say, all the CD players at exactly £229.99, it's arguably more important to examine the benefits of spending a little more – something this group is well placed to illustrate.

What to look for in a CD player? They differ somewhat in the features they offer, which may not matter to you – most people never use any buttons beyond Play, Stop, Eject and Skip anyway. All but the very cheapest now offer a digital output to connect to a recorder, which may be optical or coaxial: if you want to add an external DAC as a later upgrade then coaxial is slightly preferable. But beyond that it's all down to the sound, and like all other hi-fi components CD players have the potential to flatter, or to do violence to, tonality, detail, ambience, imaging etc.

ON TEST

Cambridge Audio D500 SE £229.95 Denon DCD-835 £229.99 Marantz CD6000 OSE LE £299.90 NAD C521 £199.95 Yamaha CDX-496 £179.95

OTHER EQUIPMENT USED

EAR 802 preamp EAR 519 monoblock power amps Harman/Kardon HK6500 integrated amp ATC SCM20 speakers Kimber, Goertz and custom-made cables

MUSIC USED DURING TESTS Ramsey Lewis - Down to Earth Coleridge-Taylor - Songs The Mavericks - Trampoline Donald Fagen - Kamakiriad

GROUP TEST CD PLAYERS



CAMBRIDGE AUDIO D500 SE

"THIS PLAYER IS BASICALLY A FUN-LOVING TYPE, WITH PLENTY OF BASS AND A LIVELY MIDRANGE." **SOUND SOUND SOUND**

£229.95 CONTACT 020 7940 2200 www.cambridgeaudio.com

he 'basic' D500 featured in *HFC* a little over a year ago (issue 202): a £30 premium for the SE buys you a different DAC chip (nominally 24-bit rather than 20, though interestingly some specifications are distinctly inferior to the 20-bit part) and a mechanism selected for low jitter. The SE is also available in silver.

Appearance and features are basic enough, indeed the display and push-buttons are reminiscent of sub-£100 players, and the jog dial provided for skip and search functions is in practice no improvement on a couple of push-buttons. No matter. The remote gives improved operation, and inside the case there is evidence that Cambridge has put the money into tangibly performance-related areas. Intriguingly, a large metal shield over the control circuitry proudly proclaims that the servo circuits have been 'custom designed and programmed by Sony' for Cambridge.

The DAC/output board is replaceable to allow upgrading, but as it stands it already boasts a decent DAC chip from Crystal Semiconductor and exclusive use of single op-amps (most CD players use dual op-amp packages to save costs and space, but most purists prefer singles). The electrical digital output is provided via a gold-plated BNC connector and there's an optical one too. The mains inlet is an IEC socket rather than the usual captive lead, and make sure you use an

Don't be fooled by the basic styling - there's a party animal just waiting to burst out!



earthed cable — I didn't and got a noticeable buzz from the

unit when connecting it! Technical performance is adequate, if not great – there's quite a lot of ultrasonic noise and distortion, though distortion within the audio band is very low. Cambridge uses an unusual oversampling filter configuration which nevertheless gives pretty similar results to more popular types.

G'TEE 1 year

SOUND QUALITY

Sophistication is perhaps not the name of the game here. It's basically a fun-loving type, with plenty of bass and a lively midrange. Don't be misled, however, into thinking that it doesn't do subtlety, because there is a fair degree of that too, and stereo imaging is pretty creditable.

Some music works better than others. Opera and big symphonic pieces seemed slightly less happy – no problem with the large scale, but at times the (generally good) level of detail slips a little and instruments or voices get lost. Smaller classical works and well-produced rock and pop seemed much happier though, with an excellent degree of energy and life. In addition to being strong, bass is well tuned and clearly delineated too, so low-lying melodies are served just as well as drums and the like. In fact the lack of enhanced bass 'kick' can make the sound seem a little unprepossessing at first but it soon becomes apparent what's what.

Detail in the midrange and treble is above average for this player's class, and there's a pleasing sweetness to the sound which helps preserve ambience and the natural decay of percussion instruments. Just the smallest hint of dryness can creep in on occasion even in fairly simple musical textures (solo violin proved one case in point) but it's never enough to interfere substantially with one's musical involvement and the sound scores highly for long-term listening. Mechanical noise from the player is low but not absolutely inaudible.

CONCLUSION

All things considered this is a very capable player which is both enjoyable and informative to listen to. Such weaknesses as it has are mild given its modest price, and it also offers good material value for money and even an upgrade path. Definitely one to be Recommended.

HI-FICHOICE



SOUND 📩 🖬 📩 🔛

Asic

VALUE **** £229.99

99 CONTACT 01753 888447 elec.denon.co.jp/europe G'TEE 2 years

stonishingly, this player was last reviewed in *HFC* over 30 issues ago, justifying its re-evaluation here on longevity grounds alone: but a significant price drop from £280 has also enhanced its apparent appeal. Does it still hold up against more recent comers?

Frankly there's no reason why it shouldn't, even though it happens to use a slightly antiquated DAC chip, a genuine multi-bit one (now listed as obsolete by its manufacturer) – the last few multi-bit converters offered performance which in all practical respects is at least equal to that of most low-bit types in a CD context, and the limiting factors are arguably elsewhere, in areas where little or nothing has changed.

And if one of those factors is the analogue output Denon should be off to a good start with an op-amp, the OP275, notably favoured by several high-end manufacturers. Output muting is by relay rather than transistor switch, and extensive separate power supply regulation is another sign that Denon's designers tried to avoid cutting corners.

As for features, there's no real shortage unless you count the absence of CD Text and CD-RW compatibility as serious. There are plenty of track selection options, digital volume control (rather coarse steps), a nice fade in/out ability, peak search, and both optical and coaxial digital outputs, plus a system remote control input. It's all neatly put together, well labelled and easy to use (as always with Denon) – no apologies needed there!

Technically the most obvious difference between this and most budget low-bit CD players is the much lower level of ultrasonic noise at its output. But how much does that really matter? In the presence of music there's still plenty of ultrasonic aliasing distortion going on. So in most ways this player is not far removed from the others in the group. Output level is a little high – about 1dB above the usual 2.0V.

SOUND QUALITY

A strong and well-defined bass is perhaps the crowning glory of this player. It's not what one might call 'kicking' but it has great ease and extension, the sort of effortless quality that imparts real authority to the lower lines of classical and jazz ensembles. Rock and some pop genres rely more on slightly higher-frequency basslines (there's nothing wrong with the upper bass but it's less obviously impressive), but well-made synthesiser tracks can go down well on such a player.

Higher up the spectrum, though, matters are not so positive. There's a hint of midband coloration which shows up on instruments like saxophone, and the treble has a slight dryness, most noticeable on solo voices and delicate percussion, and perhaps also responsible for a degree of synthetic sheen on orchestral violins. Stereo imaging is a little ping-pong and lacking some depth, at both low and high levels. Dynamics are handled with aplomb, though, and excitement levels are high when they need to be. Despite the dryness, detail is good to very good, and there is seldom anything that could fairly be described as veiling. The review in *HFC* 184 mentioned the player's 'refinement', a word I second as most appropriate.

CONCLUSION

A good performance, then, on balance, but with only mild flaws. This player will, I strongly suspect, be one of those that succeed well in some systems, less well in others. Most particularly, loudspeakers which already have a tendency to dryness and/or over-brightness may not flatter it, but those of a sweeter disposition will do much to mask its treble anomalies and can only benefit from the excellent bass control, tunefulness and extension. Definitely worth a try, and so Recommended. "IT HAS GREAT EASE AND EXTENSION, THE SORT OF EFFORTLESS QUALITY THAT IMPARTS REAL AUTHORITY."

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SOUND

arantz offers several versions of the 6000, and this is the Limited Edition of the Original Special Edition, notable not least for offering its benefits for no price premium over the standard OSE. Modifications include a couple of upgraded capacitors and a change to the response of the low-pass filter, plus some extra screening internally. It's a smartly assembled unit, given an extra touch of class by its unusual weight - largely the result of a double-skinned base and some internal damping, all intended to cut down mechanical resonance.

As arguably befits the most expensive player in the group, this is the most comprehensively featured. The front panel gives little enough away at first, though the headphone socket is a useful bonus: but as soon as power is applied the smart dot-matrix display shows signs of unusual versatility. Sure enough, the display can also give access to CD Text, and a little bargraph to the right of the main display shows the setting of the variable analogue output level. Other features include a whole bunch of editing features (select some or all tracks and play them in any order you like), peak search and other features to assist with copying to cassette, and also compatibility with finalised CD-RW discs. One surprise came when I found that the 6000 doesn't like CD-Rs which have been recorded on a PC in disc-at-once mode, discs supposedly identical in format to pressed CDs. It will play them but often refuses to jump from one track to another. CD-Rs recorded on an audio recorder are fine, though.

Build quality is good, with neatly laid out circuit boards bearing Marantz's trademark HDAMs (Hyper Dynamic Amplifier Modules). There are both coaxial and optical digital outputs and connections for a Marantz system remote controller. Measurements are typical of the breed, with output level right on the button at 2.0V and low in-band noise and distortion: however, as so often, ultrasonic noise and aliasing distortion are not quite as low as they might be, these being a function of the low-cost upsampler/DAC chip used.

SOUND OUALITY

Marantz's reputation for CD players rests not least on the 'house' sound, for which probably the best one-word description is 'civilised'. Excitement is not by any means forbidden

territory, but don't expect to find any added to essentially lacklustre CDs. I'd go so far as to say that the basic tonal quality of this player is very much that of some of the best high end players and DACs, though in the absence of a truly free lunch there is the odd hint of the budget in there too.

G'TEE 2 years

CONTACT 01753 680868 www.marantz.co.uk

Basically, what the 6000 OSE lacks in absolute terms is the last degree of insight. In practice it means that inner details and subtle ambient cues are not quite as easy to find as they are with the finest digital kit. This becomes more obvious the longer one listens: but let's not get despondent, for long-term listening is certainly pleasurable. At the price it's difficult to do better in the detail stakes.

So whether your tastes run to classical (clear strings and brass with just a shade of hardness added), rock (plenty of bass drive and energy), jazz (lifelike vocals with the merest hint of overemphasised sibilants) or whatever, you'll find plenty to enjoy here. Perhaps bass could on occasion be a little more profound, but midrange and treble are notably clean and neutral.

CONCLUSION

Considering that very fine performance and the multiplicity of features on offer, not to mention the smart build and appearance, a Best Buy seems to be in order.

"WHETHER YOUR TASTES RUN TO CLASSICAL, **ROCK. JAZZ OR** WHATEVER. YOU'LL FIND PLENTY TO **ENJOY HERE.**"

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	£199.95	CONTACT 01908 319360	www.nadelectronics.com	G'TEE 2 years

lost the will to live while waiting for the drawer to slide in and out on this one! A small point, perhaps... Appearance is 100% NAD, but frankly the company has done ergonomics better on other products, and apart from that drawer the button layout and feel are ho-hum at best. Features? Not a lot – track programming, a coaxial digital output and that's about it. CD-RW replay is not supported and there's no CD Text display.

Internally there seems to be a lot happening, but that's largely because NAD has used a mechanism which divests most of its control electronics to the main circuit board rather than keeping it nearby as many do. In fact the audio circuitry is pretty basic stuff – a DAC chip followed by a dual op-amp per channel, with fairly ordinary components all round (a couple of small 'audio-grade' capacitors are the two swallows that don't make a summer).

Said DAC is a recent low-bit type, with an onboard oversampling filter of standard variety which allows a modest amount of ultrasonic aliasing and noise through. Audio-band noise is not the lowest either, but then the mechanism makes a faintly audible hiss in operation too. Surprisingly, absolute phase is inverted at the analogue output, which may possible influence things in side-by-side demos against non-inverted players. Output level is just half a dB above 2.0V.

SOUND QUALITY

If all the above looks a little downbeat, it's only partly reflected in the player's performance. In our illustrious editor's comments in First Impressions (*HFC* 215), he noted particularly the C521's good timing, a finding with which I concur. It's a lively and danceable sound, with decent enough bass weight and definition and no very obvious tonal aberrations.

But at the end of the day it's oddly unengaging. Start a track playing and you'll notice nothing immediately wrong, but after a while the attention wanes. This is something that various commentators have found with a variety of CD players, but the best ones in this group prove that the effect can be avoided to a considerable extent, even at the modestly-priced end of the market.

Ultimately what's lacking is detail and insight, the little subtleties that don't always register consciously but whose absence makes the brain tire relatively quickly. Music that doesn't rely on such subtleties tends to 'survive' hi-fi like this much better and can sound very lively over extended periods when played by the C521, but most kinds of acoustic music start off very promising, only to end up sounding surprisingly leaden and uninviting by contrast.

To put those comments into context, it's important to realise that it took some quite extended listening to this player and the others in the group to spot the effect, and in most ways the similarities between the various players far outweigh the differences. On the other hand, once the differences – particularly over the long term: quickfire comparisons don't show them up half as much – have been identified they become a little too obvious for comfort.

CONCLUSION

As often happens, the appeal of this player will depend strongly on what you want to play on it. With acoustic music it's a little lacking appeal, but with many kinds of studiorecorded 'pop' (in the widest sense) its even-handed tonality, lively kick and general bounce and *joie-de-vivre* are much more likely to come to the fore. On balance, given that the price only just undercuts the much more general-purpose Denon and Cambridge models, it just misses a gong.

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WHAT HI+FI?

Diamond 8.1, What Hi-Fi? April 2001.

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YAMAHA CDX-496

CONTACT 01923 233166 www.yamaha-audio.co.uk G'TEE 2 years

D/00

Ithough it's the cheapest player in this group and offers no obvious pretensions, the CDX-496 is a very neatly turned-out machine. Its front panel carries the usual range of functions, but already there's a plus in the shape of the headphone socket, and variable output level (which also affects the headphone output) can be handy. With the remote control, features extend to various track programming options and a few aids to home taping including peak search, automatic tape programming and space insertion between tracks. It's also possible to synchronise the starting of a suitable Yamaha cassette recorder using the 496's remote control. You can even dim the display! CD-RW discs can be played back, but CD Text is not supported.

Assembly is tidy but unexceptional internally, with no funky audiophile components - hardly reprehensible at the price. The various integrated circuits mounted under the circuit board had numbers partly painted over, but a swift inspection of lab performance showed that in most respects they do a broadly similar job to the other decks in this group: audioband distortion and noise are low but there's a fair amount of ultrasonic garbage coming out. That's basically inaudible in itself, by definition, but it can cause audible intermodulation ('beating') distortion in amplifiers and speakers.

We're not talking about huge levels, but in fact in the presence of very high treble (the top couple of octaves of the audio spectrum) there is quite a lot more ultrasonic output than with the other four decks. And indeed Yamaha has evidently used a rather different oversampling filter from the run of the mill, one which has no 'pre-ring' but only ringing after the event. Intuitively, one might think that this would be a good thing, but careful experiments have shown that intuition in this area can be highly misleading. Best not to draw premature conclusions...

SOUND QUALITY

It has to be said that perhaps the biggest drawback of this player is its very high level of mechanical noise, which in most installations will completely drown any electronic noise in a half-decent recording. To put this into context, at moderate listening levels I found that said noise is more instrusive than the hiss of a fair-condition LP played on a budget turntable.

Sure, low noise is far from the be-all-and-end-all of hi-fi, but it seems frustrating to have to suffer it due to such a cause when most manufacturers have banished it. And yes, it can be audible - draping the player with a folded blanket did improve focus and stereo image depth particularly. Most of the listening was carried out under rather more realistic conditions!

The basic presentation of this player is distinctly up-front, which is in itself a matter of taste - it makes for a quite exciting sound, well supported by a strong bass line. Detail is fair rather than outstanding, but the real drawback of this player in subjective terms is its relative lack of control. Whatever the music, be it a single voice or a vast orchestra, there's something just a little splashy and approximate about the sound. Stereo imaging tends to be a little approximate and indeed guite often unstable, very likely for the same reasons that cause the splashiness. And so, although we're not talking about vast effects here, it's guite difficult to get a grasp on the music, in either the short or the long term.

CONCLUSION

5

1:35

There are aspects to praise with this player, such as the neutral tonal quality and lively feel, but ultimately its attendant drawbacks seem to get the upper hand and, even taking into account its modest price, it just fails to make the grade.

"THE BASIC PRESENTATION **IS DISTINCTLY UP-FRONT. WHICH IS A MATTER** OF TASTE."

A swish turn-out, from the cheapest player in the group.



// $\star \star \star \star \star !$ NAD C 350 ★★★★★ WHATHI-FIZ NAD C350 October 2000 Amplifiers **NAD C370** NAD ed Amplifier C 370 841001

★★★★★ WHAT HI-FI? NAD C370 Supertest winner September 2000

Modesty prevents us from quoting the rest of these reviews, but you get the idea!

When the time came to update the heavyweight members of our amplifier range, we knew it would be no easy task - just the kind of challenge our engineers relish and the breathtaking results have just scooped the coveted What Hi-Fi? Amplifier of the Year for an amazing **third** year in succession! Listen to NAD for yourself - you'll soon swear by us!



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CONCLUSIONS RICHARD BLACK REVEALS THE BEST IN TEST...

here's a potential problem with this conclusion, one so obvious that I guess I'd better address it right away: the accolades mount up as one goes up the price scale, apparently ignoring the valuefor-money equation completely. Why?

There are two valid answers to that. First, it just happens that even by the standards of £180 and £200 CD players respectively, the Yamaha and NAD machines are not outstanding. They're OK, they aren't vile abominations by any manner of means, but they both have limitations which count against them in the value wars. On the other hand, the Cambridge and Denon players are both very fine examples of the £230 breed, while the Marantz is an exceptionally fine £300 specimen.

Second, it would appear that there really is some sense in spending a little more on a CD player. Of course it's possible to get something that plays CDs after a fashion for well under the ton, but it seems that the natural settling point for something one might reasonably call good hi-fi sound quality is somewhere around the mid-two-hundreds.

At exactly the same price, the Denon and Cambridge machines offer subtly contrasted views of how to do it. At the risk of sounding facile, I would say that the Denon is the classical-music fan's player, while the Cambridge will suit the all-night raver. Somewhere in between there must be a crossover point – jazz



"THERE REALLY IS SOME SENSE IN SPENDING A LITTLE MORE MONEY ON A COMPACT DISC PLAYER."

fusion perhaps? But joking apart, both are highly competent and frankly, taken in isolation, either should make most people very happy.

But Marantz takes the top prize this time with yet another take on a reliable long-time favourite. Goodness only knows whether the tiny tweaks that constitute the 'Limited Edition' make any substantial difference at all, but when the basic recipe is this good and the price is the same as the standard OSE, who cares? It's possible to find better CD players around, but probably not for this price or less, and indeed there are tales around of 6000s in some very esoteric systems, serving time without a blush. It's one of those lovely products where you can hardly go wrong, which I think makes its ultimate triumph pretty much inevitable.

CD PLAYERS AT A GLANCE

	HECONOLOGIC HERONOLOGIC	HERCHARD	HERENCE CONTRACTOR	65	
MAKE	CAMBRIDGE AUDIO	DENON	MARANTZ	NAD	YAMAHA
MODEL	D500 SE	DCD-835	CD6000 OSE LE	C521	CDX-496
PRICE	£229.95	£229.99	£299.90	£199.95	£179.95
SOUND	* * * * * *	× × × × ≈	***	★ ★ ★ ★ ★	★ ★ 素 業 業
VALUE	* * * * *	× × × × ≈		★ ★ ★ ★ ★	★ ★ ★ 素 業
CONCLUSION	A really lively sound with	Refined sound with terrific	Detailed, well rounded, at	Good timing and excitement,	A rather splashy, approximate
	good detail but just a hint of	bass extension. Some slight	home in any musical context	but not good at holding the	sound, further hampered by
	dryness.	coloration.	– a real bargain.	listener's attention.	mechanical noise.
GUARANTEE	1 YEAR	2 YEARS	2 YEARS	2 YEARS	2 YEARS



Five Stars For Value

Paul Messenger explains why you should visit an independent specialist dealer if you are searching for real hi-fi satisfaction

Why use a specialist hi-fi dealer? The short answer is because he knows one hell of a lot more about hi-fi than you do. And if you've gone to the trouble of picking up a specialist magazine on the subject, you're obviously interested in something rather more than a mini system from the nearest electrical superstore.

QTA	DO		
STA	ΛŲ	UAL	

value for money	****
service	****
facilities	****
verdict	オオオオオ

You've probably bought this magazine for one of two reasons. You're looking for advice (presumably unbiased and good) on choosing and using your hi-fi system, and/ or you're checking out the ads to decide where to go and buy it.

The independent specialist dealer doesn't know everything, and he doesn't know much about you, but if music's an important part of your life, he's the only guy around who's able (and hopefully willing) to help you choose the equipment which will give you the best long term satisfaction.

Power of the Press

Dealers sometimes moan to me about the power of the press, and the disproportionate influence of its 'Best Buy' and multi-star ratings. Well, I've been in the press for twentysomething years, and still feel more ignorant than powerful.

The more I mess around with hi-fi gear, the more I become aware of our lack of real understanding of the subtleties involved, and the more I appreciate the importance of the dealer's skills and experience, in bringing together components so that the whole is greater than the sum of its parts.

We hacks get paid to write words, often about components in isolation, because individual product reviews are still the staple diet of the press. They can sometimes provide a useful guide to the way a product performs, but only under the particular circumstances in which the review was conducted.

The hi-fi reviewer attempts, with varying degrees of success, to evaluate a particular component, and find something interesting (and hopefully positive) to say about it. That's about the end of it, and it's on to the next product.

The magazine prints the review, and that very process magically confers a measure of authority. Experienced hi-fi enthusiasts, who read reviews over a period of years and try out various products themselves, soon start to realise the limitations of that approach. Some reviews are better than others, but none can get to grips with the real heart of the problem - whether a given product will improve your musical satisfaction, in your system and your room.

The Role of the Dealer

The dealer's role is very different, and potentially much more valuable. He has the chance to talk one-on-one. If he's good at his job, he'll use that opportunity to find out what you as an individual are looking (or listening) for.

His motivation is very different too. Sure he wants to make a sale. That's the lifeblood of any shop. But he also knows that if something he sells really does deliver long term satisfaction, there's a very good chance you'll come back again to see if he can repeat the trick some time in the future.



If you go into a shop and demand a particular CD player, on the basis that it got seven stars (out of five) in last month's magazines, the shop will probably simply take the line of least resistance and sell it to you. (Or switch-sell you to a similar price alternative, if he's fresh out of stock of that particular flavour-of-the-month.)

If you go in and say you're looking for a CD player, and want his advice on what to choose, things are liable to become more interesting. The onus is now on the dealer to show what he can do. His first task is to ask the right questions to try and get some idea of what you might be after.

Asking the questions is the easy bit. The real skill comes in using the information to come up with a shortlist of likely contenders, and then conducting a demonstration so that you have a real chance to play a central role in the decision making process.

Putting together a successful hi-fi system might not be as difficult as it was twenty or thirty years ago, but it's just as easy to make a mess of things. Put the 'wrong' combination of components together and it'll still sound a lot better than any cute little mini system package. It might even rate a five star review. But it won't match the potential of a carefully balanced and properly installed system, and it

certainly won't cater for your own particular preferences and personality.

We British are notoriously undiscriminating consumers, at a mass market level at least. The majority of the population don't even bother to drive a car they're thinking of buying, never mind take the trouble to listen to hi-fi equipment.

The majority will therefore end up with hyperstore mediocrity, and hi-fi that's about as tasty as supermarket bread. But if music is an essential ingredient in your daily diet, you owe it to yourself to become a member of the discriminating minority.

You know full well that your music collection is as individual as your wardrobe, and just as precious too, so it's worth taking the time and trouble to search out the dealer and equipment that will make that collection come alive, and give you a new buzz every time you play your favourite discs.

The independent specialist may not beat the chain store on price, but he continues to thrive in a hostile environment because real hi-fi is so much more than a matter of price. The people who work in these shops are themselves enthusiasts, often with many years of experience in meeting customer's needs, and the very necessary expertise to ensure that the whole thing is properly set up to deliver the best results.

The better the hi-fi, the more important it is to get the fine details right at the installation end of things, but even the least expensive equipment can be made to sound a whole lot better if good care is taken over the fine details - the support furniture, the cabling, the positioning of speakers and so on.

Without expert assistance even high class hi-fi can give mediocre results. With it you'll stand a very good chance of ending up with something rather more than a consumer durable - something which will be a source of considerable pleasure and genuine emotional satisfaction for decades to come.

I agreed to write this signed piece, irrespective of the specific sponsors, because I believe the independent specialist dealer plays a vital role in giving customers long term hi-fi satisfaction. The views and opinions expressed here are my own and not necessarily those of Hi-fi Choice.

Paul Messenger

The specialist Dealers listed here are professional and enthusiastic. Give your nearest a ring for a demonstration.

TOP 20 UK SPECIALIST HI-FI DEALERS

LONDON

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

ORANGES & LEMONS 61/63 Webbs Road, Battersea 020 7924 2040 MARTIN-KLEISER 109 Chiswick High Road 020 8400 5555

SOUTH

SOUNDCRAFT HI-FI 40 High St. 01233 624441

RAYLEIGH HI-FI 216 Moulsham Street 01245 265245

AUDIO DESIGNS 26 High St. 01342 314569

INFIDELITY 9 High Street Hampton Wick 020 8943 3530 **RAYLEIGH HI-FI** Dansk International Furniture World 01708 680551

RAYLEIGH HI-FI 44a High St. 01268 779762

PHONOGRAPHY Star Lane 01425 461230

RAYLEIGH HI-FI 132/4 London Road 01702 435255 MARTIN-KLEISER 278 High Street 01895 465444

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

MIDLANDS Banbury OVERTURE 3 Church Lane 01295 272158

SOUND ACADEMY 152a High Street, Bloxwich 01922 493499

CYMBIOSIS 6 Hotel St. 0116 262 3754 Northampton LISTEN INN 32 Gold St. 01604 637871

CREATIVE AUDIO 9 Dogpole 01743 241924

NORTH Cheadle AUDIO COUNSEL 14 Stockport Road 0161 428 7887 Oldham AUDIO COUNSEL 12/14 Shaw Road 0161 633 2602

MOORGATE ACOUSTICS 184 Fitzwilliam St 0114 275 6048 SOUND ORGANISATION 2 Gillygate 01904 627108

SCOTLAND

RUSS ANDREWS HI-FI 34 Northumberland Street 0131 557 1672

Classow STEREO STEREO 260 St. Vincent Street 0141 248 4079

N. IRELAND

LYRIC HI-FI 161 Stranmillis Road 028 90 381296



EQUIPMENT SUPPORTS BOKSHELVES GROANING? SIDEBOARD MOANING?

BOOKSHELVES GROANING? SIDEBOARD MOANING? DAN GEORGE CHECKS OUT SOME ALTERNATIVES...

ust like the Wonderbra, a good rack will not only offer excellent support, it will also make your prized possessions look their best. These days racks are also described as 'furniture' but we'll leave you to make decisions on the aesthetics of the units in this group, while we scrutinise their sonic abilities. But first of all, what do we mean by support, and why should you not simply stack your equipment up wherever you can?

It comes down to physics, and the transfer of energy – us hi-fi types know this energy as acoustic feedback. The culprits are your speakers and to an extent the room in which they are housed. As you happily play music your speakers are pounding the air, the floor, and – both directly and indirectly – your equipment, which really doesn't take kindly to it all. Your hi-fi takes the pounding (energy) or acoustic feedback and turns it into electrical feedback. This energy transfer are known as 'microphony', and virtually all components suffer from it to some degree.

Electrical feedback is bad news as it interferes with the audio signal path, producing audible coloration and time delay. We all know that timing is the essence of musicality, and coloration is the root of all hi-fi evil, so you can appreciate how crucial support really is. Knowing that hi-fi systems create acoustic feedback and turn it into electrical feedback, it becomes the job of the rack to deal with the energy one way or another.

Conventional thinking dictates that high-mass racks use their rigidity as a mechanical earth to transfer the energy away from the equipment and in this test we have four such glass and metal based racks. Also in this test we have four racks which deal with energy in a slightly different way. They're 'wobbly', and offer a degree of damping – a way of absorbing energy. Two quite different approaches to the energy problem then, and perhaps two different sonic contributions...

Our cast list of eight includes a wide variety of designs and some of the latest developments from well-established manufacturers. Our concrete-floored listening room made life for the racks a bit easier, its relatively dead character absorbing plenty of energy, but owners of floorboards will be more handsomely repaid for their rack investments.

ON TEST

 Apollo Mezzo Soprano
 £340.00

 Atacama Equinox
 £279.97

 Clearlight Audio RDC Aspekt
 £549.99

 Custom design E'lite E4
 £250.00

 Kestrel Furniture Nightingale
 £495.00

 Quadraspire Q4 Reference
 £440.00

 Sound Organisation Z560
 £195.00

 Townshend Seismic Sink Start
 £980.00

OTHER EQUIPMENT USED

NAD Silverline S500 CD player Marantz PM-17 MkII amplifier B&W CM4 speakers QED Genesis Silver Spiral speaker cable SonicLink interconnects

MUSIC USED DURING TESTS

Public Enemy - There's A Poison Goin' On Joni Mitchell - Night Ride Home Sting - Ten Summoner's Tales Dave Matthews Band -Under The Table And Dreaming Bjork - Post Kd lang - Ingenue Megadeth - Youthanasia The Rodulfus Choir - Various

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RDC 4 Isolation Cones £149.95





APOLLO MEZZO SOPRANO

CONTACT: 0121 5205070 www.apollohifi.co.uk GUARANTEE: 1 YEAR SOUND

> pollo has been around for some 25 years now, so it should know a thing or two about supports by now. For 2001 Apollo has created the Soprano which comes with sturdy steel legs and mighty 12mm clear glass shelves, although a toughened by class is also an option. This rack is by for the bids

6mm safety glass is also an option. This rack is by far the highest mass design on test, it's exceptionally heavy and rigid, andbenefits from a choice of four different shelf heights.

Its flexibility (in an adaptive sense) extends to offer any number of shelves up to a recommended height of 1.5m. We counted no less than 10 finishes available and you can choose a Soprano rack in one of four widths, to accommodate AV equipment and smaller mini/micro sized electronics. The corners on the glass shelves on our Soprano were sandwiched between the vertical pillars, spacers and black isolation washers, giving the rack its aforementioned rigidity.

SOUND QUALITY

A simple hand-dap close to the rack displays an obvious ring, which is more noticeable when music is fired at it. Choral music, courtesy of the Rodulfus Choir with its characteristic echoic church ambience had more than one soprano singing along! The balance was on the bright side and low bass, although weighty, tended to sound a bit bloated and lacked the leading edge definition that other models offered.

CONCLUSION

The Soprano adds more of its own character to music than any of the racks on test. Its high-mass glass design is prone to excitement sound and gives a distinctive ringing contribution to the music we used. It certainly offers a performance of its own, but racks are often at their best when they are giving the least.



ATACAMA EQUINOX

CONTACT: 01455 283251 www.atacama-audio.co.uk G'TEE: 1 YEAR SOUND XXXXX VALUE XXXX 2 £279.97

> he striking aesthetic of the Atacama certainly raised a few positive comments from listening room passers-by. And rightly so. The Equinox is a step in the modular direction: you buy a twoshelf base unit (£140) and then as many shelves

as you fancy, to a maximum of five levels. Great idea, especially as each additional module is spiked and offers a degree of decoupling. The spikes fit neatly into a cavity at the top of each leg. We liked the curvaceous frontage of the Equinox, and its tripod design eliminates rocking which nicely reinforces its stability and makes set up a doddle. The TIG welded steel frame is stiff and rigid and the large glass shelves offer plenty of room to manoeuvre. Available simply in black or silver the Atacama certainly makes a distinctive design statement. When you include the spiked feet at the base of the rack, there's three layer of de-coupling beneath the top tier, making this the place to put the most microphonic component in the system.

SOUND QUALITY

A good blast of the bass-heavy *Post* album from Björk demonstrated the Atacama's capability to manage low frequencies bass. Bass transients retained their pace and timing well, and extension was well controlled throughout some quite demanding music. Despite the presence of some noticeable glassy characteristics, the rack was hugely dynamic and musical, and it certainly had a pleasing sense of timing.

CONCLUSION

A fine modular glass rack, which despite giving some glassy resonances is a bass star and a good musical performer. Its threelegged stance makes it very stable and we liked the modular aspect too. It's a bit of a looker too.

Atacama



Tel: 01455 283 251 Fax: 01455 293 908 Email: post@atacama-audio.co.uk Website: www.atacama-audio.co.uk



CLEARLIGHT AUDIO RDC ASPEKT RACK

CONTACT: 0870 241 2469 www.hififorsale.com GUARANTEE: 3 YEARS

SOUND

 learlight is a German brand that sells its range on the Web and makes great play of something called RDC, this is a resin-based compound containing grains of lead, rubber and other materials.
 The concoction is claimed to be incapable of sus-

taining resonance and able to transmit energy in a linear fashion. The shelves are essentially MDF with a routed out helix design, filled with the RDC compound. This design attempts to control resonances in the shelves by passing them in a linear fashion to the frame, which incidentally is again made of MDF and bolted together with hardwood corner struts. RDC appears again at the rack's base in the form of three cones to level the structure on the floor. A black or cherry finish is available, and three shelf spacing options can be chosen. This is one of three 'wobbly' equipment supports in this test, where a degree of movement is evident when lateral force is applied at the top.

SOUND QUALITY

This rack is without doubt the most laid back of our eight. Its notably high price is matched by its sonic performance and it gives, well, very little. And that is its greatest strength, it's incredibly relaxed and natural sounding. Massive Attack's song *Protection* has all the sibilance in Tracy Thorns' vocals smoothed away. The chaotic complexities of Megadeths' *Youthanasia* were balanced and detailed, making the high-energy music more palatable than ever before. A high degree of resolution was achieved as the rack simplified complex musical layers.

CONCLUSION

A top performer with matching price tag. Stunning neutrality and laid back with it, detail and control were always in abundance.



CUSTOM DESIGN E'LITE

FIE

CONTACT: 0191 2624646 GUARANTEE: 1 YEAR

SOUND **XXXX** VALUE **XXX** 2250.00



ewcastle-based Custom Design has a wide variety of racks to choose from in the current line up of hi-fi/AV supports. All are hand built and finished here in Blighty and, for the more demanding customer, a custom build service is

available. Our E'lite E4 model, at just over half a metre tall, has four shelves, two of which (top and bottom) are bolted at the corners into the four upright supports, while the other two are adjustable. L-shaped brackets hold the latter shelves in place and although the fit is purposely snug, I managed to drop a couple of shelves as equipment was slotted in. The thankfully toughened glass is supported by a choice of tubular steel legs in seven finishes or wooden legs available in natural ash or rosemary (at extra cost). The steel variety has the capacity to be mass-loaded for increased energy absorption properties.

SOUND QUALITY

The E'lite gave a fairly neutral sound considering its high-ish mass, glass construction. Perhaps this can be attributed to the thin glass and unfixed, bracket-type supports. Whatever, the Custom Design was a fairly laid-back operator and wasn't as 'glassy' as you might expect. Celebrity drummer Chester Thomson's drumtastic work on *A Joyful Noise* was recreated with snappy quick bass drum patterns and dynamic snare and cymbal work. On the whole it offered reasonable neutrality, with only minor resonance.

CONCLUSION

A likeable rack, sounding like it may have been made from another material. Not the best of the glass shelvers in terms of performance or cost but it did the job to a good standard.



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WHAT DVD ISSUE 27 ON SALE NOW 🥯

RECOMMENDED HI-FICHOICE magazine



KESTREL FURNITURE NIGHTINGALE

CONTACT: 01252 343959 GUARANTEE: 1 YEAR



estrel Joinery of Aldershot has been producing purpose made hi-fi furniture for seven out of its 35 year history. Who better, then, to produce a solid wood stand, available with either glass or wooden shelves? Our all-wood rack, the tallest in

the group at a whopping 92cm, has a fixed top shelf, slot-in bottom shelf, and three more fully adjustable ones. For the shelves, a sound damping material is sandwiched between two layers of veneered board, again a design which offers damping at shelf level. The rear column (one of three) has slots machined into it housing a cable management system, and there is room for a five-way power adapter underneath the unit. This certainly is a well thought-out design, if a little on the large side. The light shelves use L-brackets on a 'multiple choice' pegging system, offering lots of shelf height options for big power amplifiers, etc.

SOUND QUALITY

This rack shared a lot of musical qualities with another wooden rack in this test. A good degree of balanced tonality was achieved with little sonic contribution. Strings on the Joni Mitchell track *Cherokee Louise* were naturally transparent and, on the whole, the presentation was open and smooth. Bass was well defined and didn't hang around with beat-driven Public Enemy tracks.

CONCLUSION

Lots of value for money here, from a dedicated joinery specialist. It's damping ability paves the way for a neutral sound with a likeable sense of timing and fast bass transients. You may need a big room to accommodate its generous proportions, however.

QUADRASPIRE Q4 REFERENCE

 CONTACT: 01225 333360
 www.quadraspire.co.uk
 G'TEE: 2 YEARS

 SOUND X X X X X
 VALUE
 X X X X
 £440.00



t may wobble, but it won't fall down. The latest Quadraspire product to evolve from the Bath manufacturer is based on the successful Q4 (which we enjoyed back in *HFC* 206) but now the shelves are attached to a decoupling spacer. The spacers are an

integral part of the stand's leg, and the top three real wood veneered MDF shelves wobble more than any rack on test. At first you may be alarmed but the Q4 MW joins the damping school of thought where support is concerned. Six column height options give a good choice of shelf heights and a variety of finishes are available for both shelf and aluminium column. You can even opt for spikes, flat feet or castors! It's also available with a piano black base and 40mm pillars at the bottom for £650, which provides a rigid base allowing all four shelves to move.

SOUND QUALITY

Tonally neutral with an ever-so-slightly laid back appeal, the rack delivered detail, resolution, and a composed presentation. Led Zeppelin's *The Song Remains The Same* suffered no major coloration, allowing the electric layers to remain separated and detailed. Bass was notably impressive, punchy, quick, and well extended. The demanding, sample-heavy Public Enemy track *Do You Wanna Go Our Way?* stayed wonderfully dynamic with bass beats slamming their way through the duo's rap assault.

CONCLUSION

A good non-contributor with a lovely balance and ability to compliment your electronics. Informative midband and fast bass transients make for a musical performer. The fact that it's good to look at only adds to its sub-£450 appeal.



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SOUND ORGANISATION Z560

CONTACT: 01279 501111 GUARANTEE: 1 YEAR

he only sub-£200 rack in the test has been modified over its predecessor to house the larger AV equipment that is on the market today. The modifications include width extension to 50cm, with a depth of 40cm. A few tears were shed during assembly but the huge range of shelf height options was noted. The thin 6mm smoked glass sits on lightweight steel shelves which simply bolt into a recess on the inside of the two vertical struts. Each strut has a T-shaped foot that houses a couple of spikes. It's a very simple design, which is fairly light for a glass/steel rack and appears to be less rigid than some of its contemporaries, due perhaps to the bolt together construction. Three finishes are available for this five-shelf rack, and the aesthetic has

SOUND QUALITY

to be described as 'classic'.

The clap test revealed a very quick sound decay, and a good tap gave a 'dead' hollow sound. That was encouraging and once the music started the Sound Organisation rack fooled me into thinking it was a wood-based item. Gone was the glassy ringing characteristic you might expect and in its place came a smooth performance with a natural sound. K d lang's wonderfully slick *Constant Craving* let the rack demonstrate its skill in smoothing out high frequencies and relaxing the attack of snare drums. Bass was a bit on the lean side but it timed well, and that's what is important.

CONCLUSION

All that performance for less than £200 certainly makes the Sound Organisation a winner. Its generous number of shelves and adjustability is a bonus on top of what is a great value, neutral sounding glass and steel rack.



TOWSHEND AUDIO SEISMIC SINK STAND

 CONTACT: 020 8979 2155
 www.townshendaudio.com
 G'TEE: 1 YEAR

 SOUND
 ★★★★★★
 VALUE
 ★★★★★
 £980.00

he Townshend name is legendary in the world of equipment support. We have used the older version, the Classic, here at *Choice* as reference for some time. Now we have the latest version, which has two interconnected air pillow load

cells, one at both top and bottom. The Classic literally 'hung' three shelves over an inflatable air chamber beneath the top shelf. This made the rack wobbly and fiddly to set up. These woes have been eased by the stability offered by the lower air chamber, and now no set-up is required. Once you've added some air via the schrader valve, you're away! There is however, limited room in those shelves, side access is impossible and some items like our NAD S500 CD player, were a bit of a squeeze, but wider versions are made. By decoupling the rack using air alone the Townshend goes a lot further toward total isolation than most.

SOUND QUALITY

After some experimentation with air pressure (lower is better), the Seismic Sink proved once again that it is a class performer. Compared to the Clearlight it has a lively, open sound that achieves an unmatched level of resolution by the standards of this group. The low end had terrific extension and control; bass detail came through effortlessly and so too did the midband resolution. Transparency was admirable and a marvellous open presentation was available whatever the material played.

CONCLUSION

The Townshend is now easier to live with but it's still the hero it always was. Must-have resolution and wonderful bass control combine with a full and open soundstage that lets the music weave its magic unhampered. It's not the least expensive rack on the market, but if you must have the best this is the way to go.

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CONCLUSIONS DAN GEORGE RACKS UP THE RESULTS...

his group test has given us a good balance of rigid and wobbly designs, and an opportunity to examine both methods of controlling electrical feedback energy. Whilst wobbly racks are not new, they certainly oppose the convention that has existed for quite some time that rigid, high-mass racks quickly transfer energy to the ground by managing energy locally. In this particular test, it emerged that the racks that can offer some local damping can also offer greater neutrality and give the least sonic contribution of their own.

The rack with the highest mass, the Apollo, seemingly contributed the most, and the low-mass Quadraspire performed well enough to become a benchmark in its price category. Well-deserved praise goes to Sound Organisation for an excellent value and highly competent product, and a clear (groan) winner from Atacama in the glass and metal stakes demonstrated how a new design perspective can really improve the performance of conventional materials. The mighty Kestrel Nightingale, although beautifully crafted, lost the sonic edge to the simplistic Quadraspire.

A closely fought battle for supremacy was contested by the Townshend and the Clearlight Audio. Both were excellent racks in their own right, and both resolved a level of detail that the others simply could not achieve – but one is around half the price of the other! Their ability to control or dampen energy seemed to allow a greater level of detail into the soundstage and retain a sense of timing that kept the music irresistible. The mighty Townshend clinched it in outright sonic terms, but at a price. As with all other aspects of hi-fi, if you are spending this sort of money you *must* audition the kit first, as one type of balance may be preferable for your sound or room, particularly if you enjoy a bright sound, or suffer with a reflective listening room.

"THE RACKS THAT CAN OFFER SOME LOCAL DAMPING CAN ALSO OFFER GREATER NEUTRALITY."

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BUYING TIPS

Buying secondhand 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 engineered down to a price. Do some research on which brands and products have a good service back-up, so if something does go wrong, you can get it fixed. Unless you purchase from a secondhand hi-fi dealer, you're unlikely to get any warranty. So it's up to you to ensure the fitness of any gear that you buy. Products such as speakers should be less prone to breakdown than amplifiers, and amps should be more reliable than CD players. But any abused component could be troublesome – have a proper dem, and judge the seller as well as the goods!

THE *HI-FI CHOICE* DIRECTORY ROUNDS UP OVER 1,000 PRODUCTS REVIEWED IN PAST ISSUES. HERE YOU'LL FIND OUR OPINIONS ON THE BEST HI-FI COMPONENTS, ALONG WITH GUIDANCE ON HOW TO ASSEMBLE THEM INTO FIRST CLASS HI-FI SYSTEMS.

THE ART OF SYSTEM BUILDING

HOW DO YOU GO ABOUT BRINGING TOGETHER AN IMPRESSIVE HI-FI SYSTEM? IT GOES A LITTLE LIKE THIS...

hen it comes to getting together a great separates system, identifying decent individual components is fundamental, but it isn't the whole story. There is the business of system synergy to consider, which put simply means how well your compo-

nents gel as a whole. The degree to which this can affect the end result tends to increase with price, thus budget components are relatively immune (a competitively priced Best Buy disc player, amp and loudspeaker pairing of almost any hue will combine to make a good system). When considering a purchase it's always good practice to listen to alternatives. It's the only way you can learn what different components sound like and find out which ones appeal to you.

So once you have shortlisted some components, the next step is to track down a knowledgeable dealer to take you through the options available. As well as getting the basic hardware right there is the question of which cables to use; should you stick with what comes in the box or pay extra for interconnects and speakers leads? We firmly believe that cables make a worthwhile difference, but if you are sceptical any dealer should be able to demonstrate this for you.

And don't skimp on supports. The temptation is to use any old shelf or sideboard for system and speakers, but it's worth the outlay for speaker stands and proper system support.

MAKING CONNECTIONS

WIRING UP A SYSTEM IS REALLY QUITE STRAIGHT-FORWARD IF YOU FOLLOW A FEW BASIC GUIDELINES.

■ When bi-wiring (see glossary) with speaker cable you will sometimes need to connect two plugs to one socket on the amp. If the amp has a binding post connection you can usually put one plug through the hole that goes across the post and one in the end. If this is not possible you may need to use spade connectors or have both pairs of cables soldered into single plugs at the amp end.

■ If a cable has an indication of directionality, i.e. if there are arrows on the casing, use these with regard to the way the signal travels. If there are no arrows you can try it both ways and see if you hear a difference or just route the signal in the direction of the writing on the cable jacket.

In multichannel AV systems you may have the option of routing video signals via the amp, or bypassing it. The former option gives easiest functionality if you use several sources, but by bypassing you are removing a switch and connection which should improve quality.
 Try to avoid lying mains cables across or beside signal cables as

the field they produce can have a negative effect.

Try to keep all cable runs as short as possible (unless you use Naim).

AWARD TAGS

Whenever HFC reviews a group of like components we have the opportunity to give the best products a Best Buy or Recommended award. Best Buys are considered to offer an excellent standard of performance at an attractive price. Recommended products are first class components losing out to Best Buy status only because of a higher price or less competitive overall sound quality.

A third award, the Editor's Choice, is reserved for those products reviewed solo, such as you see in the First Impressions or High Performance sections. An EC is awarded where the Editor is convinced that a product offers exceptional quality for the price.



DIRECTORY



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GLOSSARY

5.1 CHANNEL AUDIO: Six discrete channels, typically front 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: Recordable/erasable and re-

recordable CD, discs must be unfinalised before they can be re-recorded.

CLASS A: 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 give lower distortion. CLASS AB: Most practical amps oper-

ate in Class A for the first fraction of a watt and Class B thereafter. **CLIPPING:** An amplifier's output wave form 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. CROSSOVER: A simple electrical net-work which divides the full bandwidth signal received from the power amplifier, apportioning appropriate parts of the spectrum to the various drive units. 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) wavefor DOLBY DIGITAL DD (AC3): A com pressed (10:1) digital audio format that typically contains five or more entirely discrete channel, eg 7.1 EX where discrete side channe DOLBY PRO-LOGIC DPL: Forerunner to DD that 'steers' information to the front UR, centre and mono surround annels via an analogue matrix. DRIVE UNIT/DRIVER: A transducer which converts electrical energy into acoustic energy, eg bass driver, tweeter **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-4:** High resolution variant on DVD offering up to 96kHz bandwidth and 24bit dynamic range, discs are compatible with existing DVD machines. **ELECTRICAL DIGITAL:** Any digital connection that uses an electrical cable rather than optical. Includes the balanced (*AES/EBU*') interface.

FILTERS: Intrinsic to digital audio is the extensive use of filters, 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.

FINALISE (CD-R): The process of copy-

ing the Table of Contents from its temporary area on CD-R and RW to the final position where it will be recognised by ordinary CD players

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 whereby the clock, used to regulate the conversion of data into analogue audio, carries a degree of uncertainty.

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 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 psychoacoustical 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. NETWORK: see Crossover.

OUTPUT IMPEDANCE: A measure of resistance to alternating current, a source with low output impedance (say, below 100 ohms or so) helps ensure compatibiity with most amplifiers, even when using long or unusual interconnect cables. A high impedance, especially in conjunction with an amplifier with a low input impedance (some are as low as eight kOhms, although the standard is 47 kOhms) can result in audible treble losses.

PLL OR PHASE-LOCKED LOOP: A technique by which a clock of defined characteristics is used to generate a new clock at a different frequency from the original.

PRESENCE: 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: high resolution music only format developed by Sony/Philips and offering 100kHz bandwidth without digital filtering and its associated ills. 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 being more stringent than 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 amplifier output stages.

TREBLE: High frequencies, the top end of the audio band, eg above 3kHz. TWEETER: Treble driver.

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. WOOFER: Bass driver.

HEADPHONE SO POWER OUTPUT

ISSUE NUM

SPECIFICATIONS

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LINE

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6

AMPLIFIERS

PRODUCT	£	COMMENTS						
Affordable Valve Co. EL34	650	A real bargain on the face of it, but the sound is oh so soft, warm and old-valve. Too much of a good thing	4					40
Alchemist Kraken APD6A	599	Compact, with Darth Vader styling, yet sound quality is meek and mild, despite strong midband dynamics	5	•				55
Arcam Alpha 7R	300	Decent, if slightly system fussy amplifier that no longer pulls all the right strings	5	•		•	•	45
Arcam Alpha 8R	350	Workmanlike amplifier is well thought through, but is now beginning to show its age.	5	•		•		50
Arcam Diva A85	700	Much enhanced design topology give a more hard hitting, engaging sound than previous Arcams	7			•		85
Arcam Alpha 10	800	Although not the best sounding in its class, the Alpha 10's modular nature demands it be taken seriously	5					100
Arcam FMJ A22	1,000	Powerful, articulate, and expandable into a home cinema or multiroom amp/controller	7				•	10
ATC SIA2-150	1,984	An impressive sounding integrated amp with a dynamic, open and detailed sound	4				-	150
Aria S2	1,000	Glamorously packaged valve amp produces a real eyes closed, feet up kind of sound	4					12
Audio Analogue Puccini	450	Superbly finished, the entry-level Audio Analogue performs way out of its class	5	•	•			40
Audio Analogue Puccini SE	595	Upgraded, more powerful Puccini is disappointingly sluggish and curiously lacking in musical vitality	5	•				40
AVI S2000MI	999	Fine, detailed amplifier with excellent timing and strong control of a wide range of loudspeaker loads	5		-	•		100
and a second sec					-			
Bryston B60R	1,249	Great build, but the lazy bass and opaque treble bracket an articulate midband. Comes with 20 year guarantee	5				•	60
Cambridge Audio A500RC	200	Solid value, decent build and a surfeit of watts make this an attractive proposition, but it can sound slightly loose	6		-	-		50
Canary Audio CA-608	1,495	If you value the grand scheme of things and appreciate a bit of dynamic vigour this could be the amp for you	4	-	-	-		24
Chord CPM 3300	5,495	Very powerful yet compact amp with rather complex ergonomics and transparent sound. Oh, and a lovely blue glow	5			•		220
Copland CSA 28	1,249	Elegant Scandinavian cool, abundantly detailed if somewhat system dependent	5	•		•		60
Copland CTA 402	1,698	A unusually flexible valve amp with an attractive and textured sound	5	•		•		35
CR Developments CR324	569	Solid and capable on paper, this is a bit of a blunt instrument when let loose on the music	5					150
Cymbol CA1	499	Lacklustre amplifier tends to underperform with complex material. Best with straightforward compact loudspeakers	6					40
Creek 4330	279	Diminutive but classy amp will drive anything, and can be specified in various configurations	4	•				40
Creek 4330SE	499	Somewhat perplexing, though always interesting, miniature audiophile amplifier, needs careful system matching	5			•		50
Creek 5350SE	799	Smooth, open and articulate sound and quality build, but bass is a tad heavy handed	6			•	•	85
Cyrus 5	500	A enjoyable amp that is assured and unflappable, although detail is unremarkable	7			•	•	45
Cyrus 7	700	Welcome return to form for the Cyrus stable: this is the best sounding audio brick around	6			•	•	60
Denon PMA-255UK	140	Great beer-budget buy, with everything necessary for basic but decent high fidelity operation	5				•	30
Denon PMA-1500R	500	Recommended for its outrageous power, especially with problem speakers	5	•	•	•	•	70
Densen Beat B-100 MkII	650	High 'air guitar' factor, and can punch above its weight, but check it will complement your system	5					60
Exposure 2010	599	Neatly turned out amplifier, with mainstream appeal but bland with it	6			•		50
Electrocompaniet EC1-3	1,000	Basically good, but too many rough edges to warrant recommendation	6			•		75
Ezo Aria HE	449	Quick, detailed but aggressive and sometimes coarse sounding amp. Beautifully turned out, though	5				•	40
Graaf Venticinque	1,790	Smart and practical, but it just never seems to shine sonically	6	a la cara				25
Holfi Audis Signature	750	A 'no-feedback' circuit giving outstanding resolution, but significant load dependency	4	•				65
Kenwood KAF-3010R	180	Plenty of twiddly bits yet weak on inputs, and basically good, but somewhat uneven sound guality	4	•		•		70
Kenwood KAF-3030R	250	Highly capable amp with good treble, bass and fine detail	5	•		•	•	65
Kenwood KA-5090R	300	Large, well equipped and high tech integrated, but TRAITR output still gives a harsh, unsubtle performance	5	•	•	•	•	65
Krell KAV-500i	5,000	More at home in background listening/home cinema applications than out-and-out audio maniac set-ups	5			•		25
Linn Majik	845	Slightly rough and ready power amp modules, but capable preamp that can be expanded into a multiroom system	5	•		•	•	33
Lundahi Mag Amp	1,735	Unusual valve/magnetic amp hybrid with relaxed balance and good timbre	5					23
Marantz PM-6010 OSE	229	Good starter amplifier, with characteristic smooth, low key delivery	5	•	-	•	•	50
Marantz PM7000	300	Lots of power for the price, but detail and subtlety seem to have been sacrificed	6	•	-	•		11
Marantz PM6010 OSE KI Sig	400	Well-made, but somewhat ill-balanced amplifier that doesn't slot into most systems comfortably	6	•				50
Marantz PM-17 Mk II	999	Big, bold, but over-fruity balance – the 'fat uncontroller' as one put it	6		•	•		60
Marantz PM-17 KI-Signature	1,300	Full feature audiophile amp where the end results don't quite justify the fantastic ingredients	6			•	-	60
Mark Levinson No383	5.500	Extremely versatile design that thinks and acts like a serious pre/power. Sounds superb	5		-			10
	400	Externely versatile design that times and acts like a serious pre-power, sounds supero	5		-			55
Monrio Asty			6				<u></u>	
Musical Fidelity X-A2	500	A chip off the old block; sounds very similar to the X-A1 and XA-100R	5					75
Musical Fidelity A3	849	Similar to the XA-100R internally, and a little too relaxed for some		•	•	•		85
MVL A2	970	Curiously designed, and curious sounding amplifier with Sound Sentinel circuits to address perceived weaknesses	9	•			•	10
Myryad T-40	400	The T-40 is a well built and sensible, but needs more dynamics and finesse	6	•		•	•	50
Myryad MI120	600	Well styled, well built: a good, even tempered amplifier, although it can sound rather brittle	6			•	•	60
Myryad MI 240	1,500	Big and powerful integrated amp sounds clean and neutral if a bit short on musical tautness and dynamic tension	8	OPT	OPT	•	•	12
NAD C320	200	Excellent budget amp from the maker of the seminal 3020 offers better clarity and neutrality and good build	6			•	•	40
NAD C340	270	A classic NAD amplifier copes with any speaker, delivers plenty of power, and does so with calm decorum	6	•		•		50
NAD C350	300	A typical NAD: refined, warm tonality, adequate detail, and a strong power yield	7			•	•	60
NAD 317	400	Build quality aside, the current improved version is a real powerhouse, but smooth and detailed too	6			•	•	80
NAD \$300	1,900	Substantial integrated with loads of power and no shortage of finesse, slightly bass-strong	5			•		10
Naim Nait 5	799	As always with the Nait, less is more, and the Nait 5's 30 watts seem to go a lot further with some sources				•		30
Opera Aida	795	Low power (in practice) minimalist integrated amp, but the mahogany wings don't help it to fly	5	•	•			60
Pathos Classic One	995	Unusual looks and even more unusual electronic design, but compromised musical potential	5			•		55
Pioneer A-407R	230	Clean, consistent, finely detailed sound, good finish and (mainly) good build	5	•		•	•	4
Pioneer A-607R	300	Lively, articulate amp with plenty of drive and a hint of brightness	5	•		•	•	60
Pioneer A07	999	Curious blend of high-end attributes and inconsistent, though undeniably detailed sound	5	•		•		80
Plinius 8100	1,450	Slightly rough and ready, but plenty of balls from this stripped down antipodean.	6			•		10
Præcisa Acustica Sonoro	1,800	It is not often that transistor amplifiers are made to sound so palpably valve-like	5			•		10
Primare A10	500	Beautifully made, smooth and easy sounding, and though not overtly detailed or dynamic, is well organised musically	6			•		50
Primare A20 MkII	799	Everything except packaging has changed in Mk II version: but ballsier model has lost none of its refinement	5					70
Primare A30.1	1,500	Smooth, detailed singing quality, elegant appearance, and healthy power yield	6	-		•	-	10
Primare A30.1	1,499	Superb build and aesthetics, and undemonstrably musical down to its smallest screw	6			•		10
Restek Fantasy II	1,499	Muscular, but ultimately rather strident amplifier which needs careful system matching	6					10
Roksan Kandy KA-1	475	· · · · · · · · · · · · · · · · · · ·	6	-		•		
		Power with control, barely compromised by a small degree of dryness		•			•	12
Roksan Caspian	795	Mainstream Roksan line level amp works well under most circumstances	6			-		70
Rotel RA-931 Mk II	189	Simple, non-remote amp majors on clari y and transparency, without sounding over-analytical	4	•			•	35
Rotel RA-971 MkII	275	Improved RA971 is a chip off the old block: bags of power, but with added precision and clarity	6				•	60
Rotel RA-972	400	Better in the treble than the bass, which is a little too rounded and woolly	6			•	•	90
Sharp SM-SX1	3,300	Jewel like 1=bit digital amplifier with limited power reservers but offering glimpes of sonic magic	5			1 million		50
Sharp SM-SX100	10,000	The world's first stable, 1-bit digital amplifier is a technological milestone that should go from strength to strength	n/a		a sala sala			11

	STEREO A	MPLI	FIERS - INTEGRATED (CONTINUED)	LINE INPUTS	MM PHONO INPUTS	MC PHONO INPUTS	REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (W)	ISSUE NUMBER
STATUS	PRODUCT	£								
	Sony TA-FB940R	300	Technically innovative amplifier fails to cut the mustard with complex material	5	•	•	•	•	70	208
	T+A PA-1220R	1,445	Unique presentation and feature set, but sometimes rather relentless sound quality	7			•	•	100	189
	Tact Millennium MkII	7,000	This digital class D amplifier represents a bold declaration on the future expansion of digital audio in the home	n/a			•		150	194
	TAG McLaren 60i	500	Clean, slightly antiseptic sound from this beautifully turned out entry level Audiolab 8000LX replacement	6				•	60	189
	TAG McLaren 60iRv	1,000	Looks, feels and sounds better than the Audiolab it supersedes. Smooth, open, refined but lacks body and drive	6			•	•	60	184
	Talk Electronics Cyclone 1	550	Much improved build quality and silver finish, but the sound lacks physicality and can sound strained	6			•		65	196
R	Talk Electronics Storm 2	650	Crisp, clean, well defined sound, arguably lacking warmth, but a good midrange purchase overall	6			•		50	175
	Teac A-E2000	180	Has the potential to cause significant damage in the budget amp sector once the wrinkles are ironed out	6					50	195
	Technics SU-A660 Mk 3	200	Plenty of wellie for the price, but the sound can be a tad coarse and lacking in fine detail	5	•			•	37	186
	Technics SU-A808	300	Intriguing amplifier, with abundant detail but dynamically rather flat	6	•		•	•	55	196
	Thule IA60B	700	Dry, edgy and glassy sounding amplifier, though the balanced input may appeal to some.	6			•		60	214
R	Token Audio K50	350	Stainless steel finish, others available. Sound is warm and attractive, though a little undynamic	5					50	186
	Tube Technology Unisis Sig	2,400	A very attractive product which combines many classic valve attributes to good effect	5	•				30	202
	Yamaha AX-496	240	Lacklustre, if well equipped and powerful, amplifier shows some improvements over previous amps, but not enough	6			•	•	85	208
R	YBA Intégré	1,550	Careful system matching is essential, but this is definitely one of the good guys	6			•		50	214

STEREO AMPLIFIERS – PRE/POWER AMPLIFIERS

	PRODUCT Amp Flux System 2	£ 3,000	COMMENTS Three-box affair with a clean, spacious sound and plenty of slam. A touch steely, but undeniably potent	5		1000			50	
	Alchemist Kraken APD7A/8A II	1,098	Unusual looks and unusual sound too, rather rough and lacking detail	6					55	t
D	Arcam Alpha 9C/10P	1,098	Well specified and flexible preamp with sound only just lacking in greatness	6			•	•	100	t
BB	Arcam Alpha 9P	400		1			•	-	60	2
88	Audio Note M Zero/P Zero	998	Clear, colourful and well-disciplined, the Arcam is a strong all-rounder that can compete with conviction	5					8	-
-			Neat shoe box-size components. Able to impart music with real life and soul when partnered with P Zero power amps	C. St. St. A. St. St. St. St. St. St. St. St. St. St	•			-		-
R	AudioNote M2Phono/P2SE	3,198	Wonderfully natural and inviting sound with great warmth and drama, but limited loudness capability	4		-	-		18	
EC	Audio Research LS25 /VT100	11,489	This is not so much a fine valve amp, as a fine amplifier, full stop (LS25 MkII/VT100 MkII)	6	•		•		100	
EC	Border Patrol 300B SE	3,995	Single ended valve power amp with passion, grace and fire, and plenty of grunt to boot	1					8.5	2
_	Bow Technologies Warlock/Walrus	6,490	Heavyweight dual mono pairing with superb build and rich, refined sound	5			•		150	ļ
R	Bryston BP20/3B-ST	2,850	Recommended for pretty much any demanding application	8			•	•	120	
	Cary CAD 2A3SE	1,575	Monoblock valve power amp. Low power but gives delightful speed, coherence and transparency	1					5	
	Chord SPM-4000	8,500	Sound is as stylish as its appearance is bold. Probably one of the best amps you are likely to hear	1					410	
BB	Creek P43R/A52SE	949	Excellent sound, remote control operation and upgrade options from fine value preamp.	6			•	•	100	l
88	Creek P43R/A43	1,148	Great value and a podium performance earning a best buy	6			•		140	
	Crimson 620C	875	Not entirely satisfactory power amp which has dynamic strengths, but underachieves when the volume is raised	1					50	
R	Crimson CS610/CS630	1,250	Good, clear sound, including a decent phono stage, but flexibility is limited. Slimline monoblocks with grunt and finesse	3	•				100	
BB	Croft Vitali/Series 5C	1625	Oddball retro style and ergonomics, but truly magical voice coherence and projection, great transparency	3	•				30	
	Cyrus Power	498	Detail and midband clarity and stand-out qualities. Smooth and refined with most types of music but bass-soft	1	Sec. 1				50	Ĩ
R	Cyrus aCA7.5/Smart Power	1,250	Great for classical, jazz, and existing Cyrus owners, recommended	7				•	60	1
_	Cyrus aCA7/aPA7	2,694	Low feedback power amp design that's a positive departure from the transistor norm, preamp is functional but not as impressive	5			•	•	150	
	Cyrus aCA7.5/PSX-R/aPA7	2950	Very stylish 4-box modular system, slight forwardness delivers oodles of clarity and detail	7	1999		•	•	150	İ
	Densen Beat B-200	1,000	A versatile preamp with a high 'air-quitar' factor and Densen's characteristic styling	6	•	•	-		150	
8	Densen B-300	800	Expensive but highly musical. Colourful and and warm sound with strong timing and listener involvement	1	-				100	Ť
R	Densen Beat 200/300	1, 850	Classy jet black cast boxes pack plenty of punch with good total musical coherence (remote L300 extra)	6	OPT		OPT		100	1
	Electrocompaniet EC4.7/120DMB	3250	Bulky Norwegian combo has wonderful broad-band transparency, wide dynamic range and fine musical tension	6	UT		•		120	-
EC	Gamut D200	2,995	Single MOSFET pair per side gives tremendous resolution and timing (balanced only). Formerly Sirius	1					200	ŝ
EC	Levinson No380/No334	9,490	Preamplifier combines precision and warmth with unusual configurability, power has refinement, authority and transparency to spare	6			•		125	ł
EC	LFD Mistral Linestage/Power			6					60	No.
		898 990	Strong ergonomics, generally decent sound, but a little lacking in detail	9	•	•				-
	Linn Kolektor/LK85		Beautifully tuned out machine, yet slightly bland, aimed at an all Linn system	6		-			62	-
	Michell Orca/Alecto mono	3,600	Line-level design with a gorgeous remote and focused, spacious sound				•		100	ļ
R	Moth 30 Series Monoblocks	879	Tested with Active Preamp. Demonstrated solid balance and proved adept at delivering vital musical qualities	1					100	ļ
	Moth 30 Active LS/60 Stereo	948	Excellent-sounding ultra-simple miniature preamp, power amp lacks finesse and control, however	4		1			60	Ì
	Muse Model Three	1,990	Natural sounding tranny preamp with useful audiophile features. Works beautifully with 160 power amp	5			•			
R	Musical Fidelity X-P100	800	Good long-term listening prospects; detailed and a little fruitiness (tested with X-A200 power amp)	6	•		•			į
	Musical Fidelity NuVista 300	3,300	Powerful smooth sound with tremendous bass extension. Capacity to fulfil the demands of the most dynamic material	1					350	į
	Myryad MA120	450	Based on MI120 integrated – see latter for comments, but sounds significantly better when bi-amped with MI120	1					60	į
R	Myryad MP100/MA240	1,600	Smart finish and impeccable manners, smooth, clean performance	6			•	•	120	Î
R	NAD 114	270	Beer-budget preamp which sounds focused, detailed and consistent	6	•	•		•	-	į
R	NAD Silverline S100/S200	2,000	Beautifully built kit that sounds as good as it looks with heaps of power	7		15 - 1975 1975	•		200	ŝ
EC	Naim NAC112/NAP150	1,375	Clean, clever simplicity, plus a very well balanced sound that's much sweeter than earlier Naims	6			•		50	ĺ
	Naim NAC112/NAP150/FLATCAP 2	1,800	Adding a FLATCAP 2 brings a very worthwhile sonic upgrade to the basic NAC112/NAP150 combo	6	1		•		50	Í
	Naim NAC102/NAP180	2,122	More of a 'character act' than a neutral reproduction system, majors on excitement at the expense of subtlety	6			•		60	ſ
EC	Naim NAP500	10,000	Wonderful neutrality, bandwidth and dynamic range, plus Naim's traditional leading edge definition	1					140	Ĩ
-	Quad QC-twenty four/II-forty	4,000	A classic valve amplifier in circuitry and sound, but with modern ingredients and gorgeous retro styling	7					40	
R	Rega Hal/Exon	2,194	Passive line stage dedicated to Exon monoblock power amps, bold outgoing, in-command sound	6	•	•	•		125	
BB	Roksan Caspian Power	595	Excels musically and in conventional hi-fi terms. A power amp for people with long-term satisfaction in mind	1					70	Ĩ
_	Rotel RC-971	150	Low price is offset by rather coarse sound quality with certain types of music. (Tested with RB-971 power amp)	5				•		ŝ
BB	Rothwell Indus/Rubicon	1448	Quirky valve combo with passive pre-amp has a lovely neutrality and consistency across a wide dynamic range	6					10	Î
	Samuel Johnson pca100	1,800	Stylish wood and metal facia - precise, clean sound with an emphasis on leading edges	6			•	•		t
	TAG McLaren PA20R/125M	1,500	Clean, detailed sound but limited thrill power	6			•		145	
	Talk Hurricane 2L/Tornado 2	1,249	Design of integrity which gets to the heart, if not the soul, of the music	6					65	Î
	Technics SU-C3000	2,997	Price includes SE-A3000. Supremely clean and even sounding combo, though it could be more musically involving	5	•				05	-
	Technics SU-C1010	300	Price includes se-Asuou, supremely clean and even sounding combo, though it could be more musically involving Although the sound's basically all there, it's arguable that a good integrated offers more, for less	6			•			
	the second s			1	-				100	
	Thule Spirit PA100	600	More successful than matching preamp: sound is gutsy and lively, and generally clean	State State State					100	1
	Thule Spirit PR150B/PA150B Unison Research S8	1,600 2,950	The limitations in the sonic performance mean that the competition has more to offer Outrageous Italian styling and an egually melodramatic sound, with splendid voice projection and tension	6 5			VOLUME		150 24	Ľ

	PHONO ST	ſAGE	S		MM PHONO INPUTS	MC PHONO INPUTS	REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (W)	ISSUE NUMBER
STATUS	PRODUCT	f	COMMENTS							L
	Clearaudio Symphono	740	Slightly inconsistent balance marrs the performance of this lively performer	0		•				201
R	Creek OBH-9	160	A neat little unit with an essentially neutral and listenable character	0		•				189
	Cyrus aEQ7/PSX-R	826	Very hi-tech product which tends too much towards smoothness except at climaxes, which can be rough	0	•	•				189
	Densen DP-Drive/DP-02	350	Quite unusual design in many ways: sound is mostly good but never quite shakes off a 'synthetic' quality	0		•				189
R	Electrocompaniet ECP-1	495	An excellent phono amp that combines well-rounded balance with detail and low noise	0	•	•				189
BB	Moth 30 Series Phono	249	Fine sound all round, in any kind of music, from this bargain phono stage	0	•	•				189
	NAD PP-1	40	A basic phono stage that does its job rather coarsely: a bit bass-shy too	0	•					189
R	Pass Labs XOno	2,995	Not absolutely neutral, but the overall result is so beguiling it's hard to resist	0	•	•				201
R	Primare R-20	500	Fights a little shy of densely scored music, but generally an enjoyable and neutral performer	0	•	•				201
R	Pro-Ject Phono Box	40	Moving-coil compatibility is a dubious extra in a way, but MM performance is acceptable at this giveaway price	0	•	•				201
R	QED Discsaver DS-1	35	It's cheap, it's chee ful, it's OK - perfectly adequate for use with a phono-less integrated, though not very refined	0	•					189
	Roksan Artaxerxes X/DS1.5	1,150	Delicate and well balanced, slightly congested at climaxes. Power supply expensive, but runs two Roksan components	0	•	•				189
	TAG McLaren PPA20	1,500	One of the best-equipped phono stages available. Resolution is excellent, but timing is marginally behind the best	0	•	•				187
R	Tom Evans The Groove	1,800	Plenty of detail, excellent imaging and almost flawlessly neutral: a good choice for information retrieval off any LP	0		•				201

			LIFIERS	LINE INPUTS		MC PHONO INPUTS	REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (W)	
JS 🛛	PRODUCT	£	COMMENTS							1
R	Arcam AVR100	800	A solid sounding and well-engineered A/V amp with an affordable price tag. Good with music and well suited to smaller rooms	6			•	•	70	
R	Arcam Alpha 10 DAVE/10P	2,500	Packed with a diversity of electronics that against engineering odds sounds extremely good	5			•	•	110	
BB	Arcam FMJ A22 DAVE/P25	2,850	Powerful, authoritative, great stereo, excellent home cinema - what more can you want?	7			•	•	100	
	Cyrus AV5	1,000	Few processors are as adept with music. An effective multi-channel solution for music fans	4			•		N/A	
	Cyrus AV5/SmartPower	2,650	Refined, detailed and attractive, but ultimately lacking in balls.	3			•		60	
BB	Denon AVC-A1S0E	1,200	State of the art sound quality, a strong feature set and reasonable pricing. What more could you want?	11	•		•	•	125	
R	Denon AVR-3300	800	Not as powerful as Denon claims, but nonetheless capable of impressive high-fidelity multi-channel sound	4			•	•	75	
BB	Denon AVC-A1SE	2,500	A powerful, articulate 7.1-channel integrated amp, loaded with features and equally and home with music and film soundtracks	12	•		•	•	170	
	Kenwood KRF-V7773D	800	Bold, detailed presentation, but there are some technical limitations and a slightly mannered quality, especially with music.	10	•		•	•	120	ĺ
	Kenwood KRF-V9993D	1,300	Complex amp that rocks with home cinema but loses out with music	7	•		•	•	110	
BB	Marantz SR5000	500	Something of a rough diamond, but a powerful and entertaining package	5			•	•	105	
88	Marantz SR7000	700	Excellent at the price, and almost equally effective with 2-channel music and multichannel AV.	9			•	•	100	
	Marantz SR-14EX Mk2	3,250	A weighty beast, with 7.1 processing but only five channels of amplification as standard. Highly capable with both music and movies, but rather costly all-in-all	8			•	•	140	
0	Musical Fidelity HTP/HT600	3,998	A very well matched pairing with considerable musical talents	8			•		100	
R	Myryad MDP500/MA240/MA360	3,800	Superb three-box, five-channel A/V amplifier. Great with movies and beats most multichannel amps hands down with music	9			•		120	
BB	NAD T760	650	More than adequate home cinema receiver that unusually doesn't muck up the music	7			•	•	60	
	NAD T770	1,000	Lacks both transparency and subtlety while the omission of dts will be a drawback for some at this price	5			•	•	90	
	Nakamichi AV-10	1,000	A ve y powerful AV receiver that's easy to install and set-up with a civilised and subtle performance	4			•	•	140	
R	Onkyo TX-DS989	2500	Authority personified, excellent AV signal processing, but sound quality a tad unsubtle.	9	•		•	•	160	
	Pioneer VSA-E08	1,300	THX circuitry gives home cinema material a boost, but this is not an obvious first choice for music.	10	•		•	•	100	
	Pioneer VSX-908RDS	1,000	A flexible heavyweight AV receiver whose sound is just a little too stodgy and lacking in crispness	4			•	•	80	
	Primare P30/A30.5	3,700	No 5.1 channel input for DVD-A/SACD but capable of almost uncomfortable realism with real solidity and drive	8			•		120	
R	Roksan DSP/5 ch amp/VSU	2,440	Clean, powerful stereo expanded seamlessly, if without distinction, to 5.1 channels.	4			•		80	
R	Rotel RSP-976/RMB-1075	1,700	+A potent and enjoyable two-box beast that gets to the heart of both music and movie sound	8			•		120	
R	Rotel RSP-985/RPB-985 MkII	2,400	The hugely versatile processor is the weaker subjective link in this otherwise impressive combo	3			•		130	
	Sony TA-E9000ES/N9000ES	2,300	Big, gold, powerful and remarkably versatile but fails to cut the sonic mustard	5			•	•	110	
R	Sony VA777ES	1,500	Smart circuitry gives this model unusual precision and transparency, and it is a fine all rounder 9	9			•	•	100	
EC	TAG McLaren AV32R EX	2,749	A flexible A/V processor, unusually good with music. Would form the heart of a top-class multichannel system in standard or 7-channel 'EX' form	6			•		-	
	Technics SA-DA 10	500	Lower mid-market AV amp has all the right ingredients, but fails to stir the soul	5	•		•	•	80	
	Technics SE-A1010/SU-C1010 x3	1,350	A preamp plus three stereo amps provide a six-channel A/V solution without complex processing. Visually stunning but low on grunt and detail	6			•		70	
	Yamaha DSP-AX1	2,000	An anorak's delight, and one of the most flexible and effective soundfield creators ever conceived	11	•		•	•	110	

	CAD				SF	'EC	IFIC	ATI	ONS	
			TERCONNECTS (PRICES PER TERMINATED METRE PAIR)	SYMMETRICAL	COAXIAL	STRANDED	SOLID CORE	COPPER	DIG CABLE TYPE	
STATUS	PRODUCT			₽	∎ ₽		<u></u>	₩.	<u><u> </u></u>	<u> </u>
511105	Acoustic Precision Eikos	89	Not entirely neutral: probably best suited to upbeat music. Very stiff construction		•	•		•		188
	Audioquest Sidewinder	40	Suppresses the sound. At this price it's a disappointment		•		•	•		211
R	Audioquest Coral	99	Slightly forward imaging hardly detracts from its excellent tonal qualities and detail	•		•		•		200
R	Cable Talk Advanced 3	35	Good sound and great detail, but a slight brashness in the treble	•		•		•		211
R	Cable Talk Studio 2	65	A first-class performer from tonal, dynamic and rhythmic standpoints	•		•		•		160
	Cambridge Pacific	30	Lacks subtlety and bass impact but is othe wise quite serviceable for the price		•	•		•		176
R	Cambridge Audio Studio Ref	40	Dynamic cable with strong soundstaging and only a slight lack of detail		•	•		•		160

	ANALOGU	JE IN	TERCONNECTS (CONTINUED)	SYMMETRICAL	COAXIAL	STRANDED	SOLID CORE	COPPER	SILVER	DIG CABLE TYPE	ISSUE NUMBER
TATUS	PRODUCT	£	COMMENTS								
	Cambridge Silver Spirit 60	100	Good bass but a lack of detail and differentiation of instruments	•		•		•			188
R	Chord Calypso	30	Informative, clear sound at a decent price			•		•			211
	Chord Cobra 2	50	Good, strong sound with full-bodied music, less happy with smaller forces			•		•			176
	Chord Chameleon 2	90	Deep bass is fine but despite that the sound can be a bit hard and lacking body and resonance	•		•		•			188
R	Connections Midas HD	39	Canary yellow cable with excellent plugs and an open sound. Slight treble glare	 •		•		•			160
R	DNM Reson	40	Seemed a little harsh in the test system, but can work well and should be tried				•	•			200
BB	Ecosse The Composer	29	A high degree of realism and delicacy, and a fantastic price		•	•		•			211
	Goertz M1 Interconnect	145	Soft sound lacking in bite, with excessive and plummy bass (NB sample used in review was only 0.5m)				•	•			176
	Insert Audio IC100 MkII	47	Mostly good sound is let down by pervasive dryness			•		•			176
R	Insert Audio Image 5.1	85	Very good detail and imaging: perhaps a touch bass-light		•	•		•			200
BB	Ixos Gamma Audition II	30	Detailed and neutral, with just a hint of pleasant mellowness	•		•		•			211
	Ixos Gamma 1002	39	Lumpy bass, grainy treble, and poor integration. Nice colour, though			•		٠			176
	Ixos 1000	90	Nothing badly wrong, just a little bit bland and outshone by others at the price			•		٠			200
BB	Kimber PBJ	68	Assured sound, solid and natural bass and clear treble excellent performance all round			•		•			188
R	Kimber Hero	110	Slight roughness detracts from some music; seems well suited to rock and jazz. Lively and detailed	•		•		•			176
R	Moth Ley Line Black	100	O fers a full sound, neutral yet very solid and confident in delivery. Expansive imaging retains music's energy	•		•		•	•		108
	Moth Ley Line Grey	200	Detailed, but there's a sense of distance between music and listener: vocals are coarse rather than liquid			•		•	•		108
	Nordost Black Knight	60	Flat black cable that is distinctive but slightly coloured - but not in a wholly negative manner			•		•			160
R	Nordost Solar Wind	85	Good tone and dynamics, with just occasionally a touch of bass-lightness in busy music				•	•			188
R	Nordost Blue Heaven	145	Very good bass and only slightly grainy treble add up to a well integrated, natural-sounding cable				•	•			176
	Precious Metals SS35	50	Extended bass, but dry character suits electronic music better than acoustic		•	•		•			188
	Profigold PGA301 Mkll	40	Mellow and well rounded, but can seem a little heavy	144 144-10	•	•		•			211
R	Prowire VHQ	10	This crisp cable lacks a little refinement, but it's great for the price		•	•		•			211
R	Prowire Silver	60	A good cable in every way, with just the occasional hint of coloration and coarseness			•			•		176
R	QED Qunex 1	20	Well balanced, and easily rivals more expensive cables		•	•		•			211
BB	QED Qnect 2	30	Very well balanced, refined and detailed, this is everything a good cable should be, and excellent value			•		•			176
R	QED Qnect 4S	70	Some coloration and roughness in the midrange and treble, but bass is gratifyingly solid			•		•			188
R	QED Qnex Silver Spiral	90	A great cable for lovers of big sounds			•		•			200
	Reference CS1	75	A moderate performer, with a little coloration and a tendency to lose bass at climaxes			•		•			188
	Silvertone Ex-Static	35	Pleasantly unfatiguing and competitively priced cable that lacks detail and insight		•	•		•			160
BB	SonicLink Silver Pink	35	Dynamically sensitive and muddle-free. We're unsure about the flesh-coloured finish, though	D		•			•		160
R	SonicLink Black	49	Nickel-plated copper with a slight dryness in the bass and a hint of treble roll-off don't compromise integration	•		•		•			176
	SonicLink Lilac	65	Some dryness can affect transient sounds, though tone is generally good, especially in the bass			•		•			188
	SonicLink Violet	85	Better bass than treble – a little dry in the upper octaves			•					200
R	Straight Wire Chorus	40	A very confident cable with good bass, though perhaps a shade of treble loss			•		•			176
R	Straight Wire Sonata	80	Tonal balance favours lower frequencies but despite this it's a very listenable cable		•	•		•			188
	Straight Wire Encore II	100	Slightly variable bass performance is a weakness in this otherwise capable cable			•		•			200
BB	Supra EFF-ISL	80	Excellent sound in all areas — nothing to criticise	•		•		•			188
R	Tara Labs Prism 22	64	Mild tendency to plumminess offsets some hardness in complex music with mixed results		•		•	•			188
	Tara Labs Prism 55-i	195	Good with laid-back music, but seems lazy with more exciting material	•			•	•			200
BB	TCI Viper	55	Fine performance in all areas: just the smallest hint of sibilance. Very good value	•		•		•			200
BB	van den Hul PB5	50	A highly neutral cable with fine dynamic and rhythmic performance too - excellent		•	•		•			188
R	van den Hul Source HB	65	Price for 0.8m. Hybrid carbon-fibre/copper cable that is a paragon of naturalness		•	•		•			160
R	van den Hul D102 MkIII HB	80	A fine cable, but the competition has crept up and it no longer leads the pack			•		•			200

DIGITAL INTERCONNECTS (PRICES PER TERMINATED METRE PAIR)

STATUS	PRODUCT	• £			- 1 - I		
R	Audioquest Digital One	35	A neutral and capable cable that adds little or no character to the sound	•	• •	E	207
	Chord Optilink	40	Beautifully made, but performance is practically indistinguishable from other, cheaper, Toslink leads			0	207
R	Chord Prodac	50	Price for 0.6m length. Lively detailed treble, drives music along confidently with no hint of fizz	•	• •	E	131
	Ixos 1051-100	39.95	Plenty of bass, and detail seems good, but there's a loss of involvement	•	• •	E	207



	ITER	CONNECTS (PRICES PER TERMINATED METRE PAIR)	SYMMETRICAL	COAXIAL	STRANDED	Solid Core	COPPER	SILV	DIG CABLE TYPE	
	f f		P	<u> </u>		∎ ^ଲ ∎	₩.	₩.	PE	
Moth Leyline Datalink	120	A thin, coaxial version of Leyline Black with a rather hard and unforgiving character. Too expensive							E	
QED Qunex P75	25	A superbly capable interconnect that's highly detailed and well balanced		-		•			E	
Ross OP004	19.99	Sounds much like most other Toslink leads: slightly lacking detail, but good value					-		0	
SonicLink Digital Optical	30	Possibly slightly more detailed than other opticals, but still no match for a decent electrical digital link						- and the second second	0	
SonicLink Green	60	Spacious, positive and engaging if a bit over-crisp at times — very compelling, however		•		•		THE OWNER WATER OF THE OWNER OF T	E	
Straight Wire Info-Link	300	A good cable, but bass seems a little light and detail suffers a little at climaxes							E	
van den Hul Optocoupler	49.95	Noticeably has the edge over other optical leads, but still second best to electrical types							0	
van den Hul The First	140	Exceptionally natural albeit slightly cautious compared to some. Plenty of subtle information and integration		•					E	
		CABLES (PRICES PER METRE LENGTH)								
S PRODUCT ALR Jordan QMM	∎ <u>£</u> 5	COMMENTS Generally neutral, if sometimes bass-shy, but not very communicative	•	-		-				
Audio Note AN-B	16.50	Well suited to valve systems, elastic bass, methodical but unintrusive and musical								
Audio Note AN-L	29.50	Fruity base and expressive vocal rendition was appreciated by the panel, which was happy to accept its foibles	•			•		•		
Audio Note AN-SP	150	A calm and civilised presentation, very quiet in the way it reveals subtle low level detail. Great poise and clarity	•			•		•		
Audioquest Slate	15	Capable across the board, with just the smallest degree of dryness, but very listenable				•	•			
Bandridge LC7409	4	Detailed and up-beat cable. A bit too steely for classical strings			•		•			
Cable Talk Talk 3.1	2.25	Quite well-balanced but tends to lose bass lines in complex music	•		•		•			
Cable Talk Talk 4.1	4.25	Smooth and cultured sound that lacks fine detail and is a bit too restrained			•		•			
Cable Talk Flat 2	5	Rather unexciting sound, with variable bass and dry voices	•		•		•			
Cable Talk Concert 2.1	8	Can make stereo images recede, and favours the upper bass	•		•		•			
DNM LSC350	6.95	Majors on midband and lower treble lucidity at the expense of bass and extreme treble extension	•			•	•			
Chord Company Odyssey	17	Relatively vice-free cable with good detail throughout the range and generally neutral bass	•		•		•			
Chord Company Rumour 2	10	Performance is listenable enough but fails to excel in any area	•		•		•			
DNM LSCB500	12	High impedance can influence the treble response, but this was a winner on sound per pound. Bi-wire	E.S.			•	•			
Ecosse Reference CS-2.15	12	Stereo and rhythm are good, but persistent dryness detracts significantly	•			•	•			
Electrofluidics Monolith 2020		Excellent bass extension and very fine performance elsewhere - one of the best cables available all round	•			•	•			
Gale XL189	1	Slightly bright and not too subtle, but a perfectly acceptable cable for any starter system	•		•		•			
Gale XL315	2	A little lacking in detail but plenty of life and excellent value			•		•		10.00	
Gale XL160-2	2.50	Rhythmic and bouncy-sounding bi-wire cable. Can be slightly manipulative		1	•		•		e la	
Goertz M2	32	Remarkably detailed, smooth, neutral and with excellent bass; check amplifier compatibility	•			•	•			
Hitachi LC-OFC	7	Very crisp, very clear and very confident. In the right system would be very expensive to better	•	-	•		•			
Ixos Gamma 6003	2.99	A little midrange dryness, but bass is among the best at this price, strong and consistent	•		•		•			
Ixos Gamma 6006	5	Bass is better than treble, which can become spitty and sibilant – though only slightly	•	-	•		•			
Kimber 4PR	4.90	Considering the price, this cable's very slight dryness is forgivable when everything else is so right		•		•				
Kimber 4VS Kimber 4TC	8.50 18.80	A good mix of virtues including particularly fine bass A well-balanced cable with good performance in all areas	:		•		-			
Kimber 41C Kimber 8TC	348	A well-balanced cable with good performance in all areas Very capable in all areas, particularly good at imaging and with firm bass. Price for 5m terminated pair					•			
Linn K20	4	very capable in all areas, particularly good at imaging and with firm bass. Price for sm terminated pair Seems to work best with lively, unsubtle music – can be dry and edgy								
Monster Cable Z1	12.50	Slightly bass-rich balance, and could do with a bit more detail			•					
Naim NAC A5	5.5	A 'dinosaur of a cable', this stiff wire rod doesn't belong outside Naim systems, where it works a treat		1000				1000		
Nordost Octava	3	Fair bass but confused treble and some coloration	•			•				
Nordost Flatline Gold II	9.50	Exciting sound but a bit too 'in-yer-face', and bass is not always even				•				
Ortofon SPK100	3	Grey-sounding — strips instruments of their natural richness and resonance. A bit bass-shy, too								
Ortofon SPK200	4.99	Good strong bass and fair detail, only slightly marred by a little dryness	•				•			
Ortofon SPK300	8	Tremendously open and atmospheric, with robust, full-blooded bass — if slightly bright at times				•	•			
Precious Metals SL102	10	Unusual construction gives rather strained sound, only really cheering up with simple musical textures	•		•		•			
Profigold Silverflex LC8258	4	A pretty-looking cable that does little to offend but is let down by some congestion	•		•		•			
Prowire Out of Sight	1.99	Special-purpose cable for laying under carpets etc. Fair sound across the board	•			•	•			
Puresonic 7845	1.95	Big, weighty sound — but too messy and bloated for its own good	•		•		•			
Puresonic 7891	2.85	Chunky cable design; shame about the sound quality	•		•		•			
QED Qudos	2.25	Despite high-tech design and excellent Air-Loc plugs, its music-making failed to gel			•		•			
QED Qudos Silver	5	A few minor flaws but overall performance is very assured for this price	•		•		•			
QED Profile 4x4	9	Good midrange and treble balance, but bass is rather slack and detail not outstanding								
QED Profile Silver 12	15	Very slightly laid-back, but good tone and detail - wears its achievements lightly	•		•		•			
QED Genesis Silver Spiral	30	Commendable bass, with a little dryness and mildly compromised imaging: good, but not the best at its price	•		•		•			
SonicLink S300	18	Happiest with simple music; tends to smudge detail in complex pieces	•	1	•		•			
SonicLink AST50	1.95	It may look like bell-wire, but AST50 sounds detailed, ordered and balanced			•		•			
SonicLink AST75	2.95	Unusual materials and rather unusual performance too, strong on excitement and with plenty of bass	•	100	•		•			
SonicLink AST150	3.95	Slightly plummy bass and a useful way of holding musical strands together			•		•			
SonicLink AST200x2	5.95	At its best with exciting music, this cable seems shy of subtler details	•		•		•			
SonicLink Rebel	7.50	Plenty of bass, but without sacrificing upper frequency clarity or dynamics	•		•		•	1000		
Straight Wire Duo	3	Not so subtle and lacking some detail, but sound is consistent with level and musical style	•		•		•			
Straight Wire Rhythm	6	Its major flaw seems to be woolly and indistinct bass, which pervades most types of music	•		•		•			
Straight Wire Quartet	8	A good all-rounder with full tone, clear detail and natural ambience	•	-	•		•			
Supra Classic 6.0	4.95	It's all there, but a persistent lack of detail seriously mars the view	•		•		•			
Supra Ply 3.4	6.95	Clean sound which stays together well at high levels, with full bass – perhaps a touch of treble restriction	•		•		•			
Supra Ply 3.4/S Tara Labs Klara	7.95	Good in all areas with rich bass and just a touch of treble roughness	•		•		•		1935	
Tara Labs Klara Tara Labs Prism Nexa	2.95 9.95	A good budget cable with an even spread of virtues – and very minor vices – across the board	•		•		•			
Tara Labs RSC Prime 500	9.95 36	Slight tonal softness affects both bass and treble, but the overall sound is very listenable More suited to melodious music than anything with hite and drive with only moderate detail	•		•		•			
TCI Python	7.99	More suited to melodious music than anything with bite and drive, with only moderate detail No single major sin, but detail is not outstanding and rhythm isn't always completely solid	•		-	•	•			
Townshend Isolda	50	Superb sound all round, and amplifier compatibility enhanced by included stabilising inductor				•	-			
van den Hul The Snowline	5.49	A hint of high-end civilisation with a few rough edges and a slightly warm balance			•	-				
van den Hul The Clearwater	7.99	Despite its evocative title, the Clearwater turns out to be a disappointingly murky-sounding cable						•		
van den Hul Royal Jade	10.99	Lots of technology, but sound suffers from dryness and woolly bass	•							
					TRANSFERRED	ACCOUNTS OF	Constanting of	COLUMN AND		
	MAINS CAI	BLES	AND CONDITIONERS	SYMMETRICAL	COAXIAL	STRANDED	SOLID CORE	COPPER	SILVER	ISSUE NUMBER
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STATUS	PRODUCT	£	COMMENTS							
	Clearaudio Accurate Power Gen	1,090	Compact and beautifully finished unit that offers positive sonic benefits that justify the price							206
R	Lynwood Electronics Mega Power	295	Reasonable price model that improves focus while producing a sweet, tight and clean bass							206
8	PS Audio Power Plant	1,200	ower Plant improves the cleanness and separation of individual voices and instruments, giving an impressive 3-D quality							206
	GTA PHY-HP board	299	Oozing style and quality, the board generates an extremely natural and truthful sound							206
88	Russ Andrews Kimber/Power Block	350	Improved version that elevates music to a cleaner and more three-dimensional experience with greater stereo imagery							206
	Russ Andrews The Purifier	250	More ambitious version of the Silencer that gives a cleaner, quieter background, allowing more low level detail							206
88	Russ Andrews Silencer	40	A cost effect solution to noise-free mains supply that reduces 'hash' without losing brilliance and immediacy							206
	SonicLink S-Gold mains	225	Delivers a clean incisive sound with excellent detail, clarity and with no increase in noise							206
R	Trichord Research Powerblock500	300	Isolation transformer that bolsters clarity, openness and gives an increased refinement making for a purer and natural sound							206

	<u> </u>	-			S	PEC	IFIC	AT	ION	S	
	CAS	S	ETTE DECKS	DOLBY C	DOLBY S	DOLBY HX PRO	3-HEAD		AUTO CALIBRATION	ADJUSTABLE BIAS	ISSUE NUMBER
STATUS	PRODUCT	• f	COMMENTS								
	Harman/Kardon TD420	250	Minor inconsistencies detract from a well-conceived, minimum features design	•		•					140
	Harman/Kardon TD450	350	Draw loader with poor tape navigation features; good midband but shallow bass	•		•	•			•	164
88	JVC TD-R472	200	Excellent auto-reverse deck which doesn't suffer the usual disadvantages and is very sharply priced	•		•		•		•	158 -
88	JVC TD-V662BK	270	Assured, clean and agile-sounding recorder, if not quite the most refined in its class	•		•			•	•	146
	JVC TD-W718	300	Twin deck. Good for creative live recording, but no timer standby. Respectable performance	•		•	•	•	•		171
я	Kenwood KX-W6080	200	Modestly decent-sounding twin deck, with some transport instability and ragged bass	•		•	•	•		•	171
	Marantz SD455	170	Works well as a single deck, especially on replay, but dubbing at high/low speed compromises sound	•		•		•			184
	NAD 613	230	Rough and ready, but enjoyable sound, though marred by mechanical motor noise	•		•				•	158
	NAD 616	300	Twin deck with basic features. No Dolby setting memory, transport is too unstable for audiophile use			•					171
	Nakamichi DR-10	800	An ergonomic oddity, but one of the last of the great cassette decks. Worth considering against MD	•		•	•			•	195
R	Onkyo K-611	460	Cute drawer-loading mini-size component with 3 heads and dual capstan transport	•		•			•	•	146
R	Pioneer CT-S550S	250	Great features, good with cheap low bias tapes, but slightly synthetic sound quality	•	•	•	•		•		164
	Pioneer CT-W806DR	300	Had it not been for the iffy transport quality, this sophisticated twin would have been Recommended	•		•	•	•	•		171
	Teac V-1050	180	One of the cheapest 3-head machines around, but it shows in very 'thick' sound	•		•	•				184
88	Technics RS-AZ6	200	For those who can't afford the RS-AZ7; clarity over the widest bandwidth thanks to AZ thin-film head	•		•	•		•		164
88	Technics RS-AZ7	270	Thin-film head gives a solid, almost CD-like bass and midrange. A clear advance in state-of-the-art	•		•				•	158
R	Yamaha KX-580SE	250	Subtle, engaging and transparent deck, with a lightweight tonality, but stability and strong detail	•	•	•			•	•	171

CD PLAYERS

ONE-BOX CD PLAYERS

					JL	ECI	FICA	ATION	12
			AYERS	ELEC DIG OUTPUT	AES/EBU ELEC DIG OUT		HEADPHONE SOCKET	MULII-DISC VARIABLE OUTPUT	ISSUE NUMBER
	ONE-BOX	CD P	LAYERS	TPU	00			TPU	
CTATUC		6		-				1-10	1~1~
STATUS	PRODUCT Acurus ACD11	899	COMMENTS First-rate if costly player, which combines a delightful transparency with an uncontrived naturalness						166
BH	Acoustic Precision Eikos	1,850	Seriously customised Pioneer with extraordinary resolution and world beating imaging and bass	-			-		165
	Advantage CD1S	3,995	A CD player of some stature – what it lacks in dynamics it makes up for in subtlety and flow	-					193
	Alchemist Kraken	1,249	Distinctive looking player likely to suit a Alchemist system, but will result in variable results elsewhere				-		190
	Alchemist Nexus APD32A	597	Refined treble, constrained yet capable bass and attractive all-round presentation	-					169
n	AMC CD8A	150	Has balanced output, but is otherwise rather grey and unremarkable						172
	AMC CD9/DAC8	200	Beer-budget two-box system (player plus DAC) is smooth, attractive and easy on the ear						179
00	Anthem CD1	1,595	Unusual combination of high-end player, complete with HDCD, and changer. Good, but noisy	-	•			•	
	Arcam Alpha 7SE	300	Sharper, clearer Alpha 7 SE, and more affordable than before						207
	Arcam CD72	400	Easy going, slightly soft-centred reworking of Alpha 7 in new, svelte DiVA clothing						212
	Arcam Alpha MCD	450	Excellent bass and natural midband, but just a touch of treble dryness, from this very listenable changer	•				•	178
BB	Arcam Alpha 8SE	600	Excellent (and very reasonably priced) HDCD-compatible player is a strong all-rounder	•	•				176
8	Arcam Alpha 9	800	Refined, articulate player which employs new DAC technology to great effect	•					188
R	Arcam CD92	850	High resolution player needs a touch of spit and polish to be completely convincing	•	•				212
8	Arcam FMJ CD23	1,100	World class presentation allied with innovative technology to deliver an engaging standard of music making	•			•		206
	Audio Analogue Paganini	750	Basically good, but sometimes heavy-handed player	•					191
	Audio Note AN-CD1	600	Easy on the ear, and for a valve player, easy on the pocket, but a bit Radio 2-flavoured	•					188
	Audio Note AN-CD2	999	High output impedance makes performance unduly system fussy	•					195
	AVI \$2000MC2	899	A chip off the old block. This model's in-yer-face balance obstructs an otherwise finely detailed sound	•					176
R	AVI S2000MC Reference	1,399	Lean, dry, high resolution player, built to outlast most of us. A fine performer in a sympathetic system	•					169
	Balanced Audio Tech VK-D5	3,995	A valve-infused player with a big and engaging sound. Lacks a little subtlety	•			•	•	194
	Cambridge Audio D100	120	Hard, clangy and coloured sounding, and with suspect control logic						200
88	Cambridge Audio D500	200	Clean and highly articulate player wears well in extended use	•		•			202
R	Copland CDA 266	1,199	Simple yet elegant design is unexpectedly sophisticated under the skin, and effective in execution	•					176
	Copland CDA 289	1,898	Beautifully built and musically enjoyable. Lacks some precision, but still among the best below £2,000	•					194
8	Cymbol CDP12	1,299	Clean, detailed and airy HDCD-equipped player with minimalist trappings	•				•	176
R	Cyrus dAD1.5	395	Improved dAD1 variant has improved digital filter for a more natural, easy on the ear quality	•					191

SPECIFICATIONS

Cr Cr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr	PRODUCT Cyrus CD7 Cyrus CD7 Cyrus dAD3 Q24 Denon DCD-435 Denon DCD-435 Denon DCD-1550AR Densen B-400 ZCO Fog Stage 3 VC XV-D723GD Cenwood DVF-3030 Cenwood DVF-3030 Cenwood DVF-8090 Cenwood DVF-8090	f 800 900 130 180 350 1,280 1,170 500 180 250 300 800 995 150 250 300	COMMENTS New Cyrus player has strong all-round attributes to match its good looks Bold, lean and lively player demands sympathetic system matching Good low cost player, and a step up from the DCD-425, its predecessor Fine, slightly soft-edged budget player, and a good ameliorative for aggressive, edgy systems Disappointing bland and ploddy sound from an immaculately constructed, high-tech player Bold, purposeful sound, but lacks subtlety, and has some ergonomic flaws Curious player is difficult to drive, and has sound quality that both enchants and sometimes confounds Convincing DVD-Audio player that is ultimately let down by poor CD performance Solid CD player with straightforward features Focuses a clear, wide aperture lens on the music — and has CD Text too Disappointing senior brother to the excellent DP-4090, but surface interface is good Kenwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player, but it scheap and well equipped Great package with all mod cons, and eminently listenable too	ELEC DIG OUTPUT				BAL ANALOGUE OUT			
Cr Cr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr Dr	Cyrus CD7 Cyrus dAD3 Q24 Denon DCD-435 Denon DCD-435 Denon DCD-5550AR Densen B-400 ZO Fog Stage 3 VC XV-D723GD Kenwood DVF-3030 Kenwood DVF-3090 Kenwood DVF-80930 Kenwood DV	800 900 130 180 350 1,280 1,280 1,280 250 300 800 995 150 250 300 500	New Cyrus player has strong all-round attributes to match its good looks Bold, lean and lively player demands sympathetic system matching Good low cost player, and a step up from the DCD-425, its predecessor Fine, slightly soft-edged budget player, and a good ameliorative for aggressive, edgy systems Disappointing bland and ploddy sound from an immaculately constructed, high-tech player Bold, purposeful sound, but tacks subtlety, and has some ergonomic flaws Curious player is difficult to drive, and has sound quality that both enchants and sometimes confounds Convincing DVD-Audio player that is ultimately let down by poor CD performance Solid CD player with straightforward features Focuses a clear, wide aperture lens on the music — and has CD Text too Disappointing senior brother to the excellent DP-4090, but surface interface is good Kenwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player with strong multi-room appeal Well equipped budget player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too					•			
Cy Do Do Do Do Do EZ JV Kee Kee Kee Kee Kee MM MM MM MM MM MM MM	yrus dAD3 Q24 Denon DCD-435 Denon DCD-435 Denon DCD-1550AR Densen B-400 ZCO Fog Stage 3 VC XV-D723GD Genwood DVF-3030 Genwood DVF-8090 Genwood DVF-8090 Genwood DVF-8090 Genwood DVF-8090 Aarantz CD5000 Aarantz CD5000 Aarantz CD5000 Aarantz CD5000 Aarantz CD6000 VSE Harantz CD6000 VSE Harantz CD-17 MkII Harantz CD-7 Marantz SA-1 Heracus Tanto	900 130 180 350 1,280 1,280 1,280 500 180 250 300 800 995 150 250 300 500	Bold, lean and lively player demands sympathetic system matching Good low cost player, and a step up from the DCD-425, its predecessor Fine, slightly soft-edged budget player, and a good ameliorative for aggressive, edgy systems Disappointing bland and ploddy sound from an immaculately constructed, high-tech player Bold, purposeful sound, but lacks subtlety, and has some ergonomic flaws Curious player is difficult to drive, and has sound quality that both enchants and sometimes confounds Convincing DVD-Audio player that is ultimately let down by poor CD performance Solid CD player with straightforward features Focuses a clear, wide aperture lens on the music — and has CD Text too Disappointing senior brother to the excellent DP-4090, but surface interface is good Kernwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player with strong multi-room appeal Well equipped budget player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too					•		•	
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EZ JV Kee Kee Lin M M M M M M M M M M M M M	ZO Fog Stage 3 VC XV-D723GD Genwood DV-3030 Genwood DP-4090 Genwood DP-5090 Genwood DV-F89030 inn Genki Aarantz CD5000 Aarantz CD5000 Aarantz CD5000 Aarantz CD5000 Aarantz CD5000 Aarantz CD5000 KI Signature Aarantz CD-17 MkII Marantz CD-17 KI Sig Aarantz CD-7 Aarantz SA-1 Ieracus Tanto	1,170 500 180 250 300 800 995 150 150 250 300 500	Curious player is difficult to drive, and has sound quality that both enchants and sometimes confounds Convincing DVD-Audio player that is ultimately let down by poor CD performance Solid CD player with straightforward features Focuses a clear, wide aperture lens on the music — and has CD Text too Disappointing senior brother to the excellent DP-4090, but surface interface is good Kenwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player with strong multi-room appeal Well equipped budget player sounds thin and rough at times Ragged sounding multidisc player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too	•				•	•	•	•
JV Ke Ke Ke Lii M M M M M M M M M M	VC XV-D723GD Kenwood DVF-3030 Kenwood DP-4090 Kenwood DP-5090 Kenwood DVF-R9030 Inn Genki Aarantz CD5000 Aarantz CD5000 Aarantz CD6000 Karantz CD6000 Karantz CD6000 KI Signature Harantz CD-17 MkII Harantz CD-17 KI Signature Harantz CD-7 Aarantz SA-1 Heracus Tanto	500 180 250 300 800 995 150 150 250 300 500	Convincing DVD-Audio player that is ultimately let down by poor CD performance Solid CD player with straightforward features Focuses a clear, wide aperture lens on the music — and has CD Text too Disappointing senior brother to the excellent DP-4090, but surface interface is good Kenwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player with strong multi-room appeal Well equipped budget player sounds thin and rough at times Ragged sounding multidisc player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too	•				•	•	•	•
Kee Kee Lin M M M M M M M M M M M M M	Kenwood DVF-3030 Kenwood DP-4090 kenwood DP-5090 kenwood DVF-R9030 inn Genki Aarantz CD5000 Aarantz CO3000 Aarantz CD6000 A Aarantz CD6000 KS Aarantz CD6000 KS Aarantz CD-17 Mkll Aarantz CD-17 Karantz CD-7 Aarantz SA-1 Aarantz SA-1 Aarantz SA-1	180 250 300 800 995 150 150 250 300 500	Solid CD player with straightforward features Focuses a clear, wide aperture lens on the music — and has CD Text too Disappointing senior brother to the excellent DP-4090, but surface interface is good Kenwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player with strong multi-room appeal Well equipped budget player sounds thin and rough at times Ragged sounding multidisc player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too	•				•	• • • • •	•	•
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Ke Lii M M M M M M M M M M M M M	Kenwood DVF-R9030 inn Genki Aarantz CD5000 Aarantz CC3000 Aarantz CD6000 OSE Aarantz CD6000 OSE Aarantz CD6000 KI Signature Iaarantz CD-17K ISig Aarantz CD-17KI Sig Aarantz CD-7 Aarantz SA-1 Ieracus Tanto	800 995 150 150 250 300 500	Disappointing senior brother to the excellent DP-4090, but surface interface is good Kenwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player with strong multi-room appeal Well equipped budget player sounds thin and rough at times Ragged sounding multidisc player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too	•		•	•	•	•	•	•
Lii M M M M M M M M M M M	inn Genki Aarantz CD5000 Aarantz CC3000 Aarantz CD6000 Aarantz CD6000 OSE Aarantz CD6000 KI Signature Iaarantz CD-17 Mkli Aarantz CD-17Ki Sig Aarantz CD-7 Aarantz SA-1 Ieracus Tanto	995 150 150 250 300 500	Kenwood's first DVD-A player suffers from a mild compression of dynamics resulting in a polite yet matter of fact sound Explicit, rather bright sounding player with strong multi-room appeal Well equipped budget player sounds thin and rough at times Ragged sounding multidisc player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too	•		•	•	•	•		•
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M M M M M M M M	Marantz CC3000 Marantz CD6000 Marantz CD6000 OSE Marantz CD6000 KI Signature Marantz CD-17 MkII Marantz CD-17KI Sig Marantz CD-7 Marantz SA-1 Marantz SA-1	150 250 300 500	Ragged sounding multidisc player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too	•	-					1000	
M M M M M M	Aarantz CD6000 Aarantz CD6000 OSE Aarantz CD6000 KI Signature Aarantz CD-17 MkII Aarantz CD-17 KI Sig Aarantz CD-7 Aarantz SA-1 Ieracus Tanto	250 300 500	Ragged sounding multidisc player, but it is cheap and well equipped Great package with all mod cons, and eminently listenable too	20000					•	•	
M M M M M	Aarantz CD6000 OSE Aarantz CD6000 KI Signature Aarantz CD-17 Mkll Aarantz CD-17KI Sig Aarantz CD-7 Aarantz SA-1 Aarantz SA-1 Aarantz SA-1	300 500	Great package with all mod cons, and eminently listenable too	•						•	•
M M M M M	Aarantz CD6000 KI Signature Aarantz CD-17 Mkll Aarantz CD-17KI Sig Aarantz CD-7 Aarantz SA-1 Aarantz SA-1 Aarantz Tanto	500		•					•	•	
M M M M M	Aarantz CD-17 Mkli Aarantz CD-17Ki Sig Aarantz CD-7 Aarantz SA-1 Ieracus Tanto		Superbly constructed, slightly emasculated sounding, but smooth and articulate	•		•			•		
M M M M	Marantz CD-17KI Sig Marantz CD-7 Marantz SA-1 Meracus Tanto	800	Excellent all rounder, a well appointed good value package	•		•			•		
M M M	Aarantz CD-7 Aarantz SA-1 Aeracus Tanto	000	Sophisticated player with a short but attractive feature set, and a new found bounce in its step	•			•	•	•		
M M	farantz SA-1 feracus Tanto	1,100	Minor QC problems aside, this is a superbly turned-out machine, but ultimately a little bland	•		•				•	
M M	leracus Tanto	3,500	A superbly designed CD player, both inside and out. Precise and dramatic in equal measure	•		•		•		•	
M		5,000	The brand's first SACD player is a stunning machine that's equally as strong with conventional CD	•		•		•			
M		1,395	Believable tonal colours and textures, refinement takes preference over dynamics - but it's not cheap	•							
	leridian 506	1,100	Revised 506 includes MSR remote and a new D/A chip, which makes it livelier and more detailed	•		•					
M	Ionrio Asty	695	Well built player has solid, propulsive sound quality that deteriorates towards HF	•							
	Ionrio Privilege	995	Costly and well-engineered, but ultimately rather heavy-handed and dull, if refined player	•						_	
	lusical Fidelity X-RAY	799	Brilliantly packaged and clean but slightly antiseptic sounding player	•		•					
-	lusical Fidelity A3 CD	800	Excellent player has few faults apart from a slight loss of EHF detail	•		•					
	lyryad T-10	400	Rather ordinary player fails to shine with good music recordings	•							
-	lyryad T-20	600	Matter of fact styling and sound quality, a tad bright for some systems	•			<u> </u>		-		
	lyryad MCD500	1,300	Well-built, attractive player, showing much promise, but can be a little heavy-going on audition	•							
	AD C520	170	Significantly improved entry level NAD is smooth and dynamic, if slightly dull	•	-			-			
	AD 524	250	Clean, clear and essentially musical player in the NAD mould	•			<u> </u>				
	AD 523	250	Lacklustre musical presentation was disappointing on test; so was the absence of a digital output				-				•
	AD C540	330	Not cheap, and disc handling is pedestrian at best, but the C540 is smooth & elegant with just a hint of aggression	•	-	-		-			
	AD Silverline S500	1,100	It sounds as good as it looks, which is notably refined and easy on the ear	•	•	•		•			
	aim Audio CD5 akamichi MB-10	1,120 400	Recommended subject to audition, a dynamic machine, yet some physical minuses	•	-				•		•
-	aim NACDSII/XPS	5,625	Jewel of a multi-disc player, with crisp sound and superb fuss-free compact packaging Brings you the Naim sound, but for once doesn't have to rely on Naim ancillaries to get the results	-		-	-		•		-
	nkyo DX-7222	150	Competitive following recent price cut, and on the whole a strong performer musically		-				•		-
	nkyo DX-7511	300	Earthbound mid-price CD player fails to excite				-		•	•	
	arasound C/DP-1000	499	Comes on like a high end player, but ultimately sounds a bit weak and soft-centred							-	
-	hilips CD751	150	Inconsistent and occasionally opague and scrawny sounding cheapie	•					•		
	hilips SACD-1000	1,300	The first multichannel SACD on the market makes a good case for the format but doesn't match the 2-channel Sonys with CD						-		
	ioneer PD-S507	200	Low cost Legato Link implementation sounds gentle but slightly muddled						•		
200	rimare D20	799	Well presented player doesn't quite cut the mustard, though it performs promisingly	•							
	evox Exception E426	2,250	Very stylish with a light, agile sound that extends superbly and has fine timing	•				•			
-	oksan Kandy	475	Slightly old-fashioned sound quality player available in various colour schemes			•					
7 1000	oksan Caspian	895	Improved Caspian (retested for 2001) is still bold, dynamic player, but rather more subtle and expressive	•							
	otel RCD-951	300	Disappointing chopped-down RCD-971 – buy the original	•							
Ro	otel RCD-971	450	Odd disc handling logic, but bold, detailed and refined sound make this a must	•							
Ro	otel RCD-991	825	Strong midrange player with switchable dither levels to provide some system tweaking ability	•	•						
Sh	nerwood CD1	1,100	A very neutral, even handed sounding player with a rather flat, lifeless sound. Beautiful construction	•		•					
Sha	harp DX-SX1	2,700	Stylish player with a slightly forward but extremely nimble sound. Connects to matching digital amp via dedicated umbilical	•		•			•	•	
-	ony CDP-XE330	100	Unrefined, but lively, detailed and highly affordable			•				•	
So	ony CDP-XE530	140	Well equipped, but raw, scrappy sounding player lacks depth and weight			•			•	•	
	ony CDP-XB930E	300	Yet another first rate UK optimised player with all the bells and whistles	•		•					
	ony SCD-XB940	550	First mainstream SACD player that easily outstrips comparable CD players at this price	•		•	•	•	•		
	ony SCD-555ES	1,200	Fabulously built with superb sound using both CD and Super Audio software, you'll be hard pressed to find a better CD player at the price	٠		•					
	ony SCD-777ES	1,700	Beautifully built SACD player that looks like a bit of a CD player bargain	•		•					
	ony SCD-1	2,500	The first SACD player sounds fabulous but there's not much competition and limited software as yet	•		•		•			
	A CD1210R	1,185	Intriguing player with rather pushy basic sound, but has switchable digital filters	•		•					
	Ik Electronics Thunder 1	550	Entry level upgradeable Talk Electronics player sounds slightly muted								
	Ik Electronics Thunder 2	699	Fine player, slightly lacking in dynamics, but readily, if expensively upgradable in various ways								
	Ik Electronics Thunder 3	1,000	Clean, fast, and availability of a complete upgrade path make this a good long term proposition								
	G McLaren CD20R	1,249	Dry and unatmospheric, but plenty of presence – recommended with caution	•	-						
	ac VRDS-9	700	Well-presented. This Teac is crisp, yet shallow, and inconsistent in sound quality and partnering skills	•		•				•	
	ac VRDS-25x	1,000	Excellent, individualistic player with bold, colourful sound, but test sample had iffy CD-R compatibility	•		•		•		•	
	chnics SL-PG390	90	It's very cheap. Very, very cheap			•					
	chnics SL-PS7	200	Strong, but ultimately rather opaque and hard-sounding, high tech CD player		•				•		
	chnics SL-MC7	300	Maximum storage capacity for a minimum price, and presentable sound too (multidisc)			•				•	•
	ule Spirit CD100	600	Definitely a try before you buy machine, but the bass and mid are excellent	•							
	chord Genesis chord Revelation	549 799	Breathed-on Pioneer is warm and mellifluous, but ultimately lacks drive and authority Well-ordered and clean sound that may be a little too refined for some, images well	•					•	•	

CD PLAYERS / DVD PLAYERS THE DIRECTORY

	ONE-BOX	CD P	LAYERS (CONTINUED)	ELEC DIG OUTPUT	AES/EBU ELEC DIG OUT	OPT DIG OUTPUT	BAL ANALOGUE OUT	HEADPHONE SOCKET	VARIABLE OUTPUT	SACD COMPATIBLITY
TATUS .	PRODUCT	• f								
	Tube Technology Fulcrum	2,800	An imaginative two-box player with a smooth sound that lacks some lustre	•	•	•				
-	Yamaha CDX-596	230	Well-priced and attractive-sounding, this player can read CD-RW	•		•		•	•	
1	Yamaha CD-X993	400	A bit of a lush, though the sound is singularly free of grain, and equipment levels are strong	•	,	•		•	•	
1	YBA Spécial	695	There is nothing here to justify the pricing or the high-end parentage. Avoid							
	CD TRANS	£	COMMENTS			4	-		1	-
	Audio Note CDT Zero	550	Although ominously esoteric on paper, it's smooth, open and easy on the ear in practice (Tested with DAC1)	•	•					
-	Linn Karik	1,850	Based on early Linn transport, the Karik is dry but very positive, detailed and engrossing	•	•	•	<u></u>			
	Roksan Attessa ATT-DP3	1,295	Not the most detailed or refined but capable of sounding exciting with the right material	•	•	•				
-	Theta Carmen	3,299	A well equipped and extremely upgradable CD/DVD transport. Right now, the finest of its type	•	1	_				
_	Theta Data Basic II	2,397	Uses a Philips CDM9 Pro mechanism and works a treat with more lively DACs	•	•			-		
-	Thorens TCD2000	999	Lively presentation not helped by rather loose bass and splashy treble. (Tested with TDA 2000 DAC)	•		•				
-	Trichord Digital Turntable	999 699	Lively presentation not helped by rather loose bass and splashy treble. (Tested with TDA 2000 DAC) Very detailed, precise, controlled yet involving; a first-rank performer	•	1	•				
R		699				•				
R	Trichord Digital Turntable	699	Very detailed, precise, controlled yet involving; a first-rank performer	•		•				
R TUS	Trichord Digital Turntable DACS PRODUCT	699 • £	Very detailed, precise, controlled yet involving; a first-rank performer COMMENTS	:		•				-
R TUS	Trichord Digital Turntable DACs PRODUCT Alchemist TS-D-1	699 f 300	Very detailed, precise, controlled yet involving; a first-rank performer COMMENTS 24/96-equipped DAC sounds tidy but a little shut-in with both 16-bit CDs and 24-bit/96kHz DVDs	•		•		I		
R TUS R	Trichord Digital Turntable DACS PRODUCT Alchemist TS-D-1 Audio Note DAC Zero	699 f 300 369	Very detailed, precise, controlled yet involving; a first-rank performer COMMENTS 24/96-equipped DAC sounds tidy but a little shut-in with both 16-bit CDs and 24-bit/96kHz DVDs Neat valve-equipped DAC sounds smooth and fluid in the right system. (Tested with CDT Zero transport)	•						
R TUS R	Trichord Digital Turntable DACS PRODUCT Alchemist TS-D-1 Audio Note DAC Zero Audio Note DAC Zero1x	699 f 300 369 750	Very detailed, precise, controlled yet involving; a first-rank performer COMMENTS 24/96-equipped DAC sounds tidy but a little shut-in with both 16-bit CDs and 24-bit/96kHz DVDs Neat valve-equipped DAC sounds smooth and fluid in the right system. (Tested with CDT Zero transport) Although ominously esoteric on paper, it's smooth, open and easy on the ear in practice (Tested with CDT Zero)			•				

		-		T DIG OUTPUT J ELEC DIG OUT	HONE SOCKET	MULTI-DISC	OMPATI
			LET A CALL AND A			I-DISC	BILITY
US	PRODUCT	£	COMMENTS				_
R	Alba DVD103	150	Good value for money but not much of a CD player, crude and serviceable but remarkably inexpensive	•	•		
R	Arcam DiVA DV88	899	A DVD-Video player built with non-obsolescence in mind, but picture quality exceeds musical quality as a CD player	•			
88	Denon DVD-1000	300	Fine, stripped down player concentrates on the essentials, and scores a direct hit.	•			
R	Denon DVD-1500	400	Colourful and engaging (if lightweight) sound, with excellent picture quality	•	•		
R	Denon DVD-3300	999	Sometimes slightly inconsistent and strident sounding in all modes of use, but it pulls a little more off disc too.	•	•		•
R	Denon DVM-3700	1,000	One of the first multi-DVD players, and a fine all rounder, with average to good pictures, and better sound	•	•	•	
EC	Denon DVD-5000	1,600	The first DVD-V player that ain't bad as a CD player. A fine musical device	•	•		
R	Encore DV-450	200	Superb value for money, though mainly of interest to the videophile on a shoestring	•	•		
	Hitachi DVP-505	300	DVD player has rather dark, unexpansive sound, but good picture quality	•			
	Hitachi DVP-705	380	Mild mannered player works best with Radio 2 music, and gives clean, well endowed picture quality to match, along with sharp pricing.	• •			
1	JVC XV-D701	500	Good video player, but rather undeveloped musically – CD Text is neat, though	•	•		
	JVC XV-523	280	Looking impressive on screen, but lacks resolution and consistency when pushed hard	•			
1	JVC XV-515GD	300	Musically soft as a baby's bottom, and as surprising as yesterday's news	•			
	JVC XV-D723	500	The first DVD-A player is more of a DVD-V with A added rather than the next generation of hi-fi	•			
1	Kenwood DVF-R9030	899	The first multi-disc DVD-Audio player is physically large and ergonomically obstructive, but it is a smooth, slick operator	•	•	•	•
R	Kenwood DVF-9010	1,000	DVD player with brilliant picture and clean, lively sound	•	•		
	NAD T-550	500	Soft-centred but likeable player in the classic NAD mould	•			
1	Nakamichi DVD-10s	600	Well engineered, but lacklustre specifications, moderate performance – and overpriced.	•			
	Panasonic DVD-RV40	350	Modestly equipped, gives good pictures, but is musically unengaging	•			
1	Panasonic DVD-A360E	580	Powerful equipment, and unthrottled digital output notwithstanding, sound quality is modest at best	•	•		
	Panasonic DVD-A7EB	699	Chopped down Technics DVD-A10 retains most of the flagship's headline features with well balanced, but less refined and less articulate sound	•	•		•
R	Philips DVD957	400	Slightly ill-disciplined, but bold, enthusiastic player which engages even if it doesn't always convince.	•			
BB	Philips DVD750	400	Clever DVD with CD-R/CD-RW compatibility and surprisingly keen sound	•	•		
	Philips DVD960	530	DVD-V player has strong sound quality and good, though slightly washed out, pictures	•			
BB	Pioneer DV-636D	400	Bold, dynamic and detailed sounding player, with slightly simplified video feature set, sharper pricing and A1 pictures to match.				
88	Pioneer DV-717	550	Superb DVD player with good picture quality and which really knows how to play 24/96 discs	•			
R	Pioneer DV-939A	1,200	Fine player with near state of the art video performance and attractive, easy on the ear music making, from CD and DVD-Audio alike.	•	•		•
R	Primare V20	1,000	Elegant and well built DVD performer that possess a strong picture quality and decent CD player	•			
	Rotel RDV-995	700	Bold, sometimes aggressive sounding player needs RGB output to bring picture quality up to scratch.	•			
	Samsung DVD-907	500	DVD player with below average picture, and lacklustre sound quality	•			
	Sanyo DVD1500	219	Compact, low cost player is quite strong video performer, but lacks the wherewithal to succeed as a surrogate CD player.	•	•		
	Sony Art Couture DVP-S435	350	Looks to die for and decent on-screen results, but sound is flat and grey	•			
10	Sony DVP-CX850D	600	Lacklustre sound quality is a disappointment, but the price is appealing for a 200-disc DVD player	•		•	
R	Sony DVP-S7700	950	Powerfully endowed player offers articulate and believable sound				
14	Sony DVD-S9000ES	1,200	First DVD machine to play SACD has a 'Lexus' sound style that never really gets its hands dirty	•			
	Sharp DV-760	500	Reasonable picture, but sonically brings new meaning to the term rough and ready.	•	•		
	TAG Mclaren DVD32R	3,995	A tour-de-force of engineering, albeit with matching price tag. But picture quality is second to none	•			
	T+A DVD 1210R	1,699	Ergonomically a mess, but detailed, dynamic and emphatic, though there is no guarantee of a DVD-audio upgrade path		•		

SPECIFICATIONS

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SPECIFICATIONS

3.5mm JACK ADAPT

	DVD PLA	YERS ((CONTINUED)	ELEC DIG OUTPUT	Aes/ebu elec dig out		BAL ANALOGUE OUT	HEADPHONE SOCKET	VARIABLE OUTPUT	DVD-A COMPATIBILITY	ISSUE NUMBER
STATUS	PRODUCT	£	COMMENTS			1					
	Technics DVD-A10	899	Well built, early generation DVD-A player with full in-board DVD-Video decoding and a more than workmanlike sound.	•		•		•		•	213
	Theta DaViD	4,650	A top-notch CD transport, that also plays DVD-Video discs well. Pricey for a DVD transport, but worth it	•	•	• •					191
	Toshiba SD-100E	250	Mainstream player offers so-so features, performance and pricing	•		•					207
	Toshiba SD-3109	380	Defocused and soft-edged, this is more attractive for its picture than its sound quality.	•		•	1.1				202
	Toshiba SD500E	599	OK DVD-Video player, but lacklustre with music, especially when reproducing high resolution DVD-Audio material.	•		•			•	•	213
	Toshiba SD9000	800	Costly, high tech player with stunning pictures and crisp, slightly lightweight sound	•		•		•			198
	Toshiba SD900E	1,299	Top class DVD-Audio player and also a superb DVD-Video player; in this context pricing is competitive.	•		•				•	213
	T+A DVD-1210R	1,699	Ergonomically a mess, but detailed, dynamic and emphatic, though there is no guarantee of a DVD-Audio upgrade path	•		•					213

DIGITAL RECORDERS

	DI	11	IAL RELURDERS		PO	PTICAL IN/OL	ELEC IN/OL	ISSUE NI
	MINIDISC	CS		ORMAT	ORTABLE	JTPUTS	JTPUTS	UMBER
STATUS	PRODUCT	£	COMMENTS					
	JVC XM-448	220	An hidden keyboard is a great idea, but musically it sounds rather cool and strident	MD		•	•	205
	Kenwood DMF-5020	250	it may be high-tech but nothing conceals the caricatured sound	MD		•	•	205
R	Kenwood DMF-9020	500	One of the best MD decks yet for sound quality, and the first to make titling a practical proposition	MD		•	•	191
	Marantz CM635	500	CD player and MD recorder in one box: a practical idea but sound and features don't really match the asking price	MD		•	•	191
	Onkyo MD-121	450	Midi-sized deck that sounds slightly coloured at times, though immediate and lively	MD		•		177
R	Pioneer MJ-D508	200	Well equipped but musically sleep inducing player that deserves its recommendation due to price	MD		•	•	205
R	Pioneer MJ-D707	250	A handy set of features for the price, though sound is not outstanding	MD		•	•	191
	Sharp MDR3H	300	Nifty machine combining a 3-disc CD changer with a MD recorder. Sound on both is rather below par, though	MD		•	•	184
R	Sony MDS-JA555ES	650	Powerful demonstration of Sony's proficiency, it delivers the best MD can offer	MD		•	•	205

CD RECO	RDERS	
	-	

STATUS	PRODUCT	∎ £	COMMENTS		1 1	
	JVC XL-R5000	450	Flexible, rattly build, and attractive sound, but it's a little expensive compared to other rivals	CD-R(W)		205
	LG ADR-620	350	A powerfully equipped machine with useful multi-room capabilities, but sound quality is rough and ready	CD-R(W)	•	• 205
	Marantz DR700	600	Dearer than Philips and Traxdata equivalents, with apparently only a smarter front panel to show for it	CD-R	•	• 191
R	Marantz DR-17	1,500	Highly recommended, but with a jitter problem that, resolved, would improve sound quality	CD-R(W)	•	• 205
	Philips CDR951	380	An improvement on previous models, it delivers the musical goods in some style	CD-R(W)	•	• 205
R	Pioneer PDR-509	300	Straightforward design and excellent recording properties that are slightly dulled by the replay chain	CD-R(W)	•	• 205
R	Pioneer PDR-W739	400	Flexible multi-disc that has everything including respectable sound and pricing	CD-R(W)		• 205
	TEAC RW-800	350	Capable recording tool, but a little rough and ready as a player	CD-R(W)	•	• 205
R	Traxdata Traxa udio 900	399	Identical to Philips and Marantz models: it makes bit-perfect copies of CDs and has perfectly acceptable replay	CD-R	•	• 191

HEADPHONES

HEADPHONES

			PHUINES	ELECTROSTATIC	SUPRA-AURAL		OPEN BACK	CLOSED BACK	MASS	IMPEDANCE	imm JACK ADAPTOR	ISSUE NUMBER
	HEADPHO	NES		TATIO	URAL	URAL	BACK	BACK	(g) SS	E (Ω)	PTOF	MBEF
STATUS	PRODUCT	£								-	~	~
R	AKG K100	36	Leather clad groover with bags of power and clarity, for a respectable asking price		•		•		190	100	•	205
	AKG 301	70	Big 'phones with even and detailed sound but lacks sufficient bass weight			•	•		230	100	•	194
	AKG K 240 DF	100	Inoffensive 'phones that are very laid back, if lacking in grunt			•	•		240	600	•	186
R	AKG K1000	700	One of the best dynamics on the market, hooks directly into speaker outputs			•	•		270	120		99
R	Audio Technica ATH910PRO	80	The closed back 910s are an improvement on the 909s, with a nice rhythmic quality rarely found		•			•	280	40		55
R	Audio Technica ATH-D40fs	100	Detailed and involving sound with a professional 'studio' quality appeal			•		•	250	66		194
R	Audio Technica ATH-M40	120	Incredible detail and honesty from these classically designed studio 'phone			•	19.20	•	250	60		186
	Beyer DT311	50	Uncharacteristically tight, unrefined sound quality from this otherwise well engineered 'phone		•		•		124	40	•	133
	Beyer DT411	63	A reasonable but not very thrilling headphone that doesn't really offer enough at the price	1	•		•		120	250		111
	Beyer DT331	65	Clear and extremely detailed sound with rather thin bass			•	•		210	40	•	194
	Beyer DT431	81	Nice looking 'phones that may not be the best players on the field, but will always give 100 per cent			•	•		210	40	•	186
	Beyer DT531	105	Average performer from an established player. Lacks punch and bite			•	•		245	250	•	205
R	Beyer DT511	106	Superb midband clarity and speed slightly at odds with soft bass. Even so, high tingle factor			•	•		200	250		172
	Beyer DT831	140	These provide silky, smooth textures in abundance and we're not just talking about the velvet ear pads			•	1/2		295	250	•	186
	Beyer DT100	160	Rugged, modular professional design, but bass is woolly and treble lacks detail			•	1	•	350	600		157
	Grado SR-40	45	Cheap and nasty appearance largely redeemed by cheerful, up-beat sound. Very comfortable		•		•		120	32	•	172
	Grado SR-60	79	For sheer musical enjoyment these are hard to beat. Retro styling may not be to everyone's taste		•		•		200	32	•	194
	Grado SR-80	100	Open and dynamic with pedantically open mid-band. Crude physical design, rough frequency extremes		•		•		60	8	•	157
R	Grado SR-125	150	What these 'phones lack in style they make up for ten-fold in musical quality		•		•		200	32		186
R	Grado SR-225	200	Warm, darkly-coloured tonally and ultimately lacking in clarity, but true to the spirit of the music		•		•		200	32		163
	Grado SR-325	300	Elegant sound across the frequency spectrum; let down by old fashioned ear-piece design		•		•		200	32	•	205
	Jecklin Float Model 1	79	While very unusual in appearance, the Floats give remarkable sound quality and openness			•	•		400	200	6.2.1	55

	HEADPHO	NES	(CONTINUED)				CLOSED BACK	MASS (g)	IMPEDANCE (Ω)	3.5mm JACK ADAPTOR	ISSUE NUMBER
STATUS	PRODUCT	£	COMMENTS	1	1						
	JVC HA-W60	49	Remarkable lack of interference and hiss ameliorates adequate sound of this cordless design				•	165	I/R	•	172
R	JVC HA-W200RF	75	Distinct lack of hiss from these FM cordless 'phones ensures that detail and depth are easily heard		•		•	280 2	0,000	•	186
R	JVC HA-DX3	200	Great headphone with a rich bass, careful mid-range and high comfort factor		•	•	•	340	90	•	205
	Koss TD/80	50	Oodles of bass but with a recessed midband; tiresome on the head with prolonged wearing			•	•	250	60	•	194
	Koss R/100	100	Rather cheap looking 'phones that supply good detail but are severely lacking in midrange excitement		•		•	215	60	•	186
	Precide Ergo Model 2	140	Still has much of the spaciousness of the Float from which it is derived, but coarse mid/top			•		380	100		163
	Philips HP910	80	Ergonomically good but suffers from a muffled mid-range and over excited bass		•	•	105	247	32	•	205
	Sennheiser IS 380	55	As close as you'll get to real hi-fi with infra-red phones at this price. Inevitable hiss spoils the illusion	•			•	192	I/R	•	172
R	Sennheiser HD 570 Symph	90	Comfortable, light-weight 'phones with a detailed and open sound but lacks bass depth on weightier music			•		210	64	•	194
R	Sennheiser HD 545	125	Fine all-rounder that takes all styles of music in its stride. Ear-clamping headband			•		255	150	•	172
BB	Sennheiser HD 565 Ovation	150	Wide bandwidth design which is refined, expressive and extremely comfortable			•		255	150	•	157
	Sennheiser HD590	160	Assured and confident player with very low colouration and great comfort			•		270	120	•	205
	Sennheiser HE 60/HEV70/UK	998	Very nearly a superb electrostatic, with a pure midband, but top end is sibilant and edgy	•		•		260	N/A		163
	Sony MDR-V700DJ	100	Great looking fold-away 'phones with exceptional build quality. Kickin' bass	•			•	300	24	•	194
	Sony MDR-CD 2000	200	Large pads make for sweaty listening. Pure mid-tones, but weightless bass			•		300	32	•	205
BB	Technics RP-F800	50	Comfortable budget model that sounds sublime with great dynamics				•	160	40	•	205
	Technics RP-DJ1200	130	Functional design with head-pulping bass and muggy tonal balance. Good job they're sweat-proof				•	230	32	•	172
R	Stax System II	400	Luxury option at its price, but the sound delivery is five star quality all the way	•		•		295	50	•	205
BB	Stax Lambda Nova Basic	395	Refined, articulate, yet with real presence - and a notable bargain by electrostatic standards	•		•		347	N/A		163
	Vivanco SR322	30	Weak design and uncomfortable, but redeems itself with substantial sound quality			•		248	32	•	205
	Vivanco Cyberwave FMH3000	40	The only cordless 'phone to offer genuine walkabout freedom, but sounds like a cheap FM tuner				•	210	FM	•	172
	Vivanco IR5800	50	Consistently musical infra-red design. Doesn't reach for sonic heights so hiss can be forgiven	•		1/2		226	I/R	•	172
R	Vivanco SR650	50	Unusually comfortable 'phone with excellent detail resolution but aggressive			•		175		•	157
BB	Vivanco SR750	60	Cossetting physical design, attractive sound, though suffers overhang and lacks ultimate dynamics		1. P	•		199		•	157
R	Vivanco SR 950	80	Cuddly feel and sound make these an enjoyable pair of 'phones					252	32		194
	Vivanco FM7980	80	A fair amount of whine and crackle detracts from 'phones which are otherwise very listenable				•	280	9,000	•	186
	Vivanco FM8180	99	Well thought-out features and a better than average sound are, at times, marred by intrusive hiss				•	240	9,000	•	186

SPECIFICATIONS LOUDEDEAVEDE

	LUU STEREO SP		SPEAKERS	SIZE WxHxD (cm)	FLOORSTANDER	SENSITIVITY (db/W)	IMPEDANCE (Ω)	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	
JS PR	RODUCT	£									Ĵ
0.000	coustic Energy Aegis One	150	At a new low price, this has a very natural and transparent midband, erring a little on the dull side	19,36.5,24		87	6	40	•		ŕ
R AC	oustic Energy Aegis Two	250	Floorstanding variation on the Aegis One theme, with a neutral, even and detailed if slightly shiny sound	19,87,24	•	89	8	40	•		
in Look in	oustic Energy Aegis Three	350	Clean and capable 2.5-way budget floorstander with fine dynamic range but some mid-bass excess. Mass-loaded	19.5,93,2	5 .	90	5	25	•	12250	đ
	coustic Energy AE120SE	500	Attractive styling and good sonic headroom, but a heavy, uneven overall balance, and a difficult amp load	18,97,28	•	89.5	10	25	•		i i
	coustic Energy AE520	1,000	Could be more neutral, but high-class build is reflected in a high-class sound. Very elegant too	21,98,30	•	91	3	25	•		Service of the local division of the local d
	.R Entry 2	250	Metal cone stand-mount has a generous performance envelope, but sound guality was controversial	20,33,29		90	4	22	•		đ
AL	R Jordan Note 3	1,000	Very substantial, with tuneable ABR for better room matching. Sounds good but could be more neutral	24.5,37,3	2	89	5	30	•		
AL	R Jordan Note 7	2,500	A beguiling Anglo-German collaboration delivers metal-cone precision with fine dynamic range	25,107,32	•	92	4	25	•		
AR	R S20	180	Classic stand-mount might not have the most dynamic sound around, but it's an honest and effective musical communicator	20,37,28		90	4	28	•		
AR	15	275	Neat and chunky wall/stand-mount certainly knows how to rock and roll, less convincing on the delicate stuff	22,37,22		θ	4	45	•		
Ar	caydis Concept 2	1,200	Solid oak floorstander is a little lazy sounding, but is well balanced and smooth with modest coloration	19,90,26	•	86	7	25	•		
AT	C SCM10	1,000	A compact speaker with good transparency but lightweight bass	18,38,25.5		80	8	65		•	
AT	IC T16	1,750	Compact active 'home studio monitor' in colourful cast box, with considerable loudness potential	27,45,33		Α	А	45	•		
AT	C SCM70ASL	10,500	Stylish aluminium casework disguises dynamic grip, tracking and precision that equals the very best	127,40,46	•	Α	А	20	•		
Au	udio Gem Emerald	540	Pretty, compact floorstander with lively if lightweight sound	18,94,21	•	87	6	40	•		
Au	udio Note AZ1	449	A fine partner for low power valve amps, it delivers music with great gusto and enthusiasm, but also more than its fair share of coloration	23,83,29	•	92	6	30		•	
Au	udio Note AN-E/D	1,520	This classic large stand-mount might have throwback aesthetics, but it delivers an exceptional allround sound	36,79,28		92	4	20	•		
Au	udio Physic Tempo	1,999	Tall and unusually-styled floorstander has stunning stereo but suspect bass tuning	22,107,47	•	88	8	28	•	•	
Au	udiovector C2	799	Elegant two-and-a-half-way has a big, full bandwidth sound, but midband seemed a little underdeveloped	19,106,27	•	90	4	20	•		
Au	udiovector M2	1,399	High-class, smooth and slightly laid-back performer has driving bass. It's upgradable, too	20, 102, 30	•	89	4	22	•		
AV	/I NuNeutron	500	A smooth and subtle though pricey sub-miniature, albeit with the inevitable limitations of the breed	14,27,23		86	4	50		•	
AV	/I Biggatron Red Spot	600	Good bass coherence and timing, but the lean and decidedly forward balance won't be to every taste	19.5,37,3	0	88	7	30		•	
AV	/I Positron	899	This 'mini-floorstander' is capable of great precision and delicacy, but in a rather small-scale way	17.5,74,24.5	•	85	6	40	•		
B8	&W 601 S2	200	A smooth and sophisticated stand-mount combines good drive with fine neutrality	20.5,36,23		89	4	30	•		
B B8	&W 602 S2	300	Large stand-mount has fine dynamic literacy and good communication skills at a very competitive price	23.5,49,29		90	5	28	•		
B8	&W 603 S2	550	Capable of being driven seriously loud, but the cautious balance seems less happy playing at low levels	23.5,87,29	•	91	4	22	•		
B8	W CDM-1NT	750	An uncommonly stylish and sonically self-effacing stand-mount that should be very easy to live with	22,40,29		89	7	30	•		
B8	W CDM-7NT	1,250	A very classy floorstander, in sound as well as looks, with fine bass drive, authority and overall neutrality	22,95,29	•	90	6	20	•		
B8	&W Nautilus 805	1,400	A small-sounding loudspeaker dynamically, but very stylish, clean and 'unboxy', delivering loads of detail	24,42,31		89	12	28	•		
B8	&W Nautilus 803	3,500	Classy looking three-way with impressively deep bass, wide dynamic range and a laid-back balance	29,108,42		89	3	20	•		
-	&W Nautilus 804	2,500	The prettiest Nautilus has tremendous clarity and imaging but lacks the welly of bigger models	24,101.5,24	-	89	8	38	•		
	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	10000	91	8	34	•		
	&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	•	91	8	34	•		
_	ueroom Minipod	249	The Minipod can show its competitors a thing or two about freedom from boxiness and looks fab	18,34,17		91	4	50		•	
_	C Acoustique Araxe	1,300	Neat compact floorstander is a very lively communicator, if a little short of deep bass grunt	21,92,30	•	94	3	40	•		
	abasse Farella 400	950	Exciting but very upfront-and-in-yer-face sound. High sensitivity, fine build and good dynamic drive	26,92,32	٠	92	5	28		•	
	arlsson OA52.2	1,500	Ultra-discreet design integrates cleverly with the listening room. Impressively unboxy, but sounds a bit thin	41,54,37	•	90	8	20		•	
	astle Richmond	250	Tiny real-wood miniature has a lightweight but very coherent sound, a bit in-yer-face but plenty of fun	17,33,20		90	5	50	•	1	
	astle Inversion 15	425	This striking looking standmount is a good all-rounder, commendably free from boxiness	22,42,25		91	4	30		•	
Ca	astle Severn 2SE	700	Pretty little floorstander is lively and communicative, if a little coloured in the voice band	21,84,24	•	88	6	28		•	

	CTEDEO O			SIZE WxHxD (cm)	FLOORSTANDER	SENSITIVITY (db/W)	IMPEDANCE (Ω)	BASS FROM (HZ)	FREE SPACE		
			ERS (CONTINUED)	(cm)	DER	۶M	(2)	(HZ)	ACE	1	
	PRODUCT	£	COMMENTS	participation in	Ļ	-			-	1	
	Castle Harlech	880	Handsome big-sounding floorstander, great value and dynamic midrange	20,96,33	•	88	8	28			
-	Castle Inversion 100	1,975	Large semi-omni design with gorgeous Art Deco styling, sounds open but bass alignment is ill-tuned	26.5,111,45	•	91	8	20	and a second second	9	
-	Celestion A Compact	600	Provided the room isn't too large and your tastes not too heavy, this is a charming little number	17,24,21		90	3	45	Contraction of the local division of the loc	•	1
	Celestion A1	899	Rich, warm and laid-back, but a true quality sound; lovely build	24,41,35		88	6	25			
	Celestion A2	1,500	Full-scale, big sound from ultra-elegant floorstander. Smooth and slightly laid back presentation	24,93,39	•	89	6	22		•	l
	Chario Syntar 100	249	Pretty with a pleasantly easygoing balance, but not the most communicative or exciting sound around	18,32,27		87	6	45			
	Chario Hiper 1000	300	Classy looking standmount has a sweet, easygoing sound with fine midband voicing	18,35,28		87	4	45	•		
	Chario Constellation Lynx	550	Beautiful near-miniature is let down by a midband too laid back for its own good	20,36,26		87	3	40	•		
	CharioAcademy Millennium 2	2,100	Price includes stands. A showy speaker that lives up to its own hype	22,53,35		90	4	55	•		
	Cyrus CLS70	800	Wonderfully striking styling, but presence is very laid back; likes playing loud	22,33,32		87	8	40	•		
1	Cyrus Icon	2,500	First high end NXT speaker with huge omni-directional soundstage. But they have limited dynamics and unusual imaging	34, 125, 29	•	84	8	18			
1	Dali 606	400	A big bruiser at a tempting price. Sounds refined and polite, but also packs some punch	22,97,32	•	91	4	25	•		
1	Dali Royal Menuet Mkll	429	Classy sub-miniature with a beautiful box and fine ingredients, but a little lacking in subtlety and excitement	16,26,18		87	3	50			i
1	Dali Evidence 870	1,249	A real heavyweight, sonically and physically, and good for movies as well as music	24.5, 106, 36	•	93	2.5		1000		l
	Dynaudio Audience 42	400	Expensive for a vinyl-covered miniature, but an aristocrat amongst the breed. Is there a better small speaker around for the price?	17,28.5,24		87	4	40	-	-	
1	Dynaudio Audience 72	1,100	Very competent in most respects, but doesn't quite grab the attention; could be more communicative	20,97,26	•	89	3	20		-	
1							-				
	Dynaudio Contour 1.8 Mkll	1,842	Wonderful voice-band delicacy and loads of deep bass from a very elegant and compact box	21,95,29	•	85	4	20			
- 10	Elac CL102 II	599	Chunky floorstander with classy drivers has a neutral, slightly 'shiny' character, and could have more punch	20,95,28	•	88	9	23	1000 Contraction		ļ
-	Elac CL 310i Jet	800	It's pricey, and you can buy better performance for the money. Small speaker, good sound	12.3,20.8,28	111101	86	4	42			
	Eltax Liberty 3+	150	Bright, bassy, laid back and attractively evenhanded, but dynamically challenged. Big box for your dosh	20.5,38,34	125	86	4	25			
1	Eltax Linear Response	249	A curiously dumpy shape, but smooth, laid-back performer is easy on the ears, with fine tonal accuracy	25,35,32		85	4	40			
	Eltax Chroma Front	300	Gorgeous shiny styling package at an ultra-competitive price, suffers from an excess of rather flabby bass	19,98,28	•	87	4	25	the courses		
]	Energy e:XL 25	400	Neat slimline design delivers a fine all round performance for the price, but could sound smoother	15,87,31	•	90	4	25	•		
	Excel 202A	1,795	Very Pro-styling, a compact active monitor in BBC tradition - neutral, unboxy and laid-back	15,21.5,3	ŝ	Α	А	25	•		
	Epos M12	429	Retains the beguiling midband coherence that made the ES12 such a favourite. A genuine class act, sonically and aesthetically	20,38,26		86	7	40	•		
1	Gale 2i	140	Unspectacular sound and appearance fail to help this solid little miniature stand out from the crowd	22,40,27		88	7	40			ļ
A COLOR	Genelec HT206	1,400	Baby active monitor goes very loud for its size. Very neutral but a tad boxy	20,31,24		A	A	40	43/100		
	Heybrook Prima 2	159	Great openness, speed and timing. Sounds fresh and vital, though sometimes lacks scale and weight	20, 29, 18		87	6	50			į
-	Heybrook HB1	180	Good value but an uneven performer, the HB1 provides plenty of fun with the volume turned well up	21,38,25		88	3	50	Million		
r T	Heybrook Heylette	200	Attractive traditional-style near-miniature with classy main driver now has fine overall balance to match	19.5,30,22		88	4	45	1000		
1	Heybrook Optima	259	A dumpy ugly duckling with a heart of gold. Deserves a better tweeter, but communicates well	22,88,29	•	94	4	30			
-		269		23.5,36,27	-	89	6	25			
	Heybrook Heylios		Classically styled stand-mount has a fine balance of smoothness and dynamics, plus real wood veneer					ter and the second	1100		
	Heybrook Ultima	649	Has the bass wallop to justify its dual hi-fi/home cinema roles, but doesn't excite	22,97,29	•	89	6	45			
	Heybrook Duet	750	Looks slightly old-fashioned, sounds a bit coloured but its fine timing and liveliness serve music well	23,43,30		88	11		and the second	223	
	Heybrook Octet	1,800	Good-looking but pricey floorstander with novel drivers and a fine ceramic-enclosure midband	24,97,31	•	90	6	25		•	
	Indigo Three	500	Cute 'n' chunky standmount is an entertaining communicator. Great fun, despite some sonic weirdness	23,30.5,32	G	86	17		and the second		1
	Infinity Alpha 30	299	Some sharpness and nasality, but fine musical literacy plus a good measure of dynamic expression adds up to a great value floorstander	22,86,29	•	89	4	30			l
	Jamo E800	200	Nicely voiced, open midband but bottom end is a bit strong and amorphous	17.5,33,29		8	3	30			
	Jamo D830	1,400	Dynamically exciting and communicative, but lacks both smoothness and neutrality. Pricey too	24.5,38,3	2	88	5	30)		
1	JBL LX2	250	Invigorating, if a touch crude, this good-hearted speaker reproduces music with enthusiasm	22,4 ,27		87	8	40	•		
	JBL Ti200	400	Very substantial standmount knows how to rock and roll, but can sound uncouth on more delicate material	21,41,30		92	5	40	•		
1	JBL 120	700	Pricey, heavy and a bit laid-back, but this is a fine rock'n'roller which is dynamic and communicative	26,42,28		86	8	30			
1	JBL SVA1500	700	A distinctive Pro-style bi-radial horn tweeter, with a fun sound, enlivened by a juicy bass thump	17.5,51,31		86	8	40	•		
1	JBL L40	1,000	Classic, large, three-way standmount is full of vim and vigour, with a superb sense of balance	30,65,31		88	4		100 100 100 100 100 100 100 100 100 100		
	JBL 4312 II	1,000	Crude but startlingly effective dynamics. The original party animal knows just how to rock'n' roll	36,60,30		94	4	25			į
1	JBL SVA 2100	1,250	Monstrously large and brutish s yling, goes very loud as well as deep. Fine focus but some boxiness	37,114,52	•	91	8	<20			
				Contraction of the local distance	-	01	-		the second		
	JBL L90	1,500	A classic monitor which communicates with gusto and enthusiasm, though it can sound a bit crude	24,94,35	-	91	6	23	- Construction		
	JBL LX70	550	Bassmeister supreme, shame the rest doesn't match up. Fine sensitivity but an itchy, scratchy treble	26.5,94,30		91	4	33			
-	JBL Xti40	500	Real wood and a cute shape, with a punchy driving bass, and a restrained overall balance	23,82,31	•	88	6	40	the second second	1	
· -	JMLab Cobalt 815	999	Hefty real-wood floorstander has a slight 'boom'n'tizz' character but delivers big speaker grip and dynamics	22,100,31	•	90.5			Argent and an other statements		
]	JMLab Electra 905	1,200	Compact but massively engineered, delivers a very classy sound with exceptional dynamic range	23.5,47,28		90	4	40	the second		
	JMLab Electra 915	1,795	Fine headroom and bass, and classy engineering too, but also a tricky amp load which lacks delicacy	26.5,106,36	•	92	4	20			
	JMLab Mezzo Utopia	7,250	Looks good and sounds even better. A genuinely big speaker with fantastic coherence	35,115,47	•	92	4	30	•		
	JPW ML510	130	Lots of good quality speaker for the price, but not an ideal match for cheap budget components	20,34,22		88	5	50	•		
	JPW ML910	330	Loads of speaker for the money, plenty of headroom and loudness capability, but sounds dull	23,104,30	•	91	4	43	•		
	JPW ML1010	400	A seriously substantial speaker for the price, and an obvious choice for those who like their music loud	22.5,115,40	-	91	6	25	•		
1	KEF Cresta 2	149	A good looking/value package but sonically disappointing, and no match for the Q15	20.5,37,24		91	4	40	and all a start of		ļ
1	KEF Q15.2	200	A vigorous and entertaining compact speaker that remains particularly well aligned for close-to-wall siting	20.5,31,27		89	3	30	And in concession, in such as		
1	KEF Q35.2	350	A very decent and good looking compact floorstander, but a pair of stand-mounted Q15.2s is likely to have the performance edge	21,78.5,2		90	2.5		0.000		
-	KEF Q55.2	500	Beefy vinyl-finished UniQ delivers loads of bass, but might have more control	21,78.3,2	•	90 90		25	and the second second	-	
	KEF Reference One-Two	1,350	Limited low bass but bags of headroom. Coherent and lively sound, but could be more transparent	Construction of the second second	-	and the second	4	- Holesteret			j
-	KEF RDM Three			22.5,87,3		89	3	40	- marine	4	
-		1,500	Definitely a speaker aimed at long-term satisfaction rather than immediate impressiveness. Nice	24,100,27	•	90	4	40			
, 4	KEF Reference Model 2	1,599	Classy, large floorstander that has massive headroom and clean mid-to-treble, but limited deep bass	23, 103, 34	•	89	4	30	in the main		
	Keswick Audio Aria II	379	Confident and dynamic sound, if a little crude and shut in	21,42,24		89	8	20			
	Keswick Audio Torino	999	Good value, lively contender with distinctive styling. Goes loud and deep but could be smoother	26, 93,28	•	90	4	20			
-	Linn Kan	295	Great bass discrimination from size, ensuring a very informative, if slightly shut-in experience	19,31,19		86	4	45			1
	Linn Katan Aktiv/LK140	2,325	Too small to have much grunt or loudness, but bright top is very sweet, clean and detailed	17,34,23		Α	A	40			
	Living Voice Auditorium	1,500	Pretty, compact floorstander has wonderful coherence, high sensitivity and fine dynamic integrity	21.5,98,29	•	91	4	25	•		
	Living Voice Avatar OBX-R	4,000	Discreet but extremely fine design with external crossover and an affinity with valves	21.5, 104, 27	-	89	8	45			
I	Magnat Vintage 320	350	Loads of speaker for your money, but the sound is thick, heavy and lacking in presence and authority	25,102,30	•	90	4	20			
-	Magnat Vector 77	450	Tall, dark and a lot of speaker for the money. Beautiful balance, but lacking in subtlety and transparency	22,115,29		89	5	30	and a second second	-	
3	Magnat Vintage 710	800	Very competent but didn't particularly stand out; distinctive styling and slightly shiny sound	a starte starte and a second				the second second			
-				20-27,42,	10000	90	5	25	1999		
1	Magnat Vintage 720	1,200	Slightly crude in some respects but lots of heart, fine scale, decent dynamic coherence and integrity	29,113,32	•	88	4	20			
	Martin-Logan Prodigy	8,967	Combines the finesse of an electrostatic with the grunt of cleverly engineered cone bass to good effect	42,179,71	•	91	4	28			
	Meridian M33	1,495	Compact active wall-mount packs remarkable dynamic vigour into a very discreet package	15,38,22		Α	A	45			ĺ
]									and the	1 hours	
	Mirage FRX7	550	Neat slim floorstander has a heavy, laid back balance, probably better suited to movie than music reproduction	17.5,95,32	•	90	4	25	•		
		550 3,000	Neat slim floorstander has a heavy, laid back balance, probably better suited to movie than music reproduction A meaty model that goes loud without distortion, digs deep with aplomb and creates plenty of depth of image	17.5,95,32 133,30,42	•	90 90	4	25 22			

	STEPEO CD	EVK	ERS (CONTINUED)	SIZE WxHxD (cm)	FLOORSTANDER	SENSITIVITY (db/W)	IMPEDANCE	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	PLACE TO MI,
	STEREO SP	EAR	ERS (CUNTINUED)	Cm)	E	Ś	Ω	L I	ACE.	Ē	-
S 🛔	PRODUCT	f	COMMENTS						ı		
]	Mission 771e	200	Beautifully styled miniature has a delightfully voiced midband, and real wood finish too	17,31,22		86	6	45		•)
]	Mission m73	200	Sharply priced and good looking floorstander. Dynamics are a little limp, but it has a good overall balance. Excellent value for money	20,87.5,31	•	88	3	25	•		
1	Mission 780	299	Gorgeous miniature has a fine midband and clean, bright treble, slightly odd bottom end	16.5,28,27	-	86	6	40	•		and the second s
	Mission 773e Mission 774	400	Beautifully designed slim floorstander could be more neutral but still delivers an all-round entertaining sound	17.5,88,26		92	4	30		•	
1	Mission 774 Mission 782	500 699	Gorgeous floorstander is an entertaining communicator, despite some balance oddities (bright treble) Ultra-compact floorstander has a glorious midband and slightly odd bass. Good communication skills	18,95, 3 1 16.5,82,28	•	90 86	4 9.5	40 25	•	•	- una
	Mission 775e	800	Lots of speaker for the money, and musically involving too, if a little short of serious weight and authority	23,115,30	1000	93	3.5	25			
1	Mission 783	1,000	Plenty of bass weight, and a clean, articulate midrange, but the two don't quite seem to get	20.5,97,33		87	5	20	•		
1	Monitor Audio Bronze 2	180	A real corker, which combines solid material value for money with a fine all round sonic performance	18.5,35.27		89	3	30		•	l
1	Monitor Audio Bronze 3	270	Very similar to the Bronze 2, though not necessarily better. Good value with better dynamic expression than most of its ilk	18.5,87,24	•	90	3	30			
	Monitor Audio Silver 5i	450	Great looking, sharply priced real wood floorstander, but bottom end lacks drive and tension	20,81,21	•	87	5	30	•		
	Monitor Audio GR20	1,500	Solid and confident design with all metal drivers and neutral if slightly uninspiring sound	20,92.5, 3	• 0	89	6	30	•		
	Mordaunt-Short MS902	200	Gorgeous metal-finished budget stand-mount has a shiny sound to match its looks	18,31,25		87	4	45	•		
	Musical Tech Kestrel Evolution	315	Cutely styled, cleverly compact and a smooth, subtle and coherent performer, best suited to smaller rooms	20,85,19	•	86	4	40	•		
	Musical Technology Harrier	400	Very pretty package, good measured performance and even sound. Sensitivity is low, and dynamics limp	25,80,23	•	86	8	25	•		
-	Musical Technology PM15	450	A subtle, understated but very involving example of the 'classic' luxury-finish compact standmount	20,41,27		88	5	38			
	Musical Technology Falcon	680	Big speaker has a big but also surprisingly smooth and civilised sound. Fine material value too	33,117.30	•	89	4	22	•		
	Musical Technology Condor	1,000	Lots of clever ideas in a floorstander, which places transparency and smoothness ahead of dynamic drama	25,91,23	•	85	4	28	•		
-	Naim Intro Naim Credo	660 1,060	Great dynamic range and info retrieval, but thin, lacks warmth	24,89,27	•	89	6	30	•		
	Naim SBL Passive	1,060	Involving sound, but rather forward and cold. Good clarity, but some coloration and a lack of richness Lively and punchy – smoother but more upfront than before	24,89,30 27,89,27	•	88 88	8	28 25	-	•	the second se
	Naim NBL	6,648	Elegant, large floorstander is exceptionally informative with an awesome dynamic range and dry, forward balance	29,116,47	•	00 89	4	20	•		
. 44	Neat Critique 2	445	Contemporary standmount has a clean, crisp sound with lovely natural midband voicing	22,32,24		86	6	50		•	
-	Neat Mystique Mk2	575	This elegant package delivers a fine overall sound quality; some might find the top end too insistent	20,86,18	•	85	6	23	•		The second secon
-	Neat Neat Petite III	795	The treble is peaky, but this is still one of the most coherent and communicative miniatures around	20,30.5,20		86	5	30		•	1
	Neat Elite	1,195	A highly entertaining all-rounder, has a planar tweeter that sounds sweet, if not particularly smooth	20,88,18	•	88.5	6	25	•		
-	NHT Super Zero	200	If tiny size is top priority, the Super Zero is worth considering. It looks nice and sounds articulate, but it definitely needs a subwoofer	14,23,14	-	84	8	100		•)
-	NHT Super One	250	A fine compromise between size and performance, sensitivity and hence loudness capability is modest	18.5,29.5,23		85	8	30	•		
	NHT 1.5	400	This compact standmount sounds much bigger than it has any right to. Good timing and communication skills	18,42,26		85	6	40	•		
	NHT Super Two	550	Black and shiny compact three-way floorstander has marvellously even balance and good coherence	18,5,100,26	•	87	8.5	25		•)
-	Opera Prima	495	Good-looking hardwood enclosure, plus fine mid and treble, but less satisfactory bass	19,34,31		90	4	40	•		
-	Origin Live Conqueror	1,650	Chunky floorstanding three-way has lovely cabinetwork and lively sound, but limited deep bass	24,94,27	•	88	8	30	•		
-	Orelle Swing	1,200	A superb example of what an essentially small loudspeaker can do, with bags of brio and enthusiasm	18,101,28	•	87	8	45	•		
-	PMC TB2	600	A worthy and prettier successor to the TB1, which sets a high standard in its size/type class for neutrality and transparency	20,40.5,31		88	8	30	•		
-	PMC LB1 PMC FB1	999 1,275	Still fully competitive eight years after our original review, this genuine compact monitor is now a modern classic	17.5,53,26	•	87 88	6.5 6	40 20	•		
-	PMC AML1	3,525	Handsome floorstander has the lively coherence of a simple two-way alongside impressive bass weight and extension Sparkling active Pro monitor with serious attitude: 'in yer face' balance, with great dynamics	20,105.31 20,40,32	-	A	A	20	•		
-	Polk RT16	799	Bass rich, lively and powerful, but suspect top end; big and not very pretty	22,105,39	•	91	4	22	•		
-	ProAc Response 2.5	2,700	For aspirant high-enders looking for seriously good boxes, this speaker should be first port of call	22,103,35	•	86	8	30	•		
1	ProAc Tablette 2000 Sig.	899	Beautifully veneered compact stand-mount is classically balanced, if a little on the bright side of neutral	19,36,26		87	6	30	•		
1000	ProAc Studio 125	1,000	Pretty if pricey compact floorstander with a beautifully natural and neutral midband, and some bass thump	20,94,28	•	87	8	28	•		
1000	QLN Signature	1,000	Attractive pyramidal standmount with heavy, laid-back balance but remarkably unboxy sound	27,37,36	•	83	4	25	•		
	Quad ESL-989	4,600	A very 'different' speaker experience, with magnificent midband transparency and imaging, but limited loudness capability	67,134,32	•	83	3	38	•		
	Rega Jura	450	Beefy sounding, chunky floorstander sounds very 'direct coupled' to the music, if a touch 'boom'n'tizz'	22.5,92.5,2	5 •	90	5	25	•		
	Rega ELA Mk II	498	Pretty and smooth, the latest incarnation has a superb midband and excellent communicative skills	30,80,20	•	87	8	40	•		
	Rehdeko RK 115a	1,700	Single-driver system has limited bandwidth and obvious coloration, but wondrous dynamic coherence	34,42,27	-	95	8	55		•	•
	RMS Revelation Series 1	1,299	Innovative metal-box compact with integral port/stand – clean with good timing but very laid-back balance	20,99,24	•	81	8	22	•		
~	Roksan ROKone	595	Large standmount is musically very communicative, if a little coloured	21,45,33		89	6	30			
	Roksan OI3X Black	995	Innovative low-line, two-way floorstander with decoupled tweeter; great bass and fine dynamic range	28,79,46	•	84	8	20	•		
-	Royd Doublet	485	Great value compact floorstander: lively and very informative, if a little uneven	18,93,19	•	90 87	4	28	•		
	Ruark Epilogue	269 599	Beautifully finished miniature with a lively balance and plenty of charm; best suited to smaller rooms 'Traditional' cabinetwork with classy veneer and shiny gilt fixings, hampered by rather wayward sound balance	17,29,23 21,38,31		87	8	47	•		
-	Ruark Sceptre Ruark Prologue One R	949	Iraditional cabinetwork with classy veneer and sniny git fixings, hampered by rather wayward sound balance Strikingly contemporary compact floorstander is well voiced but a little lean in overall balance	17.5,93,28	•	88	5	25			
-	Ruark Excalibur	7,000	A big, handsome speaker with a big, laid-back but open sound, rocking bass and loads of headroom	30,125,53	•	90	4	30	•		
-	Sequence 400	329	Clever hang-on-wall panel is well voiced, though bass isn't too great	25,100,7		86	8	45		•	J
-	Silverado Raider	695	Beautifully built audiophile compact: neutral if bright, tough work for amps	20,40,25		83	3	30		•	
-	Snell K.5	795	Classy AV-ready stand mount is very solidly engineered. Sound is neutral but lacks excitement	22,46,30		87	6	25	•		
	Snell E.5 Mk2	1520	Large floorstander has serious deep bass extension, and also a delicate midband with low coloration	22,109,30	•	89	4	20	•		
	Snell XA75ps	4,500	Active bass floorstander with marvellous mid coherence, slightly suspect bass integration.	28,117,50	•	91	6	25	•		
	Soliloquy SM 2A3	1,095	Fine match in balance, coherence, transparency and speed. Intended for use with Cary CAD 2A3SE	35.5,19,30		91	8	45	•		
	Sonus Faber Concertino	599	A beautifully neutral loudspeaker in a beautiful Italian suit of clothes. Classy, if quite pricey	21,32,29		87	5	30	•		
-	Sonus Faber Grand Piano Home	1,589	Classy walnut'n'leather floorstander with fine engineering and lovely midband voicing	23.5,29,10	8•	90	3	25	•		
-	South Coast Speakers Lancelot	895	Pretty compact standmount has nice ribbon tweeter but sounds a bit soft and lacks dynamic vigour	19,36,26		84	8	45	•		
-	Spendor 2030	599	Discreet slimline floorstander with delicately coherent, laid-back sound	18,89,27	•	87	8	30	•		1
-	TAG McLaren F1	15,000	Oddball aesthetics with accurate, unflappable, controlled and consistent sonic neutrality Surgicipaly refined considering its upper modest price upper communication with outstanding midband delicacy	40,127,48	•	87 89	8	25 45	•		
-	Tannoy mX2 Tannoy Revolution 1	150 200	Surprisingly refined considering its very modest price: very communicative with outstanding midband delicacy Pretty little mini-monitor is smooth, well mannered and polite to a fault, lacks dynamic expression	18.5,33,25 17,30,22		89	4	45 30	•		
-	Tannoy Revolution 1 Tannoy mX3	300	Pretty little mini-monitor is smooth, well mannered and pointe to a fault, lacks dynamic expression A great all-round compromise at a very modest price, combining good looks with fine midband voicing	17,30,22		80 90	4	40			
-	Tannoy mX3 Tannoy mX4	300	A great air-round compromise at a very modest price, combining good looks with line midband voicing Pretty 2.5-way has a clean and unboxy sound with respectable transparency, but lacks the dynamic grip and drive to make music really involving	18.5,96,26		89	3	20			
1	Tannoy mX4	350	Lacks dynamic grip and authority, but delivers great bass extension and a classy overall balance at a sharp price	18.5,96,26	•	88	4	20	•		1
	Tannoy Revolution R2	350	Bargain price real wood floorstander is beautifully voiced and very even-handed, if a tad laid back	17,94,24	•	90	4	20	•		
	Tannoy Revolution R3	550	Handsome real-wood floorstander lose a decent job, but lacks the evenness of its smaller R2 brother	18.5,103,28		89	8.5	- Colore a stars	•		
	Tannoy D300	999	Gorgeous-looking compact floorstander. And a fine all-round performer, too	24,85,23	•	87	6	26	•		
1	Tannoy ST-100	1,200	This supertweeter adds a subtle and delicate effect while also broadening the soundstage at a price *	15,10.5,6	•	95	8	N/A	•		
1	Tannoy TD10	5,000	Extremely competent and rhythmic speaker, a futureproof supertweeter and detail to die for	35,101,37		91	6	38	•		
-	Tannoy Kingdom 12	6,000	Something of a throwback, but great fun, with fine dynamics and authority, but a tricky amp load	54,106,46	-increase -	92	3	28	•		
				CONTRACTOR INCOMENTS	•	85	8	25	•	Ander	
and the second	Technics SB-M500	450	This model offers a clean, open sound, offset by midbass, heavy balance and low sensitivity	25,78,37	•	05	0		100000000000000000000000000000000000000	Contraction of the	

	STEREO SF	PEAK	ERS (CONTINUED)	SIZE WxHxD (cm)	FLOORSTANDER	SENSITIVITY (db/W)	IMPEDANCE (Ω)	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
STATUS	PRODUCT	£	COMMENTS								
EC	Veritas H3	6,000	Loads of fun with wonderful dynamic and temporal integrity from horn-loaded Lowther drivers	30,110,47	•	104	4	50		•	191
R	Vienna Acoustics Mozart	1,500	Gorgeous slimline floorstander sounds very laid-back but very charming, and musically literate	17,97,30	•	88	7.5	25	•		199
EC	Wilson benesch Discovery	5,500	Innovative three way with built-in stand, combines great subtlety with weight and headroom	23,47,38	•		6	45	•		212
EC	Wilson benesch Bishop	20,000	Deep and even bass sets new standards for cleanliness and clarity; lovely open midband too	23,161,561	•	89	4	S20	•		189
	Wharfedale Diamond 7.2	140	A good-hearted, lively and up-front performer that's a little lacking in subtlety and smoothness	19,29.5,23		88	4	45	٠		169
	W'dale Diamond 7.2 Anniversary	200	Lively and exuberant, but a tad untidy with it; can sound a bit cold and hard	19,29.5,24		88	4	40	•		187
	Wharfedale Pacific Pi40	500	A lot of speaker for the money, but bass is unruly, even in a large-sized room. The smaller Pi30 might give a better bottom-end balance	22,113,36	•	89	3	25	•		215
			1					Property of the			

SUBWOOFERS

STATUS	PRODUCT	£					T 1			
	Acoustic Energy AE108S	299	Lots of loud subwoofer for your money, though ultimately more film than music oriented	50,42,43			20		•	179
R	B&W ASW1000	499	Bulky heavyweight is a high quality item, able to generate more bass output than music is likely to need	54,47,50	•	A	A20	•		198
	Jamo D8SUB	950	Pretty but pricey, the D8SUB packs plenty of punch (for movie fans), but doesn't delve deep enough for music replay	45.5,41,45.5		A	30			210
R	JPW SW60	349	A real heavyweight, sounds clean and transparent, if perhaps a little understated. Usefully flexible	55,47,39			20		•	179
	M&K MX70	795	Cutely compact and entertaining too, but lacks the ultimate extension to justify its high price	37,32,30	•	A	25			210
	Mission 7AS2	399	Ugly if very effective at supplying very low bass, but filter could do with more flexibility higher up	56,30,31	•		<20	•		198
R	Paradigm PDR-10	150	Not much grip, drive or authority, but it doesn't get in the way and it is very cheap	34.5,36,42	•	А	25			210
	Polk PSW430	400	A lot of subwoofer for your money, but lacks deep grunt and is more movie than music oriented	38.5,45,46	•	A	25			210
R	REL Q50	375	This good looking if bulky sub does the business with impressive flexibility and sonic self-effacement	42,53.31			20			210
R	Ruark Log-Rhythm	775	Adds weight and scale with commendable discretion, making a positive contribution to the whole musical exposition	43,43,43	•	А	<20		No. Real	210
	Soliloquy S10	1,050	(Active) Pretty subwoofer, cosmetically matching SM 2A3 speakers, pricey and mid-bass a bit strong	51,30.5,46	•	A	25	•		196

			SPEAKERS & PACKAGES	SIZE WXHXD (cm)	FLOORSTANDER	SENSITIVITY (db/W)	IMPEDANCE (Ω)	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
	PRODUCT			<u> </u>	1 91	3	5		8	F	
RR	Acoustic Energy Aegis Three	350	High value floorstander has deep and even bass and a smooth neutrality thereafter	19,90.25	•	90	5	22	•		19
R	B&W LCR6	349	Large, gutsy standmount intended for all-round AV use delivers fine performance as a stereo pair too	20.5,55,32		90	5	20	•		19
ш.	B&W Nautilus package	6,500	This classy, laid-back package is arguably too good for current programming. Very bulky centre speaker	var	var	n/a	3	20		•	2
	Definitive Technology BP2X	595	Pricey but effective bi-polar surround speaker, with unusually high sensitivity	23,37,15		94	4	120		•	1
	Definitive Technology BP2004	1,700	Pricey bi-polar floorstander has a fine midband, let down by its built-in powered subwoofer	19,104,31	•	91	5	28	•		19
1	Dynaudio LR/C 120	439	Slim centre and front standmount, has an evenhanded but rather laid back balance but lacks drive	16.5,57,31		89	5	25	•		19
	Jamo Concert package	2,500	Lovely main speakers sonically overshadow the centre, while surrounds are a bit obvious too	var	var	n/a	5	30		•	2
88	JBL Xti-series package	1,100	Hexagonal boxes all round, this package has decent authority and all round tension	var	var	n/a	5	40		•	2
	KEF Q-series package	880	Cleverly designed, vinyl-finished UniQ package packs a goodly thump but centre and surrounds stand out	var	var	n/a	3	25		•	2
	Mirage OM-series package	2,000	Big black and bouncy package with omni fronts has plenty of vigour but some coloration var	var	var	n/a	4	20		•	2
R	Mission 77DS	199	Neat flush-mount surround speaker has no bass but a smooth midband and nicely restrained treble	34,26,12		92	4	120		•	1
	Mission Cinema 8 package	1,400	Beautifully styled and cleverly designed package, but could have more grunt and drive for the price	var	var	n/a	4	30		•	. 2
	Polk RTE 1000p	1,300	Tall elegant tower with built-in powered bass 'subwoofer' that needs using with discretion. Bright but engaging	20,110,35	•	91	4	25	•		1
	Monitor Audio Silver series	1,000	Great looking conventionally styled package lacks something in dynamic drive and tension	var	var	n/a	4	30		•	2
R	Mordaunt-Short Declaration 500	1,600	Good value vinyl THX Select package with Power Towers. Good authority but must be 5.1-connected var	var	n/a	n/a	3	25		•	2
R	PMC FB1/TB2 package	2,200	Classy if bulky and pricey package has good transparency, coherence and weight	var	var	n/a	6	20		•	2
R	Rega Jura/Ara/Senta	920	Classy real wood package does a good all round job, but sounds bright and might have more surround weight	var	var	n/a	4	25		•	2
BB	Tannoy mXAV4 package	500	Lacks grunt, grip and authority, but smooth and refined with seamless surround coherence	var	var	n/a	4	20		•	2
BB	Tannoy Saturn S6LCR	400	A punchy compact standmount based on a serious cast-frame, pro-style dual-concentric driver	21,38,29		89	6	25			1
BB	Tannoy Saturn S6	500	Fine value vinyl floorstander offers plenty of genuine grunt and real dynamic tension	21,89,29	•	91	4	20	•		1

CENTRE CHANNEL SPEAKERS

STATUS	PRODUCT	£	COMMENTS							
R	Acoustic Energy Aegis Centre	140	Good value centre-front speaker but a tad shut in and with a slightly obvious top end (price per speaker)	46,17,20	89	5	50	•		198
	B&W Nautilus HTM1	1,500	Very bulky for a centre speaker, though very capable too - a little less laid back than its siblings	76,37,30	89	4	30		•	210
	Castle Keep	250	Substantial centre-front speaker based on Harlech drivers but with rather brighter voicing	48,17,29	88	8	45	•		198
R	Definitive Technology CLR2002	595	Pricey, but undoubtedly one of the better centre-front speakers around, with fine timing and open voicing	55.5, 17.5, 31	90	4	40	•		198
	Jamo Concert Center	550	A decent balance match but lacks the class and grip of the Concert 8s, and is bulky and pricey too	55,22,30	87	5	100		•	210
BB	JBL Xti10C	200	An elegant, cleverly designed centre and a good match for the 40s. Better value than most too	51, 19.5, 27	88	5	50		•	210
	KEF Q95C	200	This artfully designed UniQ centre looks much better than most on top of the TV set	40,17.17	89	3	120		•	210
	Mirage OM-C2	600	Large but discreet omni-bi-pole matches OM-10-1 well but lacks tight focus, and seems expensive	64, 18.5,31	88	4	50		•	210
R	Mission 77C	199	A good centre-front match for 77-series, the triple tweeter might be a curiosity, but voicing is very good	42,17,21	91	4	100		•	198
	Mission 78C	350	Makes a good visual and sonic match for the 782, but quite pricey by comparison, given the ingredients	45,17,19	86	3	100		•	210
	Monitor Audio Silver Centre 10i	300	Neat and good looking partner to the Silver 5is, but a little more forward, and quite expensive too	50,17,21	87	4	100		•	210
R	Mordaunt-Short MS 504	200	Smart yet discreet and a good match for the 502. Sounds clean and expressive, and is well priced	50, 19, 20	88	3	120		•	210
R	PMC TB2M/C	325	This bulky centre speaker is quite pricey, but it combines good transparency with some authority	40,20,31	87	6	50		•	210
	Polk CS 1000p	999	Monstrously large and heavy centre-front speaker, presumably for those with monstrous intentions	87,22,35	92	4	25	•		198
R	Rega Senta	185	The very compact Senta is sensibly priced, a bit bright maybe, but articulate and expressive	32,16,21	89	4	120		•	210
BB	Tannoy mXC	100	Could be more exciting, but a very impressive centre speaker at an unusually reasonable price	42,16,21	88	4	120	-	•	210
BB	Tannoy Saturn S6C	200	A punchy compact standmount based on a serious cast-frame, pro-style dual-concentric driver	38,21,29	89	6	25	•		198

STORAGE FORM.

SPECIFICATIONS

IN-LINE REMOT

CODE

RECORDIN

STANDARD CAPACIT

ISSUE NUMBE

PC CONNECTIO

PERSONAL/INTERNET

PERSONAL STEREOS

	The second second second second second				61		
US 🛛	PRODUCT	£	COMMENTS		1		
	Aiwa HS-PX307	30	So-so sound but an impressive features roster. Decent value overall	Cassette		•	20
R	Aiwa AM-HX50	180	Neat play-back only personal with an impressively full-bodied sound, though short on detail	MiniDisc		•	20
	JVC XL-PG31	60	'Challenging' looks and frankly unpleasant sound add up to a player that's best avoided.	CD			21
	JVC XL-PG7	100	Undistinguished CD model, with tacky build and below-par sound	CD		•	20-
	JVC XM-R700SL	250	The most expensive player here, but its in-yer-face sound and slab-like, heavy design make its value questionable	MiniDisc	•	•	21
R	Kenwood DPC-X517	100	Clean, funky bass makes for an exciting sound; an attractive proposition, if you can stomach the looks	CD			21
R	Panasonic RQ-SX71	70	A sleek aluminium body, decent sound and superb features	Cassette		•	204
	Panasonic RQ-SX91	80	A super-slick personal for well-heeled cassette users. Sound is rather bright	Cassette		•	204
1	Panasonic SJ-MR100	250	Well built and nicely appointed, though performance is unremarkable at the price	MiniDisc	•	•	204
R	Philips ACT7582	115	A splash-proof body and an entertaining sound – the perfect CD personal for holiday japes	CD			204
R	Sharp MD-MT877H	230	Pleasantly up-front sounding player in a sexy little package, well worth your attention if you like that kind of thing	MiniDisc	•	•	216
	Sharp MD-MT831H	250	Smart design, sprightly sound and a well featured package	MiniDisc	•	•	204
	Sony WM-EX404	35	Super-stylish but sonically flawed, with particularly uncomfortable earphones	Cassette			204
R	Sony D-EJ815	140	High-tech build and features, including super-effective shock protection. Sound is soft but substantial	CD		•	204

INTERNET AUDIO

	Aiwa MM-VX100	130	Aiwa's expertise in the personal stereo field is visible, but performance is only average	Solid State	•		MP3	PRL	32MB	20
	Audio ReQuest ARQ1	568	Full size separate containing CD player, hard drive and PC connection. Sign of things to come?	CD/HD	•		MP3/WM	Charles and the second	-	
	Creative Labs Digital Jukebox	349	Smartly designed high-capacity portable with storage for over 1,000 tracks	Hard Drive	•		Aqnostic	USB	5.7GB	
R	DigMedia Music Store	350	Innovative CD/hard drive combo with optional solid state portable. MP3 with or without a computer	CD/HD	•		MP3	USB	5.4GB	20
	JazPiper MV32P	125	First wave player that looks good but sounds bright. Includes voice recording and phone book features	Solid State	•		MP3	PRL	32MB	19
	LG MF-PD360	130	Good looking and temptingly affordable, but features and performance are nothing special	Solid State	•		MP3	USB	32MB	208
	LG AHA-FD770	200	Cassette and solid state personal in one – novel idea, poor execution	SS/Cass	•	•	MP3	PRL	32MB	204
	Logix Evzone	219	Novell MP3 player that uses lomega Clik! discs for storage. Chunky but quite effective, and discs are much cheaper than memory cards	Clik! Discs	•		МРЗЛИМА	USB	40MB	213
	Neo-25	420	Sparsely equipped but efficient hard drive portable with an exceptionally high potential capacity. Average in the sound department	Hard Drive	•		MP3	USB	10GB	21
	Philips eXpanium EXP103	190	The best MP3-CD personal, at least at the time of writing An effective solution for MP3 on the move	CD			MP3			213
	Philips Rush SA126	250	Sound is a little thin and wishy-washy, and the fiddly controls and lack of remote make it difficult to use	Solid State			MP3	USB/PRL	64MB	216
	Pine D'Music	120	Good build, solid sound and a voice recording mode make this a good first-time buy	Solid State	•	Sala	MP3	PRL	32MB	195
	Pontis SP504	158	Not the best aesthetically, but exceptionally good MP3 sound	Solid State	•		MP3	USB	32MB	204
2	Rio 500	190	Well featured and a strong performer, though new generation Rios have now arrived	Solid State	•		MP3	USB	64MB	195
	Rio 600	169	Neat design, strong future-proofing, good features and sound. Only its memory lets it down	Solid State	•		Agnostic	USB	32MB	208
2	Rio 800	300	If you're interested in solid state, this player's great sound and ease of use make it worth a look	Solid State	•	•	Agnostic	USB	64MB	216
	Sanyo SSP-PD7	250	Cute but pricey with limited supplied memory, but sound is good and it's one of the first to employ AAC coding	Solid State	•		MP3/AAC	USB	32MB	213
	Schneider MPMan F20	99	The world's first MP3 personal. Basic but still good value	Solid State	•		MP3	PRL	32MB	195
	Smart Portable MP3 Disc Player	119	CD personal that also plays MP3 tracks burnt onto CD-R discs	CD			MP3			208
	SonyNW-MS7	249	A gorgeous little personal using Sony's Memory Stick storage. Good but pricey	Solid State	•		MP3/ATRAC-3	USB	64MB	208
	Sony NW-MS9	300	It's got size and simplicity on its side, but it's up-front, boorny sound is significantly below par	Solid State	•		MP3/ATRAC-3	USB	64MB	216
2	Sony MDC-PC3	350	A MiniDisc deck which hooks to a PC. Introduces cheap and flexible MD media to the world of MP3	MiniDisc	•		MP3/ATRAC	USB		213

SPECIFICATIONS RECORD PLAYERS SUPPLIED WITH ARN SUPPLIED WITH CART SUSE EXTERNAL ISSUE NUMBEI SUBCHASSIS SEMI-AUTO SPEEDS AUTO **TURNTABLES** PSU STATUS PRODUCT ∎ £ 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 33/45 194 Avid Acutus 4,995 • . . Extremely capable design with no apparent shortcomings, don't sell your vinyl 'til you've heard it on this! Clearaudio Reference • 33/45 144 3.990 Opulent beast tested with Souther TQ-1 arm. Tends to gloss over detail, but can sound bold 144 DNM Rota 2 5.600 Tonally slightly bleached, but extracts detail like few others. Works well on its own table . 33/45 . Dual CS 455.1 220 Neat record player with automatic convenience (and 78rpm), but doesn't match simpler manual rivals sonically . 33/45/78 . . 203 -33/45 103 Dual 505-4 UK 250 Consistent sounding and well isolated turntable. It is slightly lacking in oomph • . Kuzma Stabi/PS 1,950 (Tested with Stogi Reference) Solid oak plinth; sound is very clear, detailed and extended 33/45 . 91 . 103 . Linn LP12 Basik 1,100 Trails the full LP12 significantly, but pace, rhythm, timing etc. still top rank 33 . Linn LP12 Lingo The classic reference is improved by the Lingo, but charming character remains . 33/45 . . 91 1.750 Michell Gyrodec 875 Sweet and natural-sounding player, well matched to Rega RB300 arm • 33/45 . . 55 • 33/45 190 EC Michell Gyro SE 775 A stunningly desirable combination of looks, solidity and sound make this a tempting turntable . Michell Orbe SE 1,725 A Superb turntable, able to mix it with the best at virtually any price . 33/45 192 . NAD 533 220 Sonically a little crude, but musically satisfying results at a very modest price 33/45 . . 203 Notts Analogue Spacedeck/Arm No frills, just a first-rate, outstandingly natural-sounding deck that will last forev • 33/45 . . 159 750 • 33/45 164 Pro-ject 2 300 Remarkably effective at the price, with decent timing and a generally well defined sound . • 203 Pro-ject Classic Cherry 450 A great looking turntable with a generous and dynamic sound, but lacks something in overall coherence 33/45 • . 192 **Pro-ject Perspective** 750 Flexible facilities and competitive package, but performance of turntable alone is behind the best . 33/45 R Pro-ject 6/Sumiko 850 Don't think of this as a deck with a good arm, but as a scaled-down Oracle Delphi — it's that good . 33/45 138 .

	TURNTABL	.ES (0	CONTINUED)	MANUAL	AUTO	SEMI-AUTO	SPEEDS	SUSP SUBCHASSIS	EXTERNAL PSU	SUPPLIED WITH ARM	SUPPLIED WITH CART	ISSUE NUMBER
STATUS	PRODUCT	£	COMMENTS									
BB	Rega Planar 2	214	A remarkable product at the price, surprisingly articulate and confident	•			33/45			•		48
R	Rega Planar 3	274	Sounds musical in a balanced manner, needs decent isolation and suffers a little pitch instability	•			33/45			•		164
BB	Rega Planar 25	619	Great looking turntable has a silky smooth sound with exceptional midband coherence	•			33/45		•			203
BB	Reson RS1	600	Supplied set-up and ready-tuned, this unconventional deck is packed with mid-band detail	•			33/45		•	•		159
R	Roksan Radius 3/Tabriz zi	890	Elegant-looking turntable with a tidy, ordered sound. Bright and breezy if a shade lightweight	•			33/45	•	•			159
EC	SME Model 10A	3,333	Elegant and extremely capable design with Series V/309 hybrid arm, superbly built	•			33/45	•	•	•		195
EC	SME Model 20.2A	4,863	Beautifully built, extremely neutral damped and suspended deck with superb sound. Inc V arm	•			33/45/78	•	•	•		186
BB	Thorens TD166 VI/UK/RB	400	Refined, solid sound with well-focused imagery; suitable for use with good MM/MC budget cartridges	•			33/45	•		•	•	103
	Thorens TD 146 VI	550	Tonearm not quite up to turntable's potential; this semi-auto is much pricier than manual TD166	•			33/45	•	•	•		203
	Thorens TD 2001	700	Balances convenience and sound well, but deck lacks detail and bass could be better controlled			•	33/45	•		•		159
R	VPI HW19 Junior	650	A notably large and handsome turntable with good sound quality and considerable upgrade potential	•			33/45	•	•	•		203
R	Well Tempered Record Player	850	Intriguing and challenging. Musically not ideal, but its limpid quality and lack of artificiality set standards	•			33/45	•	•			136
EC	Well Tempered Reference	5,500	Superb mechanical stability and unflappability result in a clean reproduction	•			33/45	•	•	•		205
BB	Wilson benesch The Circle	795	A beautiful turntable with a sumptuous sound, all at a very reasonable price - a clear Best Buy	•			33/45	•				192

CARTRIDO	iES		M	MC	REPLACEABLE STYLUS	OUTPUT (mV)	MASS (g)	
US PRODUCT	£	COMMENTS						ĩ
Allaerts MC1B	1,295	Highly capable and entertaining Belgian cartridge that warrants the finest turntable and phono stage you can afford	Section.	•		0.5		
88 Audio Technica AT-95E	20	Clear and dynamic, though richly balanced	•		•	2.8		
Audio Technica AT-OC9ML	330	A well-finished cartridge with a sound that's smoothly detailed, but also rather unexciting		•		0.4	8	
BB Clearaudio Signature	1,495	A great all-round performer with fine dynamic vitality and a seductive midband intimacy		•		0.55	11.5	
BB Denon DL110	70	A fine all-rounder, this high output MC model is likely to perform well	e de la companya de l	•		1.0	6	
Denon DL103	100	Good performance in bass and good 'life'. Is seriously let down by its spherical stylus which kills subtle detail		•		0.1	6	
BB Denon DL304	200	Uncoloured, detailed, tracks superbly. Top notch altogether, and a bargain at the price		•				
R Dynavector DV-20X L	299	Articulate-sounding, with impressive treble resolve, though lightweight at times. Needs a high quality turntable and arm		•		0.25	8.6	
Dynavector Karat 17D2 mk2	450	Clean and controlled sound with taut, tuneful bass. Detailed and musically cogent		•		0.15	5.3	
R Dynavector XX-1L	998	Very clear, very detailed; a response lift around 20kHz seems to do no harm		•		0.25	12	
R Dynavector Te-Kaitora	1,698	A real smoothie, but pricey. Worth checking out for its delicate laid-back transparency and low needle-talk		•		0.25	8.5	
C Dynavector DRT XV-1	2,500	Capable of conjuring one of the most tactile , three dimensional sound stages on the vinyl planet. Extremely entertaining		•		0.3	13	
R Goldring Elan	19	A lightweight and frisky-sounding MM apparently based on Nagaoka MM4 body	•		•	5.0	7	
R Goldring 1012GX	79	Slightly harsh but plenty of life and detail. Some high frequency coloration apparent	•		•	6.5	7	
R Goldring 1022GX	99	As with 1012, a touch harsh; detail and transient purity improved	•		•	6.5	7	
R Goldring Eroica LX	110	Not the most subtle cartridge in the world: can sound edgy at times, but lively and informative		•		0.5	8	
Goldring 1042	120	Not terribly subtle, and not such good value alongside 1012 and 1022. Quite lively, though	•		•	6.5	6	
Goldring Elite	220	The basics are right, and it will cheerfully tackle any source material, but its sound is not the cleanest		•	and see	0.5	8	
Goldring Excel VX	525	Good bass drive but dull and imprecise higher up. An old-fashioned sound that falls short of the true high end		•		0.45	8	
BB Grado Prestige Gold	149	Rich sounding with an unusually refined top-end for a moving magnet-type cartridge	•		•	4	6	
Grado Reference	995	Loads of tracking headroom but treble is limited. A prospect for mid-oriented valve amp users	•			1.7	6.5	
BB Linn K9	125	Linn improved this model by beefing up the Basik's bodywork and adding a super stylus	•		•	4.5	5	
London Decca Maroon	259	Now manufactured under the London brand name, this Decca cartridge is as iconoclastic as ever	•			5.0	6	
London Decca S Gold	399	Immediate and detailed, but coloured and nonlinear, with a questionable effect on records	•			5.0	6	
Lyra Lydian Beta	599	A thoroughly enjoyable cartridge - smooth, agile and dynamic in character		•		0.5	8	
R Lyra Lydian	649	Superbly capable all-round musical performer that improves markedly when its body cover is removed		•		0.3	7	
C Lyra Helikon	1095	Highly capable and highly neutral, this is a cartridge for all seasons		•		0.5	8	
Lyra Parnassus D.C.t	1,895	A real little jewel of a cartridge, with many good qualities, but handicapped by a rather too obvious treble peak		•		0.22	10.5	
BB Ortofon 510/P	38	For the price, a good blend of virtues – weight, clarity and neutrality	•		•	3.0	5	
R Ortofon 520/P	65	Sensitive to load capacitance, but the 520/P has a lively, effervescent sound	•		•	3.0	5	
R Ortofon MC3 Turbo	130	The 3 Turbo is bright, cheerful and bouncy, but unsubtle - take it as it comes		•		3.3	4	
BB Ortofon MC15 Super II	130	A good all-rounder, with outstanding resolution, if slightly bright and close up		•		0.35	7	
Ortofon MC25E	180	An excellent upgrade for a mid-price turntable		•		0.5	11	
Ortofon MC25FL	250	A bit too stark and honest, but faithful to what's on the LP		•		0.5	11	
BB Ortofon MC 10 Supreme	300	A full and cultured-sounding cartridge, with collective attributes far outweighing its shortcomings		•		0.5	10.7	
Ortofon MC30 Supreme	525	Highly detailed and even-sounding cartridge that has a special affinity with female vocal recordings		•	1 Starts	0.5	10.7	
BB Ortofon Rohmann	1,000	A class act in nearly every respect, with fine groove security and a very smooth and even-handed sound		•		0.25	8,5	
R Ortofon MC3000II	1,100	A real ear-opener. Nothing to criticise anywhere — one of the very best		•		0.12	10	
Ortofon MC5000	1,500	Limited tracking ability, bright and forward sound, but good stereo		•		0.12	10	
Rega Bias	39	Difficult to mount in some arms due to its shallow body, but the Bias offers a gentle, refined sound	•		•	5	4	
R Rega Elys	85	Clearly superior to the Bias, the Elys is more detailed, accurate and convincing	•		•	5.0	5	
R Reson Reca	250	If you're after a high quality moving magnet cartridge, they don't get much better than this	•		•	6.5	6.3	
R Roksan Corus Black	130	Recognisably related to the Corus Blue, but smoother and more civilised	•		•	6.5	5	
BB Sumiko Blue Point Special	250	A no-nonsense performer with engaging musical properties - one of the best around for less than £300		•		2.5	9	
R van den Hul MM-1	250	If woody midrange could be tamed, imaging and security would pull it through	•		•	5.5	6	
van den Hul DDT-II	600	Outstanding stereo imaging and neutral balance are appealing, but rhythmically the DDT-II is a bit lazy		•		0.35	7.6	
R van den Hul MC-10	750	A neutral, balanced performer, gives fine depth and focus and a firm, extended bass		•		0.4	6	
R van den Hul MC-One	900	This extends all the positive qualities of the 10, but adds greater authority and scale - worth all the extra money		•		0.4	6	
R van den Hul MC-Two	1,200	MC-Two rewards with a highly detailed yet fluid and musically convincing portrayal		•		0.4	6	
R van den Hul Frog	1,500	Seems to control/suppress surface noise better than its rivals. This delicate and subtle performer has great charm		•		0.65	7	
van den Hul G' hopper IIIGLA	2,800	Undoubtedly one of the finest cartridges available. It has tremendous bandwidth, energy and finesse		•		0.4	6	
R Wilson benesch Matrix	786	Extraordinarily well balanced cartridge: neutral and detailed yet lively and rhythmically assertive		•		0.58	6	
R Wilson benesch Carbon	1,573	Carbon fibre body contributes to a delightfully clean and open midrange, and a quick, lively and coherent sound		•	Contraction of the	0.45	7	

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TONEARMS / EQUIPMENT SUPPORTS / SPEAKER STANDS THE DIRECTORY

SPECIFICATIONS

NUMBER OF SHELV

ISSUE NUMBI

TOP PLATE SIZE (c

TONEARM	15		EFFECTIVE MASS	PARALLEL TRACKING	EFFECTIVE LENGHT (cm)	ISSUE NUMBER
S PRODUCT	£					
Kuzma Stogi Ref	1,250	Large, solid and well made arm, gives exceptionally clear sound with just a hint of brightness	High			79
Linn Ekos	1,500	Superb, state-of-the-art design which builds significantly on predecessor's strengths	Med		229	67
Rega RB250	109	The ultimate budget arm? Refined, sweet, detailed and natural	Low		237	60
Rega RB300	174	Despite its modest price it sets exceptional standards and could be used on many high-end turntables	Low		237	60
Roksan Tabriz Basic	350	Targeted at the Xerxes, this is a good alternative to the Rega arm in many cases – a touch bright though	Low		240	91
SME Series IV	983	Superb engineering and finish with a finely balanced sound, impressive stereo focus and low coloration	Low		233	60
SME Series V	1,461	Excellent in all respects, this arm arguably sets the standards for pivoted arms, regardless of price	Low		233	60

STANDS & SUPPORTS

EQUIPMENT SUPPORTS

	EQUIPMEN		JPPORTS	HEIGHT	ATE SIZE (cm)	FILLABLE	WELDED	ER OF SHELVES	SHELF TYPE	
JS	PRODUCT	£								
	Aavik C4	200	Attractive wood finish stand with a very large footprint but sound is a little coloured	77	47			4	MDF	Î
۲.	Aavik Furniture A4	350	Good sound and stylish Scandinavian looks at an affordable price	80.5	47			4	Wood	
	Alphason GR 17/17-AS	275	Great looks but sound can be bettered for the money	36	60,39			4	Glass	l
	Apollo Symphony	245	Simple steel and glass stand which majors in excitement factor but lacks precision	73	46.5		•	4	Glass	
	Apollo Soprano	275	Uninspiring looks and sonic performance that can be beaten at this price	68.5	45.5			4	Glass	
2	Atacama Europa	240	Stylish, expandable modular design with agreeable full-bodied sound – great value	67	48.6		6	4	Wood	
в	Audiophile Furniture Base	615	Price is justified by its earth-shattering sonic abilities a worthy upgrade	82	43		100	4	MDF	
2	Avid Isoschelf	1,100	An enthusiasts equipment support stand free from coloration if a little fiddly to set up	87.5	48			5	MDF	
	Custom Design Aspect650	270	Smart looks and practical thanks to adjustable shelves. Sound is fair with some loss of detail	66	46		•	4	Glass	
	Elemental Isotube x 4/Ref	1,199	Blockbusting size and build. Super sound quality	92	45,49		•	4	Marb	
	Elemental Audio Isotube X4	849	A hefty stand that demonstrates just how much difference a good support can make	90	49		•	4	Glass	
3	Frameworks H500/H175	404	Two-shelf stand and isolation platform combo in tubular steel - made a spectacular impression on audition	70	52,34		•	3	Glass	
	Ixos Deadrock 704	250	Looks unassuming but sound is full and inviting		46,39			4	Resin	
	Mana 4-tier	500	The ultimate statement in steel and glass; adds resonance in a way you'll love or hate	87 ·	45		•	4	Glass	
	Optimum Int 2000 OPT490	299	25kg stand with shelves between variable-height tubular uprights. Sounds smooth and relaxed with sturdy bass	50	60,40			4	Glass	
	Optimum Int 2000 OPT660	349	Glitzy style isn't reflected in sound, which is wholesome	82	60,52		15	5	Glass	
	Projekt Furniture A4	215	An elegant support stand that blends in to any home environment with a laid-back sound	56	48			4	Wood	
	Quadraspire Q4	280	Simple but modestly effective and very attractive	52	49			4	MDF	l
	Sonus System Elite	330	Rather ugly and seems to offer little over and above cheaper steel and glass stands	68	50		•	4	Glass	
3	Sound Organisation Z560	160	Welded and bolted members give structural integrity. While performance is not up with the best, it's great value	90	46,36		•	5	Wood	Į
	Sound Organisation Z545	160	Budget price and great looks make this a great value stand	73	46		•	4	Glass	
	Soundstyle X100	230	Looks lovely, sounds lively but slightly bright	64	49,28		•	4	Glass	
	Soundstyle XS100	270	Less character than other similar strands, but sound is somewhat short on transparency	72.5	49.5		•	4	Glass	
	Soundstyle Radius SR100	280	Stylish looks and a smooth sound	63,5	49.5		•	4	Glass	
	Soundstyle Finewoods W105	320	Veneered shelves clamped between tubular uprights. Delivers with classical material	82	48,27			4	Wood	1
В	Standesign Design 4	190	An all-in-one support at a budget price with good sonic performance	88.5	50.8		•	4	Glass	l
	Townshend Seismic Sink AV1-4	600	Gives significant isolation for turntables and seems to add little character otherwise	74.5	45			4	MDF	
В	Townshend Seismic Stand	1,245	It's big, it wobbles and it's pricey. But this is the ultimate equipment support	72	58,45			3	Wood	
B	Wilson benesch Asside	590	Sounds even better than it looks. And it looks wonderful	72	37,50			4	Wood	

SPEAKER STANDS

	PRODUCT Alphason Akros II	65	COMMENTS A well-specified budget stand but the sound is as subtle as a house party	60,45	16.5	•	202
	Alphason HDS	85	A reasonable stand with a smooth but rather bland sound balance. Good finish options		15.5,15.5	-	18
	Apollo Olympus	75	A popular stand and a decent performer, but unremarkable by today's standards	40-60		CARD COLOR OF COLOR OF COLOR	18
	Apollo A4/6	82	A performance and a decent performer, our unremarkable by loady's standards	51,40.51			20
	Atacama Nexus 6	50	An excellent all round performer and a genuine hi-fi bargain	60,50	14.5,18		20
	Atacama R724	150	Atacama uses its market strength to deliver a superbly appointed product at a very reasonable price	60	15,17		18
	Custom Design R/S300 Mkll	100	A solid stand improving on the original with better focus and detail	61,56,51		•	20
	Elemental Isotube SZse	599	Stands of distinction, able to free the speaker's sound from its box in a way budget stands simply can't	61	23,27	• •	18
	JPW HS1	120	A purposeful stand, a touch dry-sounding but particularly strong with bass. Great for rock and dance music	61	19,21	•	18
i i	Mana Sound Base	175	The Sound Base plinth simply improves the sound of every speaker placed on it	8	29,32		20
	Mission Stance	100	Detailed and open but needs a firm foundation to give its best	60	19,15	•	20
в	Partington A-4	119	An oddball stand with a sound that's sheer class. More open and focused than almost anything below £150	50-100	19,22	• •	18
5	Partington Dreadnought Ult.	299	Super heavyweight stand that is an open window to the speaker placed on it	63	20.5,23.5	•	20
	Russ Andrews Torlyte	599	Subtle and musical-sounding stands, though a touch more 'pizzazz' is need for Recommendation at this price	61	33.5,24		18
	Sonus Systems Excel	110	Strong performance when filled with sand but design flaws let it down	65,45	20,22.5	•	20
	Sound Organisation Z524	69	A coherent-sounding stand with particular strengths in the midband, though quality drops at the frequency extremes	61	16,17		18
BB	Sound Organisation Z522	89	Easy going and likeable performer straight out of the box	59	16,17	•	20
	Sound Style Select	95	OK but not as good as its cheaper brother the Z522	59	16,17	•	20
	Target HM60	106	A solid and well-built stand laid-back to the point of coma	40-70	16.5,19	•	20
กไ	Townshend Seismic Sink	499	Unique inflatable plinth that works well with decent floorstanders as well as standmounted speakers	4	38,48		20



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			Arcan DAB	Tunen	SPI	ECIF	ICA	TIO	NS	
				WAVEBANDS	PRESETS	RDS	REMOTE CONTROL	SIG. STRENGTH METER	ROT. TUNING KNOB	ISSUE NUMBER
ATUS	PRODUCT	£ ·								
R	Cambridge T500	180	Very capable tuner suited to good and less good reception conditions	FM,M,L	64		2	•	•	193
R	Creek T43	399	Quality UK-made tuner offering classy sound in all areas at a very fair price	FM,M,Ł	64		•	•	•	193
R	Cyrus FM7.5	400	Beautifully made and presented, with sound that's a small but worthwhile advance over budget models	FM	7			•	•	211
BB	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
R	Denon TU-1500RD	250	A well balanced and clean sound with good bass and treble extension	FM,M	40	•			•	184
	Magnum Dynalab FT11	499	All-analogue tuner: receives weak or tightly packed stations but loses out on noise and sonic neutrality	FM	3			•	•	184
BB	Harman/Kardon TU950	200	Bulky but effective, delivering fine RF performance an'd good sound for the price	FM,M,L	30	•			•	166
	Leak Trough Line - GTA	300	A renovated classic with a style all of its own coupled with an emotive and gutsy performance	FM	0			•	•	206
	Linn Pekin	545	Smart and high-tech tuner which integrates well with Linn systems but offers less appealing performance out of that context	FM, M	80		•	•		211
R	Linn Kremlin	2,600	Controversially good sound at a very high price	FM	80		•	•	in the second	142
BB	Marantz ST-48	120	A classic budget model which manages a performance only just behind much more expensive models	FM,M	60	•				184
	Marantz ST6000	150	Another budget killer from Marantz, with sound well above its class and useful features	FM, M, L	90	•		•		211
R	Myryad T-30	400	Attractive product that produces attractive sounds too: capable of very musical performance with a good aerial	FM	29		•	•		193
	Myryad T-10	530	A very smart unit which works well and offers good rhythmic drive and vitality, albeit at a price	FM	20			•	•	184
	NAD C440	200	Rather polite sound, a little vague at times, that seldom offends but never excites	FM,M	30	•				193
	Pioneer F-504RDS	250	Cable-friendly with advanced RDS and excellent RF performance; slightly disappointing sound	FM,M	40	•		•	•	166
	Roksan Caspian	595	Neat facia with great ergonomics, but sound is not really any better than models at half the price	FM	50		•	•	•	184
	Sony ST-SE500	140	A lot of features for the money, but sound lacks detail and has some coloration	FM,M,L	30	•		•	•	193
	Roksan Kandy KT-1	375	Well made but sound is a bit lacklustre and lags behind some budget models	FM, M, Ł		•				211
	Rotel RT-935AX	160	Good ergonomics and sound quality at a realistic price, but limited features and RF selectivity	FM,M	20					166
	Sony ST-SA3ES	250	Clean, lean presentation but needs a quality aerial to perform at its best	FM,M,L	30	•		•	•	157
R	Sony STS-B920S	180	A little hiss and image compression don't detract from the clean performance of this feature-packed tuner	FM,M,L	30	•		•	•	184
	Thorens TRT2000	499	Not exactly neutral sounding, but nonetheless makes listening fun	FM,M	59	•	•	•	•	157

DIGITAL TUNERS

STATUS	PRODUCT	£	COMMENTS							1.1
R	Arcam Alpha 10 DRT	800	The first DAB tuner and arguably still the best, but the system's still not perfect	DAB	7	•		•	•	199
	Arcam FMJ DT26		Metal-cased version of the Alpha 10 DAB, not so competitive now DAB prices are dropping	DAB	7	•	•	•	•	211
	Cymbol C-DAB 1	1,000	The first 'high-end' DAB tuner, although format is the ultimate limitation. Gorgeous finish	DAB	8	•	•	•		199
	Psion Wavefinder	299	Bizarre-looking DAB tuner that requires a powerful PC to operate - great gadget, sound variable	DAB		•		•		211
	Sony ST-D777ES	550	Smart and useful with DAB and FM in one box, but neither band really shines	DAB, FM, M, I	99	•	•	•	•	211
R	Technics ST-GT1000	500	Handy tuner that combines DAB, FM and AM in one unit and substantially lowers the price bar for DAB entry	DAB,FM,M	97	•	•	•	•	199
	VideoLogic DRX-601E	299	Cheapest DAB tuner to date, and concedes little if anything to dearer models	DAB	10	•		•	•	211

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NEXT MONTH

In this world of zeroes and ones, the only real way to record your music is digitally. Next issue, we present a Bench Test of a dozen digital recorders. We check out the best CD-R and CD-RW decks, and MiniDisc separates, featuring the latest models from Pioneer, Philips, Denon, JVC, Kenwood and Sony,

SWEEPING SATELLITES Speaker systems are getting more discreet and stylish by the month, and the kings of this particular hill are satellite and subwoofer systems. We find out if these little beauties cut the sonic mustard. Featuring the latest unboxy bundles from the likes of KEF.

THE MAINS EVENT

your taste in music, it's electricity you're listening to. It's electricity that, at the end of the day, gets those check out next issue's test of sub-£100 mains cables designed to keep your supply as clean as possible featuring models from Kimber, SonicLink, Audio Note, Yello and many more.

Meridian's hot new 596 DVD player, the brand's set new standards for the genre. And ATC's classic were raised in the studio and only slightly tamed for

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The art of subwoofery

HOW DO YOU GET THE BEST OUT OF YOUR BASS? PAUL HAS SOME SUGGESTIONS.

eviewing the two REL 'sub-bass systems' (see p22) was a potent reminder that subwoofers (as they are generally known) are one of the most interesting components around, as well as one of the most difficult to evaluate properly. Were I to accuse REL's founder Richard Lord of being crazy to design and build subwoofers for a living, he'd certainly agree. I sometimes wonder whether I'm crazy trying to review the things too (but then someone's gotta do it, and it's a good excuse to get adolescent again with some kickin' dance tracks!).

Next month we're doing a group test of stylish 'three-box' stereo speaker systems, or satellite/subwoofer combinations as they're often called. These are much more straightforward than separate subwoofers, because the subs and the sats are designed with each other in mind, in order to make a properly matched combination.

However, creating a 'universal' subwoofer has always been a much trickier task, all the more so since DVD players burst onto the scene with their discrete '5.1' movie soundtracks. Stereo CD players will continue to be made for hi-fi enthusiasts, no question, but because they're able replay CDs as well as DVDs, DVD players are fast replacing them in the mainstream sector, and are the key component in bringing the hi-fi and AV worlds together.

WORLDS APART

Agreed, in an ideal world we'd keep our hifi and our AV systems quite separate, even down to the rooms we use them in. In the real world few can afford such luxury, and the two have to learn how best to co-exist. In a recent column (*HFC* 211) I looked at the system 'architecture' which allows the true hi-fi enthusiast to have his/her AV surround sound cake while still enjoying the full flavour and delights of serious stereophonic hi-fi. In short, this is done by keeping your proper stereo hi-fi system 'as is', and using it to supply the main left/right channels for an AV system of much more modest pretensions which is only brought into play with 5.1-channel programming.

However, that glosses over one factor which this month's subwoofer review highlighted. It's all to do with that '.1', also known as the LFE (low frequency effects) channel. The stuff that goes into that channel has nothing to do with music, and everything to do with creating explosions and various other forms of sonic mayhem. This is often at a power level way above that required for any musical form – sufficiently so as to be potentially embarrasing to smaller amplifiers and speakers.

MATTERS OF SIZE

Now, a stereo hi-fi system consists of two, fullbandwidth channels, with no flexibility (apart, of course, from adding a subwoofer, REL-style, to underpin the main speaker pair). A 5.1 surround system, however, incorporates 'bass management' which allows various combinations of small and large loudspeakers and subwoofers. A classic AV system might use five small speakers and a subwoofer, the latter handling all the bass for the system.

However, if you're integrating your stereo and AV system, things can become rather more complicated. It's no problem if your hi-fi amp and speakers can handle plenty of bass power, irrespective of whether or not you're using a sub. Just select 'large' main left/right and 'no sub' in the 5.1 menu, and all the LF and LFE will be routed through the main hi-fi channels.

However, if your main speakers are small, and used alongside a subwoofer, they could easily get upset and become a limiting factor when working hard with an LFE-rich soundtrack. Which is why REL fits its subs with two parallel and independent inputs – one at high level, which you can link up to your regular stereo speakers for normal stereo operation, and 'mix' for optimum balance between music and movies. When you go over to a 5.1 soundtrack, keep the LFE '.1' feed active and connect it to the sub's low level input, so all the high level effects go just to the sub and don't overload the main speakers. Clever stuff!

Paul Messenger enjoys getting down, deeper and down - and then he gets down some more. (With his bad self, natch.)



"I SOMETIMES WONDER WHETHER I'M CRAZY WHEN I TRY TO REVIEW SUBWOOFERS..."

look to the past future tο hear the

AMATI HOMAGE

Sonus faber.

Franco Serblin is too much the artist to settle into a routine, too passionate a designer to sit still. After 20 years, he remains driven to discover better methods for reproducing sound. And just as his views change the way we look at loudspeakers, so has his medium - Sonus Faber - evolved alongside his need to further the loudspeaker art.

His loudspeakers have developed into three distinct ranges - all the better to address the needs of an increasingly sophisticated marketplace. After all, with maturity comes a clarity of vision and intent. At the time of Sonus Faber's birth, there was no home theatre to address, and digital audio was in its infancy. In 2001, the world of home entertainment encompasses discrete 5.1 channel surround sound, purist 2-channel analogue audio,

emerging digital technologies such as SACD and DVD-A, and more



Sonus Faber welcomes the future, yet it shows respect for the past, the most vivid example being the Homage series. This luxurious range consists of the stand-mounted two-way Guarneri and the three-way floor-standing Amati, both embodying artisan skills of centuries past: the beauty and warmth of hand-fashioned cabinetry, wrapped around components which deliver sound worthy of the names of the greatest stringed instruments of all time. For more modest installations, the Signum and the Electa Amator II forge a direct link with the speakers which established the Sonus Faber name. And to serve a multitude of channels, the dazzling, ultra-modern Concerto

Home series contains everything from satellite speakers and slim floor-standing models, to a centre channel, to the new Gravis subwoofer.



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YOU'LL SEE

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One look tells you that this is a speaker that will enhance any environment. Finished in real wood veneers with a stylish brushed aluminium baffle, no other speaker in its class brings music to life with such realism yet fits so effortlessly into your interior. The CM doesn't only look beautiful, it sounds amazing too. Including audio technology derived from the ground-breaking Nautilus[™], the CM Series is the perfect solution for interior design-conscious music enthusiasts.



ND

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