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KITE

In-depth and exclusive Essential new hi-fi from the world's best brands





The latest DVD-A, SACD and universal players do battle in the definitive high-res shootout

FEATURING...

Arcam DiVA DV89

Denon DVD-2900

> Marantz DV8400

> Pioneer DV-565A > Sony DVP-NS999ES

ROKSANB&WSONYORELLE REWORLDARCAMDENON





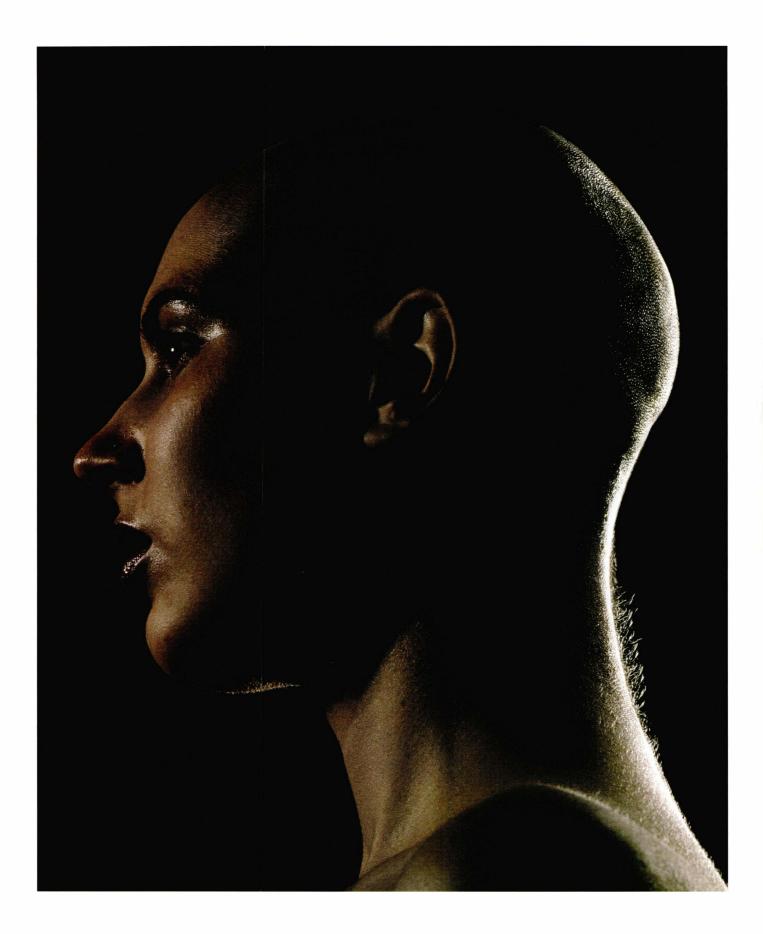
> A B S O R B E D

With every beautiful note I'm where I want to be



B&W Bowers & Wilkins





The Arcam DiVA range has always been about the performance. Pure emotion from pure sound. Experience the power of music at your DiVA dealer - it could make the hairs stand up on the back of your neck.



HI-FICHO

DECEMBER 2003 ISSUE 248

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



Jason previously edited Hi-Fi Choice, but can now be found swanning about the wilds of Sussex indulging himself with the very best hi-fi money can buy. His own system is simply isational (trust us) and his



A former editor of Hi-Fi Choice beloved hi-fi hobby for some 26 years. In that time he has ne one of the world's mos respected sonic scribes and probably the UK's foremost oudspeaker reviewer. He also writes for respected US hi-fi journal Stereophile.



Science officer Miller is hi-fi's ndisputed king of lab testing He employs his own specially designed equipment to null apart every measurable neter and explain its effect on a product's performance.



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



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

sit in front of my hi-fi as I write, warming my soul on the smouldering undertow of Elbow's brilliant Cast Of Thousands album while poring over our shortlist for this year's Hi-Fi Choice Awards. The deliberations continue as we whittle down our favourites from a fascinating year for lovers of the sonic arts. You'll have to wait until 28 November to discover the eventual winners, but in the meantime you can bask in the reflected sonic glow of our biggest ever Reviews section, inside this very issue.

It's a remarkably strong line-up of kit, hardly surprising as many of the key products for the autumn/winter season have found their way through the clamour to qualify for the Awards. The running theme, as ever, is passion for enthralling sound, and to that end we've put together a selection of the finest new kit for both two and multichannel replay. We've got 21 in-depth solus reviews, including important exclusives from the likes of Roksan, B&W, Sony, and Focal-JMlab, plus an unprecedented Ultimate Group Test of the very latest DVD-Audio and SACD compatible multi-format disc players, not to mention our regular round-ups of accessories and music.

When we do multichannel, our ethos is unmoved - a rigorous pursuit of excellence and the entrenchment of traditional hi-fi ideals. Musical performance is paramount, in both two-channel and surround, and in that regard the best new kit is unrecognisable from the tricksy home cinema-centric hardware of just a couple of years ago.

Hi-fi-quality multichannel doesn't come cheap, and for many a continued investment in two-channel stereo may give more profitable sonic returns. But it can deliver a

uniquely involving experience, even for the avid music fan - it's just a question of setting your budget and defining your priorities. And if you'd like a quide to help you on your way, bristling with definitive reviews, you won't find a better one than HFC.



Tim Bowern editor

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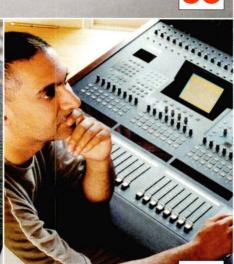


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HI-FICHOICE Hi-Fi Choice is your essential guide to audio excellence in the home, from vinyl records to the latest digital music formats. For 28 years, our unique tests have brought you the most thorough and reliable hi-fi journal around. And our mix of rigorous group tests and in-depth

solo reviews continues to ensure that HFC is the magazine you

can trust. Published 13 times a year, it's the smarter hi-fi read...

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



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PRODUCT NEWS

RODUCT NEWS SPECIAL: THE HIGHLIGHTS FROM LONDON'S RECENT HI-FI SHOWS



NAIM IN REACH

NEW ENTRY-LEVEL HI-FI BRINGS MARQUE TO THE MASSES

Naim's latest electronics are priced to launch a new generation of Naimists. At £825 for the new CD5i and £700 for the 50-watt Nait 5i amplifier the new kit is clearly priced at entry-level, while borrowing construction and design cues from the more expensive ranges. For example, the CD5i uses the drawer and transport suspension from the

CDX2, with the same control software as the CDS3. Naim has specced the CD5i with RCA phono sockets alongside the controversial DIN sockets of old.

Its partner in rhyme, the Nait 5i is described as the most powerful Naim integrated ever its 50 watts (continuous) power also offers a whopping 500 watts into one ohm. You can

even experiment with speaker cable - for once Naim isn't insistent on customers using its wires. We have also learned of a new two-way floorstander likely to be priced at under £1,000, although details are limited at the time of going to press.

2 01722 332266 www.naim-audio.com



S-CLUB 9000

THE FUTURE OF SOUND, SONY-STYLE

The star of Sony's ES (Elevated Standard) product range at the The star of Sony's Es (Lievauca Stantana,)

Hi-Fi Show & AV Expo was the range-topping SCD-XA9000ES SACD player (£2,400). It includes a new 'tri-powered' DAC, said to enhance frequency range and lower noise levels, and a new dual-laser pick-up. Its key feature is the i.Link (FireWire) interface that supports the transfer of DSD data streams to the new TA-DA9000ES multichannel amp (£2,600) in the hope of maximising SACD performance.

Four new AV receivers were also on show. All feature S-Master Pro, the latest version of Sony's integrated digital amp system originally developed

for SACD. It's claimed the technology avoids the problem of heat dissipation associated with analogue amps and reduces jitter in digital signals by simplifying their path.



www.sony.co.uk



PROAC POSERS

SPEAKERS FOR THE DEEPER POCKET

new high-end Response D (for 'dynamic') loudspeakers. Three new floorstanders, each designed with efficiency and sensitivity in mind, join two existing models. ProAc claims 3-5dB greater efficiency with the new speakers, thanks largely to newly-derived polypropylene bass drivers.

Starting at £3,000, the D25 is a direct replacement for the Response 2.5, and is followed by the £4,500 D38, which replaces the D3.8. At the top end is the flagship D100 (pictured), a 131 kg monster with twin 254mm bass drivers and 75mm midrange units all for a cool £15,000.

2 01280 700147

* www.proac-loudspeakers.com





HDMI IS GO

SCART-KILLING INTERFACE ALMOST HERE

Pioneer's first HDMi output-equipped universal DVD players have arrived. The DV-668AV and DV-868AVi both incorporate a '21st Century Scart connector'. HDMi, or High Definition Multimedia interface, is the first digital connection for both video and stereo audio, eliminating the need for D/A and A/D conversion with plasma screens and DLP projectors.

The DV-668AV (£600) features PAL progressive, full DVD-Audio and SACD multichannel compatibility and all the bells and whistles of a modern DVD player. The DV-868AVi (£1,000) adds an i.Link connection for high-res multichannel audio, better video DACs and a scaling chip that optimises picture size when used with the HDMi connection. 2 01753 789789 @ www.pioneer.co.uk



OVERCOME WITH EMOTION

ICY COOL CLEARAUDIO TURNTABLE

First seen at the Frankfurt show in May, Clearaudio's sub-£700 Emotion turntable is now in the UK. The striking new entry-level deck comes with the brand's Satisfy arm and Aurum Classics Wood cartridge. The chassis is made from acrylic and aluminium with a 'maintenancefree' bearing, and the motor is isolated and damped from the

main structure. The Satisfy tonearm is a new hand-made. two-axis design that's claimed to offer high structural rigidity with low friction movement. Vinyl collectors and more mature readers will welcome the opportunity to play 78s with an optional pulley.

2 01252 702705

www.clearaudio.de

POTTY HI-FI?

WACKY CERAMIC KIT FROM JAPAN

Minimalist hi-fi brand 47 Labs has launched an entry-level range Minimalist ni-ii brailu 47 Labs has a CD transport called Shigaraki. This cute new series includes a CD transport of (£1,550) with no lid or drawer mechanism (the disc spins in front of your disbelieving eyes), a DAC (£925) and a phono stage (£925) that fit inside tiny cubes, and an integrated amplifier (£1,430) that resembles an old school toaster.

Shigaraki is a type of Japanese ceramic and all of these components feature the material, the DAC

and phono stage casework being made of it while the amp and transport sit on a shiqaraki base.

2 01562 731100

www.sakurasystems.com



CONRAD-JOHNSON'S

PUKKA GEAR FROM ACROSS THE POND

Virginia's Conrad-Johnson has unveiled two new valve-based components. The Premier 17LS Series 2 is a valvedriven line preamp with C-J's new high-current Teflon capacitors, which replace **MOSFETs** in the power supply regulation stages. It retails for £4,995.

The Premier 350 is the first solid state amp to carry the C-J Premier label. For £8,000 you get a 350-wattsper-channel stereo power amp with new zero-loop feedback design, auto linear stage gain and JFET output stages which cancel evenorder harmonic distortion.

C-J distributor Audiofreaks has also introduced the Reimyo CDP-777 to the UK. From the Combak corporation, this £9,500 Japanese CD player designed by Kyodo Denshi is based on JVC's ultimate transport mechanism and uses the latest version of it's K2 extended processing circuitry. 2 020 8948 4153 @ www.conrad johnson.com

(>) Soundbites



NS is the latest name in high-end equipment supports. Its striking new range comprises five cunningly engineered models with prices from £700 to £2,400. Particularly intriguing is the shelfless F1 support that uses 'fingers' reaching out from the main vertical pillars. The £700 Ultimo (pictured) is designed to eliminate acoustic feedback using three inner shelves that are decoupled from the outer structure. **2** 0870 350 1349

RYSTON has developed a circuit board that will allow the digital output from a CD or DVD player to hook directly up to its BP20 and BP25 preamps without prior conversion to analogue. The board contains "state of the art" DACs and proprietary Class A op-amps, and when combined with a BP25 the total price is £2,300. It's also available as a £764 retro-fit for existing preamp owners. ☎ 0870 444 1044

III has designed a new table-top CD player to complement its tasty range of radios. Called the Model CD, it has a front-loading slot design similar to in-car head units and sports a cherry wood finish. It's priced at £200, boasts a credit card-sized remote control and will happily play CD-R discs too. **☎** 01702 601 410

GITAL is a newcomer to the portable DAB tuner market but already the products have caught our eye, with L-band and band III compatibility that puts them one step ahead for the future and ensures compatibility worldwide. The £150 A-3000 World DAB is claimed to be the smallest and lightest portable DAB unit available, and its additional support for analogue FM gives it real flexibility wherever you are and whatever you're listening to. **2** 0870 005 6410

audiofile

(>) Soundbites

USHER is a new kind of audiophile test disc produced by regular HFC contributor Richard Black. The Ultimate Stereo Hearing and Equipment Refresher addresses the findings of 20th Century audiologist Alfred Tomatis who found that the ear is over-exposed to low frequency sounds, which dulls general hearing. USHER features progressively filtered tracks that train the ear to focus on higher frequencies. £18 gets you 77 minutes of imaging, demagnetisation and music tracks **2** 020 7277 7068



⊕ www musaeus co uk

The Trip by Dirty Vegas is the first album in a new series of eclectic collections mixed by guest DJs. Dance duo Dirty Vegas has pulled together a trip's worth of happy tracks that inspired them, and we have ten copies to give away on CD. For your chance to win send a postcard with your name, address and daytime telephone number to Dirty Vegas Trip, Hi-Fi Choice, Future Publishing, 99 Baker Street, London, W1U 6FP. Closing date 27 November.

Hi-Fi diary

TV Music Fair London Cromwell Road, London SW7 020 7831 8577 Fab vinyl-only record fair

8-11 CES Las Vegas, USA The world's largest consumer electronics expo

Audiojumble 2004 Tonbridge, 01892 540022 Go for a rumble in the Tonbridge Audiojumble

20-22 Sound and Vision The Bristol Show Mariot Hotel, Bristol www.bristolshow.co.uk One of the UK's biggest

20-23 High End 2004 Munich, Germany The dog's danglies at the former Frankfurt Show

DOUBLE OR QUITS NATIONAL GRID WARNED OF MONSTER MARANTZ AMPS

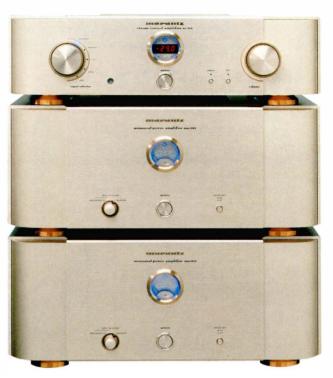
Marantz has produced its most ambitious range of amps ever. The nomenclature of the £17.500 SC-7S1 preamp and MA-9S1 monoblocks harks back to the Model 7 and 9 valve pre/power amps of the late fifties but the technology used within is very different.

The SC-7S1 Stereo Control Amplifier has a floating control bus system which enables you to double up SC-7S1s for even greater stereo separation. It is a fully balanced design with an eight-gang volume control and a choke input system in the power supply. The latter can also be found in the MA-9S1 monoblock which is an ultra-low impedance design that is specified to deliver 300 watts into eight ohms and double that into four.

The ultimate set-up with these amps is two control amps and four monoblocks at around £35,000, this is Marantz's way of throwing down the gauntlet to the Mark Levinsons and Krells of this world.

01753 680868

www.marantz.com





NEW HORIZON FOR NOTTS ANALOGUE

SUB-£500 TURNTABLE FROM **NOTTINGHAM ANALOGUE**

Nottingham Analogue, maker of the popular Spacedeck turntable, has produced its most affordable design to date. The £484 Horizon is a solid plinth design with one of NA's favoured lowtorque motors driving an MDF plinth via a round belt. The deck uses the 'East-West' resonance transfer system found in the range-topping Anna Log design – in this case a single beam supports motor, bearing and tonearm.

An extra £150 buys a 'divorced' motor option that is decoupled from the main beam. Designer/maker Tom Fletcher commented that "we try to create the illusion of music with all our turntables - this is as true with the Horizon as it is with our top deck". The Horizon is available complete with a Rega RB250 tonearm for £529.

2 01773 762947

CLAYMORE RETURNS

INCA ENTERTAINMENT FROM AN OLD HAND

Inca Design is a new brand with a link to the past. The name derives from Incatech, once famous for a classic amp called the Claymore (see Retro, HFC 246). Designer Colin Wonfor has contributed the new name to Activ Distribution, which uses a pool of consultant designers and far eastern manufacturing to produce a distinctive range of keenly-priced components.

Colin has contributed to the Talon integrated amp (£695), Falcon preamp and both Eagle 80-watt stereo (£895) and Osprey class A monoblock (£3,195) power amps. He is also finalising a modernised Claymore integrated for release next year. These amps join the Katana CD player (£595, pictured below) and SACD player (£995), alongside Aeolian speakers from £995.

2 01635 291357



marantz[®] RANGE SERIES





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Synonymous with its name, Marantz AV receivers deliver the purest, most true-to-life sound and pictures possible. Featuring the latest Dolby Digital and DTS formats they'll tingle your senses for truly breathteaking experiences in audio and video.

because music matters

audiofile

BEATS'N'PIECES

TIME MACHINE

FIVE YEARS AGO

Hi-Fi Choice

December 1998

TAG McLaren's new range proved to be a mixed bag - it improved on the old Audiolab kit it was based on in some



ways while failing in others. Back to the pits perhaps? This was also the month that Wilson Benesch launched the £20,000 Bishop loudspeaker,

complete with eight drivers in isobaric configuration - not for the faint-hearted. The best bet for getting a good FM radio performance, according to our group test, came from Marantz's ST-48 tuner, while Rotel's RCD-971 topped our CD player group. We also tested various recorders cassette, MD and CD-R, boldly stating that the humble tape had had its day.

TEN YEARS AGO

Hi-Fi Choice December 1993

Ours ears warmed to the valvelicious sound of Copland's CTA301/504 pre/power combo, our



reviewer describing it as "a nineties valve amp with fifties no-nonsense mentality". Praise indeed, but that wasn't all - the Danes done

good with the Horning Anathon a horn-loaded Lowther driver-equipped super-speaker. At £3,500 it wasn't cheap, but we thought there was little to touch it for classical, folk and jazz pieces. Elsewhere we performed our civic duty by directing the unenlightened towards the best 'stack' systems of the day.

SYSTEM BUILDER

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



LED ZEPPELIN

Untitled (4) Atlantic

One of the stand-outs in a fairly stand-outy career, Untitled (or 4, as it's popularly known) has a timeless folk-rock feel, charting a seamless progression from the largely acoustic 3 and offering the uninitiated a gripping entry point into a life-long relationship. 1971 was the year that spawned vocalist Robert Plant's personal favourite Rock And Roll, acoustic masterpieces The Battle Of Evermore and Going To California, and the widely adored Black Dog, as well as the much loved/loathed Stairway To Heaven.

Drummer John Bonham's triumphant pounding was never better than on When The Levee Breaks and Four Sticks is one of the most rewarding Zep tracks of all time. The album demands a good allround system to capture both the hard-rockin' energy and the quieter string arrangements from guitar magus Jimmy Page, and Plant's outrageous vocals.



CD PLAYER

ARCAM DIVA CD73T £400

We're going for a fairly low cost separates set up this month, and Arcam's recently introduced CD73T is the perfect starting place. A solid and mellifluous sounding player that knows how to rock, Zep-style.

LOUDSPEAKERS

EPOS M12 £500

A standmount with one of the best midbands around. A class act tight but loose, rather like the Zep, actually.

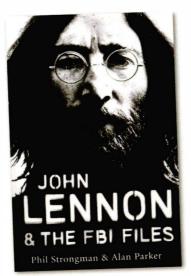


AMPLIFIER

MARANTZ PM7200 £330

This amp performs well above its station, featuring user selectability between Class A and Class AB operation. It delivers power and refinement in spades - check out the review on p38 if you don't believe us!





BOOK OF THE MONTH

JOHN LENNON & THE FBI FILES

Phil Strongman and Alan Parker Sanctuary Publishing £11.99

Hi-Fi Choice scribe Phil Strongman has joined forces with keen music novelist Alan Parker to expose the untold true story of how Lennon came to be regarded as a serious threat to the security of the USA. Having gained full access to Lennon's FBI files the book attempts to uncover the truth behind the paranoia surrounding the Fab Four's co-founder. Lennon's killer, Mark Chapman was reportedly the first fatal celebrity stalker, and the book delves deeper into the story behind the crazed lone qunman. Or was he?

The book is an intriguing read for Lennon devotees and music lovers alike, exposing the explosive documents held on one of the UK's best-loved musicians of all time.

READERS' DEMO DISCS

YOUR FAVOURITE MUSIC FOR HI-FI AUDITIONS



RICKIE LEE JONES

Girl at her Volcano

(Japanese import available via Amazon)
"Released in the early eighties, this is
largely an album of covers. Listen to Walk
Away Renee – beautifully clear percussion
effects, a heavy dose of testing piano and
magnificently simple and solid bass lines.

It's topped off with a unique female voice that's as emotionally charged as singing gets. *Under The Boardwalk* is also stunning on a good system – the vocals, acoustic guitar and percussion are frighteningly realistic. The drum sound is astonishing, the best I've heard. There are two crescendos involving kick drum and snare that sound so dynamic they quite simply explode into the room."

Peter Loosly via email

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

JIMMY'S TWEAKS #15

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



Spiked feet for loudspeakers

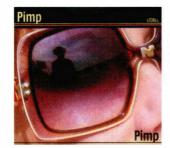
Spiked feet were originally introduced as a means of obtaining a rigid, wobble-free interface between speaker/stand and floor. The aim was to reduce any tendency for the speaker to move when playing music, thereby improving the coupling between drive unit and air. There's no question that spiked feet do

create a tighter, more focused presentation. But such benefits often come at the cost of less ease and naturalness. That's why it's worth investigating an air-cushioned support surface such as Townshend Audio's Seismic Sink, or the stylish Voodoo Platforms. The benefits, musically, include increased clarity and separation of voices and instruments, and a smoother, more relaxed, yet no less incisive and detailed quality of sound.

ON THE OFFICE STEREO

MUSIC THAT AMUSED US WHILE CREATING THIS ISSUE

Pimp Pimp
Dirty Vegas The Trip
Radiohead Hail To The Thief
Various Artists Now 1985
The Streets Original Pirate
Material
Bob Dylan Time Out Of Mind
Elbow Cast Of Thousands
Various Artists Verve/Remixed2
Cat Stevens The Very Best Of
Francois K Choice
The Strokes Room On Fire
The Neptunes Clones
Chillout Session: Ibiza Sunsets



NEW MUSIC IN THE STUDIO

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



BECK

Title: the

Release date: Spring 2004

Beck recently started work in LA on his eighth album, which he promises will be "more aggressive" than last year's predominantly acoustic *Sea Change*. Dan The Automator and Timbaland are among those reportedly involved.

THE WHO

Title: the

Release date: Spring 2004

Pete Townshend and Roger Daltrey are working together on an album to be released under The Who's name, despite the death of bassist John Entwistle. The collection of all new songs could have the same title as Townshend's autobiography, The Boy Who Heard Music.

COURTNEY LOVE

Title: America's Sweetheard Release date: Early 2004

The volatile Ms Love is clearly struggling with her first album since 1998's *Celebrity Skin*. She cancelled summer festival appearances due to recording commitments and *America's Sweetheart* was announced for October release. Now it's delayed while she goes back into the studio again. "There's still work to do," admits a spokesman.

DAVID KITT

Title: Square 1

Release date: Feb 2004

Singer-songwriter David Kitt may be a new name to some, but *Square 1* has shot straight to number one in Ireland, where he's spoken of in the same breath as David Gray. His success there



has delayed British release until the New Year, when he's set to become one of the most significant new arrivals of 2004.

AMERICAN MUSIC CLUB

Title: You Better Watch What You Say

Release date: Spring 2004

Cult singer-songwriter Mark Eitzel has reunited in the studio for the first time in ten years with the original members of the legendary American Music Club, a key influence on a host of bands, including REM. "It's really inspiring to be working with these great musicians once again," Eitzel says.

ALSO COMING SOON

Al Green I Can't Stop (Dec), Enrique Iglesias Seven (Dec), Nelly Furtado Folklore (Dec), Puddle Of Mud Life On Display (Dec).

CLASSICAL/JAZZ

Murray Prior Bach Italian Concertos (Dec), Arkadi Volodos Tchaikovsky Piano Concerto No1 hybrid SACD (Jan), George Benson Irreplaceable (Mar), Diana Krall tbc (Apr).

audiofile ...:

ESSENTIALS Our regular round-up of hi-fi accessories



Goldring Super Exstatic LP cleaner £12

Vinyl-Zyme is great for long-term dirt on dics, but for newly descended dust one needs a quick wipe with some suitable brush. Long experience suggests that a carbon-fibre brush like this is just the thing. In fact there's also a velvet pad between two carbon-fibre brushes, so you can experiment with different cleaning actions and even use the velvet for a bit of a tougher scrub when something's stuck to the surface. Fibre alone suffices most of the time, and is generally very effective at picking up loose dust and particles. Some cheap brushes deposit fibres on the disc which is distinctly counter-productive, but this time-proven version is notably rugged and generally blameless in that respect. Truly, a 'hi-fi essential' for any record player.

Veda 01284 701101www.veda-uk.co.uk

Buggtussel Vinyl-Zyme Gold £13

This is an LP cleaner with a difference. All the other wet cleaners that we've seen use some kind of solvent to dissolve oils and lift off dust, the resulting gunge being swept off with a cloth. Vinyl-Zyme uses natural enzymes (the things that do digestion inside you) to lift oils, bacteria and fungi from the record surface. Thinking about it, this makes a good deal of sense. Sniff a few elderly LPs and you'll soon discover that mould loves vinyl – and conventional cleaners just don't shift it, handy though they are for ingrained dust, fingerprints and so on.

And it works a real treat, too. Not all records need the treatment, but quite a few (including discs cleaned, apparently successfully, with conventional cleaners) benefited markedly with lower surface noise and distinctly improved detail. Particularly useful for 78s, too. Biological hi-fi? We're fans!

Page Hififorsale 0870 241 2469



Countries to Carton Contains 180

QED SS21 Speaker switchbox £45

To some, 'audiophile speaker switchbox' is an oxymoron, but there will be plenty of folks who lament the absence from their specialist-made amplifier of dual outputs. For them, this little accessory will be a boon, allowing as it does operation of one or two pairs of speakers. It's well enough made, with three-way input/output terminals, heavy internal wiring and good quality switches.

In truth, its presence is just about detectable in a good system, but the effect is not alarming, equivalent to downgrading the speaker cable by a level or so. Having seen the quality of switches and wiring put inside dual-output amps, it's probably less damaging than most of those, and in return for the convenience of remote speakers without adding an extra amp it seems a fair bargain. Do make sure your amp is up to driving the increased load before switching both pairs in at once, though!

QED 01483 747474

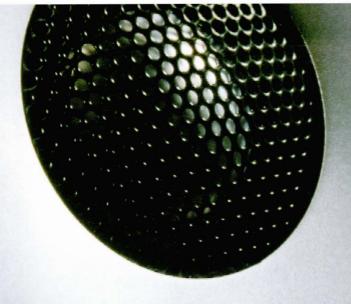
www.qed.co.uk

Milty Foculpods £18

These disgustingly squidgy lumps of 'advanced polymer' (if it isn't actually Sorbothane it's a dead ringer) are intended to be put under the feet of equipment to isolate it from vibrations. They do that quite effectively, handling a rated 5kg each. They do more than just that, though, since they damp the resonances in the surface with which they are in contact, resonances which can colour the sound of the listening environment. There are three implications – first, experiment with positioning under equipment, trying placement away from edges if it doesn't upset stability too much. Second, try putting them on as well as under equipment (though the polymer can mark some surfaces slightly). And third, try them on or under resonant objects such as glass coffee tables in the listening room. And try them under speakers too. Simple, versatile, and easy to experiment with.

🕿 Veda 01284 701101

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Award winning movie stars...















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2000



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Rarely, has a home cinema speaker package garnered such rave reviews as Mordaunt-Short's stunning Declaration 500 Series THX Select system. For once, the audio press has been united in its praise for a product.

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ChoiceCuts



This month's varied musical morsels

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

AUDIOPHILE VINYL

JOHN LEE HOOKER

It Serves You Right To Suffer

mpulse 180g vinyl

Music: John Lee Hooker has become a blues legend and this is one of the albums that built his reputation.

Recorded in New York in 1965
with a three-piece band this is
no-nonsense blues with a lot of
groove in the sixties style. This
new vinyl release is a gorgeous
artefact, the gatefold sleeve
with classic original artwork
d the distinctive Impulse label
n of the time make it a very

and the distinctive Impulse label design of the time make it a very desirable object even before you hear it. The eight songs include Shake It Baby, Decoration Day and Berry Gordy's Money and the standard throughout is excellent – the title track in particular is superb. One of the best Hooker albums that features a band, this is a classy piece of vinyl. ★★★ Sound: Putting John Lee on a jazz label might seem an odd choice but Bob Thiele did a great job with this session. The sound is warm by today's standards but pretty slick for sixties blues - it has energy, good stereo and a silent groove. $\star\star\star\star\star$ JK

PINK FLOYD Dark Side Of The Moon

EMI 180g vinyl

Music: The 30th anniversary of this album has created something of an overkill in terms of versions and

formats and there's a definite danger of *Dark Side...* saturation. Yet if you want to hear the original, on the format that it was produced for, then there's no substitute for vinyl. Good copies of the original LP now cost a fortune and rarely come with the three posters and stick-on

with the three posters and stick-on postcards supplied here, let alone an anniversary 'poster'. The music barely needs describing but it's worth listening to, as it represents a coming of age for rock, proving that it could break its blues bounds and progress. The ultimate concept album is still musically powerful and deserves to be heard as it was intended. ****
Sound: A gorgeous heavyweight slab of vinyl, this pressing makes an interesting comparison with the SACD, which sounds a little dull and contained (in stereo) in comparison.

***** JK

COMPACT DISC & VINYL



SOEL

Memento Warner Jazz

Music: Pascal Ohsé was the trumpeter who would pop up rather tastefully on electro chill combo St Germain's records. His first solo album, under the name Soel, is in a similar laid-back vein, but there's a greater emphasis on acoustic instruments and he accentuates the funk, with a heavy sixties/seventies soul influence. There are echoes of Donny Hathaway, Donald Byrd and Curtis Mayfield with funky basslines, deep grooves and Blaxploitation echoes aplenty, topped Ohsé's atmospheric horn. ★★★: Sound: The mix is spacious and rich. with occasional sharp stabs from horns or flute, and badass dude vocals very close to the ear. It's like sinking into a favourite leather armchair, probably with a full stomach and a heavy whiff of ganja in the air. ★★★★★ DO



GENE CLARK

No Other

Elektra/Asylum

Music: Having ironically quit The Byrds due to his fear of flying, the quiet Missouri songsmith would embark on an incredible sonic flight with this masterful album. Recorded over six months in LA with arranger/producer Thomas Jefferson Kaye in 1974, this baroque-country masterpiece slept at the back of many a muso's psyche for decades. Now remastered, its beautiful acoustic/electric/soul oddities never fail to sparkle and astound. Life's Greatest Fool, Silver Raven and Lady Of The North are still peerless nuggets of genius. Remastered with seven bonus cuts ****

Sound: The new sound brings out the subtle interplay between the instruments and the driving rhythm sections have more pluck and punch in the new edition. ***** MP



THE DELFONICS

Platinum & Gold

Arista/BMG Heritage

Music: The O'Jays and Stylistics were bigger but The Delfonics were the original funky sweet Philly soulboys and this classy 1968-70 set has all their finest. Didn't I (Blow Your Mind...), Going Out of My Head, La-La Means I Love You, Ready Or Not Here I Come, When You Get Right Down To It and the spacey Funny Feeling are just some of the highlights. Many of these melodic love trips are only two or three minutes long but, hey, here at Hi-Fi Choice we'll take quality over quantity any day of the week. French horns, cracking tunes and outrageous Lionels - what more could you possibly need? ★★★ Sound: Well-recorded vocals soar over crisp yet laid-back beats with casually

perfect separation throughout. Philly

never sounded better. *** PS



RANDY NEWMAN

Songbook Vol 1

Nonesuch

Music: America's conscience has probably got used to being critically lauded but publicly ignored (except perhaps by the Mullah in Iran who has been playing *Political Science* in public as an example of how American's really think –

"They all hate us anyhow, So let's drop the big one now"). Stripped of everything bar Newman's voice and piano, these new versions of old songs acquire a power that wasn't always present on prior, more 'produced' albums and they're all the better for it. Whether he's being ironicly humorous (Rednecks), deftly outlining aspects of human frailty (You Can Leave Your Hat On) or just telling a story (The World Isn't Fair), he's always impeccable – funny, sad and unerringly perceptive all at the same time. ****

Sound: Produced by Mitchell Froom, the sparse instrumentation is inviting and intimate, like a personal performance in your living room. ***** DO



TRAVIS

12 Memories

Music: The rock world has changed dramatically since Travis became the biggest band in the land. Yet the response on their fourth album to the Strokes/White Stripes nu-rock phenomenon is simply to ignore the noise and continue on their pleasantly melodic way. Nobody could be offended by Travis. Unless you're Tony Blair, for in between the tasteful cosiness, they let rip on two strident anti-war diatribes, The Beautiful Occupation and Peace The Fuck Out. For the rest, some will call it bland. But there's nothing wrong with nice songs sweetly sung, is there? ★★★ Sound: Rabble-rousing anti-war protests apart, it's a record that hasn't a hair out of place - production is tight and professional. **** NW



THIS MONTH'S CLASSIC HI-FI TEST DISC "This is a classic West Coast production..."

TRACY CHAPMAN Tracy Chapman

Elektra/Asylum 180g

Music: There was a time, in the years that followed this album's 1988 release when you could hear it playing in five out of ten rooms at a hi-fi show. Heralded as the new Joan Armatrading, Chapman's debut was a phenomenal success and delivered its creator the mountain o' things she laments in the song of the same name. The songs are well crafted and slickly played by accomplished session musicians yet

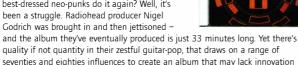
this does not diminish the power of the emotional tug they deliver. Stand-outs include For My Lover, Across The Lines and Fast Car, but there's very little filler here. Sound: Luxurious is the word that comes to mind. Smooth yet highlighted by crisp percussion and sonorous bass, this is a classic West Coast production that makes any system sound good yet keeps something in reserve for the truly transparent. **** JK



THE STROKES Room On Fire

Rough Trade

Music: After making the most-acclaimed debut in years with Is This It, could New York's best-dressed neo-punks do it again? Well, it's been a struggle. Radiohead producer Nigel



the Strokes doing a ballad. *** Sound: You probably wouldn't want Radiohead-style perfection on a Strokes record. It doesn't exactly sound like it was recorded in a garage, but there's an upmarket scuzziness to both the serrated guitars and Julian Casablancas's vocals. ★★★ NW

but makes you feel that little bit more alive by its sheer exhilaration. Yet oddly,

best of all is the lovely Under Control, the nearest you're ever likely to get to



IGOR STRAVINSKY

The Firebird Idil Biret (piano) Naxos 8.555999

Music: This is something of an oddity - a piano transcription by the composer of the complete score of the Firebird ballet. As a musical construction, it works better than expected. Clearly the colour and variety of the familiar orchestral score is missing but the measured yet powerful playing makes this more than just academically interesting, drawing attention to the rhythmic and dynamic elements of the work, which with the Firebird are considerable. * Sound: For once, a piano that sounds like a piano! The sound is close enough to capture the action, noise and power of the instruments at play, yet it doesn't diminish an acoustic of real warmth and depth. **** AG



SIBELIUS

Symphonies No 1 & 5 Yoel Levi (cond), Atlanta SO Telarc CD-80246

Music: The first symphony, written before Sibelius developed his distinctive musical language, sees the composer at his most Tchaikovskyflavoured. By the time he composed the Fifth he inhabited a whole new musical universe, and the distinctively cool, Nordic beauty of his soundscapes had been fully developed. The Fifth is the finer work as well as the most popular of his symphonies, but both works receive more than routinely fine performances, if lacking the mystery and magic of his finest. ** Sound: One of the better examples from Telarc, with the space and 'air' needed for the music to breathe, but the percussion and woodwind could have sounded stronger. $\star\star\star$ AG

DVD-AUDIO & SACD

DAVID BOWIE

Heathen

SACD (stereo,/multichannel SACD only)

Columbia/Sony

Music: Heralded in many quarters as his best since Scary Monsters (haven't we read that before?) Heathen came out last year to considerable approval. His reunion with producer Tony Visconti adds a touch of class to proceedings but to be honest it's never going to be enough to overcome the weight of Bowie's golden years. The albums up to and including Scary Monsters were so

good that everything he has done subsequently has seemed second rate. Heathen has its moment, namely the opening track Sunday, which has tremendous atmosphere and gets your hopes up for the rest of the album, but unfortunately it doesn't deliver. ***

Sound: The slightly hard-sounding production is not dramatically improved by the move to SACD. That said, the surround mix is substantial and enveloping, though nothing interesting has been done with the extra channels. $\star\star\star\star$ JK

JS BACH

Oboenwerke (Oboe Works) - Vol 1

Alexei Utkin (oboe/cond), Hermitage Chamber Orch

SACD (m

Cara Mitis CM 0012003

Music: The Hermitage Chamber Orchestra led by oboist Cara Mitis is made up from former graduates of the Tchaikovsky Conservatory in Moscow. The label has a history too - it was apparently established by ex-engineers from the now defunct Melodia label. The oboe works, of which the Concerto In D Minor For Violin, Oboe, Strings

And Basso Continuo is the most popular, is exquisitely judged, avoiding the charge of sounding metronomic at one extreme, or of being too elastic in its timing at the other ****

Sound: The superb playing is complemented by a warm, open instrumental sound in what appears to be a really fine, possibly (a dangerous assumption this) high, wood-panelled room, billed as the fifth studio of the Russian Broadcasting Company in Moscow. **** AG



BOB DYLAN

Another Side Of Bob Dylan

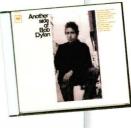
SACD Ist

Columbia/Sony

Music: How high is your harmonica tolerance? Dylan's fourth album may not quite reach the ear-serrating wailing of his John Wesley Harding set, but it's still pretty brutal at times - particularly on this crystal-clear remastering, one of a new series of stereo and multichannel SACD re-issues. Dating from 1964, Another Side... contains a clutch of classic Bob tunes including It Ain't Me Babe and Chimes Of

Freedom and is touch more laid back than its protest song-heavy predecessors. It's an interesting snapshot of an artist finding his feet creatively and looking to expand out of the folk world that spawned him. ***

Sound: Okay, let's get one thing straight – Bob Dylan is not a multichannel artist, and that's painfully obvious here. There's been very little clever trickery applied to up the sound from two to five channels, and the effect is more akin to applying Dolby Pro-Logic II to the sound, like a cheap 'party mode' button. Still, the high-resolution stereo is exemplary. *** * SM

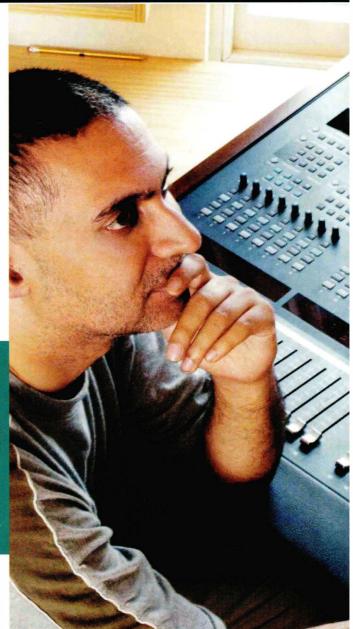


itin Sawhney is a man who knows what he wants. As a composer, arranger, producer and musician he's carved out an almost unique genre for himself that spans pop, classical (Indian and Western), jazz, drum and bass, R'n'B, UK garage and probably most other styles you might care to mention, including flamenco and techno. The Kent-born renaissance man has recently released his sixth solo album, having in his time also produced film and TV soundtracks, written scripts (he developed the original Goodness Gracious Me with his university chum Sanjeev Bhaskar), worked with Paul McCartney (on his electronic Fireman project) and he still finds time to play live with an ever-changing array of musicians.

He's won the Mercury Music prize

as richly rewarding, multi-layered and textured, intelligent musical pieces.

For 2001's Prophecy he visited South Africa to interview Nelson Mandela, to Brazil to record an orchestra and to Australia to obtain some Aboriginal Australian instrumentation. Now, the world is just as likely to come to him, to the house in a south London terraced street which doubles as his living and working space. The open plan living/ dining room is a very effective live room, complete with cunningly hidden divider screens which can be pulled out from the walls if required. Upstairs however, past his wall-mounted collection of quitars (he's a trained flamenco quitarist) is his inner sanctum, his production suite containing everything he needs for his film and TV work. He's only just finished it, having



Human, being

Composer and musician **Nitin Sawhney** reveals the secrets behind his beautifully diverse sounds, from a cosy studio to the joy of analogue. Interview: **Dave Oliver**

(for 1999's Beyond Skin) and has travelled the world searching for sounds and musicians that he has recorded using his laptop PC, MiniDisc or whatever has been to hand, so that he can blend them with his own vision to create a unique hybrid, mixing musical and recording styles with equal facility, though never with abandon. His is a tightly controlled sound which combines electronic and acoustic instruments along with a huge range of musical styles to create something that can work equally well in the background (you'll know his music from myriad TV trailers, if you haven't already sought it out on CD) and also

put it together while making his latest album, *Human*. Today he appears friendly if a trifle distant, crumpled and unshaven, looking more like he's recovering from a night on the tiles rather the heavy cold which he says has laid him low for the past few days. He was reluctant to be photographed, but since it's for *Hi-Fi Choice*...

"I'm very pleased with the sound of this album. It's the first time I used this studio and the living room as well – we did all the strings there. It was designed by acoustic designers Munroes and We had these screens to adapt the space, so acoustically it sounds a lot better.

"I've done stuff in my bedrooms











before in various places and I've always

found ways to make things sound okay,

sonics of things a lot more than I used

to, so I try to deal with the detail of the

personal and intimate space, especially

if you're making an album that's really

emotional. You need to make musicians

and especially singers feel relaxed in an

environment that they don't feel is too

designed to be just studio spaces. I like

environment so you have a feeling of

performing, I think that really helps. It's

clinical, which is what quite often

the idea of a living and working

informality when people are

happens with studio spaces that are

"I like the idea of keeping a very

but nowadays I'm getting into the

sound a lot more carefully.

"I like the idea of a living and working environment so you have a feeling of informality when people are performing."

also really important to have daylight in the room that you're working in because you can lose a sense of context and reality if you're working on a project for a long time."

NOW VOYAGER

Though he's generally very clear on what he wants, his working methods tend to be as diverse as his influences. Sometimes he'll write a piece from start to finish and perform it himself, but at other times he'll use a series of collaborators to help him.

"When I'm working on my own album projects I have to be very much in control of the overall direction and sound and feel of what's going on. If I'm collaborating with people then I try to explore what people have to offer in terms of their own talent, and their own perspectives. So it's like being a director of a film working with actors. You try to steer things in a certain direction, like I can do my own string arrangements, but if I'm working with a very good arranger I may allow them space to do their own thing with it. Similarly, when I'm working with a very strong lyricist who has their own way of dealing with things or coming up with ideas around what I'm talking about, then I'll let them explore things lyrically. It all depends on what people have to offer.

"With people like (singer) Tina Grace, I had to make sure I got that level of intimacy and emotion from the way she expresses herself, so I try and pull performances that are based on expression out of people rather than based on singing technically well or anything like that. That's much more important to me."

MORE THAN A FEELING

His recording methods too follow no set pattern, and he likes to vary his techniques as he goes along, swapping easily between digital and analogue recording methods, and even recording in 5.1 surround for his film score work, which has included the comedy Anita And Me and Pure, as well as recent Channel 4 productions such as Second Generation and Twelfth Night.

"I've got the Yamaha DM2000 desk, which is specially designed for surround sound. It has a lever which allows me to place sound anywhere within the 5.1

surround system, which also works very well for film score work.

"I still tend to work in stereo for my own albums, though I may do a surround version of the latest album. possibly on DVD-Audio. I've not been impressed by surround albums particularly, more by going to the cinema and hearing how it's used there. I like the flexibility you get with surround - it's very powerful to place ambiences behind people for example and it gives you additional tools to try and bring people more into your own world, which I find very interesting.

"I mostly use digital but occasionally I'll use analogue recording equipment as well. Sometimes to warm things up I'll get them on to two-inch tape. With strings, for instance, I might get them on tape first before treating them with Pro Tools (software) so that I get a certain warmth in the sound which I really like. Sometimes when you're recording directly to the digital medium I think that you miss some of the warm analogue processing that people have associations with. It's much more moodbased rather than capturing the sound of a room. For instance, sound recorded on two-inch tape can have an 'older' feel, that you tend to associate with certain times or certain moods, so I tend to look at it that way rather than being too technically minded about it. I always think that the technology should serve the intention or the feeling that you have rather than the other way around.

"Often with digital recording it simply seems to play back exactly what you've put into it, but what we've been used to hearing for many years - the warmth we associate with analogue sound - is actually the warmth that we associate with our childhood or with times gone. I tend to look at it not so much technically, but more in terms of association and human psychology.

There's obviously going to be a warmer sound with tape - it's something that you're used to hearing because of virtually everything that was recorded in the sixties and seventies. so you have certain associations with that sound. And certain media do add something to what's recorded. I can't explain sonically how it works but I know how it feels, and that's what's important to me." HFC

Sawhney on CD



album I've done, like a novel of my life, really. There are lots of vignettes and scenes, and a lot of symbolism to record some of it. but by and large it was here and I found it a quite depressing experience looking at what was going on with the war and the political rubbish that was being said at that



bit around the world The track Moonrise, for instance was recorded in four different countries. I went to Brazil to record the string section, Cheb Mami was recorded in Paris. recorded in London. and I recorded the flamenco quitar in Spain, so there were lots of different



ond Skin (1999) "I recorded it in my bedsit, on a much less grand scale than what I have now, I find that sometimes if you have very minimal equipment or resources you can get very creative with what you have. I didn't really feel hindered by not having the equipment that I have now, for instance. If you have an idea in your mind you can always find ways to achieve it with what you've got."

Choice Mail







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



Above: Our extensive radio feature from *HFC* 242, taking in FM, DAB, cable and satellite



Above: Our glowing review of Tannoy's DC2 speaker – a great match for the Linn Classik system

"Why can't we have dealers who will just give their honest opinion – is it too much to ask?"

SHIPPING FORECAST

I've always been fond of good music on the radio with a decent aerial and a good quality FM tuner. Yet I've found that with satellite receivers a new and vast field of local and foreign radios constitutes a real alternative to analogue or DAB radio tuners. I think it would be interesting for many of your readers to test some of the receivers available on the market.

Jean-Yves Le Douarin France

HFC: True, there's a whole new multilingual broadcasting world out there if you've a taste for it. A comparison of some available kit might be interesting, though few models put much effort into the audio outputs. We've had decent results with Nokia's Mediamaster digibox (£89 at the last time of asking) – see our radio feature in HFC 242 for more details.

CLASSIK QUERY

I want to buy a Linn Classik CD/DVD player but have now spent months trawling through magazines seeking advice on what speakers should match. Sadly, most dealers just recommend their own models. Please help.

Justin Baker via email

HFC: We'd suggest a communicative and fast speaker that will exploit the strengths of the Linn. Make an attempt to listen to models in your budget from PMC, Epos and Tannoy – the Sensys DC1 and DC2 with dual concentric drivers and super-tweeters are fabulous.

LIFESAVERS

I recently recorded a session of my band onto MiniDisc

and transferred it onto my Mac. I then recorded over it with a few more songs and only after realised the audio from our first session was not on the Mac – somehow it was never copied over.

I desperately needed the audio data recovered from the deleted MD and after much searching on the web I found a company to offer this service – Universal Data Recovery in Brighton (www.universaldatarecovery.com). Recovery is cheap – this valuable audio was rescued for under £90. They saved my bacon!

Grace Wilm via email

HOLY SOUND

My music set-up is very satisfying except at the exact position where most publications advise you to sit – there is a distinct hole where the bass should be. Either side of the listening spot has brilliant bass but the stereo image suffers. Are there any adjustments that can be tried to rectify the problem?

Dean M Munich

HFC: Sounds like a problem room mode interaction – you're getting a bass null. Try experimenting with both the placement of your speakers and your listening position, and perhaps try moving the speakers closer to the wall to reinforce the bass. With a bit of trial and error you should be able to achieve both solid bass and realistic imaging at your listening position.

I AM THE WALL-RUG

It took me quite a while to hunt down a rug that looked good enough to be mounted on my listening room wall. My living room has bare, plastered walls and I'd been

LETTER OF THE MONTH

HDCD TO GO?

I have noticed that none of the DVD-Audio, SACD or CD players I have seen reviewed include HDCD decoding. I know some DVD-Audio players have it, but I have never seen it on an SACD player. Is this perhaps a condition of SACD licensing, or is there a technical reason why it can't be supported?

I am considering buying a universal player, but I want to wring all the available bits from my existing collection of HDCD recordings. Will a truly universal disc player eventually appear on the market? Or is HDCD sound an insignificant benefit when compared to the new



high-resolution audio formats?

James Gilbert via email

HFC: Actually we did find one (very expensive) SACD player with HDCD via an internet search, from a brand not available in the UK. There's no insurmountable technical or political problem with including it, as far as

we can discover, but the regular chipsets used for SACD replay are not easily compatible with HDCD decoding and it's a bit of a head-scratcher for the designers. Let's hope a few get round to it!



WIN IXOS INTERCONNECTS!

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

Or email your letters to dan.george@futurenet.co.uk

You have mail



curious as to how the sound could be improved especially after experiencing some listening fatigue. After putting up a 15kg wool rug (2.4x1.7m) the most prominent difference is that the bass becomes more full-bodied - rounder with more punch to it.

There are also soundstage changes – things tend to tidy up a bit and instruments become clearer. Paying £120 in total for the rug and installation materials seems like a worthy investment to me.

Monotone via email

DIDO - NO ANGEL

If you are planning to buy the new Dido album and use a DVD player as your CD transport, prepare to be disappointed. The disc carries none of the normal Compact Disc logos and won't play on my Sony DVD.

However, I finally managed to get it to work. I extracted the audio files as PCM, 16-bit/44.1kHz stereo .wav files and put them onto my PC. I then burnt them onto a CD-R which plays perfectly on my DVD player! I think I'll take it back tomorrow for a refund though, just because they've pissed me off.

Sid and Coke via email

STREET LEGAL

After getting rid of some old equipment I went shopping for some budget gear. Dealer A had the amp and CD player that I was after in a deal that seemed fairly good, but they didn't stock the speakers I wanted. Dealer B around the corner did, but to my dismay, they didn't have the amp. I looked at the amp and CD in Shop A and spoke to the guy in charge - he asked what speakers I was using and I said I was going to buy from shop B because as he doesn't stock them. His face immediately dropped and he insisted that there were much better speakers on the market than the ones I was after. He also said that I shouldn't take any notice of reviews as I should listen myself - two minutes after he told me the CD player had won loads of awards in magazines and anybody who didn't like it couldn't hear properly!

I went to dealer B and bought the speakers I wanted. Why can't we have dealers who will just give their honest opinion? I appreciate they are all in business to make money, but one dealer has forever lost my custom because I know they don't give impartial advice. Am I asking for too much?

Ian City via email

HFC: A sad state of affairs Ian. The best dealers will be more concerned with making a customer for life than making a quick sale, while HFC can help you build your audition shortlist with informed opinion and independent advice.

ONLINE FORUM



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



I'm surprised by the absence of some brands in the UK that are well known in France such as Cabasse and Elipson. Cabasse is pretty much a loudspeaker reference in France. Are these brands simply not distributed in the UK? Guillaume

HFC: Elipson currently has no UK distribution. Cabasse is available in the UK, but has received little active promotion and scant coverage in the UK hi-fi press (our last review was a sub/sat system a couple of years back). But watch this space...

Here's a mini online poll I ran to see if people actually need to use tone controls fitted to their amps: Yes - 16%. No - 80%. No but I use a loudness button - 3%. Rozzar

The October edition of Hi-Fi Choice was fantastic. The free CD was a real bonus - the first track is amazing, it sounds like I have new speakers! The air around each guitar, the decay of the instruments and the ability of the artists is superb - thanks HFC. Colin

HI-FI CHOICE AWARDS 2003 VOTING FORM

The countdown has begun. Next issue we'll be publishing the most vital, comprehensive and considered real hi-fi awards in the UK. We'll reveal the best components of 2003, as voted by our exceptionally experienced band of reviewers. What's more, we're giving you the chance to have your say too - and win one of 20 Prowire interconnect cables into the bargain.

The Hi-Fi Choice 2003 Awards Issue will also feature a special Readers' Awards section, giving you the chance to cast your votes for your own personal highlights of the year. Simply send us the voting form below - don't worry if you don't have a favourite for every category, just fill out the ones that are relevant to you. Please include your contact details and remember to buy the special Awards Issue to check out the results - on the shelves 28 November.

- 1. Best CD player
- 2. Best DVD or SACD player
- 3. Best turntable
- 4. Best radio tuner
- 5. Best digital audio recorder
- 6. Best stereo amplifier
- 7. Best multichannel/AV amplifier
- 8. Best stereo speakers
- 9. Best multichannel speakers
- 10. Best hi-fi accessory
- 11. Hi-fi innovation of the year
- 12. Hi-fi brand of the year
- 13. Hi-fi dealer of the year
- 14. Album of the year (CD or vinyl)
- 15. Best SACD or DVD-Audio music disc
- 16. Hi-Fi Choice reviewer of the year

CUT OUT OR PHOTOCOPY AND SEND TO: Hi-Fi Choice Readers' Awards, Hi-Fi Choice, Future Publishing, 99 Baker Street, London W1U 6FP.





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REVIEWS



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

SOLO REVIEWS

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LITIMATE GROUP TES

NEW FORMAT DISC PLAYERS £250-£1,400

- 64 Arcam DiVA DV89
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OUR RATINGS EXPLAINED

Percentage ratings for various different criteria, like sound quality and value for money nor an nor an nor we liked point here is to the job of vo.

percommend you percommend you percommend you pare mis wur waranzs z 800 player, the 17 Mkil M, which has excellent build and e a very good impression in HFC 243. At same price there's also the Cyrus 7, a ng all-lounder in a compact case. 'ter trying the Heart with the standard s we switched over to the Siemens yade, a comparison somewhat muddied by

e fact that it was a cold for hot swap – the

hrough. The Siemens-equipped player has an in snappier sound with better timing that es with dense material with remarkable Sidence and ease. It even seems to be You can find more civilised players for the money. But few combine dynamics with fine timing skills as effectively as this. **HFC**Jason Kennedy



The things we like most about the product

The things we think could be better

The product's final score. All criteria are taken into account but the emphasis is on performance. Components scoring more than 85% may qualify for an HFC Award Badge

OUR AWARD BADGES EXPLAINED



Best Buy

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



Editor's Choice

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

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

Review Roksan Caspian M Series CD player and integrated amplifier



ROKSAN ROLLOVER

Smart updates of Roksan's Caspian CD player and amp build on the strengths of the originals

PRODUCT Roksan Caspian M Series

TYPE CD player and integrated stereo amplifier

PRICE £1,100 (CD) and £1,000 (amp)

KEY FEATURES Size (WxHxD): 43x8x33cm **○** CD player: CD-R compatible (not CD-RW), Philips TD1305T DAC **○** Amp: 85W/ch (8 ohms), 120W/ch (4 ohms)

CONTACT **2** 01235 511166 **⊕** www.roksan.co.uk

oksan's extensive range of Caspian hi-fi and home cinema components seems to have been around forever, but was actually introduced in 1998, with occasional improvements and only one previous major revision under the original model designations. In fact, the Caspian series has now remained practically unchanged since the dawn of the millennium, and the opportunity was clearly ripe for an update. The design aims for the new 'M' designated CD player and integrated amp reviewed here were partly to improve reliability, and partly to enhance the aesthetics which were beginning to look a little dated. The principal intention, however, was to improve sound quality based on experience gained from the originals.

The visual changes are limited but they make a useful difference by adding an extra degree of sophistication and class to the designs, though the changes are small enough to allow stacking with older components without looking out of place. The black button tops on the front panel have been swapped for silver-finished equivalents and there are changes to the lighting of the display, which have little visual impact but are designed to make the indications more legible from a little distance.

The amp's ALPs motorised volume control

knob, with its distinctive cut-out and illuminated position indicator, is new. Both units in this test are stand-alone components, and both are supplied with identical silver-coloured system remote controls. replacing the translucent blue iMac-inspired handsets that we considered out of place at the time. And that's about it aesthetically, give or take. But limited as they are, these changes have had the desired effect, lifting and improving the visuals.

The basic specifications of the CD player (£1,100) are as before. A single-play model, it's based on a Philips TD1305T continuous calibration (hybrid) DAC, but with a number of significant refinements to the supporting circuits, including (but not limited to) the power supply and servo sections. The output

identical play buttons, one each side of the loading drawer for symmetry. Standard play, programme and repeat options are available from the handset. Double play buttons aside, there's nothing in the least remarkable about the fixtures and fittings, but then the Caspian CD was always intended to be functional first and foremost. The player feels very well put together, the controls are responsive and the mechanism and hinged cover are quick-acting by CD player standards.

Much the same applies to the microprocessor-controlled amplifier (£1,000), which also boasts a simple, straightforward and functional user interface. The main operational controls are the two large rotaries at each end of the fascia, which have a firm

"The Caspian series has been practically unchanged since the dawn of the millennium, and it was clearly time for an update."

op-amp has also been upgraded, to the Burr-Brown 2604. The player copes happily with recordable discs, and is equipped with a single pair of analogue outputs and an electrical digital output on a BNC connector. There is no optical digital output.

The centrally mounted mechanism is equipped with a hinged door which includes a simple green fluorescent display built into its front surface, which shows track numbers, timings and operational status. Front panel controls are limited to track number select, play, pause and stop, and two (count 'em!)

and positive action. Minor controls take care of mode switching and tape monitoring – the mode switch is a multi-function control which switches the amplifier between standby and operating mode, and which when the amplifier is activated invokes a 20dB mute circuit. Power, input and tape monitor status are signalled by the central display. Around the back are a single set of 4mm binding posts, five line inputs, a tape loop and two sets of preamp outputs, which could be used for driving external power amps in a bi-amp configuration (or even a tri-amp system

ROKSAN

MODE

CD

TUNER

VIDEO

LINE

LINE 2

TAP

CRONS AND



Touraj Moghaddam, joint founder and chief engineer of Roksan, discusses the changes built into the M Series Caspian CD player and amplifier.



HFC: Was there a trigger for the development of the new M Series Caspians?

TM: They're based on original circuits which were developed for the Roksan Caspian M Series monoblock and preamp.

What are the major changes in integrated amp compared to the previous Caspian generation? The integrated amplifier is based on the circuit design of our component monoblock power amplifier and preamp. Over the years, the Caspian integrated amplifier has effectively been compromised only by the quality of the components used and the power supply. So we kept the circuit more or less the same and improved the components. What we have also done is to redo the software for the speaker switching and protection with a new circuit board where the loudspeakers connect. We use new high-quality relays, which has meant a new protection circuit. Back at the mains input, we now fit a high-quality mains input filter.

Is this in response to the tightening of legislation concerning electrical interference? Not really. The basic idea was to stop interference from other equipment. It has more to do with audio quality. Many products, especially CD players, processors and D/A converters, feed a lot of digital noise into the mains, which can make its way into the amplifier, and influence sound quality. We have always included mains filtering on our CD players, but many products are not well filtered, despite existing legislation.

Are there other changes to the amplifier?
There are a number of detail changes, mainly improved quality components. The transformer for example has the same rating but is mechanically

example has the same rating but is mechanically quieter, and the diode rectifier bridge uses new high-speed devices, with new high-frequency, low-impedance reservoir caps. Coupling caps are higher value Elna Filmics, which give a more extended LF response and a better sound, and the main PC board has been respecified with thicker copper plating.

What changes have been made to the player? It's a similar story, which involves a large number of detail changes to the motherboard, which is now a double-sided, plated-through component. Chassis ventilation has been improved, and the main D/A board has been equipped with a high tolerance crystal oscillator. Tighter tolerance components are used in the servo so that focusing and tracking have improved.





"This is an excellent player which is always enjoyable and unfailingly musical."

if the internal power amps are used as well). Finally, an input is available to bypass the preamp and drive the power amp direct, but this facility must be activated internally, so it's not quite plug-and-play. Like the CD player, the M Series integrated amp feels as solid as a rock, and is clearly built to last. Both components tested feature 1.6mm steel wraps and 6mm thick aluminium front panels. The amp is fully short-circuit protected and includes power supply failure detection, along with a dedicated output protection board with high current speaker relays. A diagnostic check is performed at power-up before the speakers are connected to the load.

Most of this is much as it was on previous versions of the Caspian amp, though the protection and relays have been improved. But there are some important differences too. Power output is up by around 20 per cent from 70 to 85 watts per channel into four ohms from a 350VA toroidal transformer, rising significantly in output into a four-ohm load. Peak current drive is said to be substantial, and the Roksan will drive a variety of mid to lowish sensitivity speakers hard enough for most practical purposes, even in large rooms. It wasn't quite equal to the task of driving B&W's Nautilus 800 comfortably however, but this is a punishing speaker that defeats most integrated amps short of Krell standards.

SOUND QUALITY

The two products were assessed in a system whose common factors were speakers and cabling. The main test speaker was the

Focal-JMlab Alto, a wide bandwidth, high-resolution model with a refined and broadly neutral tonality. Interconnects and speaker cables were Nordost Valkyrja. Part of the listening involved direct comparison with products that were as close to the Roksan in price and general aims as possible – an Arcam FMJ A32 amp (HFC 228) and another Arcam product, the DiVA CD93 CD player (HFC 247).

From the outset, it was apparent that the two Roksan components have quite similar voicing, or more correctly that they share a significant amount in common within the limits set by the fact that they do very different jobs. Without in any way meaning to suggest that they had a noticeably tailored sound, still less that they were coloured, there was something about their voicing that suggested openness, warmth and grace.

Looking closer, differences between the Roksan CD player and its opposite number from Arcam turned out to be more subtle than the corresponding differences between the two amps. The Arcam was the player with the greater resolving power, and in a recording of the elegiac *Adagio* from the Emerson set of Shostakovich string quartets, the Arcam CD93 sounded leaner and drier tonally, and more alive to the detail in the upper strings. The rumbustuous *Allegretto*, a highly energetic joke polka which follows the *Adagio* on the same disc, sounded more vital and alive through the Arcam.

But the Roksan brought some additional qualities to the party – a more distinctive sound, a great sense of grip in the midband, and a more 'rosiny' quality to the strings. In a



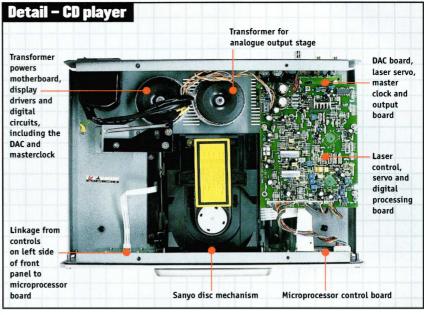
recording of *The Queen's Monastery* from Janacek's *Sinfonietta* (on Reference Recordings), it was again the Arcam that gave the more sharply etched sound, while the Roksan seemed somehow more distinctive, colourful and alive to the musical intent of the piece. But the loss of detail and articulation, which was noticeable across a wide range of discs, is a factor that weighs significantly with the Focal-JMlab Alto, which shows this kind of limitation very clearly.

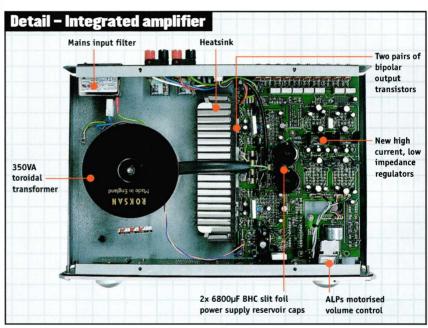
In the end, although the two players sound distinctively different, it is hard to put a value judgement on this. Whether one is a better player than the other probably depends more on the system context, and also perhaps on the kind of music that will be used, than any other factors. Used with the kind of speakers that are more likely to be employed with CD players and amps in this price category, the Roksan may end up giving more 'shape' and a more sonorous and varied feel to the music. This is an excellent player, always extremely enjoyable and unfailingly musical.

Broadly similar points can be made of the Roksan Caspian M integrated amp, which hints at the fact that they have common design roots. But this time the differences are rather more clear-cut, and so too is the price gap. The Roksan's slight power shortfall compared to the 100-watt Arcam was audible with large-scale, extended-bandwidth works played at moderately high (but by no means excessive) volume levels, especially in handling the lowest octave or so. But the Caspian trades this for a little more warmth and enthusiasm - with one choral piece featuring an orchestral and organ accompaniment (Weinberger's Polka And Fugue, also on Reference Recordings) these qualities proved particularly attractive.

On the other hand, the Arcam offered superior articulation and a more even-handed way of handling the whole band, with a more 'alive' sounding upper midband and treble. In the end, although the Roksan often sounded 'nicer', the more expensive Arcam justified its price by telling a more detailed story. It was the more tactile too (try the opening chord from the superbly recorded title track of Mark Knopfler's Sailing To Philadelphia), but it was the Roksan that sounded the more propulsive and which appeared to have more on-the-ball timing. When the music called for it, the Roksan had more spirit and more responsiveness, and was more ready to (metaphorically) let its hair down. Something similar was heard in an old faithful recording, Tracy Chapman's Mountains O' Things, whose erratically choppy rhythms were more convincingly lop-sided and fluid sounding through the Roksan. The Caspian sounded more responsive, more elastic and in the end considerably more satisfying.

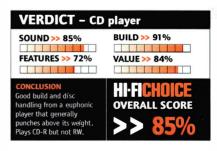
Again, which amplifier is better for you is going to depend on the rest of the system

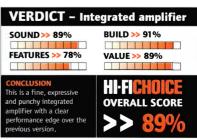




and perhaps on personal taste. It isn't so much a question of which is the better amplifier - under ideal conditions, and in the context of a suitably analytical system, the Arcam ultimately has some powerful qualities at its disposal. But in practice the qualitative differences are not major and the decision is going to end up as one of personality - the right personality to suit your system, and the right personality to suit you. If the question being asked is which is the better amplifier, for overall discipline and resolving power, and suitability for high-grade replay, it would be difficult to argue against the Arcam. But if asked which provides more musical involvement and enjoyment - two different but vital qualities - then more often than not it's the Roksan. This is an amp and CD player for music fans, pure and beautifully simple. HFC

Alvin Gold











STYLE AND GRACE

B&W's stylish new compact floorstander incorporates some very classy ingredients

PRODUCT B&W 704

TYPE Floorstanding loudspeaker (2.5-way)

PRICE £1,400

KEY FEATURES Size (WxHxD): 22x96x32cm ◆ Weight: 21kg ◆ 25mm tube-loaded alloy tweeter ◆ 165mm Kevlar bass/mid driver ◆ 165mm paper/Kevlar bass driver ◆ Sensitivity/impedance: 90dB/40hms minimum CONTACT ◆ 01903 221500 ◆ www.bwspeakers.com

aby brother to the impressive three-way 703 reviewed in depth in the last issue of *Hi-Fi Choice*, this 704 looks very similar indeed to its range-mate. However, its enclosure is slightly smaller and the driver line-up rather simpler, resulting in a price tag of £1,400, £600 less than its larger sibling.

B&W puts considerable resources into research and development, which led to the radical and dramatically successful Nautilus 800 series of models that first appeared at the end of the 1990s. The lessons learned there have been gradually filtering down to the company's less costly ranges, and are particularly evident in this brand new 700-series, which neatly fills a gap between the 800s and their 'budget' 600-series brethren.

B&W hasn't really hit the mark with its previous 'gap fillers'. The P-series from the

early 1990s never made much of a mark in the UK, while the rather-too-chunky CDMseries models, first introduced in 1996, have been through no fewer than three different evolutionary stages between then and now, when they'll be replaced by the 700-series.

The complete 700-series is made up of three stereo pairs, plus specialist centre and surround channel models for multichannel types. The stereo models include the £800 705 and £2,000 703, either side of this £1,400 two-and-a-half-way floorstanding 704. For multichannel users, the £450 HTM7 centre channel, and £900 DS7 surround speakers complete the set, alongside a pair of

powered subwoofers for movie fans.

There are many obvious similarities between the CDM-NTs and the 700-series, starting with the top-mounted, external tube-loaded tweeter. But whereas the former had a chunky angularity that was starting to look a little dated, these new models have a sleeker, more streamlined look. The softened, radiused edges may have gone now, but the real wood veneer is undoubtedly classier, the front-to-back tapering is a very nice touch, helping avoid the parallel surfaces that 'focus' internal standing waves, while the *pièce de résistance* is the curved single-piece front and top — using a bent-wood technique derived from

MULTICHANNEL OPTIONS

B&W has specific, matching centre and surround speakers to fit in-between and around the 700-series stereo pairs, for those who want multichannel surround sound.

The £450 HTM7 (for Home Theater Monitor) handles the centre-front channel. With its curved top surface and external tweeter, this two-way design looks bulky, but it voice-matches the 704 well, sharing as it does the same main driver and tweeter (indeed, it's a closer match to the 704 than the rather brighter 703). Crucially, the HTM7 should not

be placed on top of a large-screen TV set, as close proximity to a large flat surface adds a thickening coloration in the midband. Avoid that and the 704/HTM7 combo will form the basis of a highly effective multichannel system

Not available in time for this review, the £900 DS7 surround speaker looks potentially even more interesting. It's switchable between dipole and monopole modes (the former best for movies, the latter for music), and the change can be effected via a 12-volt 'trigger' signal from the receiver.

the Nautili, along with a healthy dose of form-follows-function.

Whereas the three-way 703 used B&W's unique and radical FST 'surroundless' midrange driver, this 704 is altogether more conventional, and essentially shares the same configuration and driver line-up as its CDM-7NT predecessor, which HFC reviewed three years ago. The price has gone up a little, from £1,250 to £1,400, but that's by no means unreasonable in view of the superior enclosure engineering and intervening years.

B&W has long employed the concept of mounting an external tweeter on top of a speaker - indeed, disputes have arisen over the patent rights to doing this. The basic purposes are to provide wide distribution for the high frequencies, avoiding the focusing created by mounting onto a flat surface, while also creating the desired time alignment to

integrate the tweeter and midrange drivers optimally. The new curved top and front edge offers two significant advantages over its more angular predecessors, giving better distributed vertical reflections, while the shaping guarantees excellent mechanical stiffness and integrity.

Below the 25mm alloy dome tweeter, the 704 has a 165mm cast-frame bass/mid driver with a 120mm diameter yellow-coloured woven Kevlar cone. The lowest driver is a dedicated bass unit, with 165mm frame and 120mm diameter Kevlar-reinforced paper cone, further stiffened by a dome that's nearly as large as the cone. All the drive units have undergone significant improvements over their predecessors, using what B&W calls 'balanced drive' motors, with more symmetrical magnetic fields and reduced variations in inductance. High frequency

in-room balance to the bigger 703, it differs crucially in avoiding the latter's rather bright top end. It's only a small difference in measurement terms, but such is the subtlety of speaker voicing through the presence zone. the contrast is very obvious indeed subjectively. Whereas the 703 sounds relatively upfront, this 704 is altogether more restrained and laid back.

The treble level actually seems just about perfect here, though the overall presence energy may be just a little too laid back, to the point where voices sound a little 'shut in', and speech is mildly compromised. We found we had to play the 704s at a slightly higher volume than the brighter 703s, for example, when listening to talk radio stations.

The plus side to this, however, is that these speakers rarely if ever sound aggressive even when playing Bob Dylan's in-yer-face harmonica on The Bootleg Series Vols 1-3 (and numerous other albums from the same artist!). At heart it's an easy-listening speaker - one that goes about its task without ever really drawing attention to itself, and certainly without ever sounding unduly intrusive.

It doesn't hide or mask the musical detail in any way, indeed the enclosure seems very well controlled, ensuring a wide dynamic range with good low-level information, and very precise stereo soundstage imaging. And if its midband doesn't match the overall clarity of the FST-equipped 703, this 704's bottom end is equally clean, extended, and free from boom, showing considerable agility and pose as it propels the music along with considerable enthusiasm.

There will be those who will prefer something with a little more low-end weight and warmth, and others may like a little less restraint through the presence region. But every speaker has its own character, and these comments should be taken as observations not criticisms. This is a fine all-rounder, intelligently engineered, elegantly styled, beautifully finished, at a realistic price. HFC

Paul Messenger

"At heart it's an easy-listening speaker – one that goes about its task without ever really drawing attention to itself."

BEST BUY

HI-FICHOICE

magazine

extension has also been increased. The box is subdivided internally with 'Flowport' reflex ports

front and rear and foam

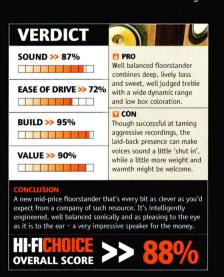
bungs are supplied for fine tuning the bass end. With a total weight of 21 kg, the whole thing feels very solid, and sits securely on well-seated spikes. Twin terminal pairs provide bi-wire/amp options. Our samples came finished in an attractive dark American walnut real wood veneer, with options including maple, cherry wood, rosenut and black ash.

SOUND QUALITY

Room measurements are very useful in defining the tonal balance of a speaker, highlighting any peculiarities, and providing useful guidance on the best places to site the speakers in relation to room boundaries. The 704's ports are tuned to very low frequencies, giving good ultimate bass extension without excessive mid-bass boom.

This speaker is better kept well clear of walls, though if this is not practical you can use port-blocking bungs.

Although the 704 delivers a very similar





SUPER AUDIO THRILLS

Flying in the face of 'universal' fashion, Sony launches two upmarket audio-only SACD players

PRODUCT Sony SCD-XA3000ES

TYPE Multichannel SACD/CD player

PRICE £800

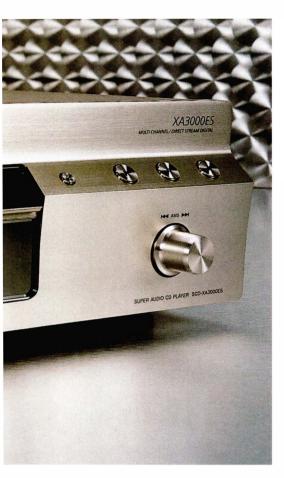
KEY FEATURES Size (WxHxD): 43x12x39cm

→ Weight: 8.2kg → Multichannel SACD and two-channel SACD, CD, CD-R/RW replay → SACD and CD Text compatible → Fixed speaker configuration options

CONTACT 2 08705 111999 **⊕** www.sony.co.uk

hile its competitors are hastily spreading their wings over every new multichannel option, Sony has returned its focus to SACD and SACD alone. As an originator of the format, it's not surprising that Sony should also have the wherewithal to develop the most advanced replay technology, a boast given form by this model. It's one of two new ES components, both compatible with stereo and multichannel SACD, stereo CD, CD-R and CD-RW. CD and SACD Text are also supported on their displays. The flagship SCD-XA9000ES model is equipped with an i.Link interface, not unlike Pioneer's DV-757Ai, that enables SACD digital data to be piped into the companion





TA-DA9000ES digital amp, for example.

The SCD-XA3000ES, by contrast, offers a more conventional 5.1-channel analogue output plus analogue, optical and coaxial digital outputs for CD. A dual-laser pick-up mechanism is employed to distinguish between SACD data and the coarser layer embedded in a CD, but it will not read either DVD-Audio or DVD-Video discs. Which also means the player has no video circuitry and no means of delivering an on-screen menu. Make no mistake, this is a purist SACD player for the audiophile. Build and finish quality are as superb as ever and will reward any enthusiast with real pride of ownership.

The SCD-XA3000ES looks rather like a tickled-up '333ES with improved component quality, a distinctive facelift and - crucially the same complement of six 'Super Audio' DACs used in the costlier SCD-XA777ES. Bearing in mind the '333ES cost £1,200, then the value of the '3000ES starts to look very promising indeed. Nevertheless, by comparison with the slick GUI (Graphical User Interface) that accompanies every DVD player these days, the '3000ES is a strictly hands-on machine. Options are limited, but you can set either the SACD or CD layer of hybrid discs as the default and exert some control over the speaker configuration with Sony's 'Multi-Channel (bass) Management' regime.

This was used on early SACD players and comprises some eight possible permutations of speaker size. The ideal setting is 'MCH





"It has no video circuitry and no on-screen menu. Make no mistake, this is a purist SACD player for the audiophile."

Direct', which outputs all 5.1 channels in their purest form, but others include '5 Large + SW', '5 Small + SW', 'FRT Large + SW' and so on. It is possible to adjust individual channel levels and influence the front-to-surround balance, but channel delays and variable (sub) crossover frequencies are not available.

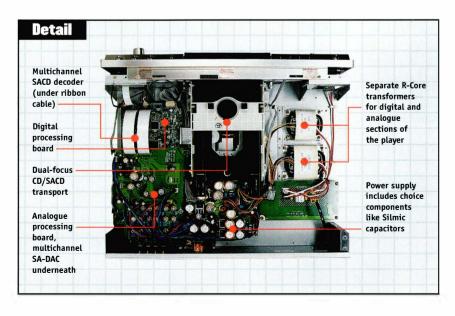
This also suggests that the SCD-XA3000ES remains true to the ideals of DSD (Direct Stream Digital - the code system used by SACD) in maintaining a one-bit datastream right through to its proprietary DACs. Just about every other player on the market would seem to convert this 'pure' bitstream to PCM at some stage, trading the full benefit of SACD for the convenience of speaker delay options, for example, or a single universal DAC solution. Perhaps that's why, in general, the 'sound' of SACD and DVD-Audio seems much closer with today's universal players than it did between the first generation DVD-A and SACD players. In this respect, the SCD-XA3000ES serves as a timely reminder.

I should point out however, a very minor 'bug' in its software. Skip to track 2 or 3, for example, and any identifying CD/SACD Text

scrolls dutifully across the fluorescent display. But fast search *backwards* into track 1 and the CD/SACD Text still thinks it's playing track 2 or 3...

SOUND QUALITY

The very earliest SACD players had the capacity to put you right at the heart of a performance, not just in terms of their communication and emotional impact but also in a psycho-acoustical sense. A well-matched system fronted by such a player could place the 'images' of performers right into the listening position, right into your head. An uncanny experience not unlike wearing the ultimate set of headphones. Now, this is a quality we've not heard from any of the more recent universal or combi DVD/SACD players. The very best of the latter, including Denon's DVD-2900, can still generate a palpable body of sound and a tremendous sense of occasion that substantially exceeds the capability of two-channel CD audio. Nevertheless, that eerie sound focused immediately around the listening position is not something these players have achieved.



[Review] Sony SCD-XA3000ES SACD player



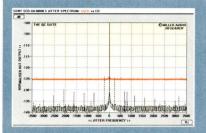
■ The SCD-XA3000ES, by contrast, brings it all back. The soundstaging might not have the architectural significance of the best DVD-Audio players, but its ghost-like imagery is a sure-fire substitute. Listen to James Taylor's October Road and the tiny finger-drums that rattle from the surrounds will have the hairs standing on the back of your neck just as his fuller-sounding vocals appear almost in front of your nose. There is nothing forced about the sound of this player. Performers and instruments simply 'appear' in the room yards away from any speaker. The boxes - even ruddy great lumps like the B&W Nautilus 802s and 804s used in the test room - melt like hot fudge to leave a gentle, unchallenging but inherently 'musical' field of sound.

Even the most difficult and intense SACD mixes, including Frankie Goes to Hollywood's Rage Hard... collection, sound positively inviting, the explosion of sound transfixed around the room. So was Relax just a little too relaxed? Perhaps, but if the real energy, vibrancy and 'elastic' rhythm of this recording was let loose in your room then you'd have few ornaments left on the mantelpiece. Instead, the SCD-XA3000ES creates the sort of 3D sound that encourages you to walk around the back of the various performers, if only to view the action from a different angle.

No universal DVD-A/SACD player sounds like this. The better examples have a more pointed and arguably more dynamic delivery, but the soundfield is always 'projected' from the periphery of the room. With this player, individual performers will just appear in front, behind, to the side and even above you as if it were the most natural thing in the world. Regardless of the volume position its music simply 'exists' in the room.

The recent Telarc release of Tchaikovsky's 1812 (a genuine DSD recording) has sounded just a little too 'thick' or hooded with the six or seven players I've used recently, but here the SCD-XA3000ES revealed what was

LAB REPORT

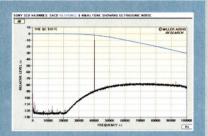


JITTER SPECTRUM: SACD VS CD

Jitter is exceptionally low at just 80psec with CD and ~15psec with SACD software, elevating the SCD-XA3000ES into the 'reference class' of silver disc players. The output level is a little below average at 1.8V with both CD and SACD software but distortion is equally low at 0.0006% through the midrange (CD and SACD), increasing slightly to 0.015% at 20kHz (CD).

SACD RESPONSE AND ULTRASONIC NOISE

SACD incorporates a deal of ultrasonic noise that's visible on this graph beyond the 40kHz peak. Distortion plus noise adds up to ~0.05% and clearly reduces its practical dynamic range above the audioband. This 'range' is represented by the decreasing gap between the noise and the player's response (blue trace) with SACD discs.





possibly there all the time, just waiting to be discovered. The bells have a realistic ringing quality and the strings bring a thrilling edge to the building tension, a bubble burst by the sharp, resonant crack of the cannon. At last it was possible to sit back and let the orchestra wash into the room, the performers imbued with an energy and passion that had previously been lacking from their performance. Or so I had thought...

Compare the liquid performance of the SCD-XA3000ES with the DVP-NS999ES (see this month's Ultimate Group Test) and you'd never believe the two products wore the same badge. And while we're doing comparisons the £800 '3000ES shows the £1,400 Marantz SA-17S1 a distinctly clean pair of heels. It is a timely reminder of why SACD was almost universally preferred over DVD-A in the 'early days' of multichannel audio, for no universal player does the DSD format the justice of this purpose-built machine. Whether this will be enough to justify sufficient sales of what is, by any reckoning, a very specialised product is another matter. I'd be tempted to look at it like this - if you were thinking of splashing

> out on a high quality CD player, then buy the SCD-XA3000ES instead and get the very best from both plain vanilla and Super Audio CD. Speaking of which, the

SCD-XA3000ES is more than merely passable at spinning the original silver

disc. CDs also share more than a hint of SACD's gentle spaciousness, creating a deep and impressively detailed soundfield even if this is concentrated at the front of the room. Vocals sound slick and articulate while percussive detail sparkles without sounding overly bright. It's a very inviting sound and one that does full justice to the older music format.

Last season's SCD-XA333ES was certainly not broken and this season's SCD-XA3000ES makes no attempt to fix it. Instead, a fantastic player just got a little better... and a whole lot cheaper into the bargain. **HFC**

Paul Miller



BERYLLIUM TWEETER





Why Beryllium? Beryllium is ideally suited to meet the extended demands placed on tweeters by new high bandwidth sources. With a rigidity more than seven times higher than a Titanium or Aluminum dome of identical mass, Beryllium has allowed Focal-JMlab to create a single tweeter dome with a remarkable five octave flat response from 1kHz to 40kHz! Eliminating the problems found when using dedicated "supertweeters".

For further information visit the Focal-JMlab website at www.focal-fr.com



CLASSY PERFORMER

This remarkable £330 amp appears to offer a choice – power or refinement. We find it can do both



PRODUCT Marantz PM7200

TYPE Integrated stereo amplifier

PRICE £330

an you actually get a sensible 105-watt amp for £330? So confident is Marantz that it is in a sense offering two for that modest sum, one being a 'conventional' Class-AB version putting out 105 watts, the other a 25-watt Class A variant. It's not a world first but it is unusual and perhaps unprecedented at this price. A front panel switch toggles between the two modes of operation.

Most hi-fi amps, particularly those at modest prices, work in Class AB. Current flows into the loudspeaker from one transistor, but when the signal crosses the zero line and becomes a negative rather than positive voltage the current flows the other way and through another transistor. Each transistor conducts about half the time, with hand-over from one to the other accomplished as smoothly as possible. It's difficult to make it really smooth, however, and Class A gets round the problem altogether by having so much current flowing at all times that under normal conditions

neither transistor is ever turned off, a situation that is intrinsically more linear.

All that spare current translates into a lot of waste heat though, so Class A amps tend to be low powered. Marantz's trick here gives the user the option of high power with low dissipation or lower power with (hopefully!) higher quality and still manageable dissipation. Impressively, changeover between modes can be effected with the amplifier switched on and playing, with nary a click, making comparison of the modes easy.

Now to be perfectly honest this amp doesn't remain in Class A for the whole 25 watts – rather more like eight watts in fact – but that's still sufficient to ensure that all bar the loudest peaks will be within the Class A envelope. And in fact the maximum output is more like 30 watts than 25, so overall it's still far from gutless.

Both modes use exactly the same bunch of components to do the work, including some high-speed output transistors and a couple of Marantz's sealed 'HDAM' modules. Everything

is switched by relays, including inputs and outputs, helping to keep signal paths short and of course facilitating remote control, which also covers the volume control, a motorised potentiometer. A fair-sized mains transformer powers the audio

circuits, large enough to maintain the rated power into both channels as per specifications, but ironically, because it's only just large enough for that, it offers spare voltage on a transient basis, making the momentary peak output of the amp more like 160 watts. Quite a powerhouse!

At this price you wouldn't expect audiophile grade resistors and capacitors, and sure enough there aren't any. Nevertheless, everything in the signal path seems to be of pretty good quality, some slightly flakylooking capacitors on the input board merely linking grounds together for better protection against radio interference. Even the phono stage has more than the bare minimum of components, featuring as it does some nice low-noise input transistors.

Features include six line inputs and two record outputs, with full record monitoring and cross-copying facilities. Tone and balance controls can be bypassed.

SOUND QUALITY

One might have thought that the Class AB mode with its plentiful power would suit rock, opera, party sounds and generally anything





big, with Class A reserved perhaps for more intimate grooves. But in fact, to our considerable surprise, differences in sound between the two were remarkably small. So small, in fact, that we pulled the lid off early in the proceedings to check all was well inside. It clearly was, but some quite careful lab tests were needed to show the differences in distortion between the two modes

That in turn is because distortion is rather impressively low throughout, indicating that Marantz may have made a pretty good Class A amp but arguably a blinder of a Class AB one, at least technically speaking.

And as for sonic performance? Well, it may not be twenty grand's-worth of imported esoterica (perhaps even a few models at a thousand pounds can teach it a thing or two) but it has little right to sound this good, with this much power on tap, at this price. Bass goes down for miles, treble's sweet and effortless and the midrange is as clean as a whistle, very revealing and possessed of some of the best imaging we've heard this side of the mental high end.

Set against that, if you will, some sacrifice in the control and grip department. But that's pretty much the sole domain of very specialised kit, the kind of stuff that can grab a really tricky speaker and drive the allen bolts off it. The PM7200 won't do that, at least not quite, but it will give some quite recalcitrant speakers a fair shock. Some small JBLs passing through the review system, for instance, were bludgeoned into passing more

detail than they've previously been known for.

And with friendlier loads, such as our resident ATCs (insensitive but not a particularly demanding load otherwise), the PM7200 fairly shone. Across a range of review material, it consistently showed up more detail than almost any direct competitor we could think of, with a tonal balance that may not always be absolutely neutral but, much more importantly, is consistently believable.

So for instance, a pleasant couple of hours revisiting discs of really large-scale symphonies found some of Mahler's trumpets ever so slightly coloured, though still sounding definitely like trumpets, with none of the saxophone imitation that some amps can produce. And boy, did they sound martial! Moments later, a brief percussion barrage fairly shook the room but didn't shake the stereo image, while throughout the particularly tricky sound of two dozen violins stayed steady and free from the dreaded screech that afflicts many inferior amps.

Rock recordings told the same story - big sounds, big images, but little or no compromise in the level of detail portrayed. And subtle recordings of smaller forces were no less well served, the human voice in particular retaining both personality and imaging. The phono stage is a little bland, but serviceable.

After a while, a few differences began to become apparent between the two operating modes, but they really are small. Indeed, they are not very consistent, with some music

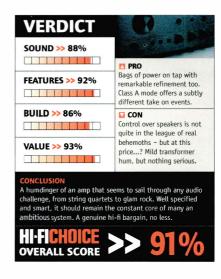


"Bass goes down for miles, treble's sweet and the midrange is as clean as a whistle. with some of the best imaging this side of the mental high end."

favouring one mode, some the other. One factor that may come into play is the rather high level of mechanical hum from the mains transformer, which is higher in Class A mode than Class AB - this alone may be enough to tip the balance in favour of AB when listening at modest volumes. Otherwise, it's definitely more a case of personal taste than anything gross or obviously flawed either way.

Like its honoured forebears, the NAD 3020 and the Pioneer A-400, this seems to be one of those amps that breaks away from the pack and sets a new pace for the others to follow. It's not perfect, but it's an exceptional product at its price and deserves every success. HFC

Richard Black



"We're talking about a future classic"

July 2002 / VS55 / HI Fi News Ken Kessler

"More than any other CD player, the CD3 is the machine that renews my enthusiasm, wrapping me up completely in the musical event"

November 2002 / CD3 / Suono Mario Berlinguer

ARC ANGELS

"Sets a new standard of quality"

December 2002 / SP16/VS55 / Suono Mario Berlinguer





AUDIO RESEARCH LS25 MKII/VT100 MKIII PRE/POWER AMPLIFIER



"If you yearn for that intangible 'something' that many modern amps miss, then you must hear the VS110"

March 2003 / VS110 / Hi Fi News Dave Berriman



Audio Research apply the technology gained from their Reference 2 preamplifier and Reference 600 series amplifiers to every model in their range, right down to the entry-level designs. The SP16 preamplifier, VS55 and VS110 power amplifiers and the new VSi55 integrated amplifier are not only packed with knowledge gained from the company's legendary flagship models, but herald a change in the way reasonably priced high end is perceived. Joining these classics are the state-of-the-art CD3 CD player and 150M multi-channel amplifier. For details of the full range and your nearest dealer, contact Absolute Sounds.

Audio Research: not a cautious choice, but a considered one.



absolute sounds ltd





BEST DAB YET?

Cambridge's latest DAB tuner offers improved ergonomics and selectable frequency response tweaks

PRODUCT DAB500 TYPE DAB digital radio tuner PRICE £150 CONTACT № 020 7940 2200 www.cambridgeaudio.com

ardly had we reviewed the DAB300 when Cambridge came out with an upgraded model, the 500. Upgraded, indeed, in practically every way. For a start, it's a lot smarter, with a nicely laid out front panel (but the far-too-common problem of small legends - guys, not all hi-fi buyers have 20/20 eyesight!) and a display that's clearly readable over a wide range of viewing angles, and dimmable too. It's as easy as any to use, thanks to the way DAB stations are stored as presets, 'tuning' here using the familiar 'twist 'n' push' knob - a little wobbly, but secure enough. A full range of information is available, including programme details put out by the broadcasters and also (our favourite) signal error, the most reliable indicator of adequate signal strength.

As with recent Pure Digital tuners (with whose circuits this model has a great deal in common), the DAB500 features a touch of frequency response tweaking to make the often over-bright sound of DAB more attractive. Here however, there's an additional twist in the shape of a three-position switch, at the rear of the unit, which selects flat response or one of a choice of tweaked versions, dubbed 'Natural Contour Technology'. 'Lo' is a dead ringer for Pure's 'PsychoAcoustic Compensation', a downward treble shelf above a couple of kHz, while

'Lo/Hi' adds to that a boost higher up in the treble, above about 4kHz.

For the rest, there's an input for looping through an FM tuner, a pair of digital outputs, optical and coaxial - but no L-band, so the newly-announced allocations for extra local DAB stations will be wasted on DAB500 owners. It does look as if national stations will stay on the VHF DAB band, though.

SOUND QUALITY

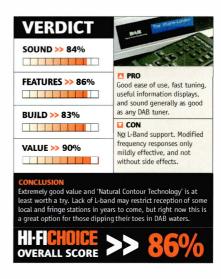
It's getting difficult to write about the sound quality of DAB tuners because, frankly, they vary remarkably little, apart from a couple of super-budget models we've seen which disappointed. Those apart, the basic sound is inevitably and invariably dominated by the sound of MPEG data reduction, with such differences as exist between tuners (and given how many are based on the same Frontier Silicon chipset there aren't many) being down to relatively minor nips and tucks in such areas as jitter, output stages and noise.

That said, there are at least the three alternative frequency response shapes to choose from here. They do what one might expect - 'Lo' slightly reducing the spit of too many broadcasts and 'Lo/Hi' doing less for spit but slightly rebalancing sounds away from the 'presence' region. It's quite successful but there's a touch of veiling (a side effect of the extra components, perhaps?) and in the long run it doesn't do much to redeem the heavily compressed and data-reduced sounds from most stations.

Still, comparing this tuner to a longstanding reference showed that in unfiltered mode it sounds clean, just audibly superior to early DAB incarnations and with no detectable problems of data loss or noise and distortion. Sensitivity seems a touch superior to early models, too, although it's hard to be absolutely sure. In our inner-London location, perfect reception continued even after the antenna had fallen, unnoticed, on the floor.

That there is still some room for sonic improvement in DAB was shown by using the digital output of the DAB500 to feed a Chord DAC64 (£1,900!) - but it's pretty close. So given that the features here are almost a complete set and ease of use is the best we've seen so far in a DAB tuner, this would seem to be our top recommendation: but, Cambridge, how about L-band on the next one? HFC

Richard Black





HEAVEN ORELLE?

Curvaceous casework of course, but Orelle's new CD player is much more than just a pretty face

PRODUCT Orelle CD100evo

TYPE CD player

PRICE £1,500

KEY FEATURES Size (WxHxD): 44x7x35.8cm **☼** Weight: 5.5kg **۞** Multi-bit DAC **۞** Low negative feedback circuitry **۞** Vibration-cancelling casework

CONTACT 20 0208 991 9200 www.orelle.freeserve.co.uk

hy introduce a new upmarket CD player?" is the first question posed in the press release that accompanied this attractive and distinctively styled machine. "Why buy one?" is a question that has been posed often enough in this and other magazines, since the arrival of more versatile DVD and SACD silver disc spinners.

However, despite the widespread efforts of propagandists – and in particular the protagonists of the new 'high band' DVD-A and SACD formats – CD-only players have continued to sell in respectable numbers. Recent marketplace statistics show that CD player sales have declined, but that's true for the hi-fi separates sector as a whole, and while one wouldn't describe things as healthy, there's no way this downturn is a collapse.

Orelle's answer to that original question is that it has already investigated SACD and is less than impressed by the range of software available, or the ability to get hold of what there is. Furthermore, after nearly twenty years of CD, we have all amassed large CD collections, so getting the very best out of our existing collections is still the first priority.

Furthermore, the company believes that although SACD players are able to play CDs, they aren't optimised for the task, and therefore deliver a less satisfactory performance compared with what can currently be achieved by focusing exclusively on CD replay. A dedicated CD player which goes to considerable lengths to maximise the sound quality of 'regular' CDs therefore still makes plenty of sense.

That's very much the Orelle approach. As its name suggests, the £1,500 CD100evo represents an evolution of Orelle's original and highly successful CD100, incorporating substantial improvements in both the electronic and mechanical design.

The casework, for example, is more than just an interesting and unusual shape. The curved profile gives the extruded alloy sides

considerable strength and stiffness, and these couple mechanically to the lightweight alloy chassis in such a way as to channel and dissipate vibrational energy. The case is also basically non-magnetic, while still providing good radio frequency (RF) shielding.

Inside, the solid state single-ended Class A circuitry uses balanced split-rail supplies with DC servo control, allowing a DC-coupled output. The player uses the latest generation Philips CD10 chipset and VAM1250 disc drive mechanism, along with a low-jitter master clock and proprietary control software.

Orelle strongly believes in using multi-bit digital-to-analogue converters (DACs), because it says these produce more faithful music reproduction than the near-ubiquitous Delta Sigma converters. The CD100evo uses an advanced 24-bit interpolating linear phase digital filter, driving separate mono multi-bit DACs. These deliver a current rather than a voltage output, to a discrete Class A transistor circuit with passive LC filters, avoiding the need for lots of negative feedback.

Multiple power supplies are used to feed the different sections, with high-speed diodes and capacitors to avoid 'time-smear'. Every analogue stage uses discrete balanced zener-referenced transistor regulators, to control voltage accurately and provide low noise and good ripple rejection while maintaining a Class A power supply, without the need for negative feedback. All critical components are









"It's a beautifully balanced player that does everything well or very well, so that it sneaks its way into your affections."

The silver-finished CD100evo's very distinctive appearance was created by Danish industrial designer Kristian Gundarson, and is both clean and practical, though sharp eyes (or glasses!) are needed to read the little button legends. The remote handset is a very dull and prosaic affair by comparison, which is a shame. It does all the important stuff effectively enough, but the machine itself seems a little sluggish in the way it responds to commands (though it's still faster than DVD and SACD machinery tends to be)

Features are limited to maximise sound quality. An 'off' setting avoids any noise from the display, which comes on for a couple of seconds when the remote control is used. As standard there is no digital output, as fitting one leads to extra noise and compromises fidelity (though it is available as an optional extra). There's no headphone output here either, again to avoid compromise.

SOUND QUALITY

Regular readers will have noted that CD is not my favourite source medium, and that I only review one or two players a year – self-indulgently hand-picked because they really do offer something a bit special.

Which is why I couldn't resist this Orelle, a player that really does stand out from the silver disc spinning pack, and does a remarkable job in virtually every respect. It's not an 'extreme' player, sacrificing some aspects of performance to achieve excellence elsewhere. Rather it's a beautifully balanced one that does everything well or very well, so that it sneakily worms its way into your affections, demanding respect and setting down marker points for judging its rivals.

Although this player is unquestionably solid state transistor technology throughout, we gather that a very positive experience with super-simple single-ended triode valve amps was a major inspiration behind its circuitry. That makes some sense in the way this player sounds. It's not exactly valve-like in the romantic stereotype sense, but it does have something of the free-breathing presentation and delicate transparency one associates with valve devices, and the player seemed to work very well indeed. This is particularly evident when playing simply recorded acoustic material, such as Christy Moore's Live At The Point, which somehow sounds more 'analogue-like' and less 'mechanical' with this player than many others I've tried.

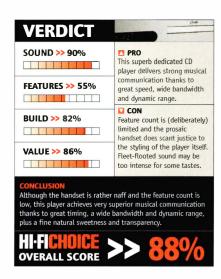
Connected up to a Naim NAC552/NAP500 pre/power amp combo, and thence to the B&W 703 from HFC 247, we were immediately conscious of this player's wide bandwidth. It shows notably impressive extension at both extremes of the audio band, with good power and poise at the bottom end and particularly fine resolution and unusually good detail at the extreme top end of things.

Another stand-out quality here is the stereo imaging, which shows good depth and very authentic and natural sounding perspectives. This quality came through clearly enough with the Naim amplification, and was even more obvious when Orelle's own pre/power amp combo was hooked up (see *HFC* 243).

But perhaps the greatest strength here is the way this player seems to deliver all the detail without ever forcing the issue. On an album like the White Stripes' *Elephant*, which varies from aggressive hard rock tracks through to lyrical ballads and subtle harmonies, the CD100evo comfortably deals with both extremes, allowing the hard edges of the music through without ever making the sound itself brittle or uncomfortable. At the same time, the expressive vocals on the more lyrical tracks send shivers up the spine, giving a degree of emotional communication which got surprisingly close to that achieved from a vinyl copy of the same album.

Orelle's CD player not only has attractively distinctive styling that singles it out from the herd, it also delivers an exceptional standard of music reproduction. Timing is exquisitely tight, whatever the material being played, the resolution bandwidth and dynamic range is unusually wide, and the overall sonic character has a fine natural sweetness and transparency. The strategy of deliberately curtailing the feature count in order to focus exclusively on compact disc sound quality clearly pays fine dividends. **HFC**

Paul Messenger



LOUD AND CLEAR

This stunning turntable and arm combines designer looks, ease of set-up and excellent performance

PRODUCT Roksan Radius

TYPE Vinyl turntable and tonearm

PRICE £850 (clear acrylic chassis; maple chassis £750)

KEY FEATURES Size (WxHxD): 40x15x35cm **○** Weight 7.5kg **○** Belt drive turntable & unipivot arm **○** Partially decoupled sub-plinth

CONTACT № 01235 511166 # www.roksan.co.uk

kay, I admit it. I was totally unprepared for what came out of the box. I had been forewarned that the new Radius was a smart cookie, but then the original Radius had been something of an eye-turner in its day. I had expected an updated version and if you look carefully enough, it can be seen in these terms. But the Radius 5 design has been stretched to the point where it is effectively completely new, closer in some ways to the flagship TMS than to the early Radius. The visuals though are all its own. There's nothing traditional about this deck with its oddly shaped and superbly finished acrylic two-part chassis echoed in the transparent arm bearing cover and headshell to produce something unique. If this Radius is just too radical, there is a version with a maple chassis at £750.

As supplied, the deck consists of two components, the Radius 5 turntable and Nima arm, which are preassembled and ready to run. A substantial 19mm acrylic sheet acts as the base of the Radius 5, and is fitted with three adjustable feet. Decoupled from the base is a smaller acrylic sheet, which is stiffly decoupled from the base, and which acts as an anchor for the main bearing and arm. The custom mains-locked synchronous motor is resiliently decoupled from an extension of this piece, the suspension acting in effect like a clutch when starting, winding up to absorb errant torque loads on the belt as speed stabilises. The rim-driven belt drive platter is machined from acrylic, with a recess to accommodate the record label. The main bearing is preassembled, and apparently closely related to the long narrow design with captive ball and ultra-fine tolerance that is used on the TMS2.

The biggest surprise was to discover that the Nima arm is a unipivot. Why? Because an arm with precision two-plane bearings would have broken the bank at the intended price point. The relatively wide diameter straight aluminium armtube is internally wired with flexible thin printed circuit material carrying the conductors and leadout pins. The headshell is another relatively thick acrylic component, formed with the necessary offset.

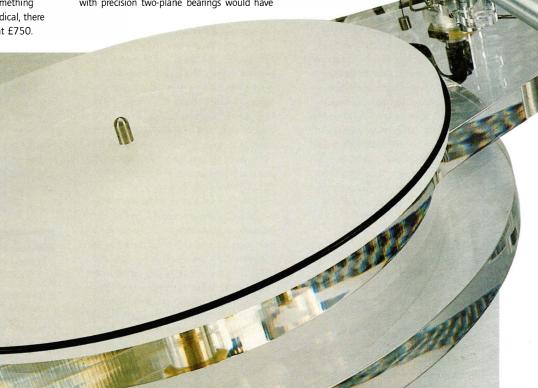
Set-up is always key to good sound reproduction from records, and considerable thought has gone into making this player as simple to get on the road as most solid (nonsuspended) turntables. Even the potentially tricky task of readying the unipivot arm for play has been tackled by supplying the arm locked in a safe position, from which it is freed by simply pressing down on the bearing housing. The one unavoidable extra task is to rotate the eccentric counterweight on its

rather sticky gasket

mount to align

the azimuth of

the cartridge on







the groove. Vertical tracking angle is adjustable with an allen key to adjust arm height, but was set correctly for the supplied Roksan Corus Black cartridge, and most cartridges have a very similar height. The thick Perspex headshell will often demand long screws, but didn't in this case because those supplied with the cartridge are long enough to connect to the cartridge's captive nuts. Roksan has even foreseen problems by allowing

the platter to tilt under manual pressure to prevent damage to the very fine bearing. Tracking force is uncalibrated on the counterweight, but Roksan supplies a simple scale which is just about accurate enough to set the required 1.8g tracking force, which, like the bias, can be tweaked manually by ear.

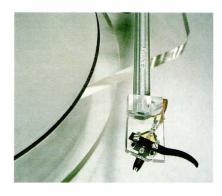
SOUND QUALITY

Remembering that this is a brand new design which will not have had much time to settle down in production, the Radius is an almost shockingly mature and well balanced product with qualities on audition that are a virtually ideal fit with its mid-market status.

Pitch integrity is effectively 100 per cent, with none of the insidious wow - long-term pitch instability with sustained notes - that can sometimes spoil even expensive players. Similarly transients were completely on the ball. There was no sign of the almost imperceptible slowing or hesitation under load that you will quite often hear. Rumble was simply not an issue, and surface noise was particularly well handled, though the latter point is then casually related to the character of Roksan's Corus Black cartridge, which has a noticeable warmth and fullness. It has to be admitted that resolving power is not the most obvious strength of this cartridge, but on the whole recorded detail spoke out easily and naturally, and the stereo soundstage was well layered without the sound ever being in danger of sounding bright, desiccated or glassy. Just the opposite in fact. Imagery was also genuinely threedimensional and once again this cannot be completely unrelated to the cartridge, though it's worth bearing in mind that the turntable and arm have to be right if the cartridge is going to develop its inherent character through the system.

The three-dimensional imagery merely adds to the strength of the illusion, and if there was an occasional touch of sugar coating, this is only fitting for a turntable like the Radius. Although pricing is far from beer-budget level, it is further still from true high-end models like Roksan's own TMS2 (reviewed two issues back), and the latter certainly offers a more physical, direct sound of greater stature and resolving ability than the Radius. The sound here is slightly lossy, but its grace, threedimensionality and the comfort factor it imposes on the occasionally recalcitrant or difficult recording is just what is required for the status of system it belongs in. The bass is deep and pure, but tuneful and easy to follow. Although the Sonus Faber Cremona test speakers (used with a Musical Fidelity X-LP phono stage and Arcam FMJ A32 amp) are a little outside the Radius's price class, they are speakers with plenty of resolving power which seem incapable of reproducing an ugly note. Somehow this makes them peculiarly fitting.

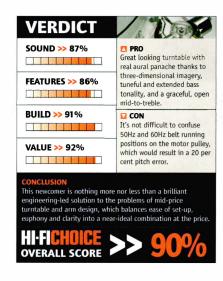
The musical performance of the Radius goes much further than the gross balance or character in the cartridge or the player. From the moment the stylus hit the groove, playing



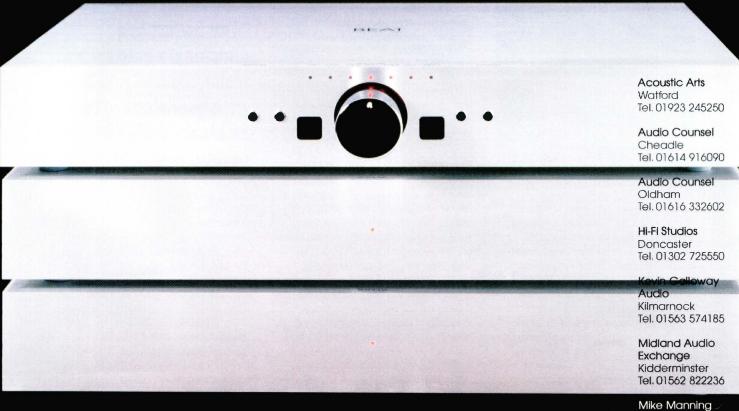
"The Radius is a shockingly mature and well balanced product with qualities that are an ideal fit with its mid-market status."

Out On The Weekend from Neil Young's Harvest, then Soft Machine 5 and on to the double white album, I was transported by a consistently open, fluid and natural sounding player. After listening to digital discs almost non-stop, with only very occasional recent forays into vinyl, it was surprising how easy, vivid and fluid the music - almost any music - sounded. The inspired lunacy of the Beatles' Helter Skelter had something like the same shocking effect as when I first heard it, while Bob Dylan's exquisite Simple Twist Of Fate (from Blood On The Tracks) had a pungency beyond words. The original 1955 mono recording of Glenn Gould playing Bach's Goldberg Variations reproduced a pellucid purity and projection that sounded as effective as more modern performances, the Roksan maintaining the mono focus without spread, the (admittedly dry) lower frequencies sounding taut and pure. HFC

Alvin Gold



LIFE IS TOO SHORT FOR BORING HI-FI







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"The Densen is like a Zeiss lens bringing everything into focus. It seems to transmit more musical clues which passes many other amplifiers by. One can analyse hi-fi specifics till the cows come home but it's something intangible, difficult to put into words, but to which the ear and brain subliminally react. So, do I like this Densen amp. No, I love it."

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"The best advice I can give you is to audition the beat for your selves. It does so much right that really expensive amps get wrong, that it might event start you thinking!"

Hi-Fi Plus 1999

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Secrets of home theater 1999

"The Densen did an admirable job of simply making music. The Densen was extremely musical and nicely propulsive, so much so that it often interfered with my work, resulting in more than one or two 1:00-AM listening sessions as well as couple of missed deadlines. Densen offers tremendous value and musically it knocks it out of the park. I heartily recommend that anyone looking to assemble a real music system look at this box."

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Can NAD's new budget CD player cut the sonic mustard at a price level now dominated by DVD?

PRODUCT NAD C521 BEE TYPE CD player PRICE £200 CONTACT 2 01908 319360

efore telling you what the C521BEE does, here's what it doesn't. It doesn't play DVDs, SACDs or DVD-As. It won't play MP3s or WMAs. You can't even plug in headphones. So what kind of player is this?

Answer - it's just a CD player. Yes, they do exist, in fact we've been going though a modest resurgence of this endangered species, but most of the newcomers have been expensive. Hell, when you can buy an all-singing and dancing DVD player that plays CDs with both arms tied behind its back for well under three figures, they're all expensive. But cheap DVD players don't make very good CD players.

This new NAD is hardly complicated to get to grips with. The front panel is straightforward nearly to the point of anonymity, but there are enough controls for normal play, cue and random play functions, and controls to change the simple and quite good-looking back-lit electro-luminescent display. The drawer is a little noisy but pleasingly quick-acting. The back panel has a single analogue output and a coaxial digital output. No optical out, no HDCD, and no CD Text either. It's CD-R/RW compatible (its predecessor wasn't), and includes programming for 20 tracks plus delete programming, various repeat modes and a brand new remote control, which is very NAD. It's no beauty, but its controls are clear and easy to get to grips with.

Internal highlights include a 20-bit Burr-Brown Delta Sigma D/A processor with 8x oversampling. There are separate power supplies for the digital and analogue circuits and the digital output is buffered and presents a precisely calibrated 75-ohm source. A four-pole analogue filter and 5532 op-amps define the output, which has a moderately low 300 ohms output impedance.

SOUND QUALITY

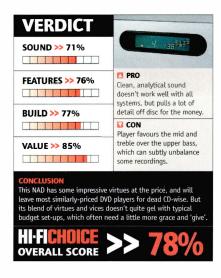
NAD products rarely offer more features than the competition, and build quality and finish are usually strictly middle market (top-end Silver Series products aside). But they often betray a little more informed care and attention to sound quality than much of the direct competition, and this frequently shows in performance standards. After an extended evaluation period with this player, it is not clear to me whether the C521 has succeeded in quite the way that NAD intended.

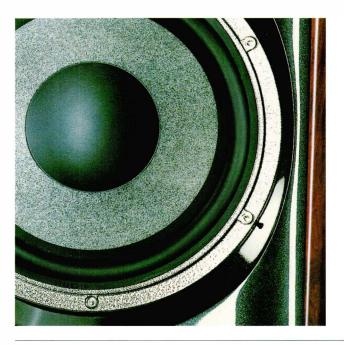
The plus side is that this is a player with considerable musical resolving power, but it is not entirely evenly spread. The mid and high frequencies are well defined, with an almost etched quality at times, but lower frequencies are a little underdeveloped. The lower registers of the piano transcription of Stravinsky's Firebird (on Naxos) sounded soft, where an Arcam CD73 (albeit a £450 player), and even a Pioneer DV-757Ai in its CD-playing role offered more uniform expression, and a more natural, believable balance between the left and right-hand parts. Similarly a recording of a

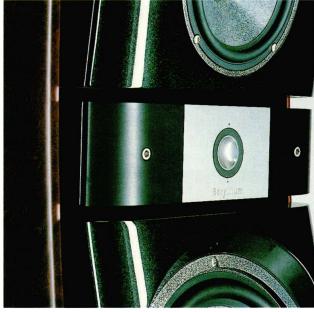
Bach Concerto For Oboe (see Choice Cuts, p16) simply sounded like a better quality recording through the other players, with more expressive playing and a more developed lower midband adding weight and substance.

The shortcomings outlined are not major in isolation. But they are enough to detract from overall sound quality in the ways described, and can make the player rather system-fussy, which is not always a good qualification for a budget player. The bass in particular is well extended and tuneful, but slightly insubstantial. The sheer amount of information extracted off the disc is impressive at the price, but the player can sound excessively analytical, to the point of sounding raw and edgy. HFC

Alvin Gold







HIGH ALTOTUDE

The beryllium-tweetered Micro Utopia Be is already a firm HFC favourite. Now meet its big brother...

PRODUCT Focal-JMlab Alto Utopia Be

TYPE Floorstanding loudspeaker (three-way)

PRICE £11,000 per pair

KEY FEATURES Size (WxHxD): 37x121x53cm

○ Weight 75.5kg ○ 25mm inverted dome beryllium tweeter ○ 165mm cone midrange driver ○ 280mm cone bass driver ○ Sensitivity/impedance: 90dB/40hms

CONTACT ② 0845 660 2680 ∰ www.focal-jmlab.fr

he Focal brand founded by Jacques Mahul after he left the engineering department at Son Audax was originally used for the high-class drive units that the company supplied to various leading brands, while the JMlab badge was reserved for its own complete speaker systems, based on the same driver technology. However, a large double-barrelled Focal-JMlab logo emblazoned across the back of this floorstander is evidence that the Focal name is now starting to achieve extra prominence.

The Utopia Ligne is the company's prestige 'flagship' range. The first model – the original and gigantic Grande Utopia – was introduced in 1995, and this was followed at decent intervals by three smaller variations on the Utopia theme. A big change, however, has come about this year, when the whole range has undergone a major makeover. The star attraction is a new inverted dome tweeter made of beryllium, but there are plenty of other changes and innovations besides.

In HFC 245, Jason Kennedy reviewed the first of these to come our way, the new Micro

Utopia Be, a two-way standmount priced at £3,500. As the next model up the ladder, the Alto Utopia Be is a massive but not unduly bulky looking floorstander, and the direct replacement for the Mezzo Utopia we originally reviewed in 1999. The bad news is that it costs a hefty £11,000 per pair (the Mezzo was just £7,250), although the fact that the weight has gone up from 63kg to 75.5kg is evidence of the extra engineering content. The price/size gap between Micro and Alto will soon be filled by a slimmer floorstander, the Diva Utopia Be.

Styling and presentation is quite delightful, form reflecting function with considerable flair and elegance. This three-way design is midrange driver above (and bass unit below) a tweeter situated at seated ear level. It's also quite wide, this defined by the 280mm diameter of the single bass driver. A neat feature is the way you can see right through it between the different sections, which definitely lightens up the overall appearance.

The large bass chamber is port-loaded by a shaped slot near the floor, while a surprisingly generous sealed top box houses the midrange driver. Both these have angled front baffles, creating a vertical concavity that time-aligns the three drivers. Alongside the vertical concavity, the front panels have lateral convex shaping, to avoid the distribution discontinuities created by a sharp edge.

"It provides the best of both worlds – plenty of weight and welly when required, combined with delicacy and image precision."

constructed in three separate boxes, one for each driver, all sandwiched between full-height side panels finished in a choice of three bird's eye ash veneers – 'Classic' gold, 'Signature' burgundy and 'Avant-garde' natural. The front, back and top are mostly finished in a slate grey metallic lacquer, with the tweeter baffle section in matt alloy.

It's quite a tall speaker, the height determined by the decision to place the

The bass driver has a 280mm frame and 195mm diameter 'W-sandwich' cone, plus a large port tuned to 28Hz. The midrange unit has a 165mm cast frame and another 'W-sandwich' cone, this time 115mm in diameter, The 25mm beryllium tweeter dome here is inverted in the Focal manner, and driven from a low-inductance 19mm voice-coil. Connection is via a single pair of tasty WBT locking multi-way terminals, as the company is

Focal-JMlab Alto Utopia Be loudspeaker [Review]

unconvinced of the merits of bi-wiring or bi-amping. Decent floor spikes are provided.

The materials used here are particularly interesting. Beryllium is very costly and difficult to work, but offers a substantially better stiffness-to-weight ratio than titanium or aluminium, along with good self-damping. One clear benefit is that it comfortably reaches 40kHz, rendering further super-tweetery unnecessary.

The 'W-Sandwich' cone technology has been greatly refined since its introduction in the original Utopias, using glass fibre and structural foam layers to achieve optimum balance between stiffness and self-damping. The midrange unit has a slightly concave central pole extension, to minimise turbulence.

The tweeter motor uses a combination of samarium cobalt (which has a high Curie point) close to the coil, backed up by a neodymium 'focus ring' to give a very high (two Tesla) field strength. The cone driver motors use seven small magnets in a 'power flower' ring, primarily for greater sample consistency, and the crossover network includes precision polypropylene capacitors and air-cored inductors wound with multi-strand silver-plated copper wire.

SOUND QUALITY

During a very enjoyable listening session at the St Etienne factory, it became abundantly clear that the 'big daddy' Grande Utopia Be was considerably superior to its predecessor. However, when a pair of these monsters were installed in my own rather smaller (4.5x2.6x5.5m) listening room, the excellent midband and top was hampered by bass unevenness, caused by unfavourable interaction between speakers and room at low frequencies.

It was a salutary lesson, showing that bigger is not necessarily better. Big speakers especially need the right match between the room and the loudspeakers themselves – and it's not necessarily at all easy to predict.

However, the portents and precedents for the Alto look very good. It shares the same size bass driver, box and layout as the Mezzo Utopia which we reviewed back in 1999, and a major strength of that model was a bass end that was beautifully aligned in our room. The Alto Utopia Be might cost less than a quarter the price of the much larger Grande Utopia Be, but it actually balanced out much better under our conditions.

In classic King Wenceslas fashion, the bass here is deep, crisp and even. The sound is beautifully full, warm and rich, yet thankfully without unduly exaggerating any part of the

HI-FICHOIC magazine bass region, though a slight texture thickening is audible in the lower midband.

bass region, though a slight texture thickening is audible in the lower midband. During the Proms the generous, full-scale ambient space of the Royal Albert Hall was very convincing, especially during the extended and poignantly tense opening to John Adams's *On The Transmigration Of Souls*. In total contrast, the synthetic but

essentially percussive bass lines on UK garage rapper Dizzee Rascal's *Boy In Da Corner* were tight and clear as well as weighty.

Another considerable strength of this speaker lies in stereo image focus which is altogether tighter than one normally finds with large loudspeakers. The dispersion would seem to be a good half-way compromise between the wider distribution associated with external tweeter designs (e.g. B&W, KEF), and more directional designs like horns (JBL, Tannoy) and dipoles (Quad).

In a sense, the Alto provides the best of both worlds – plenty of weight and welly when required, yet combined with the delicacy and image precision normally associated with small standmounts.

[Review] Focal-JMlab Alto Utopia Be loudspeaker



POSITIONING

As the instructions make clear, this is a design that ought to be kept well clear of walls for best bass alignment. The manual helpfully goes much further than most in suggesting appropriate positioning with respect to room boundaries to achieve the smoothest effect, using a simple formula to calculate optimum distances between the bass driver and the floor, the nearest side, and the rearward wall.

The ideal arrangement is to ensure that the smallest of these three dimensions multiplied by the largest of the three is roughly equal to the middle one multiplied by itself.

MEASURED PERFORMANCE

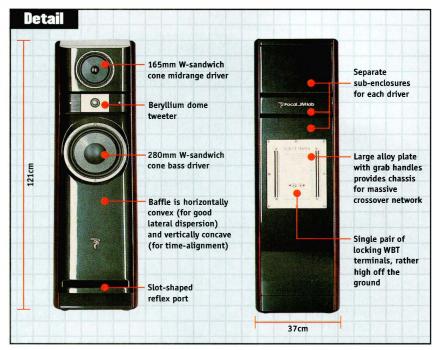
The claim for 91dB sensitivity is a shade optimistic – our samples, measured under a far-field regime, recorded a slightly lower 89-90dB across the lower midband. The suggestion that this might be an 'eight-ohm' load is rather further off-beam, as the impedance dips to around three ohms at two separate frequencies – c88Hz and 470Hz, both in sectors of the spectrum where power demands will be quite high.

The in-room far-field averaged responses look very promising. With the speakers well clear of walls, the bass is unusually smooth and very well extended (-4dB at 20Hz in-room). Average output below 150Hz is some 2dB above the midband average, ensuring a warm and weighty balance.

Output starts to fall gently and smoothly above 300Hz, registering around -4dB by 3kHz in the presence region. The treble then recovers by around 2dB by 6kHz. This trend is clearly responsible for the rather restrained and laid-back tonal balance noted in the listening tests, as well as the slightly 'hot' top end.

SYSTEM MATCHING

This speaker has a decent enough sensitivity, but the impedance dips low twice to three ohms in the upper bass and midband. It's therefore not really suitable for use with lower-power valve amps such as single-ended and direct-coupled types, and is better partnered with solid state amps with generous current delivery capabilities. Note: only a single pair of connection terminals is available, so only a single cable run is required.





The broad midband is also smooth and even, but also just a little laid back, so that the main image is formed a little behind the line of speakers. Coloration is notably low, though there is a hint of nasality and a slightly 'shut in' quality. While some might desire slightly more vivid dynamic expression, the Alto maintains fine detail reproduction and good intelligibility even when playing at whisper-quiet levels, which is a sure sign of its fine dynamic range and resolution.

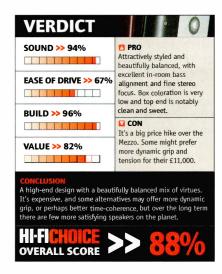
There's a touch of 'if you've got it, flaunt it' about the alignment of the beryllium tweeter. The top end is just a shade 'hot', but it's also exceptionally clean and sweet. One is aware of the delicately detailed music, and of the open transparency of the top end, but the tweeter itself has no obvious sonic signature or 'edge'. Sibilants and hard-edged consonants are notably crisp and clean, yet free from any unwanted exaggeration.

While the sheer complexity of its three-way crossover does impose some constraints, this is actually a very difficult speaker to criticise, and one that's invariably exceptionally enjoyable and easy to listen to over the long haul. Whatever your musical taste and preferences, the Alto Utopia Be will wrap you



up in its wonderful warmth and richness, while also providing pin-point resolution across a wide bandwidth and magnificent dynamic range. Above all, that splendid tweeter supplies a delicacy, sweetness and transparency that's clearly well ahead of the pack, and provides a substantive justification for this speaker's considerable price tag. **HFC**

Paul Messenger



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THE LINK EFFECT

This Pioneer isn't just a great AV receiver - it's also the most affordable i.Link-equipped amp yet

PRODUCT Pioneer VSA-AX5i

TYPE Multichannel receiver

PRICES £1,200

KEY FEATURES Size (WxHxD): 42x19x46cm ◆ Weight: 19.8kg ◆ 7.1 channel FM/MW receiver ◆ Power output 100 watts/ch DIN 1kHz, 1% THD, 8 ohms, one/two channels ◆ i.Link digital interface

t is not so long ago that big multichannel 'home cinema' amplifiers like the subject of this test were regarded by audiophiles with the kind of disdain that wine drinkers reserve for sweet German whites. This is still quite a common attitude, which shows that there are still a lot of people out there willing to believe all the hoary old stereotypes.

True, the VSA-AX5i is no competition for the real high end. It's not even high end among home cinema amps. In fact, it is a mid-price integrated receiver (a 'receiver' rather than an 'amp' because of its FM/MW radio tuner), little more than one-third of the price of Pioneer's top of the range multichannel amp, the VSA-AX10i. It shares some key features with the latter, including a version of the Multi Channel Acoustic Calibration software which uses a microphone positioned at the listening hot seat to make all the adjustments normally required to a multichannel speaker system - levels, distances, even basic equalisation, though nothing to compare with the DSP-driven room EQ now being promoted by Meridian and TAG McLaren. It's stuffed to

the gills with other features too, including almost every surround sound process known to man, from standard Dolby Digital and DTS to the EX and EX 6.1 channel variants, DTS Neo:6, DTS 96:24 and more.

The receiver's power is rated rather optimistically at six times 100 watts. There are some good minor features, such as a lip sync adjustment to bring sound and vision into step (particularly good with plasma displays), a rudimentary zone two output and some powerful bass management features. There is even an audio scaler, which upsamples incoming digital data to 24-bit/192kHz and applies Pioneer's Legato Link digital filtering.

All of which is perfectly wonderful, but we've yet to cover the VSA-AX5i's killer feature for audiophiles and anyone interested in high-resolution multichannel sound - the i.Link digital interface, capable of carrying wide bandwidth DVD-Audio and SACD data without prior conversion to analogue. i.Link (or FireWire, or IEEE1394) has a lengthy history as a computer networking interface and has been adopted by Pioneer, first for the DV-757Ai universal DVD player and VSA-AX10i amp. The VSA-AX5i has two such inputs (though i.Link network connections can be daisy chained) and is the most affordable amp component to feature it thus far. Products from Sony and Yamaha are coming with others to follow.

i.Link is a single wire connection between two i.Link-equipped components, typically a

source component and amplifier. The link carries audio, clock and control data, everything needed to connect source and amp. Everything that is, with the exception of video. The audio data is lossless - full bandwidth in the same format as it is read off the disc, stereo or multichannel, be it PCM from CD or DVD-A, data-reduced Dolby Digital/DTS, or DSD (the native SACD file format), along with additional encryption to protect copyright data. In addition, the VSA-AX5i (but not the senior VSA-AX10i) has DACs that can work with DSD data. Unless bass management is required, which means converting from DSD to PCM before the signal can be operated on, the DSD signal is converted directly to analogue, amplified and sent to the outside world. The processing overhead required for bass management inevitably means that there is a quality loss in this mode, which is audible mainly as a relatively mild loss of transparency, a noticeable 'blanketing' of the sound.

In the VSA-AX5i implementation of the bi-directional i.Link, the amplifier returns a clock signal to slave the source player as a means of reducing jitter levels, an established idea but one that normally requires a separate clock link cable. Finally, the control information tells the amplifier what source and signal type is connected, information that is then mirrored on the amplifier's display, and which switches the appropriate decoders and speaker arrays as necessary.

SOUND OUALITY

The Pioneer receiver has many operating modes, and there is no single comment that can be made that accurately categorises them all. But there are some general points that can be made. First, the VSA-AX5i continues a trend that has become apparent over the last two to three years, of multichannel amps that are not only growing in the length of their feature list, but which are also improving in performance. No longer is it appropriate for audiophiles to dismiss models like this as overgrown toys. For some of the test period, the Pioneer was used to drive a £12,000 Sonus Faber 5.1-channel Cremona speaker system, and although it gets nowhere close to realising this system's full potential, it nevertheless sounded musically tight, tidy and in control, and it provided a genuinely compelling listening experience.

These comments about the lifting of the quality bar are unrelated to i.Link, which as it turns out reinforces this trend. i.Link has the ability to turn a jobbing multi-format disc player into something approaching a heavyweight. Future generations of amps will presumably be able to drive performance standards even harder, but even in this not unreasonably priced iteration the i.Link adds a layer of detail resolution and transparency that is simply not there on analogue cable links. The effect is truly striking, and if you're worried that the effects are too subtle to hear, forget it.

The acid test of i.Link is how it compares to the analogue multichannel input when playing high-resolution DVD-A/SACD material with all bass management turned off. We assessed this using Pioneer's £800 DV-757Ai universal player, which is not just i.Link-equipped in its own right, but which also has all the proprietary extensions, of which the clock link is the most relevant. I reiterate, we're not talking about subtle differences which only passing bats will hear. The digitally connected version uses superior D/A converters and associated circuitry in the receiver, as well as eliminating a lot of analogue wiring and buffer stages, and the difference is extraordinary. The i.Link-mediated sound is lighter, airier and more detailed - much more so than the analoguemediated alternative. i.Link even goes some way to ameliorating the rather listless sound, or lack of presence and grip, that has been laid by some at SACD's door, though much of this is

based (I believe) on differences in the way that SACD multichannel discs are mastered. But that's a different story..

Mention has been made of the way that big multichannel AV amps like the VSA-AX5i have improved over recent years. Some, including myself, have criticised

Right: Pioneer's universal DV-747Ai, pictured here with the VSA-AX5i, was the first i.Link-equipped DVD player. More are set to follow, including models from other brands like Sony and Yamaha



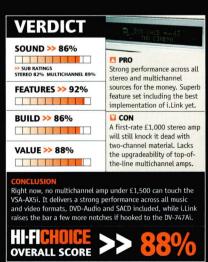
"The i.Link adds a layer of detail resolution that is not there on analogue cable links."

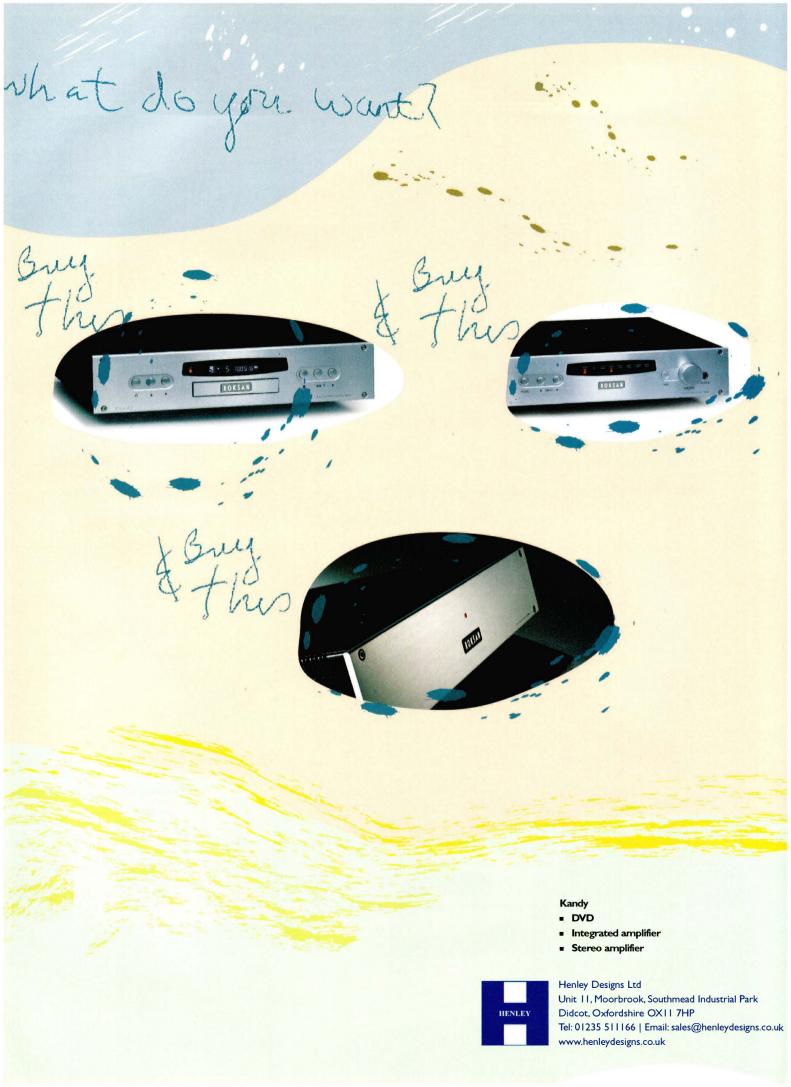
the way that power is specified in such amps, but in the end this is a side issue. The DIN power ratings for the Pioneer do read suspiciously like cooking the books, but the criticism misses the point, which is that this is still a prodigiously powerful amplifier in practice. With a typical subwoofer, it can pump out more than half a kilowatt, which is fine for most rooms. Equally important is that Dolby and DTS decoding has improved substantially. They are still the poor relation of non-datareduced alternatives like DSD and high-bit-rate PCM, but they cannot be written off easily as was once the case. Dolby Digital recordings sounded expressive and musical, and DTS was even better. Pioneer is in the vanguard of improved decoding, and this model is up there with any at the price. HFC











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n an ideal world, the mains that feeds your hi-fi would be exactly as claimed: 230V of pure 50Hz sinewave under all conditions, with unlimited current on tap. Further, all hi-fi equipment would be designed so that if by some obscure chance a disturbance did appear on the mains, it would have no effect at all on the audio.

Sadly, neither of these is the case, nor ultimately possible. Most equipment shows some signs of deterioration when fed from poor, corrupted mains, while the marked modern day increase in radio-frequency noise sources of all kinds, from mobile phones to computer power supplies to communications systems that deliberately inject signals into the mains, makes the case for mains filtering stronger than ever.

IsoTek markets a wide range of mains filters covering prices between the very modest and the distinctly eyebrow-raising. The Mini Sub is a midrange device intended as the sole filter for a system. It's actually a very intelligent design with three different grades of filtering applied to the six output sockets, in pairs. Outputs 1 and 2 have only a parallel arrangement of capacitors and transient protectors and are intended for power amps. Outputs 3 and 4 have much more filtering

and are intended for preamps and analogue sources, while 5 and 6 add even more filtering specifically targeted at digital and video components. Since filtering by its nature tends to be bi-directional, this arrangement also prevents digital sources from interfering with analogue ones if they output highfrequency noise to the mains.

Build quality is very good indeed, with high specification components of several flavours (dedicated inductors, capacitors and different kinds of transient absorber) securely mounted on a single circuit board. External finish is good too, and European sockets are available as an option.

SOUND OUALITY

IsoTek makes no spurious technical claims for its products, merely stating that they filter the mains and improve the sound. We'd have to concur. A little technical curiosity quickly proved the basic filtering claim but failed to discover any conclusive differences in audio components before and after IsoTeking. The ears, however, tell a different story. All kinds of comparisons (including single-blind tests conducted as rigorously as possible) showed a consistent, and in some ways quite marked, improvement to the sound after inserting the

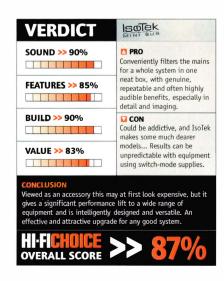
filter. Most listening was done with a full system plumbed through the Mini Sub since that's obviously how it will generally be used.

Simple budget mains filters, and specialist mains cables, can make a subtle difference to the sound. This unit achieves considerably more than that, as became obvious as soon as it was inserted in front of the system. More detail immediately becomes audible, and in the nicest possible way - that's to say that unlike some amplifier changes, for instance, which can result in detail being positively hurled at you, more becomes audible behind the layers already familiar from previous hearings. Just to give one example, a guiet bass drum tap suddenly appeared on a recording which has been a primary reference for so long it hardly seemed possible there could be more to hear on it.

Many recordings benefited likewise, often with a gain in stereo image depth too - that most elusive of audio attributes. At the same time, listening fatigue seemed to disappear or, in what amounts to the same thing, the excitement of hearing more encouraged protracted sessions. This applied across a broad spectrum of recordings and with various source and amplifier components. All benefited to some extent, varying from the slight but detectable to the highly surprising.

Previous experience with simpler filters hadn't quite prepared us for the jump in performance delivered by this one. At its price it's unlikely to partner budget systems, but if your individual components are in its ballpark you may well thank yourself for putting it high on your upgrade list. HFC

Richard Black





BLACK ROOM TOYS

A valve-powered phono stage and a budget turntable with a carbon fibre tonearm... intriguing!

PRODUCT Pro-Ject 1 Xpression and Tube Box

TYPE Turntable (with arm/cartridge) and phono stage

PRICE £210 (turntable) and £300 (phono stage)

KEY FEATURES Size (HxWxD): turntable 12x42x33cm

(inc. lid), phono stage 12x42x33cm ◆ Turntable includes carbon fibre arm and Ortofon OM10 cartridge ◆ Phono stage has valve output stage, variable gain/impedance

CONTACT № 01235 511166

⊕ www.henleydesigns.co.uk

ro-Ject has shaken up the budget turntable scene quite severely in the UK. Its first product was an extremely idiosyncratic design that will undoubtedly be a collector's item in years to come, but since then the brand has declared all-out war on the competition. The latest weapon in its extensive armoury is the 1 Xpression, a replacement for the original 1, Pro-Ject's first regular record player. It's a slick looking deck with a nicely soft edged plinth, a carbon fibre tonearm and an Ortofon OM10 cartridge included in its £210 price tag - pretty staggering when you consider that carbon fibre arms were solely the preserve of the high end a few years ago.

Similarities with its predecessor extend to the cast alloy platter, rubber motor suspension

and choice of cartridge. Everything else is new – it has a better motor, higher density plinth and of course carbon fibre where there was previously aluminium in the arm, the latter featuring refined bearings to boot. What you end up with is a deck that has its guns aimed squarely at Rega's P2 – £198 but with a £35 cartridge. You do the sums.

The Xpression is built around an MDF plinth which sits on four compliant feet and supports a felt-covered platter on a belt-driven sub-platter. Changing speed requires the use of a little plunger device which you stick through a hole in the platter to pluck the belt from one pulley to the other. The belt is of the flat rubber variety and is driven by a motor that's suspended in the plinth – set-up requires the removal of transit screws to free the motor. To turn the motor on and off you need to feel under the front edge of the plinth for a little rocker switch.

The tonearm uses gimbal-style bearings and a line and weight anti-skate system that can be a fiddle to get on but at least it won't fall off. Downforce can be set with the adjustable dial and the arm picked up with a lift/lower device or finger lift bolted to the cartridge and headshell. For dust-free pleasure, a lid is

also supplied but it's recommended that you remove it completely for serious listening.

Alongside we have one of Pro-Ject's more ambitious components, a new £300 tube-powered phono stage – not a great deal for a tube component of any kind let alone a phono stage. Given its flexibility in terms of tailoring facilities I suspect that this is a solid state RIAA stage with valve output devices, rather than a pure tube stage which tend to be both rare and expensive – as in four-figure expensive.

The Tube Box features a range of switches on its underside which can be used to accommodate both moving magnet (MM) and moving coil (MC) cartridges. With MCs you can choose between three levels of impedance as well, which will help get the best out of these fine cartridges. Like the turntable it comes with a separate in-line mains transformer.

Combining these components might seem odd, and if the supplied cartridge is all you use it's not the best way to allocate budget, but it's not as crazy as you might think. Put a £100-plus MC on the Xpression and you'll need a stage of this quality to hear its potential, and even with the OM10 you'd be doing it a disservice with a basic phono stage.

Pro-Ject 1 Xpression turntable and Tube Box phono stage Review









SOUND QUALITY

On setting this turntable up we were a little concerned to find that cartridge alignment left a lot to be desired. Apparently dealers will check this with the decks they sell but we'd recommend investing in a Polaris Plus gauge or similar to make sure it's done right, because poor alignment means worn vinyl. In all other respects it's an easy deck to put together just balance the cartridge, set downforce and away you go. Ditto the Tube Box - set the switches for your cartridge and plug the cables in. The only niggle is the tiny earth post, but I guess it does belay the earth lead on the Xpression without too much fiddling.

Slipping the Cinematic Orchestra's Everyday onto the felt mat and lowering the needle reveals a pretty together and weighty sound that is a good reflection of this album. The bass is full and fruity and while the scale may not be as substantial as it can be the sense of timing makes up for this, grabbing your ears and drawing you in. High frequencies are a bit restrained and you'd get a slightly more energetic, lively sound from a Rega, but this combo delivers most of the goods all of the time and has a smoother balance than one expects of a basic Rega deck and cartridge.

Elbow's excellent Bitten By The Tailfly is reproduced with decent resolution, dynamics and edge, the Pro-Ject combo conjuring up a good portion of the atmosphere on this fine track. It is sensitive to the variations in pace and energy even if the guitar breaks don't have quite the attack that is possible. Richard Thompson's voice and acoustic quitar sound great on Old Kit Bag, full of expression and

tonal richness. The sound could perhaps be a bit more substantial but has power and never threatens to grate on the nerves, however angular the music becomes.

Up against CD with the Peace Orchestra producing the sounds, the Xpression/Tube Box shuts out some of the reverb and softens the bass but produces a more musically coherent result despite such hi-fi shortcomings. Turntables nearly always better CD players in this respect because they usually have intrinsically better timing, and this is no exception. However, if it's ultimate resolution of detail you're after it's a closer call and at the frequency extremes a good CD player has the advantage over this particular record player/phono stage.

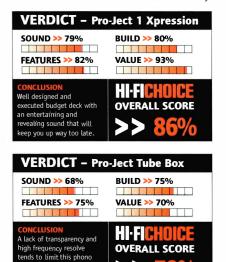
We like the way that it doesn't thrust things down your throat but lets the music ebb and flow in a natural, relaxed fashion. But we couldn't help wondering where the life and energy of the music was going - budget turntables are not inherently mellow things after all. Swapping in another £300 phono stage, the Trichord Dino, reveals that much of this laid-back style is a result of the amplification rather than the turntable and cartridge. The Dino delivers a significantly more lively and open sound from the Xpression and reveals that it is indeed extracting the reverb and space in the recording - it's just that the Tube Box isn't really making the most of it. It would appear that the Tube Box is the limiting factor in this particular combination

We tried the Tube Box with the van den Hul Grasshopper GLAIII MC cartridge on an SME

20A turntable and got a decent result - it's a little short of gain but revels in the timbre of instruments and delivers a smooth, clean sound that's very relaxing albeit not short on engaging qualities.

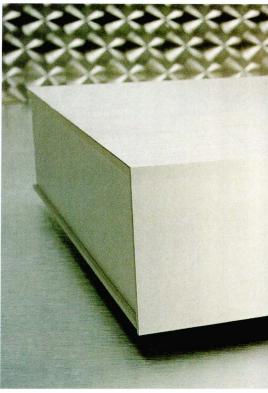
In the final analysis these two Pro-Jects are not perfect partners as they stand, but a different cartridge would undoubtedly bring them closer together. What's more, this is the sort of turntable that warrants needles costing more than the turntable does. You can tell by the detail levels revealed by the Trichord Dino that this is a surprisingly good deck for the money and it does space, light, energy and serious bass while keeping its finger firmly on the musical pulse. HFC

Jason Kennedy



stage, its smoothness





BETTER BEAT?

Densen's toe tappin' Beat B-400 CD player has become the B-400 Plus. Has it still got the beat?

PRODUCT Densen Beat B-400 Plus

TYPE CD player

PRICE £1,450 ('albino' finish; black is £1,350)

KEY FEATURES Size (WxHxD): 44x6x31cm

→ Weight: 7.5kg → Multi-room linking socketry

→ Dual 24-bit DACs → Switchable digital output

ensen's philosophy is summed up by a line from its mission statement: "Our main focus is to achieve the highest possible air guitar factor". An admirable goal perhaps but one which might alienate the brand from not only the classical music fan but the image-conscious youth element as well. Yet you have to respect an approach that is so music-centred, whether you feel like imitating Jimi Hendrix or not. And there's always 'air baton' for the Shostakovich fan...

It's certainly a breath of fresh air in an industry that all too often becomes embroiled in the intricacies of technology. Whether having a half-naked bloke in a tie playing guitar on your brochure enhances sales is open to debate, but whether Densen's founder Thomas Sillesen has his heart in the right place is not.

Best known for its amps, the Beat B-400 has been Densen's bread and butter source

component for some time now and it was inevitable that it would take on board some of the technology developed for the more expensive XS version before long. The most striking change is the casework, which is sleeker and, as I found to my cost, sharper edged. It looks great but should either come with gloves or a 'Handle With Care' label! Our review sample's so-called 'albino' finish is the same natural aluminium that has come into fashion over the last few years throughout the hi-fi world and beyond, but here the lack of visible fixings makes for a rather stylish case. The simple chrome-plated buttons set it off nicely but you'll need to be able to see the top edge to find out what they do. Unlike virtually all other CD players you have to splash out another £200 for a remote control, so those buttons may end up getting a lot of use. The Gizmo remote is a very attractive thing however - normally you'd have to spend twice as much on a player to get a remote of this quality.

Inside the box is a new pair of 24-bit digital

to analogue converters that have the facility to be upgraded, presumably to XS standard, the Beat B-400XS being the ultimate Densen CD player. A new non-HDCD filter has been incorporated on the double-sided Teflon circuit boards which also harbour built-in 'DeMagic' demagnetising circuitry, a 20VA-per-channel power supply and a zero-feedback, class A output stage. The main micro processor has the facility for software upgrades should they be required.

The B-400 Plus has a wider array of socketry than most of its contemporaries, with multipin link sockets that allow communication between the player and other components in a system or house that's appropriately wired up. There are also two sets of main outputs and a defeatable electrical digital output on a BNC socket. A dedicated Densen digital output, 'Denlink', is provided, yet as far as we can tell there is no Densen DAC or digital recorder to go with it, but I guess it might be useful in the future. There's no on/off switch





on the unit's front panel and you are discouraged from using the one on the back.

Existing owners of the Densen B-400 might be interested to hear that their players can be upgraded to Plus status for the price difference between the two models. Of more interest could be the claim that unlike the original, the Plus is not prone to disc recognition errors, or as the press release puts it: "Some discs she just did not like, for whatever reason, but we have managed to gain better control of her and now she will no longer skip when she does not like a particular disc."

SOUND QUALITY

The Beat B-400 Plus has nothing if not air guitar factor on its side. I didn't actually pick up an imaginary axe (we reviewers are far too cool for such indulgences) but had a tennis racket been lying around I'm sure the temptation would have been powerful. How do I know? Well, the Plus has a distinct liking for rhythm - it picks out the beat by emphasising percussive elements within the music. There seems to be a slight preference for the upper midband - if anything, guitars and cymbals seem to get more of the limelight than usual, giving the proceedings a heightened sense of energy.

The chances are that if looked at in the lab this would measure close to flat in response terms but there's no denying the way that the buzz of quitar amps seems to fizz that wee bit more obviously. It doesn't seem like a tremendously transparent player across the board but it's possible to pick out a lot of detail which suggests that there's some sort

of emphasis at work. With Radiohead's Hail To The Thief this slightly dry balance delivered the drive of the material if not its full atmospheric charge, but vocals were well handled with Thom Yorke's lamenting coming across in full effect.

power of the instruments even when quiet."

David Thomas' Erewhon gave a new perspective, the ex-Pere Ubu man's voice remaining full scale and remarkably tactile, if lacking some of its usual warmth, but the guitar fairly crackled with energy. The effect is a bit like that encountered at amplified concerts - you can hear the raw power of the electric instruments even when they are quiet. The phasey effects in the production of this album were also well served, the sound swirling between the speakers to good effect. In stereo image terms it was a little flat but the resolution of width was good with sounds thrown out to the extremities of the room.

Next to a more relaxed player like the Hegel CDP2A (£1,500, reviewed in two issues time) the B-400 Plus is undoubtedly lively and exciting but it does seem a touch strong on character. The aim with hi-fi equipment is to let the music through in all its glory without addition or subtraction, but the Densen seems to add a little bit of life of its own to make up for that lost elsewhere in the chain.

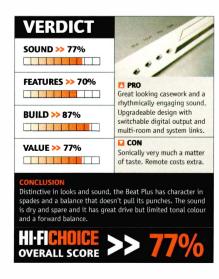
The problem is that it seems to filter out the juice in the music as it does so. It has a dry and slightly bright presentation that, while long on emotional communication, is short on naturalness of tone. There's a shortage of flesh on the musical bone, which means that the Densen's character is apparent with nearly everything you play on it. It appears to be trying to get at the heart of the music, which

is admirable but whether it's possible to do this by emphasis alone is questionable This is what Thomas Sillesen means when he says that "life is too short for boring hi-fi", and Densen kit is anything but boring. I prefer the motto: "life is too short for boring music", but that's not going to sell hardware for anyone.

If you have this sort of budget, we suggest you listen to the Classé CDP10, Copland CDA822 and Meridian 507 alongside the Beat to see whether its flavour is to your taste.

The Densen is so nicely made and the sentiment behind it so true that it seems a shame to put it down, but if high fidelity is the goal this is not getting us any closer. If getting a live sound from your studio albums and rocking out is the aim however, then Densen is well on its way. HFC

Jason Kennedy



[Review] Musical Fidelity X-LPS^{v3} phono stage and X-Cans^{v3} headphone amp





X MARKS THE SPOT

V3 comes up smelling of roses as Musical Fidelity revamps its X-series accessories

PRODUCT Musical Fidelity X-LPS^{v3} and X-Cans^{v3}

TYPE Phono stage and headphone amplifier

PRICE £249 each

CONTACT 2 0208 900 2999 www.musicalfidelity.com

oth these neat little boxes are improved and better packaged versions of products that have been available for some years as part of the original X-series. The newcomers share a number of features, most obviously the outer casings made from alloy extrusions of very high quality (though now rectangular rather than cylindrical). They also share identical plug-top power supplies, now fitted with three-pin DIN power plugs.

The X-LPS^{v3} is a phono stage, allowing moving coil and moving magnet cartridges to be connected to any amp line input. MM/MC switching is by a rear panel control, though the two inputs are also physically separate. The active circuit is based on an IC with a Musical Fidelity designation, SSMF 069. Passive equalisation continues the sub-20kHz RIAA treble roll-off up to 80kHz, and the output stage has been beefed up to increase peak current ability and reduce output impedance. Signal/noise is specified as -86dB on MM and -77dB MC, with a typical distortion level around 0.0075 per cent. There are no user adjustments for impedance or capacitance.

The X-Cans^{v3} headphone amp installs in a convenient tape loop, or can be connected to a spare preamp output, and is controlled by an ALPS volume control. There is enough voltage gain to drive headphones like AKG's K1000 (HFC 244), which is normally only useable

from the loudspeaker outputs of an amp. The main circuit front end is valve-powered, not with Musical Fidelity's favoured subminiature 5703, but with ECC88s. The circuit offers a frequency response to 100kHz, and 0.008 per cent distortion up to 25kHz (maker's figures). Signal/noise is rated at 76dB, and output impedance is low enough to avoid most interactions with reactive headphone loads.

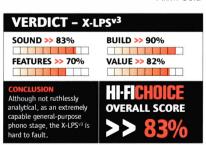
SOUND QUALITY

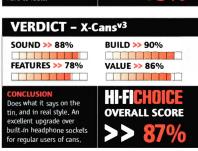
The X-LP^{v3} was given an extensive workout with a Corus Black MM cartridge fitted to Roksan's new Radius player reviewed on p40. The main amp test bed was an Arcam FMJ A32 driven via its CD input. There was some hum-related output, mostly it seems second harmonic (100Hz) but noise was low. A low impedance MC cartridge will tend to short the residual noise, which is unlikely to be much higher than with an MM. At useable volume levels, there was no audible hum or noise apparent through the Sonus Faber Cremona test speakers at a normal listening distance.

The Corus was able to speak with its true voice through the X-LP^{v3}. The short version is that it sounds wonderful, with the same warmish balance and big bass delivery which this cartridge has often delivered in other combinations. Imagery is stable and three-dimensional, and the sound overall is full of life and energy, with fine control. The lack of internal adjustments points to this stage not having been aimed at the bleeding high end, but it is exactly what it purports to be, namely an excellent, sensibly priced, general purpose phono stage.

The X-Cans^{v3} was given a thorough workout with various Sennheiser headphones, and even one of the better Sony in-ear models, which easily exceeded expectations. But the main test platform was the AKG K1000, which was wired with a 6.3mm plug for the purpose. Although there isn't enough voltage on tap to reach hazardous volume levels, there is more than enough for all practical purposes. As with the X-LPv3, sound quality is bold, open and lively. With Sennheiser headphones that are also useable via amp headphone sockets, the performance edge offered by the X-Cans^{v3} varied according to the amp. But it always sounded better, at times a little, at others dramatically. HFC

Alvin Gold





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BLACK RHODIUM ILLUSION

An interconnect for those who like their music on a grand scale



PRODUCT Black Rhodium Illusion

TYPE Interconnect cable

PRICE £77 (1m terminated pair)

CONTACT ☎ 01332 361390 ⊕ www.blackrhodium.co.uk

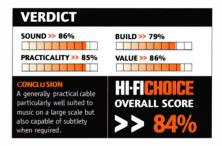
lack Rhodium's range has long included models featuring unusual materials, but this simple twisted pair uses conventional copper conductors and PTFE insulation. There is still a touch of the unconventional, however, in the Eichmann 'Bullet Plug' connectors which come fitted as standard with the Illusion - indeed, the cable was designed specifically to suit them. The point of these plastic-bodied connectors is to maintain a simple parallel pair of conductors right through the body, avoiding (or so we're told) eddy currents in the plug. That's as may be, but you certainly get good continuity thanks to the exceptional grip they maintain on the socket and the cable's tight and consistent spiral bodes well for effective rejection of interference.

SOUND QUALITY

The immediate impression this cable makes is just that – immediate. The performers seem right there in front of you, with remarkably little of the veiling that you can find when using some other cables. At the same time,

stereo image depth is very good indeed, not in the least sacrificed to the immediacy. This makes the cable very well suited to lovers of big-scale music, from orchestral to full-on rock, who can revel in the broad canvas without losing sight of the finer details.

As for the more subtle nuances, they're mostly there as well. There's perhaps a hint of coloration on occasion, something that became apparent on a solo violin recording where the tone of the instrument seemed a little altered compared to familiar references, but it's mild and really about the only drawback we could find. A highly competent wire altogether. **HFC**



KIMBER TIMBRE

Kimber's latest interconnect delivers superb sound for the money



PRODUCT Kimber Timbre

TYPE Interconnect cable

PRICE £72 (0.5m terminated pair)

CONTACT ② 0800 373467

∰ www.kimber.com

tried and trusted formula here, Kimber's three-conductor plait, unscreened, which like Black Rhodium's cable above still achieves good interference rejection thanks to its geometry. To some, it still seems dodgy using unscreened conductors in signal-level applications, but it's worth remembering that some very high-speed computer interfaces use unscreened cable without problems and experience suggests that they work well in audio too, even at phono level.

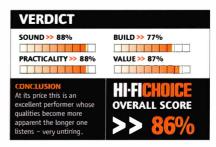
Kimber's own 'Ultraplate' phono plugs are used here, simple but well made. The cable itself uses stranded copper insulated with PTFE and is marked for directionality, though outwardly it's symmetrical end-to-end.

SOUND QUALITY

Kimber cables tend to be effective and this is no exception. It makes an interesting contrast to the Black Rhodium, seeming somehow less up-front but no less detailed. More relaxed, one might say – except that when something vigorous happens there's certainly no soft-pedalling. Again, stereo imaging is

excellent in both lateral dimensions and one can really pinpoint the position of the performers in any well-recorded ensemble.

Tonally, bass is strong and well extended, perhaps lacking the absolute extension of some upmarket interconnects (including some of Kimber's own) but always tuneful and full-bodied. Treble is very clean, as ever, and the midrange is admirably neutral, with no specific sins of omission or commission to which one can point with certainty. If one is to be really fussy, there's just a touch of constriction on the fade into ambience of percussive sounds, but few or no cables around this price will completely avoid that. **HFC**



QED X-TUBE XT400

The top speaker cable in QED's X-Tube range is a practical and confident performer



PRODUCT QED X-Tube XT400

TYPE Speaker cable

PRICE £20 per metre (plus terminations, £8-£18)

CONTACT 2 01483 747474

⊕ www.qed.co.uk

e first visited the innovative X-Tube series around a year ago in the form of the cheapest version - the £10 per metre XT300. This shares the basic principle, which is that the conductors are tubular and hollow, achieving two things - a large overall conductor diameter without the high cost of masses of copper (in turn giving low inductance for what's basically a figure-8 cable), and very low variation in skin effectinduced resistance across the audio band.

For your extra pennies over the cheaper variants, the XT400 gives you silver-plated copper instead of plain, and slightly more of it, hence lower resistance. Inductance and capacitance are similar, which is to say both are moderate by typical cable standards, and shouldn't upset any amps. A set of QED's nice 'Airlok' plugs will add £40.

SOUND QUALITY

Lacking a sample of the impressive XT300 for direct comparison, we nevertheless were left in little doubt that the XT400 does generally achieve greater things. In the bass it is

similarly confident and extended, with treble whose extension and informative nature broadly match those of the XT300 too. The most obvious differences though are in the areas of detail, ambience and stereo imaging. All three are improved, with stereo image width a particular strength. Depth slightly lacks the insight of the best speaker wires, and similarly ambience is still very slightly on the dry side, but detail is among the front runners around this price. That combination of qualities seems to make this a good cable for rock and lively jazz - with a classical programme it's a little less assured. Well worth a try though. HFC



WIREWORLD SOLSTICE 5

On this showing, Wireworld's trip across the pond should prove highly worthwhile



PRODUCT Wireworld Solstice 5

TYPE Speaker cable

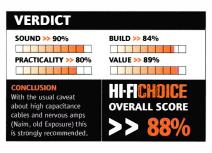
PRICE £19.97 per metre (plus terminations, £52.50 single wire/£79 bi-wire)

ewly returned to these shores, US-based Wireworld offers a wide range of cables priced between the attractive and the faintly alarming - this speaker cable is from the lower slopes. It shares with most of the brand's range a geometry called 'Symmetricoax'. As you'd guess, that means the cables are coaxial ('hot' conductor inside a tubular 'earth'), but the clever part is that the inner is also tubular, air-cored - by odd coincidence, just like QED's X-Tube conductor. In this case, the difference from conventional cables is significant, with capacitance higher than almost any bar flat types along Townshend lines (some amplifiers may possibly object to this). The bi-wire version reviewed here is simply two 'Symmetricoaxes' joined together and commoned at one end - a little on the inflexible side.

SOUND QUALITY

It's worth struggling with Solstice's stiff body and terminations because you're likely to find the results highly gratifying. We started off the listening with some vintage Pink Floyd, which came out with some bass we'd almost

forgotten was there and proceeded to reveal detail we'd certainly not previously registered. Very nice, and so were the results with simpler recordings. A voice and lute disc benefited from very clear midrange and remarkably lifelike ambience, something that has proved a weakness of many a speaker cable. Stereo imaging was consistently good, tonality seemed neutral with all the usual awkward sounds including voices and massed strings, and treble was beautifully pure. Even using a single portion of the bi-wire in conventional mode gave good results, though bi-wire certainly had an edge in detail and imaging. A fine result all round. HFC





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By the time you read this the salon will have opened in its new premises. Why you may ask? Simply because we are one of the largest growing Audio Specialists in the UK and we need more space! Larger and more luxurious demonstration rooms, more displays, new product ranges, Audiophile CD shop and many other surprises to follow in the coming months. Demonstrations are by appointment only, which means that a member of staff is on-hand at all times to ensure that we find the right component, upgrade or system for you.

Music Evenings! We will be shortly holding some music evenings. Demonstrating both existing and new products from manufacturers such as Mark Levinson, Gryphon, Shanling and Zingali. Further information will be available from our Web Site shortly.

You know we get phone calls all the time from people who really want to visit us but feel that they are to far away, people in London for example. So how can we help? Simple! The Son has got together with a few travel agents and can organise a very competitive flight for yourself and/or your family to visit us. We can even organise accommodation if necessary. More and more people fly to Glasgow in the morning, spend the day with us and fly back in the evening. If this would be of interest to you then please call or email us for more details. Its one trip that you will be glad you made!!

Why not visit our new Web Site! Bigger, brighter and full of useful information to help you choose the right product/system for you. You can view and read about every product that we sell at the Salon. Want to purchase an Ex-demonstration or second-hand item? You can now look through our second-hand and ex-dem products on screen. For our existing customers only, we have setup a special part of the Web Site where you will find tips, advice, news, music evenings and specials offers that should not be missed. Please call or email us to obtain information on how you access the Customer Section or visit our Web Site for more details. Like all things at the Salon, the Web Site will be constantly evolving so make sure you visit regularly.

If you are looking for a bargain or two then you will find our selection of second hand and ex-demonstration equipment in the classified section of this magazine. Do you have equipment that you would like to part exchange for that new item you have always dreamed of owning? Alternatively we can sell your products on your behalf. Our adverts and web site attract a lot of people from all over the world and in most cases we have a very quick turnaround rate on second hand and ex-demonstration equipment. Please fill out the special form on our Web Site (s-hand /ex-dem section) or give us a call and we will be more than happy to discuss this with you. That product you have always wanted could be just a phone call away!

Choosing the right cable is a minefield? It doesn't have to be if you buy JPS-Labs cables. The range caters for all budgets and system requirements No other cable in our experience seems to work as happily in every system and offers such an exceptional performance. In every single system that we demonstrate we use JPS-Labs cables. For more information about JPS-Labs , visit our Web Site.

Friends, families and **people** from all over the world, call or visit the salon time and time again, shouldn't you give us a call and find out why ?

You might be missing out on a lot more than you think!

Happy listening

Jack Lawson

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tel 0141 357 5700 (2 lines) fax 0141 339 9762

Sugden and ProAc may share the same page, but that's not all they share. Read on.....

Over the years the Audio Salon has had the great pleasure in selling two particular brands who have stood the test of time, again and again.

ProAc Loudspeakers and Sugder Audio products are respected, admired and sold all over the world. Their popularity is as strong as ever and you don't have to look hard too see why or how, you only need to listen!

Many Audio Manufacturers release new products on a regular basis using the latest technology to share the limelight. A position that is very short lived, technology destined to join others that have come and gone. Surely using the newest and latest technology is the best approach to building products? After all, it means the customer always gets something that in theory sounds better than the rest. Right?

Like all things in this world, Audio included there is more than one way to approach something and the obvious, easiest or latest technology at hand isn't always the best. The proof is in the listening!

Both Sugden and ProAc are great example of taking a different approach to Audio products rather than jumping on what is a very over crowded band wagon.

Sugden, based in West Yorkshire, England has been designing and building specialised audio products for over 35 years. Every component is built by hand in the UK at the Sugden plant. Each new product evolving from its predecessors, blending existing ideas with new ones to create a product that carries with it a strong musical heritage and pedigree. Every single product is meticulously and painstakingly designed to reproduce your music as you were meant to hear it - as faithfully to the original as is humanly possible.

Today Sugden produce three esteemed ranges of products; the 21 series, Bijou series and Master Class series. Each sharing the ability to breath life into your music and place it before you in a way that you will never get tired of.

The A21 series is the entry level range of products from Sugden. Entry level they may be but ordinary they are most certainly not. The range includes an Integrated Amplifier, CD Player, Tuner and Power Amplifier. Each component continues to win awards and world-wide acclaim from the press as being the best in their class by a long margin.

For people who want a wonderful sound but small boxes, the Bijou answers all your prayers. Audiophile products that are housed in beautiful slim-line elegant cases that will occupy a very tiny space in your listening room. CD Player, Tuner, Pre and two Power Amplifiers are available. Designed to be stacked, one on top of the other and placed on a special stand, you have a system that while very small, will be the talking point of any room.

The MasterClass series are Sugden's reference products. Built and designed using the finest discrete components, optimised circuit layouts and custom power supplies. These components deserve to be partnered with the finest loudspeakers available. Take a listen to a MasterClass system and it will be very hard to go back to anything else. You have been warned!

Fine electronics of course need to be paired with fine speakers and this is where the connection between Sugden and ProAc will become all too

Speaker Manufacturers come and go all the time, but not **ProAc**. A company famous throughout the world for their world-class throughout the world for their world-class products. Each and every one stands the test of time, for each and every one is more than a little special. Many have become true classics A great example is the **Tablette** model, which was first released 24 years ago. Today the **Tablette** is as popular as ever and has undergone very few changes on the outside!

So what makes ProAc Loudspeakers special?

It could be that each loudspeaker is hand-crasted with each technician being individually responsible for the building and testing of each unit. Build quality alone is unsurpassed, each cabinet being menculously constructed, damped and finished in real wood veneer

Only the very finest components are used in ProAc loudspeakers, with each new model reflecting the very leading edge of audio technology. Indeed many models now incorporate dedicated drive units using ProAc, own basket, cone and magnet assemblies. Drive unit performance is fine-tuned through expensive and significant ted crossover networks.

ProAc has plust released a new Response range, which was shown at this years Hi-Fi News Show. Using equipment from Sugden, every model left a wonderful impression on those in the room. From the small Tablette model to the new flagship D100 model.

You can see the new Response models on the right of the page.

For the last twelve years the legendary Response Four has been ProAc's flagship model. A model which has truly delighted its owners beyond reproach. With the development of an entirely new and next generation of sensitive drive units, the Response Four has now been eclipsed by a new flagship model, the D100 starting from £14,995 (pair).

The D100 is tall, slim, deep, elegant, with entirely new porting system means that room placement of the cabinets is much less critical and the 100's will perform superbly in rooms of most layouts and sizes.

The innovative drive unit layout has ensured The innovative drive unit layout has ensured greater dispersion and a seamless integrated sound. Two new professional quality 10" bass drivers are mounted on the baffle either side of two exciting new 3" midrange units and a one-inch soft dome tweeter. Married by a complex HQC crossover network and connected by ProAc oxygen-free copper wiring, this formit dable combination of drive units produces one of the most coherent and expansive sounds in modern hi-fi.

The D100's produce stunning music, effortlessly. The enhanced sensitivity extracts the tiniest detail from any recording without brightness or exaggeration. Greater bandwidth creates a huge soundstage, drawing in the listener and creating a concert hall experience, where the loudspeakers seem to melt from the scene.

ProAc and Sugden when used together form a world class system, arguably unsurpassable, certainly offering value for money only possible on a home market. Optimise cables, mains and isolation, and it's better than sex.

All Sugden's products are on permanent dem, and the Audio Salon is proud to be the first UK dealer with the astounding D100 speakers.





















web: www.audiosalon.co.uk email: info@audiosalon.co.uk

GROUP TEST & LAB REPORTS: PAUL MILLER

NEW FORMAT DISC PLAYERS

Multi-format DVD-A, SACD and 'universal' players have been steadily raising their game for some time, but can they finally hold their heads up in dedicated company?



wenty years ago the audio industry faced a revolution prompted by the introduction of CD. It was to usher in changes that would influence the development of hi-fi systems from front end to speakers, changes that were resisted by the usual suspects who, quite frankly fear 'change' as a matter of policy. But there was no stopping the digital train as it thundered through the marketplace, reducing the uptake of the analogue vinyl LP and, later, the analogue compact cassette to mere fractions of their import in decades past.

We are facing a somewhat quieter revolution right now as the 'humble' silver CD – a technological marvel in its day – is being made to look and sound rather antiquated by the extra bandwidth, resolution and channels of DVD-Audio and SACD. But unlike the sea change of the 1980s, the growth of high-res multichannel audio is one of evolution and not mutual incompatibility.

After all, you could never squeeze your lifetime's collection of 12-inch black vinyl into that little slot on the fascia of a CD player. But you *can* still enjoy every digit of your CD collection in a new DVD-A, SACD or universal disc player. And it's this backwards compatibility, along with the synergy of home cinema, that may turn this particular revolution into something of a bloodless coup.

Given the right software, high quality two-channel CD systems can be matched, and even exceeded, in their capacity to involve on a musical level by a well-ordered but relatively modest multichannel set-up. Using five identical speakers, even small boxes like those from Mordaunt-Short's collection, with a competent active subwoofer is the first vital step in realising this goal. Using a mish-mash of speakers is rarely successful, but fortunately there is now a wide range of good multichannel amps

available. The quality of surround amplification and processing has improved massively in the last few years, and multichannel amps are now much better at playing back two-channel music sources too (though the best in this regard do not come cheap).

Now you've asked the question, this month's group of DVD-Audio, SACD and universal players will provide one if not more solutions. Every machine is compatible with CD, CD-R and CD-RW so no disc in your digital collection will be lost. All that remains is for you to explore a new dimension in audio. Oh yes, and they all play movies too. **HFC**

EQUIPMENT USED

- Arcam AV8 processor (preamp) and P7 power amplifier
- ⊗ B&W Nautilus 802, 804 and 850 (sub) loudspeakers
- ◆ Townshend Isolda DCT interconnect & QED X-Tube 400 speaker cable

MUSIC USED

- Steely Dan Godwhacker, Everything Must Go DVD-A
- Paul Simon You're The One DVD-A

- Frankie Goes To Hollywood Rage Hard... SACD
- Peter Gabriel Up SACD
- Erich Kunzel/Cincinnati Pops & Kiev Symphony Orchestras Tchaikovsky 1812 SACD/DVD-A

EARS USED

Our thanks go to the following panellists for their experience and diligence in facilitating our blind listening tests:





STRUCTURED LAB & LISTENING TESTS

Each of these players was subject to a penetrating series of lab and listening tests which provide a unique insight into their performance and compatibility. The latest QC Suite Functional Testing Station was used to probe every crevice of the player's electrical performance with

DVD-Audio, SACD and CD media. Tests included low-level resolution, response, trends of distortion versus frequency and digital level, plus the bane of all digital systems – jitter. These, together with standard noise, cross-talk and digital filter measurements leave no stone unturned in our quest to get under the skin of these products.

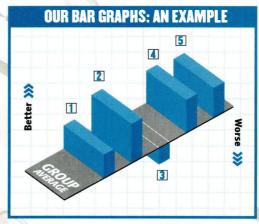
Our comprehensive listening tests were no less rigorous, being conducted under blind, level-matched conditions with the assistance of the industry's most experienced panellists. Levels were electrically, rather than acoustically, matched across *all* channels for greatest precision. This means any perceived difference in level between one player and another was not 'real' but provided an important clue to the product's character and long-term suitability.

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

LAB REPORTS: THE BAR GRAPH

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

- 1] Harmonic Distortion: Not derived from a single 1kHz test, but from multiple measurements of distortion from 20Hz to 20kHz and from 0dBFs to -100dBFs.
- **2] Jitter:** Any uncertainty or modulation in the timing of data as it passes through the player causes this particular form of distortion to arise during D/A conversion. High bar graphs mean low jitter with SACD and/or DVD-A.
- **3] Linearity:** This is a measure of the player's low-level resolution at -100dBFs with SACD or DVD-A software. If a very quiet (say, -80dBFs) digital signal is decoded at -79.5dB, then it'll be 0.5dB louder than it should.
- **4] Practical Dynamic range:** Measures both the A-wtd S/N ratio, distortion and noise when reproducing a low-level (-60dBFs) signal and any noise modulation caused by non-monotonic behaviour during D/A conversion.
- **5] Digital Filtering:** All players employ an oversampling filter when handling the PCM data from CD and DVD-A software but not, in theory, from SACD. Its performance with CD or 96kHz DVD-A is represented here.





£1.300 ☎ 01223 203200 ⊕ www.arcam.co.uk

ARCAM DIVA DV89 DVD-AUDIO - DVD-VIDEO - CD

The DV88 Plus moves up with the addition of DVD-Audio

rcam's rolling product development saw the original DV88 DVD player boosted by the introduction of a PAL progressive video output in its DV88 Plus model. Now, the DV88 Plus has evolved into the DV89 thanks to its onward compatibility with multichannel DVD-Audio. Arcam could not have delivered one without the other, because it was the upgrade of the Zoran Vaddis III processor to the Vaddis V that enabled both progressive video and, with recent software updates, the ability to decode DVD-Audio. Factory upgrades are available for existing models.

An additional audio board brings centre, sub and surround analogue outputs to join the L/R stereo outputs already included on the DV88 Plus but the Scart, component, composite and S-Video connections remain unchanged. Neither the front panel layout or CR-314 remote handset have received a facelift, but Arcam's on-screen set-up is expanded to seven pages to accommodate all the new speaker configuration options.

The OSD does not take advantage of a DVD player's ability to support fancy graphics, but the text-based menu is still very easy to navigate. New items include a 'speakers' page that allows you to set the speaker size and crossover frequency to the sub channel. Other pages offer front, centre and surround delays together with the ability to trim the output of all six channels independently.

SOUND QUALITY

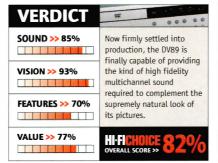
This is a rich and powerful sounding player that tries very hard to keep the listener at the centre of the action. Familiar multichannel mixes can sound 'different' - the DV89's very bold sound extends through to the surrounds, which can sound both louder and larger than life. The backing guitars from Steely Dan's Godwhacker rarely sound so vibrant and alive at the rear of the room, reinforcing the depth of the soundfield without drawing your attention from the vocal action at the front.



We were genuinely surrounded by the orchestra on the Telarc 1812 DVD-A, for while this is a less-than transparent recording, the DV89 made a good fist of launching the music into the room with some gusto. Our precise multichannel level-matching ensures that the output of all channels is matched not only between players but also channel-tochannel. So the bubbly sound of the DV89's surrounds is more a reflection of its character than of it being actually louder.

Paul Simon's You're The One was very well resolved, the strings taut, his voice articulate and sharply defined. Every time the music pauses, you can hear the echo mixed, quite deliberately, from front to back. This is a tremendous DVD-A, packed with the kind of musical detail that is very positively realised by the DV89 with its strong and clear-cut style. The Arcam's picture quality is less 'dynamic' but flows with a cinematic ease that's matched by few other players. Its images have a natural quality that makes long-term viewing a pleasure and extends the appeal of the DV89 from audiophile to film buff.

The understated appearance of this player disquises both its powerful sound and raw but very musical edge. Add to this a picture quality that's up with the very, very best and the DV89 offers a compelling package. HFC



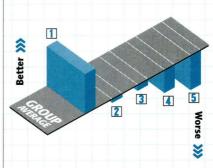


LAB REPORT

Arcam's earliest samples of the DV89 were mildly compromised by inadequate supply decoupling - an issue that has now been addressed. As such, jitter remains very low at ~110psec but is now free of the supply-related interference noted a few months ago. On the other hand, there are still idle tones or other (video?) related spikes at multiples of 1450Hz that drag the overall S/N ratio down to 103.5dB on all channels, including the front pair with their dualdifferential DAC arrangement. Otherwise, harmonic distortions are exceptionally low at 0.0008-0.0017% across the audioband and just 0.0026% at 40kHz with 96kHz and 192kHz DVD-A software.

Separation is >100dB across all channels but the response of the player is marginally more rolled-off through ultrasonic frequencies than is common figures of -4.7dB/60kHz and -9.2dB/80kHz contrast with the Denon DVD-2900, for example, which remains entirely flat. Stopband rejection is poorer than expected with high-rate DVD-A, but the ultrasonic performance of the DV89 is otherwise very clean indeed.

HOW IT COMPARES



- 1] Distortion » 55%
- 21 litter >> -5%
- 3] Linearity >> -10%
- 4] Dynamic Range >> -35%
- 5] Digital Filter >> -65%

SPECIFICATIONS		
Measurement	Rated	Actual
Maximum output level	2.2V	2.19V
Distortion (1kHz @ OdBFs)	<0.005%	0.0008%
Signal-to-noise ratio	105dB	103.5dB



£850 ☎ 01234 741200 **⊕** www.denon.co.uk

DENON DVD-2900 DVD-AUDIO - DVD-VIDEO - CD - SACD

Denon's first universal player is a do-it-all audiophile bargain

hile Marantz, Denon's partner in the merged D&M Holdings, looks to be concentrating on digital video technology, Denon is introducing genuinely new and innovative multichannel audio products. Indeed, the DVD-2900 is just the first of four new universal players due for launch, spanning budget to high-end markets with a hop, skip and a jump. As it stands, the DVD-2900 is a fully inclusive solution, equipped with Dolby Digital, DTS, DVD-Audio and SACD decoders driving six 'equivalent' audio channels via three pairs of the universal DSD1790 DACs, from Burr-Brown.

A progressive video output is offered with both NTSC and PAL software using the same Sil504 processor that Arcam employs in its top-end DVD-Audio player. Scart, component, composite and S-Video outputs are provided while 'driving' the DVD-2900 is made all the easier by an enhanced on-screen display.

The audio set-up page now includes a section for SACD while the speaker configuration menu is accessed via the 'audio channel' setting. Variable speaker size and level trims are available for all, but interchannel delays are only appropriate for DVD-Video and DVD-Audio media.

SOUND QUALITY

The confident and authoritative balance of the Denon is evident from the first, its deceptively 'expensive' sound achieved without that polished sheen that accompanies other, far costlier, players. Even over-produced DVD-As like Steely Dan's Everything Must Go are decoded in a very well-rounded fashion that combines tremendous detail with a taut, punchy bass and transparent but still very sweet, undemanding treble.

From tiny finger drums to fuller-sounding vocals, this player maintains a calm but firm grip over its multichannel sound which is both crisply detailed and remarkably lifelike. The player also benefits from the expanding pool



of well-mixed software that's becoming available. So, whether we listened to Paul Simon's You're The One or James Taylor's SACD, we all relished the way in which both backing vocals and percussion lifted the performance from the rear of the room.

On the other hand, this is not the most energetic-sounding player, so softer sounding recordings like the Telarc 1812 Overture, while not without some sense of atmosphere and occasion, can also lack the thrill of 'real life' As one listener put it "you really had it be there", implying that the recording failed to match the power of the original performance. A more exaggerated-sounding player might bring such discs to life. The DVD-2900 just tells it like it is, warts and all.

The DVD-2900 lacks Denon's proprietary Serial Link interface for direct connection to its top-end AV amps and was also launched just a little too early to incorporate a digital video output. Nevertheless, it still encompasses the very best aspects of two and multichannel DVD-A and SACD replay under one roof. It's one of the very few players that's equally proficient with all formats, making it the ideal one-stop solution for any audiophile on the upgrade warpath. HFC

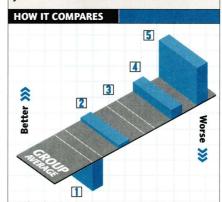
VERDICT	
SOUND >> 88%	The first universal player to knock Pioneer of its perch.
VISION >> 90%	performance, facilities and superb build quality that, while out of the budget
FEATURES >> 90%	category, remains very realistically priced indeed.
VALUE >> 90%	HI-FICHOICE 90%



LAB REPORT

While this player has the flattest responses recorded for CD (-0.02dB at 20kHz), 96kHz DVD-A (-0.0dB at 44kHz) and 192kHz DVD-A (-0.0dB at 80kHz). Denon has still implemented some 'light' analogue filtering for SACD. This is designed to temper the full excess of SACD's ultrasonic noise. dipping its response by -3.2dB at 80kHz and -8.6dB at 100kHz. While this yields a response that's far closer to DVD-A than typical, it also means there's a proportionally higher level of ultrasonic noise escaping the DVD-2900 than the Sony DVP-NS999ES, for example.

The analogue stage is also responsible for a very slight increase in distortion from just ~0.0002% at 1kHz/-10dBFs with all data types, to 0.0005% at its 2.1V peak output. In real terms, distortion only really starts to increase at very high frequencies where both CD and DVD-A software incur some 0.09% of odd-order harmonics. Otherwise, litter is very low at 155psec (CD/DVD-A) and 70psec (SACD), the latter recording errors in linearity of just +0.1dB at -110dBFs and +2.0dB at -120dBFs.



- 1] Distortion >> -45%
- 21 Jitter >> 5%
- 3] Linearity >> 0% 4] Dynamic Range >> 15%
- 5] Digital Filter >> 60%

SPECIFICATIONS		
Measurement	Rated	Actual
Maximum output level	2.0V	2.10V
Distortion (1kHz @ 0dBFs)	0.0009%	0.0002%
Signal-to-noise ratio	118dB	106.2dB



£1.400 @ 01753 680868 @ www.marantz.co.uk

MARANTZ DV8400 DAZ - DO - OBDIV-DVD - OIDUA-DVD

The first universal player to be future-proofed with a DVI output



Look around the rear, however, and the real estate once occupied by two Scart sockets is now occupied by a single Scart, an RS232 port for custom installers and a DVI output. Now that digital video outputs with HDCP (high bandwidth digital content protection) have been rubber-stamped by the DVDCCA, this enables direct, progressive digital video signals to be output to compatible display devices such as plasma TVs and projectors. The picture quality is cleaner, sharper and imbued with a greater perceived depth than the best analogue component video outputs.

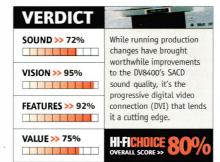
SOUND QUALITY

This is the kind of player that wins by seduction rather than using the more immediate and revealing approach of the Arcam, for example. With DVD-A software we were typically immersed in a very 'cosy' surround sound, even with heavily produced discs like the Steely Dan DVD-A. Sure enough, the vocal quality is a little dry and occasionally glassy but the accompaniment remains very tangible, well rounded and musical. This seductive quality was repeated with Paul Simon's You're The One, even if its subtle rear-channel delivery sounded a little too laid-back and lacklustre by the standards of the Denon and Arcam.



Frankly, much of our multichannel DVD-A material collapsed to the front of the room where it offered little advantage over two-channel DVD or CD. But with SACD media, the DV8400 lifts its game, delivering a far stronger, positive surround that meets the front and centre channels half-way. The surround effects throughout Peter Gabriel's Up make a far better case for the benefits of multichannel sound than any of our DVD-A discs had with this player. The strong bass line has extension though it lacks some speed, but there's plenty of 'whack' to carry the music forward. And while the DV8400 carries this busy SACD material off to good effect, there's no sense of it buckling under the strain. Switch back to DVD-A or even CD and you'd think you were listening to a different player.

Marantz has made genuine improvements to the original DV8300 chassis without fundamentally altering the building blocks of the player. SACD replay has benefited most significantly, and sufficiently so to outperform the more specialised SA-17S1 model reviewed last month. DVD-Audio sounds less impressive but it's as a DVD-Video player, with the capability to deliver digital video, that the DV8400 will make its mark with future, DVI-equipped, display devices. HFC



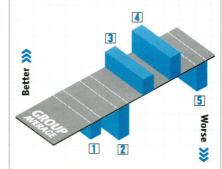


LAB REPORT

The DV8400 has a slightly cleaner performance than the DV8300, particularly with SACD software. The A-wtd S/N ratio is unchanged at 107dB and distortion still ranges from 0.0007-0.04% and 0.0005-0.025% (20Hz-20kHz, CD and DVD-A) while HF distortion with SACD remains submerged beneath the wash of requantisation noise associated with the format. Ultrasonic noise, lower with CD and DVD-A software is still higher than with other DVD/universal players thanks to the CS4392 DACs. Expect some variability in performance with different amps as a result.

Jitter is reduced from ~625psec to ~450psec with all formats in this player while, importantly, changes to the SACD filter have extended its response from -7.6dB/80kHz and -16.3dB/100kHz (DV8300) to -3.4dB/80kHz and -8.5dB/100kHz (DV8400). Lowlevel linearity is absolutely superb with SACD where the player betrays errors of just +0.1dB down to -110dB and a worst case of just +0.4dB at -120dB. This is significantly better than the +0.5dB error recorded with 16-bit CD at -90dB, for example. DVD-A performance is unchanged over the DV8300.

HOW IT COMPARES



- 11 Distortion >> -25%
- 2] Jitter >> -50%
- 3] Linearity >> 25%
- 4] Dynamic Range » 35%
- 5] Digital Filter >> -40%

SPECIFICATIONS				
Measurement	Rated	Actual		
Maximum output level	2.0V	2.1V		
Distortion (1kHz @ 0dBFs)	0.00095%	0.0006%		
Signal-to-noise ratio	125dB	107.0dB		

£250 © 01753 789789 **(** www.pioneer-eur.com

PIONEER DV-565A DVD-AUDIO - DVD-VIDEO - CD - SACD

Now everyone can afford a true universal, multichannel front end

ew, if any disc players are as slim or indeed as light on their feet as Pioneer's new budget machine. Then again, there is no other player available close to this price that offers all the features of the DV-565A. £250 buys you a fully integrated universal solution, compatible with CD and CD-R/RW (including MP3), Dolby Digital and DTS movie DVDs, and both two and multichannel SACD and DVD-Audio media. Optical and coaxial digital outputs allow the player to link into higher-specification AV receivers for 6.1 channel Dolby EX replay, for example. Indeed, about the only key feature 'missing' from the DV-565A is the ability to output a progressive signal with PAL video sources.

There are a few basic controls decorating its plain fascia, but the player is best driven via remote control and Pioneer's beefed-up on-screen display. Picture controls are fairly limited but the ability to adjust speaker size, level and distance is fully accommodated under the 'speaker installation' page of the 'initial settings' menu.

Under the bonnet, Pioneer's economy is not only revealed in the combined MPEG video, Dolby, DTS and DVD-A decoder solution but also the use of slightly cheaper DACs for the centre, sub and surround channels. The front (stereo) channels are of a higher specification to benefit CD replay.

SOUND QUALITY

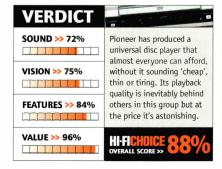
While the player sounds both wholesome and integrated, its reproduction of multichannel mixes is more congested than the better players in this test. The surrounds were described as "dissipated", so much so that the finger percussion on James Taylor's October Road did not have the same clarity or surprise. By contrast, the DV-565's picture quality is more colourful, often overly so, bringing a robust Technicolor hue to reds and blues and a 'zing' to its performance missing from sound quality alone.



With SACD and DVD-A, the DV-565 may not grab the attention but its balance is clean, smooth and very easy on the ear. And while the bass is too rounded and a little soft, the Steely Dan DVD-A still had all our feet tapping. Vocals can sound a little synthetic but the music still bobs along at a good pace, controlled and only a little constrained. So, the player will never leap out and grab you but then neither will it over-extend itself and sound harsh or ill-disciplined.

The grander acoustic of our 1812 SACD was handled surprisingly well, for although the deepest tympani sounded "splodgy", the music still has a warmth and presence that beats its two-channel sound hands-down. Never boring, this player is engineered to craft a sound within its limits and within the limits of its likely partners.

Our listeners quickly identified the DV-565 as a budget player but were astonished to discover it was some £600 cheaper than the Denon, for example. Customers looking for a step into the realm of multichannel music and DVD will need to find reasons not to buy the DV-565 rather than the other way around. If you have a standard TV and do not need progressive PAL video outputs then the DV-565 is Hobson's choice for the multichannel separates starter system. HFC

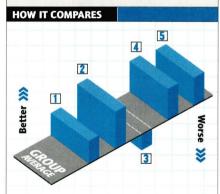




LAB REPORT

Before attempting any CD/DVD-A versus SACD listening tests of your own, remember to account for the 1.5dB difference in output level (2.08V and 1.75V, respectively) that exists between PCM and DSD via the DV-565A. This goes double for any reviewers who are about to suggest that SACD sounds 'less punchy' or somesuch via the DV-565. Due to the different DACs used on the front versus the centre and surround channels, there are clear differences in performance. The S/N ratio varies from 108.5dB (front) to 99.5dB (others) while distortion increases from 0.0009% (front) to 0.0013% (others) at 1kHz/OdBFs. At 20kHz, all channels increase to just 0.005% while jitter remains vanishingly low at ~80psec (CD/DVDA) and just ~30psec (SACD).

The frequency responses are similar to that of Marantz's DV8400, just -0.7dB/44kHz with 96kHz DVDA. -3.3dB/80kHz with 192kHz DVDA and -3.0dB/60kHz, -5.5dB/80kHz and -10.5dB/100kHz with SACD. The asymmetry aside, Pioneer has very successfully nailed down the technical performance of this budget machine.



11 Distortion >> 35% 2] Jitter >> 60% 3] Linearity >> -25%

4] Dynamic Range >> 50% 5] Digital Filter >> 45%

Rated	Actual	Ī
2.0V	2.08V	
0.0014%	0.0009%	
110dB	108.5dB	
	2.0V 0.0014%	2.0V 2.08V 0.0014% 0.0009%





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SONY DVP-NS999ES DVD-VIDEO - CD - SACD

A sophisticated DVD player with the added bonus of SACD



The usual Scart, component, composite and S-Video outputs are included along with separate stereo and 5.1-channel analogue audio outputs. The loading tray is a thin sliver that glides deliberately into view while its very comprehensive, but not entirely straightforward, menu system is navigable via both the RMT-D150P remote control and the jog/enter dial mounted on the player itself.

Video picture and speaker configuration menus are extensive, but the fact that speaker size, level and delay options are available for SACD suggests the data may well be converted from DSD to PCM internally. Oh yes, and don't be surprised to find a DVD you last watched a week ago resume play where you left off, for the DVP-NS999ES includes a powerful 300-disc memory function.

SOUND QUALITY

Everything about this player, its technical and subjective performance, is highly composed. Bass sounds taut and deliberate while the mid and treble are both very neutral and clean, producing a very detailed but not necessarily 'wholesome' sounding mix. Described as "over-clean, making every disc sound like demo material", the '999 ultimately failed to convince our panel.

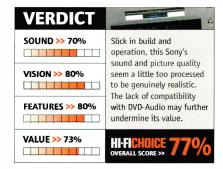
The Telarc 1812 Overture, which is not the most vigorous of recordings, still sounded too



bland: "The orchestra has been replaced by cardboard replicas" suggested one listener "who care not a jot ... " interjected another. The sanitising effect of the player was just too extreme in this instance while, with less ordered recordings, including Relax from Frankie's Rage Hard SACD, its tempering influence is very welcome. The Roland and Moog synthesisers tear out of the surrounds but don't tear into your ears, just as the harsh vocal sibilance is tamed into acceptability.

In a direct parallel, its picture quality is clean and clear, if not detailed, but also oddly artificial. Images simply do not have the fluidity of the Arcam and so are just a little less rewarding. So while the Arcam, Denon and Sony players all communicate with the listener, the DVP-NS999ES does it by fax.

If the DVP-NS999ES had been produced by any other company with the resources of the Sony Corporation, but without the political ties to SACD, then it would have been a universal player. Just how long Sony can continue to ignore DVD-Audio as a fact of multichannel life depends as much on corporate pride as the depth of its pockets. But until it changes its tune, its multi-format players will continue to be usurped by the best that Pioneer and Denon, free of allegiance, have to offer. HFC



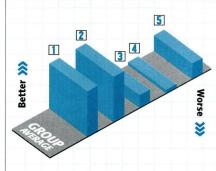


LAB REPORT

Like Arcam's DV89, the DVP-NS999ES also has a few interference patterns that reduce its overall A-wtd S/N ratio, even if a figure of 105.9dB seems perfectly adequate. Distortion is fabulously low with both CD and SACD media, amounting to just 0.00025% at 1kHz/OdBFs and 0.0025% at 20kHz/OdBFs. The latter figure 'increases' to 0.075% with SACD thanks to its swell of ultrasonic noise, but the real harmonics are much lower in level. Jitter is also low at ~50psec with all sources while its low-level linearity comes second only to the Marantz with errors of +0.3dB at -110dB and +0.7dB at -120dB with SACD media.

Interchannel separation is also the best of the SACD bunch with figures of 99dB at 20kHz and 91dB at 50kHz. Unusually, its response shows some in-band filter ripple (a common problem with much older CD players) while Sony has also reverted to the more conservative HF roll-off of its earlier SACD players, dipping from -5dB at 60kHz to -14dB at 80kHz and a full -30dB at 100kHz. Whether this strong filter has any direct, subjective effect on sound quality is open to debate.

HOW IT COMPARES



- 1] Distortion >> 75%
- 21 litter >> 75%
- 3] Linearity >> 20%
- 4] Dynamic Range >> 5% 5] Digital Filter >> 25%

SPECIFICATIONS	700	
Measurement	Rated	Actual
Maximum output level	2.0V	2.07V
Distortion (1kHz @ 0dBFs)	0.0012%	0.00025%
Signal-to-noise ratio	103dB	105.9dB



Bespoke Audio Visual Consultants

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System 2

System 3

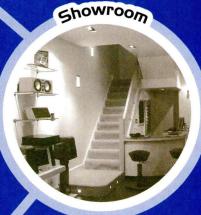
System 4

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CONCLUSIONS

Consistently impressive results distinguish this particular group of high-res multichannel players

ith one exception, each of these players has at least one over-riding strength. Sony's DVP-NS999ES was arguably the weakest of the bunch - despite being beautifully engineered, both its sound and picture quality have a slightly 'processed' feel. Marantz's DV8400 gives a cracking account of itself with multichannel SACD while Arcam's studious DiVA DV89 delivers the most vibrant performance with multichannel DVD-A. Neither the Pioneer or Denon can match these individual qualities but offer more consistent performances with all media.

The very upbeat but controlled sound of Arcam's DV89 is certainly more involving than the sterile presentation of the Sony. but it's not as relaxing as the Denon. This player delivers music that invigorates, driving any multichannel system to its full potential and supplemented by a picture quality that's a match for the very best. Marantz's DV8400 may be a tickled-up DV8300 with a DVI output but it is also a universal player where the war

between DVD-A and SACD is played out to dramatic effect, the latter winning hands down. The result is a sound with DVD-A that cannot hold a candle to the Arcam, for example, but an SACD performance that teaches Sony's DVP-NS999ES about realistic music-making

As for the two universal stars of our group. Pioneer's DV-565 may seem too good to be true, but it represents fabulous value with the flexibility, picture and multichannel sound quality of a player twice the price. This is the

one to set your feet on the road to audio's future just as Denon's DVD-2900 represents the kind of milestone that you'll encounter further down the route. Denon's first universal player has a warm and thoroughly agreeable sound that grows on you, making it ideal for both short and long-term listening. As an audience, it takes no effort to get involved in the music, the fundamental test of any successful multichannel product. Its application in a successful multi-format AV system is therefore certain. HFC

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PIONEER VSX-AX5i £1 200

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B&W DM600 S3 PACKAGE £900 Great bass and midrange but a top end suited to 'sweeter' sounding players.

KEF Q AV7 PACKAGE £1,300

An remarkably capable multichannel speaker system for the money

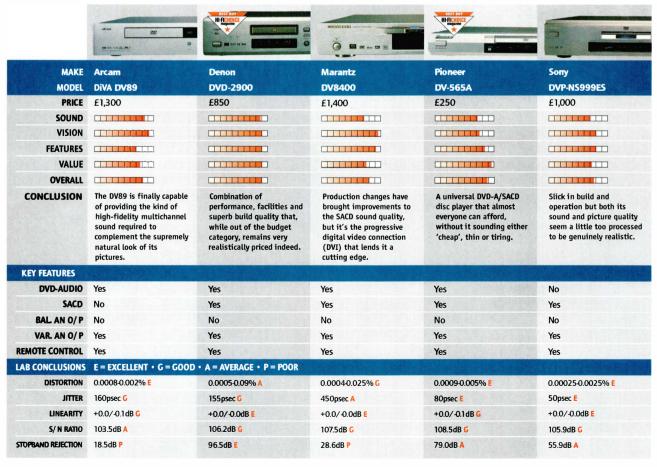
HINTS AND TIPS

Give the player a good 30 minutes or so to warm up before making a critical judgement.

 DVD-A and SACD players are now less microphonic than early CD players, but many still benefit from being sited on a proprietary shelf.

1 If you intend to use your DVD-A or SACD player with a passive, rather than active preamp, then check that its output impedance is 100 ohms or less. Higher output impedances may cause audible changes in response.

NEW FORMAT DISC PLAYERS AT A GLANCE





Manufacturing

The final part of our series on the making of recorded music focuses on the nuts and bolts of manufacturing the discs themselves. Feature: Richard Black

t the end of the last part of our look at how recordings are made, we waved goodbye to the recording as it left the mastering house en route to the factory. No more audio processing awaits, but there's still plenty to happen before discs magically appear in your local record shop.

All current disc-based music carriers have one thing in common - basically, they are produced by pressing a pattern into plastic. Nothing else comes even anywhere near that for cost-effective manufacture. Pre-recorded cassettes became pretty cheap but for music purposes the format is basically obsolete (in most of the West, anyway). A century ago the wax cylinder was a higher quality physical format than discs but there was never a sensible

lacquer - just like a prisoner imprinting a key to Alcatraz in a bar of soap, for example. At least, that was the original invention. In fact, an electroplating process is used to create the negative image, avoiding the use of force which would damage the lacquer.

Unfortunately, lacquers don't conduct electricity (though the copper-coated master discs used in the Direct Metal Mastering process do), so it's first necessary to coat the surface with a very thin layer of something conductive. This is done with what is basically a kind of paint containing very fine silver particles, following which the disc is immersed in an electroplating tank and plated with nickel. The result is a disc with a raised spiral instead of a groove. That can be used for stamping discs but frequently have to be recut simply to meet initial demand, never mind reissues. For the same reason, discs may be pressed in more than one factory, perhaps on different brands of vinyl. Next time you hear someone talk about 'the sound' of an LP, bear this in mind!

Two stampers are required for a disc, one for each side. Each has a hole in its centre, but perhaps not in the absolute centre. Aligning the stampers on the press, each with a thick metal plate behind to spread the stamping force, is a bit of an art. Once that's done, a label is placed against each stamper, a lump of hot vinyl is put between them, and they are brought together, forming the disc. A quick spin of the assembly past a knife to trim off the excess, and then the vinvl must be cooled so that it sets bearing the imprint of the stampers. The disc, complete with labels, is ejected and put into a 'hopper'.

The whole stamping process takes around a minute, depending on how thick the finished record will be - heavy pressings take longer to cool. It may sound a bit arcane, but it looks worse a press is a fearsome machine tool, with large bits of cast iron and lots of tubes carrying the various fluids (water, steam, oil, plus vacuum) required at different stages. Looking at one, it takes a real effort of will to remember that the end result is a piece of precision plastic carrying information smaller in size than a wavelength of light.

"The stamping process takes around a minute, though thicker pressings usually take a bit longer to cool."

way to mass-duplicate cylinders, which was the main reason for their demise.

A little history. Analogue disc manufacture (e.g. vinyl) has changed little since Emile Berliner invented the flat disc in 1887. In our last article, we described the lacquer that is cut at the mastering studio. This is a playable disc that looks and behaves much like a finished record, albeit a rather large, heavy, fragile and single-sided one. What happens to it next is a Heath Robinson mixture of art, science and trade secrets, which nevertheless has been finely honed and works better than one could possibly expect from any mere verbal description.

What's needed in order to press playable discs is a stamper with an exact negative image of the grooves. To make that, in turn, one needs to press something into the grooves of the

it has a finite life and usually a second plating process is used to produce one (or two, or three) 'mother' discs, which like the lacquer, are playable.

Another plating process produces up to five stampers from each mother, a total of up to 15 stampers per lacquer, with each stamper capable of producing between 600 and 3,000 LPs depending on which factory you talk to and how fussy everyone is being about quality. And if that makes you wonder what the quality implications are of getting pressings from the start or end of the run, consider this - the first negative sounds better than the second, the first mother sounds better than the second, and ditto the stampers, and the best pressings are generally considered to be around numbers ten (after the stamper has 'settled down') to 100. What's more, really big sellers

BANG UP TO DATE?

CD pressing must of course be a much more up-to-date process, right? Yes and no. Conceptually it's almost identical to the LP pressing process. All the metalplating and stamping stuff still applies, though of course with only one stamper and minor differences such as the artwork being printed on the disc rather than stuck on in the form of paper labels. The main difference is in the preparation of the 'glass master'



used to create the stampers. Where the LP lacquer is cut with a stylus, the digital item is made by exposing a photo-sensitive layer on a glass disc to light from a laser, followed by chemical treatment to remove the exposed material. The disc is first sputtered with nickel or silver and then plated.

The input to the glass mastering stage is the master CD-R or computer tape supplied by the mastering engineer. It's surely only a matter of a little time, though, until the data is simply emailed, already technically possible if you have a good high-speed internet connection. Another day saved - no bad thing in an increasingly timeconscious system.

It is at the glass mastering stage that the various error correction codes are added to the data stream. This is generally done 'on the fly' so that it

HUMAN TOUCH



At every stage of LP manufacture, there is subjective human input. For instance, the metal stampers are conventionally polished with something akin to 'Brasso' on a bit of rag. I've spoken on

a couple of occasions to the operatives doing this, who had no very clear idea of exactly what they were trying to achieve, though the elderly and knowledgeable foreman at one factory was at least able to tell me that it reduces surface noise. Hardly a very scientific process, though. Similarly, setting the cooling time on a press involves a



compromise between surface noise (cooling too quickly), warping (not cooling sufficiently before ejecting the disc) and machine time, and varies somewhat between vinyl brands.

doesn't add any time to the process, but the fact remains that glass mastering is something of a bottleneck in CD manufacture, requiring as it does the use of a very expensive visible-light laser and some very high precision equipment generally. In order to speed things up a bit, the recent trend has been towards faster mastering, typically between 2x and 4x. However, there's an awareness among some parties from both the manufacturing and audio sides that higher speed mastering is not always good for sound (as with highspeed CD-R burning, it tends to increase jitter which is not dealt with as it should be by most CD players), and a very few CD plants offer the option of single-speed glass mastering.

In addition, one or two schemes have been put on the market that claim to improve jitter performance, probably the best known being the 'K2' process from JVC. In fact, some surprising things can be done to what is ostensibly a 'digital' process. A large proportion of the world's glass mastering laser beam recorders (LBR) are interfaced via signal processing devices from Doug Carson Associates. The main function of such processors is adding error correction, subcodes and so forth, but they can also provide specific modifications to the geometry of the pits on the disc, even including 'pit art'. The majority of disc manufacturers are interested in little beyond optimising throughput but it's clear that there really is such a thing as an 'audiophile' CD pressing.

One extra stage is required in CD manufacture, compared with LP metallisation of the disc to create the reflective layer that the laser reads. In DVD manufacture (which is to all intents and purposes identical to that of CDs, even using the very same machines in many cases), double-layer discs require a semi-reflective layer to be produced, which is done by very thinly metallising with gold. The layers are then bonded together with special glues cured by ultraviolet light. That apart, the only significant difference between manufacturing CDs and DVDs or SACDs is that smaller pit sizes on the disc require the use of a short-wavelength laser for glass mastering, and of course even closer tolerances throughout. Anticopying codes and other extra features are just a question of digital signal processing in the interface unit that precedes the laser beam recorder.

After manufacture, discs must be married with the appropriate 'paper parts' (sleeves for LPs, liner notes and

tray cards for CDs) which will generally have been printed elsewhere. Even here there's less room for inaccuracy with CDs, where the parts must generally be trimmed to an accuracy of less than 1mm if they are to fit into the jewel case correctly. LP sleeves have always been a bit hit and miss by comparison. In both cases, however, the cost of paper parts can equal or even exceed that of the actual music medium, especially in short runs of 1,000 or less.

THE BOTTOM LINE

Let's have a look at some of the costs of recording manufacture. Suppose a small label wants to issue a recording of some new music of uncertain market appeal. There's no sense going straight for a huge pressing run, and 1,000 units is typical. You can get 1.000 CDs manufactured from final audio master on CD-R, and artwork on computer disc, for around £800, (80p per disc). For LPs, the costs are higher (assuming reasonable quality pressings), around 80p per disc plus sleeves (35p) and labels (12p) - let's say £1.30 each. It's still a long way from £15 though. But hang on - there are any number of nonrecurring costs to factor in. Let's work backwards. The artwork has to be designed by someone, for which at least £300 is typical. If the music is new it will be





"Most disc manufacturers are only interested in optimising throughput but there is such a thing as an 'audiophile' CD."

be up to £500 to pay for that (it's calculated *pro rata* on the number and retail price of discs). Editing and mastering the recording will probably have taken a minimum of three days at £250 per day, so that's another £750.

And then there's

And then there's the recording session itself. Now this is very variable but if perhaps six musicians are involved over two days we're looking at something like £1,500 - a lot more if they're 'names'. Add to that the engineer/ producer plus equipment, another £500, and hire of some suitable venue (studio or hall), at least £500, a couple of hundred for travel expenses and lunch... There's quite a lot of administration in organising all this, so put in £200 for secretarial running around - where are we? £5,250 for CDs. £5.750 for LPs. That's for 1,000 discs, but we'd better allow ten per cent of

stations and so on.
Hmm, about £6
per disc. Which is a
little below the
wholesale price,
excluding VAT, for a
full price CD. We sell
them all, we make a
small profit. But wait!
We haven't advertised it

yet. Advertising is a

them at least as promotional copies to reviewers, radio bottomless pit, but if we can include this title among the others in our regular monthly adverts in a couple of journals we can probably reasonably figure on £400 for it over half a year or so. Oh, and there's the cost of sending the discs out, something like 30p per disc for CDs and 50p for LPs in smallish quantities.

I've made professional CDs from concept to 1,000 finished discs for around £3,000, but the musicians and engineer got paid expenses only and the whole thing was largely a labour of love. Yes, if you sell a few hundred quickly you make a profit but it's hardly a licence to print money. At the other extremes, an orchestral recording of limited appeal is almost bound to cost over £20.000 if it's recorded in Western Europe, (small wonder that many new classical recordings use minor orchestras in far-off countries, and young soloists more interested in getting their name on a CD than in big fees) while a big-name pop record can cost into the millions to make but at least gets to amortise that over sales also in the millions, on which scale manufacture drops to pennies, or at any rate around 30p per unit all-in. A level playing field it ain't!

REVERSING THE PROCESS

Once the disc has been made, packaged, shipped, sold and finally inserted into your much-loved hi-fi, the recording process is basically reversed.

IF ONLY LP'S WERE MADE LIKE THIS



The actual pressing of CDs is much quicker than with LPs, with a typical cycle time of three seconds per disc. Everything about the process requires high standards of accuracy if discs are to be readable once they're made.

Indeed, from the outset, CD manufacturing has been performed in 'clean room' conditions, with air filters to remove particles and operators dressed in 'space suits'. If

LP manufacture were performed in similar conditions and to the same tolerances there would be a lot less noisy and warped pressings in the world.



Digital codes are first stripped of error correction and subcodes, then converted to analogue voltages. These are boosted to much higher power levels (this part of the process at least proceeds in the same direction as in most of the recording chain, due to losses in other stages) and used to drive a loudspeaker, the reverse of a microphone, which excites the air in your room and creates what we hope is a reasonably accurate facsimile of air movements in the recording studio. All told, it's a long and tortuous path from original performance to recreation in the home, but one which has followed a fairly consistent trend of higher quality and lower cost (despite increasing technological sophistication) over the last century. Let's hope that trend continues. HFC



PRESENTED BY:

Home Cinema





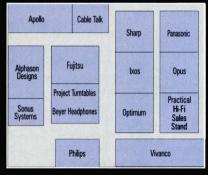
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RETRO

NAKAMICHI DRAGON CASSETTE DECK

There only ever been one truly serious cassette deck manufacturer, one name that systematically worked through each of the limitations of the medium – and that name was Nakamichi. Others popularised the technology, Philips in the first instance, and much later Aiwa and Sony. And of course cassette decks could never have been taken seriously without the elegant technological sticking plasters developed and popularised by Dolby Laboratories, in particular Dolby B whose 10dB of noise reduction was just enough to stretch the operating range of the medium to where it needed to be. But it was Nakamichi that drove the technology forward with a dedication that no other cassette deck manufacturer before or since has shown.

Some of its developments from 1973 to 1993 were quite idiosyncratic. In the early days, Nakamichi had a particular antipathy to auto-reverse operation because even if it was possible to assure correct head azimuth in one direction, the adjustment would inevitably be lost when the tape direction changed and the head was spun through 180 degrees. Azimuth describes the orientation of the head with respect to the direction of magnetisation of the tape - if the head was not perfectly aligned, the narrow read gap on the playback head would lay across more than one part of the signal waveform, the result being a loss of high-frequency output. There was a related problem with decks that used physically separate record and playback heads, which was that it was difficult to ensure that record and play head gaps were perfectly parallel. These difficulties caused Nakamichi to shy away from three-head decks to begin with, and when they did take the plunge, some of their solutions were distinctly odd, including models that flipped the tape over at the end of a side, leaving the heads fixed in place.

The auto-reverse Dragon was less idiosyncratic, eschewing spinning tapes in favour of a more conventional arrangement with a sophisticated dual capstan transport with three heads and two asymmetric direct-drive capstans, and even a pad lifter to disengage the low-spec felt pad built into cassette housings as a means to reducing scrape flutter, an idea taken from



"The Dragon brought some special qualities to its recordings, in particular its warmth, stability and transparency."

professional open-reel practice. Three heads allowed off-tape monitoring, which was coupled in the Dragon to a twin-frequency oscillator, used to optimise bias and equalisation. Physical tape alignment was addressed with a feature that operated on playback called Nakamichi Auto Azimuth Correction (NAAC), which automatically adjusted replay head azimuth to the characteristics of the specific tape. In doing so, NAAC also optimised the playback frequency response, and the feature worked whether the tape was recorded on the Nakamichi or any other deck, lining up azimuth equally well in both directions.

The Dragon brought some very special qualities to its recordings, in particular its warmth, stability and transparency, and the open top end, which was simply the best in the business. Other key features included Dolby B and C and an output level control, while some samples were rack mountable.

The Dragon was superbly built, but extremely complex, with a mass of set-up controls for those fastidious enough to want the very best from their tapes. It also presented something of a challenge to the service engineer, more so by all accounts than some later models, but these things apart it was probably the best (if not the most usable) deck that Nakamichi ever made. It was certainly the model that sealed Nakamichi's reputation internationally. It was launched in 1982 and was finally put to bed in 1993, at which point it sold at around the £1,200 level.

The Dragon has retained its appeal over the years. Good working examples remain in strong demand, and a really clean one can fetch as much as £1,000. Although parts, especially cosmetic ones, are now in very short supply, there is still a coterie of people and organisations in Europe and the USA dedicated to keeping old Nakamichis on the road. HFC

Alvin Gold





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ansen Beat 400 PLUS

The most important improvement over the standard B—400 is the all-new DAC. The B—400 PLUS converter is based on our very highly regarded reference player, the B—400 XS. The PLUS DAC does not incorporate HDCD but a 24-bit type which exceeds the standard B—400 in every way. A very effective demonstration of this is that the B—400 PLUS reproduces HDCD CDs in a much higher quality than the B-400, which does offer HDCD capability.

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Accuphase Super Audio CD Player DP-77

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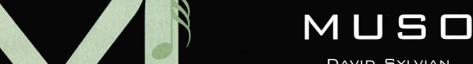


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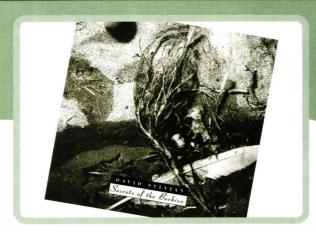
DAVID SYLVIAN SECRETS OF THE BEEHIVE

When David Sylvian was dubbed "the most beautiful man in the world" during the New Romantic phase of his 1980s 'supergroup' Japan, no-one could have predicted his incredible musical journey which followed the band's demise in 1982. His close friend Ryuichi Sakamoto was instrumental in opening his ears and mind to new music, especially the post-war avant-garde of Stockhausen, John Cage and Toru Takemitsu. It was Sakamoto's wife, Akiko Yano, who gave Sylvian the idea of the synthesised vocal lines on the Japan hit of 1981, *Ghosts*. And Sylvian's Japanese girlfriend, Yuka Fujii, revealed to him the aural space in the music of Nick Drake and the ECM jazz catalogue.

With such releases as *Brilliant Trees* (1984), *Alchemy* (1985) and *Gone To Earth* (1986), Sylvian married his superb tenor voice to a series of courageous experiments which widened the definition of pop music. He looked to his heroes of the 1970s progressive music scene and openly embraced the work of Robert Fripp, Bill Nelson and Can's Holger Czukay. Guitarist David Torn likened Sylvian to Miles Davis with his "uncanny sense for assembling interesting, even provocative, constellations of musicians and getting the best out of them".

By the end of 1986, Sylvian was ready to make his most accomplished album of the 1980s. At the time he said, "I'm writing a very song-based album now and going back to orchestral arrangements and traditional instruments like flutes, oboes, cellos and violins." For inspiration he drew on the simplicity of folk and the openness of jazz music. He also returned to Sakamoto, whose various acoustic/electronic arrangements and keyboard/synth/piano contributions made Secrets Of The Beehive an almost perfect recording.

During the beginning of 1987, Sylvian recorded basic home demos on a four-track in London. Then he journeyed to the Chateau Miraval in France to record "loosely" with a group which included Sakamoto, Danny Thompson (bass) and Danny Cummings (percussion). A move back to London was necessary to do the orchestrations with Sakamoto and then it was off to Hilversum in Holland to finish the overdubs and vocals. Finally, it



"Sylvian was fascinated by how Czukay made extraneous hiss and radio noise an integral part of the composition."

was to the Wool Hall in Bath with trusted engineer Steve Nye to execute final tweaks and mixing. In all only two and a half months to produce a masterpiece.

What is so thrilling about *Secrets Of The Beehive* (critically acclaimed on its release in October 1987) is the wealth of musical surprises coupled to a range of fantastic songs. At times impressionistic and at others plain down to earth, *Secrets* continues to fascinate to this very day. On *When Poets Dreamed Of Angels*, Sylvian sings the stinging line, "He kneels beside her once more, whispers a promise: Next time I'll break every bone in your body," in a song which draws a strong analogy between the fury of domestic violence and the cruelty of war. Bitterness, loss, futility, even a sense of cynicism pervade the first seven songs of the album, but all are wrapped in such lovely music that you want to listen again and again and again.

Perhaps the strangest track is the haunting *Maria*, with its tape loops and found voices played out at a funereal pace. This was directly influenced by Holger Czukay who used dictaphone recordings to deteriorate his own work. In fact, Sylvian had spent a Christmas in Cologne with the ex-Can genius and recorded ambient music with him (*Plight & Premonition* was released in 1988 by Virgin Venture). Sylvian was fascinated by how Czukay made extraneous hiss, radio noise and such 'concrète' sounds an integral part of the composition. With its circular stepped motion, *Maria* is one of Sylvian's greatest ambient recordings.

Released by Virgin on vinyl (V 2471) and CD (CDV 2471) in 1987, Secrets Of The Beehive has recently been beautifully remastered and re-released in Deluxe Digipak format (CDVX 2471) with new photos, poster booklet and lyric sheet, and a bonus instrumental track Promise (The Cult Of Eurydice). HFC

Mark Prendergast

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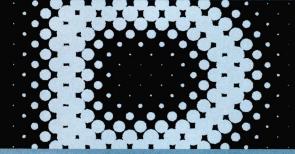




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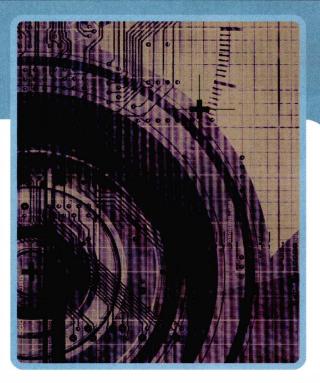
SACD II

Word has reached us over the last few weeks of a variation on the SACD theme called, not surprisingly, SACD II. SACD II or SACD with pictures is just that, provided these 'added benefits' can be migrated onto new discs without rendering them incompatible with existing SACD and CD players. SACD II also brings the format into closer alignment with DVD-Audio, at least in terms of features if not execution.

But it does mean that 'purist' SACD-only players, like the SCD-XA3000ES featured this month (p30), will have to include video processing circuitry to avail themselves of this new functionality. It'll be interesting to see how Sony sells this idea to the audiophile. Universal players or SACD/DVD players are already part way there, so compromised sound quality won't be an issue. Then again, it's equally unlikely that the DVD Forum will approve the licensing of DVD-Video playback technology for the competing SACD format.

What's not widely appreciated is that the 'Scarlet Book' SACD standard has always retained an area of the disc (at the periphery, beyond the 6-channel area) for what is loosely termed 'extra data'. It was always envisaged that this would include text, still graphics and sub-MPEG2 quality video. The SACD Text feature has already been realised, of course, but the capacity to include stills, trailers and liner notes to accompany individual music tracks has not.

So what is the commercial impetus to add pictures to SACD? One reason might be the increasing viability of a true DVD(-A)/CD hybrid disc from its competitors. The backwards compatibility of dual layer or hybrid SACD discs with existing CD players has proved an important advantage to the Sony/Philips alliance and its software supporters. The latter have been comforted by the security of the high density DSD layer because it includes multi-faceted digital copy protection to prevent piracy. One aspect of this technology, called Pit Signal Processing or PSP, can leave a faint text or graphical 'watermark' on the data surface of the disc that's all but impossible to duplicate.

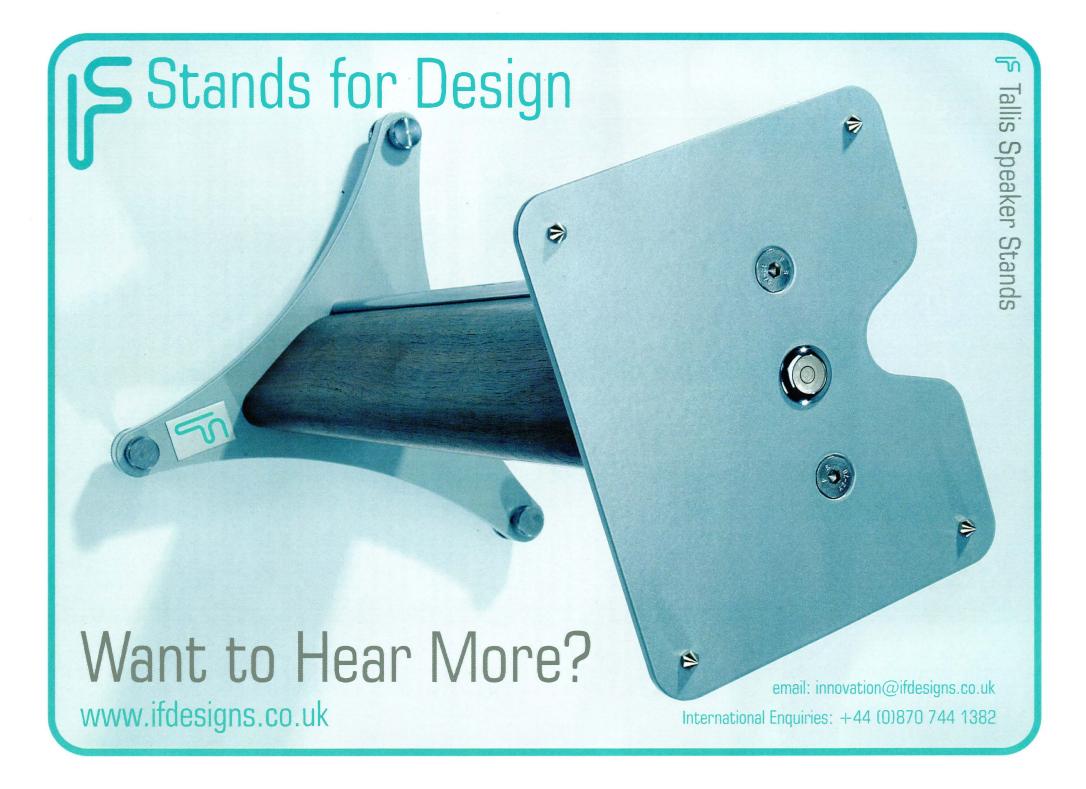


"Enhancements to the security of the overall disc, and particularly any added video content, will no doubt form part of the SACD II remit."

So the DSD layer is secure, but the CD layer can still be ripped off using commercial CD/DVD PC drives and is no more protected than any other 'Red Book' disc. Enhancements to the security of the overall disc, and particularly any added video content, will no doubt form part of the SACD II remit. Particularly so if any hybrid DVD(-A)/CD disc is seen by the music industry to benefit from the content protection mechanisms of the existing DVD format.

There is some considerable pressure for a DVD-A/CD hybrid to happen, if only to refresh the CD software market. Retailers could then afford to give DVD-A the appropriate shelf space that many feel it deserves rather than have it play second fiddle to the tired (in technical terms) CD. And all this extra 'added value' might just encourage consumers to re-invest in music software rather than downloading it from the internet. Backwards compatibility remains a key issue, so I won't be surprised to see a DVD-A/CD hybrid as a two-sided rather than dual-layer disc — one side CD, the other DVD-A. At which point SACD could be in real trouble, pictures or not. HFC

Paul Miller



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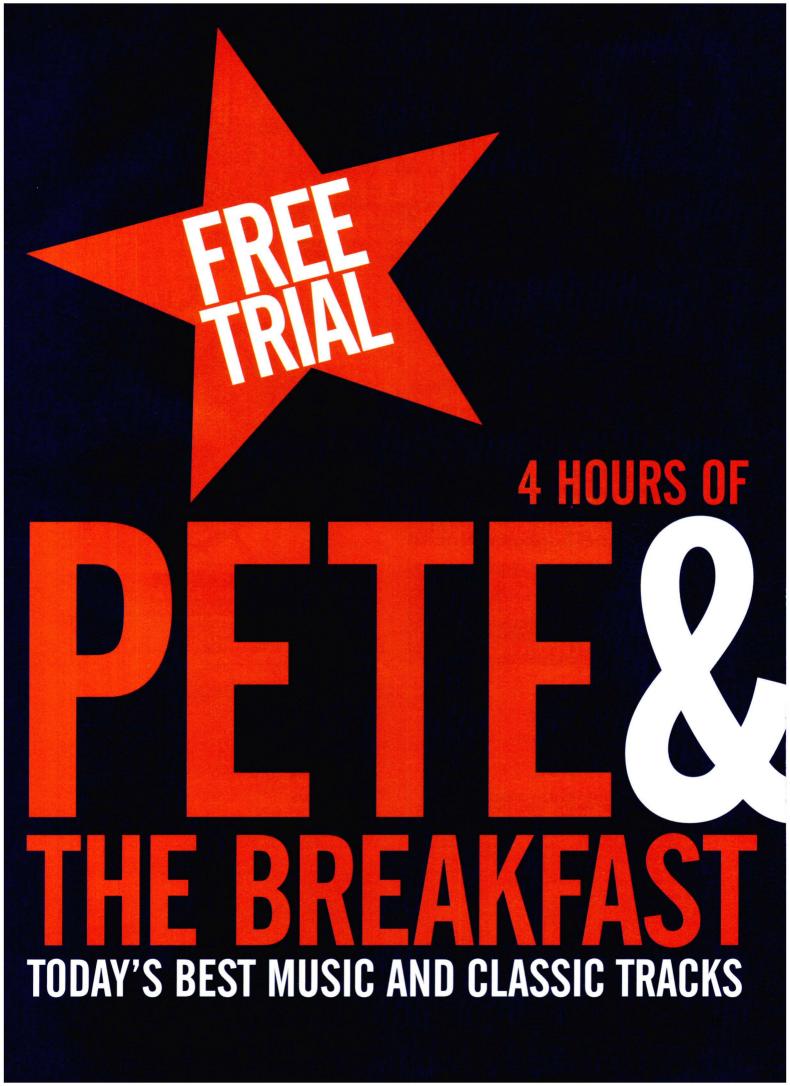
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Yamaha.

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

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

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UYER'S BIBLE CD PLAYERS

CD PLAYERS

Audio disc players for music only

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

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

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



again before being amplified and sent to the output sockets.

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

0&4

WHAT'S A DAC?

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

WHY HAVE SEPARATE TRANSPORTS & DACS?

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

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

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

DO I NEED DIGITAL CABLES FOR A CD PLAYER?

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

WHAT IS OVERSAMPLING/UPSAMPLING?

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

CAN I PLAY SACDS ON A NORMAL CD PLAYER?

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

CAN I PLAY DVDS ON A CD PLAYER?

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

SUPER AUDIO CD

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

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



Marantz CD6000 KI Signature £500

An affordable high-end machine, this very impressive player has it all: brawn, finesse and class. Not to mention the full range of features.



Meridian 507 £1,195

The entry-level player from British digital audio specialist Meridian is an absolute peach - a transparent and detailed sound, and superb build quality to boot.

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	PRODUCT	3	COMMENTS	E	Š	Š	E	3	5	Ē	5	9
UP IL	Arcam DiVA CD73T	400	Refined and articulate with moderate detail retrieval, a finely judged balance for budget to mid-price systems		0	0	0	0				24
88	Arcam DiVA CD93T	950	Excellent high-resolution and transparent-sounding player in familiar DiVA clothing		0	0	0	69				24
	Cyrus CD8	-	Reveals the emotional and intellectual message in everything it plays and is guaranteed to keep you listening		0							2
	Exposure 2010	600	A smooth and substantial-sounding player, a little lacking in refinement but musical all the same		0	0	0	0				2:
	Linn Genki	995	Explicit, rather bright-sounding player with strong multiroom appeal	-							0	2
	Heart CD6000 OSE LE	750	Valved-up Marantz makes an entertaining and colourful player that will inspire you to listen longer	H	•	•	•	•	-	•		24
88	Marantz CD6000 KI Sig	500	Impressive mid-market player is an unusually accomplished all-rounder, and is also well built			0	0			0	0	23
	Marantz CD-17 Mkll M	800	Insight, detail and rhythmic precision make the modified CD-17 Mkll M a top-draw player at the price			0	0	0				2
88	NAD C541i	330	High-octane player has the occasional rough edge, but is remarkable value for money		0							2
	Rotel RCD-02	375	Against some strong competition in the same price area, the new Rotel generally holds up well		0		0					2
18	Thule CD150B	775	A light but engaging and expansive-sounding player with a very quirky user interface		0		0	0	0			2
ABOV	E £1,000				7.92	2000					1000	
C	Audionet ART V2	2,300	Built to last forever, this CD has a dark natural sound with excellent bass and would be cheap at twice the price!	-	0		4					2
88	Classé CDP-10	1,599	Very natural yet capable of revealing the finest of details in a coherent and engaging manner				0		4			2
C	Copland CDA 822	1,598	Well built and carefully thought out, if you go for the more sophisticated musical forms it is superb value		0		0		0			2
	Exposure 3010	1,195	What this player lacks in immediacy and punch is offset by its sparkling sense of occasion and musical tension			0	0	0				2
	Exposure XXII	1,395	Natural sounding player, great with voices and acoustic instruments and makes for engaging listening	-	0		0					2
C	Gamut CD1R	2,350	Natural, precise and impressively 3D sound that marries precision with emotional communication		0		0		0			2
C	Krell KPS 25sc	24,998	One of the finest CD players available, this is also a state of the art preamplifier with Cast interface technology		0				•		•	2
C	Mark Levinson No390S	6,495	Superbly built and comprehensively equipped with genuinely high-resolution sound		0	•	•		•		0	2
55	Meridian 507	1,195	Unusually precise and considered performer that sounds as different as the discs you stick in the drawer	-	0	•	•					2
	Musical Fidelity CD-PRE ²⁴	2,000	Substantial player incorporates upsampling and extensive analogue and digital preamplification facilities		9	•					69	2
C	Musical Fidelity Tri-Vista	4,000	Limited edition stereo-only SACD/CD player that is simply the best player MF has ever made				0	0				2
	NAD S500i	1,200	A beautifully built machine that treads the fine line between precision and musicality with aplomb		0		0		0			2
	Naim Audio CD5	1,150	Recommended subject to audition — a dynamic machine, yet some physical minuses									2
C	Naim CDX2	2,650	Fine quality one-box CD player, but its best feature is upgradeability via outboard XPS supply				•					2
36	Primare D30.2	1,499	Superb high-resolution player gives a strong taste of musical structure and physicality		0							2
38	Resolution Audio Opus 21	2,850	Dynamic, well timed and 3D performance with an analogue volume control and digital input for a second source				0		0		0	2
EC	Talk Thunder 3.1	1,900	A player whose sound has both direction and stature, remaining cool under the busiest musical fire		0	0	0		0		0	2
EC	TEAC D-70/P-70	13,000	This two-box solution is one of the best CD replay systems available, with a fantastic range of facilities		0	0		0	0			2
EC	Wadia 301	3,650	Insightful player with digital preamp options and good onboard volume control. Try it direct for maximum effect		0				0		0	2

SPECSICEY SACD COMPATIBLE Plays high-resolution SACD discs in multichannel and/or two-channel mode. ELEC DIGITAL OUTPUT Electrical coaxial output for digital connection to a DAC or digital recorder. OPT DIGITAL OUTPUT Optical Toslink output for digital connection to a DAC or digital recorder. CD-RW COMPATIBLE Will play CD-RW (rewritable) discs, most CD players can cope with CD-Rs. CD TEXT Will display album and track titles from inserted disc. BAL ANALOGUE OUT Balanced XLR output connections for similarly equipped amplifiers. HEADPHONE SOCKET Quarter inch (6.3mm) headphone jack fitted to the CD player. VARIABLE OUTPUT Player features both fixed level and variable, volume adjustable outputs.



O.... fores....ita =

An exceptional CD player from the Canadian high-end brand – its natural, detailed and engaging way with varied music types is little short of stunning.



BUYER'S BIBLE DVD PLAYERS

DVD PLAYERS

Disc players for audio and video

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

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



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

A.30

WHICH AUDIO OUTPUTS GIVE THE BEST QUALITY?

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

WHICH VIDEO OUTPUTS GIVE THE BEST QUALITY?

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

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

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

DO I NEED PROGRESSIVE SCAN VIDEO?

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

DVD-AUDIO

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

The discs can be played on any DVD player, but the CD-beating high-fidelity sound can only be appreciated with a DVD-A player. While offering similar benefits to SACD, it has the advantage of on-screen display for

information – lyrics, images and so on. To save you having to decide which format to go for, a few brands are bringing out universal players to cover SACD and DVD-A, and this would seem to be the best route if you want to enjoy high-resolution digital audio. If you're after a high-end model, look for one with a 'high bandwidth' digital audio output as well as 5.1 analogue outputs.

CONNECTIONS



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

DIGITAL OUTPUTS: For Dolby Digital, DTS and PCM audio bitstreams. VIDEO CONNECTIONS: Yellow sockets are composite; red, green and blue sockets are for component which gives best results, while the black multipin socket is S-video, which sits qualitatively between the two.

CONNECTIONS: These are a goodquality option for video, especially

SCART

quality option for video, especially ones that output RGB.

	ır favourit				ONS				
	VD PL	A\	YERS	DVD-A C	SACD O	ELEC I	0PT I	HEADPHONE SOCKET	SS
Aud	io/Video disc playe	ers		COMPATIBLE	COMPATIBLE	DIG OU	OPT DIG OUTPUT	NE SO	SSUE NUMBER
BADGE?	PRODUCT	£	COMMENTS	UBLE	IBLE	OUTPUT	PLI	8	MBER
UP TO	£1,000								
EC	Arcam DiVA DV88 Plus	1,000	The first DVD player (just) enabled to deliver progressive scan with UK-spec PAL discs. Superb picture and good sound			0	0		238
	Cambridge Audio DVD57	200	DVD-Audio replay, progressive scan pictures and a good performance at a silly-low price. Fantastic value for money.			0	0)		243
	Cyrus DVD 7+	1,000	Typical Cyrus style – open, vivid and bouncy sound, with moderate picture quality to match						237
88	Denon DVD-2900	850	A beautifully built universal player that delivers a strong performance across all formats, all at a remarkable price	0	0	0	0		246
	Pioneer DV-656A	400	Do-it-all 'universal' player is a decent performer with all disc types, and superb value for money considering its range	0	0	0	0		240
88	Pioneer DV-757Ai	800	State of the art universal player with iLink digital interface provides performance stretch currently unavailable to others	0	0	0	0		240
	Primare V25	1,000	Bold pictures on screen are matched to easy, likeable sound quality and a huge range of outputs	0		0	0		237
BB	Sony DVP-NS905V	400	DVD-Video and SACD in a distinctly superior package, with above average performance	0		0		0	234
ABOVE	£1,000								
EC	Arcam FMJ DV27A	1,900	Very accomplished, clean sounding player with CD, DVD and DVD-Audio alike. Picture quality is excellent too	0		0	0		246
	Cyrus DVD8	1,200	An impressive step up from the DVD7+, which includes component video outputs			0	0		238
EC	Denon DVD-A1	2,500	A convincing case for the DVD-A format, battleship construction combined with sonic and visual finesse	0		0	0		230
EC	Marantz DV-12S1	2,500	THX Ultra-progressive DVD-A player is a classy all-rounder, and absolutely top notch in legacy CD mode	0		0	0		229
EC	Meridian DVD596	2,485	Very classy player with DVD-A upgrade potential, one of the few that is also a superb CD player			0			218
EC	Meridian 800	10,805	The ultimate in DVD replay, modular construction, buffered ROM drive, upsampling and high-res digital outputs	0		0		0	230
	Roksan Caspian DVD	1,195	A good all-rounder – a solid and propulsive sounding DVD player which is also a surprisingly capable picture-making machine			0	0		237
EC	TAG McLaren DVD32R	3,995	An engineering tour de force. It's pricey and plays neither DVD-A nor SACD, but performance — especially video — is top notch			0	0		212
EC	Townshend DV-747A	2.899	Major upgrade to Pioneer machine turns it into a giant slayer of a disc player, available as an upgrade to existing owners	0	0	0	0		232

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



Sony DVP-NS905V £400

SACD-compatible DVD-Video player offers excellent audio and video performance.









- Excellent Sound
- Excellent Looks
- Excellent Price
- Excellent Finish
- Excellent Design
- Excellent Engineering







Contact us for your nearest dealer



• Tel: 01480 457300 Fax: 01480 457057 • Email: info@avidhifi.co.uk • Web: www.avidhifi.co.uk Unit 52, 137 North Gate, Alconbury Airfield, Huntingdon, Cambridgeshire PE28 4WX

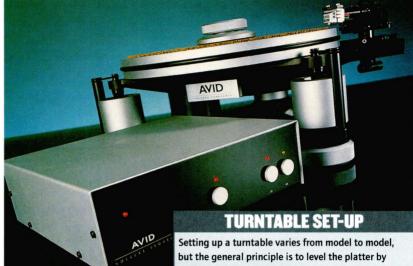
VINYL

Turntables, cartridges and phono stages

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

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

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



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

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



Rega P3 £298

The latest version of a hi-fi classic is a very capable deck for a very modest price, with little serious competition from other makes. A great turntable for the money.



TT1/ARM1 £594

Simple, unpretentious and relatively inexpensive, Audio Note's TT1 delivers a real taste of high-end performance at a realistically affordable price.



Avid Diva £1,100

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



Michell Orbe SE £1,825

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

Our 1	favnı	ırite	BEST BUY	EC EDITOR'S CHOICE
-				

TURNTABLES Record players			SPE					
				SUSP SUBCHASSI	SWITCHABL SPEED CHANG	SUPPLIED WITH ARI	SUPPLIED WITH CAR	ISSUE NUMBER
							-	203
				-	0	0		247
	<u> </u>							194
Avid Volvere Sequel	3,500	Heavyweight turntable that will deliver more of what's in a vinyl groove than most of the competition	33/45	0	9			229
Bluenote Bellavista/Borghese	1,594	Charming in appearance and sound if not particularly practical. Start your love affair with vinyl here	33/45			0		239
Clearaudio Champion Level 2	1,955	Neutral balance, great looks, but only so-so detail. Benefits greatly from isolation	33/45			0	0	223
Linn LP12 Basik	1,100	Trails the full LP12 significantly, but pace, rhythm, timing etc are still top rank	33	0		0		103
Michell Gyro SE	1,058	New DC motor-equipped Gyro offers great looks and even better sound. Price includes RB300 arm	33/45	9		0		239
Michell Orbe SE	1,825	A superb turntable, able to mix it with the best at virtually any price. Now features new DC motor.	33/45	0				235
Pro-Ject RPM 6	500	Basic, very neutral turntable and arm combination that can take a very expensive cartridge. A high-end bargain	33/45			0		236
Rega P2	198	Updated Planar 2; just as much fun as ever and now even better value as the competition falls away	33/45			0		214
Rega P3	298	Updated Planar 3, building on the strengths of the P2 with added subtlety and detail	33/45			0		214
Rega P25	619	The contemporary aesthetic wins admiration, the sonic assurance turns it into your own personal music shrine	33/45			0		239
Rega P9	2,248	Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm	33/45		0	0		228
Roksan TMS2	7,500	Typical Roksan sound, but better: pitch-accurate, lean, detailed and controlled, without the 'bloat' of lesser designs	33/45	0	0			246
SME Model 10A	3,411	Elegant and extremely capable design with Series V/309 hybrid arm, superbly built	33/45	0	0	0		195
SME Model 20.2A	5,274	Beautifully built, extremely neutral damped and suspended deck with superb sound. Inc V arm	33/45/78	0	0	0		186
	PRODUCT Audio Note TT1/ARM1 Avid Diva Avid Acutus Avid Volvere Sequel Bluenote Bellavista/Borghese Clearaudio Champion Level 2 Linn LP12 Basik Michell Gyro SE Michell Orbe SE Pro-Ject RPM 6 Rega P2 Rega P3 Rega P25 Rega P9 Roksan TMS2 SME Model 10A	PRODUCT £ Audio Note TT1/ARM1 594 Avid Diva 1,100 Avid Acutus 5,000 Avid Volvere Sequel 3,500 Bluenote Bellavista/Borghese 1,594 Clearaudio Champion Level 2 1,955 Linn LP12 Basik 1,100 Michell Gyro SE 1,825 Pro-Ject RPM 6 500 Rega P2 198 Rega P3 298 Rega P9 2,248 Roksan TMS2 7,500 SME Model 10A 3,411	PRODUCT Audio Note TT1/ARM1 594 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price Avid Diva 1,100 A solid and powerful sounding deck with fine build, requires a smooth, relaxed cartridge for best results Avid Acutus 5,000 Extremely capable design with no apparent shortcomings. Don't sell your vinyl 'til you've heard it on this! Avid Volvere Sequel 3,500 Heavyweight turntable that will deliver more of what's in a vinyl groove than most of the competition Bluenote Bellavista/Borghese 1,594 Charming in appearance and sound if not particularly practical. Start your love affair with vinyl here Clearaudio Champion Level 2 1,955 Neutral balance, great looks, but only so-so detail. Benefits greatly from isolation Linn LP12 Basik 1,100 Trails the full LP12 significantly, but pace, rhythm, timing etc are still top rank Michell Gyro SE 1,058 New DC motor-equipped Gyro offers great looks and even better sound. Price includes RB300 arm Michell Orbe SE 1,825 A superb turntable, able to mix it with the best at virtually any price. Now features new DC motor. Pro-Ject RPM 6 500 Basic, very neutral turntable and arm combination that can take a very expensive cartridge. A high-end bargain Rega P2 198 Updated Planar 2; just as much fun as ever and now even better value as the competition falls away Updated Planar 3, building on the strengths of the P2 with added subtlety and detail Rega P9 2,248 Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm Roksan TMS2 7,500 Typical Roksan sound, but better: pitch-accurate, lean, detailed and controlled, without the 'bloat' of lesser designs SME Model 10A 3,411 Elegant and extremely capable design with Series V/309 hybrid arm, superbly built	PRODUCT Se COMMENTS Audio Note TT1/ARM1 594 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price 33/45 Avid Diva 1,100 A solid and powerful sounding deck with fine build, requires a smooth, relaxed cartridge for best results 33/45 Avid Acutus 5,000 Extremely capable design with no apparent shortcomings. Don't sell your vinyl 'til you've heard it on this! 33/45 Avid Volvere Sequel 3,500 Heavyweight turntable that will deliver more of what's in a vinyl groove than most of the competition 33/45 Bluenote Bellavista/Borghese 1,594 Charming in appearance and sound if not particularly practical. Start your love affair with vinyl here 33/45 Clearaudio Champion Level 2 1,955 Neutral balance, great looks, but only so-so detail. Benefits greatly from isolation 33/45 Linn LP12 Basik 1,100 Trails the full LP12 significantly, but pace, rhythm, tirning etc are still top rank 33/45 Michell Orbe SE 1,825 A superb turntable, able to mix it with the best at virtually any price. Now features new DC motor. 33/45 Michell Orbe SE 1,825 A superb turntable, able to mix it with the best at virtually any price. Now features new DC motor. 33/45 Rega P2 198 Updated Planar 2: just as much fun as ever and now even better value as the competition falls away 33/45 Rega P3 298 Updated Planar 3, building on the strengths of the P2 with added subtlety and detail 33/45 Rega P9 2,248 Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm 33/45 Roksan TMS2 7,500 Typical Roksan sound, but better: pitch-accurate, lean, detailed and controlled, without the 'bloat' of lesser designs 33/45 SME Model 10A 3,411 Elegant and extremely capable design with Series V/309 hybrid arm, superbly built	PRODUCT Se COMMENTS Audio Note TT1/ARM1 594 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price 33/45 Avid Diva 1,100 A solid and powerful sounding deck with fine build, requires a smooth, relaxed cartridge for best results 33/45 Avid Acutus 5,000 Extremely capable design with no apparent shortcomings. 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A high-end bargain 33/45 Pro-Ject RPM 6 500 Basic, very neutral turntable and arm combination that can take a very expensive cartridge. A high-end bargain 33/45 Prega P2 198 Updated Planar 2: just as much fun as ever and now even better value as the competition falls away 33/45 Prega P3 298 Updated Planar 3, building on the strengths of the P2 with added subtlety and detail 33/45 Prega P3 2,248 Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm 33/45 Prega P9 2,248 Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm 33/45 Pro-Ject RPM 6 Son Son Sound, but better: pitch-accurate, lean, detailed and controlled, without the 'b	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 4 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price 33/45 4 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price 33/45 4 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price 33/45 4 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price 33/45 4 Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price 33/45 4 Simple and unpretention 4 Simple and unpretention 4 Simple Avid Acutus 5,000 Extremely capable design with no apparent shortcomings. Don't sell your vinyl 'til you've heard it on this! 33/45 4 Simple and unusually deliver more of what's in a vinyl groove than most of the competition 33/45 4 Simple Bluenote Bellavista/Borghese 1,594 Charming in appearance and sound if not particularly practical. Start your love affair with vinyl here 33/45 4 Clearaudio Champion Level 2 1,955 Neutral balance, great looks, but only so-so detail. Benefits greatly from isolation 33/45 4 Simple Bluenote Bellavista/Borghese 1,005 New DC motor-equipped Gyro offers great looks and even better sound. Price includes RB300 arm 33/45 4 Simple Si	PRODUCT	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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Our favourite BEST BUY BEDITOR'S CHOICE DUONO CADIDIDOCC

PHUNU GAN I NIUGES									
MM	MM and MC cartridges								
BADGE?	PRODUCT	£	COMMENTS						
80	Audio Technica AT110E	29	Excellent performance for the price, with little more than some mild coloration and a touch of hardness at high levels						
	Clearaudio Aurum Beta S	270	Clear improvement over cheaper Alpha, and good sound all round by any standards	4					
	Clearaudio Sigma	580	A nimble and revealing cartridge that is more at home in lower mass arms						
	Goldring Flite	250	A remarkably subtle and persuasive design that should tempt anyone						

	Goldring Elite	250	A remarkably subtle and persuasive design that should tempt anyone		0		235
	Grado Prestige Black	40	Offers admirable detail and treble extension, with good bass and ambience too	8		8	214
26	Grado Prestige Gold	110	Produces rich, open and expansive music with the minimum of fuss				235
EC	Lyra Helikon	1,095	Highly capable and highly neutral, this is a cartridge for all seasons, albeit fussy about vinyl quality	0			215
	Reson Reca	250	If you're after a high-quality moving magnet cartridge, they don't get much better than this	0			192
	Reson Etile	485	Plenty of life and detail, and refined with it		0		223
88	Sumiko Blue Point Special	250	A no-nonsense performer with engaging musical properties — one of the best around for less than £300		0		192
88	Van den Hul MC One Special	699	A gorgeous cartridge that's worth the price every time you hear a familiar track in a whole new light		0		235
EC	van den Hul Colibri XGP	2 699	Phenomenal resolution custom building to suit hard and software, but needs 500 ohm loading and is vulnerable to damage		0		244

Our favourite BEST BUY CELOTOR'S CHOICE

PHONO STAGES

Phor	ono stages		HONO INPL	HONO INPUTS	ADJ. G	. IMPEDANCE	SUE NUMBER	
BADGE?	PRODUCT	٤	COMMENTS	SI	SII	GAIN	R	9
BB	Creek OBH-8SE	160	Neutral, relaxed and involving sound from this neat little unit	0				223
	Lehmann Black Cube	275	Creates a well balanced sound that has few limitations and plenty of good qualities. Very flexible for the price	*		0	0	234
	NAD PP2 phono stage	50	A fine buy for turntable users on a tight budget - open tonality and clarity is distinctly impressive for the money	0				245
88	Tom Evans Microgroove	400	For dynamics and real bass extension alongside good tonal colour this is the one to beat, excellent value for the money		0			234
	Tom Evans Microgroove Plus	700	Stunning detail, gives new insights into familiar discs		0			223
EC	Tom Evans The Groove	1,800	Plenty of detail, excellent imaging and almost flawlessly neutral: a good choice for maximum information retrieval off any LP		0			201
88	Trichord Dino/Dino+	498	Relaxed yet resolute with very good image depth and natural balance, not to mention great flexibility	0	0	0	0	234

TURNYABLE SPECS KEY SPEEDS Speeds offered in rpm. SUSP SUBCHASSIS Turntables with a sprung or suspended support for the platter and arm. SWITCHABLE SPEED CHANGE Some decks require manual lifting of the belt from one pulley to another to change speed, but not these ones. **SUPPLIED WITH ARM** Deck is supplied complete with tonearm – some require a separate purchase in this department, but the dealer will fit it for you. **SUPPLIED WITH CARTRIDGE** Some decks are supplied with a starter cartridge and this is included in the price shown.

CARTRIDGE SPECS KEY MM Moving magnet cartridge — see amp and phono stage features to match this type. MC Moving coil cartridge — see amp and phono stage features to match this type. REPLACEABLE STYLUS Some cartridges have separate styli for ease of replacement, but it compromises sound quality.

SPECIFICATIONS

MC

SPECIFICATIONS

214 223

"The Best in New, Second Hand and X-Dem Equipment"









H I - F I

HOME CINEMA MULTIROOM INSTALL

BUY/SELL

Choice

c h

Choice hi-fi make it easy for you to fulfill your sonic dreams. Quality hi-fi is not just about expensive brandnames. It's about aspiring to the very best sound, about choosing your ideal system from the widest selection in the country, in a unique no-pressure environment.

ourchoice

- Acoustic Energy
- Advantage ATC
- Audible Illusions Audio Physic B.A.T Boulder

- Bryston
- Cary C.A.T. Chord Clear Audio Denon DNM
- Egglaston Works Electrograph Delphi
- Gamut
- Genelec Gryphon Graham
- Imerge J M Lab Krell
- Lexicon Linn
- Lutron
- Lyra Mark Levinson Michell Eng. Musical Fidelity
- Naim NEC
- NEC Nordost Oracle Ortofon Plinius P.M.C.

- Primare
- Primare Project Quadraspire REL Rockport Roksan Rotel Ruark Shahinian

- Shahinian SIM2 SME
- Straight Wire Sugden Tara Labs

- Transfiguration Trichord
- Trilogy Van den Hul VPI
- Wilson Audio Wilson Research YBA

QUARTERLY	saleiten	n s
Exposure VII pre + XII psu	£450.00*	£1,200.00
Magnum Dynalab P 200 Pre	£695.00	£1,900.00
dpa Enlightenment DAC	£295.00*	£.
Kenwood L1000C Pre	£295.00	£895.00
Kenwood LI 000M Power	£395.00	£1,295.00
Michaelson Audio Odyseus	£495.00*	£1,500.00
Sunfire 300 Power Amp (110 volts)	£695.00*	£2,400.00
Arcam Delta 110 pre amp	£295.00	£750.00
McCormak Line Drive	£395.00	£995.00
Thule Spirit CD	£495.00	£900.00
Audio Refinement Pre 5 "new"	£395.00*	£895.00

New thismonth

* Reduced this month

POWER AMPLIFIERS		
Cello Performance 2 Monoblocks	£7,995.00	£20,000.00
Krell KSA 250	£2,750.00	£6,000.00
Bel Canto Evo 4	£On Dem	£3,895.00
Krell KSA 80B	£1,395.00	£3,600.00
Roksan Caspian Integrated	£On Dem	£895.00
Roksan Caspian Power	£On Dem	£645.00
Quad 33/ 303	£295.00	-
PRE AMPLIFIERS		
Audio Research LS25 mk II	£4,250.00	£5,995.00
YBA 2a Line	£1,295.00	£1,995.00
LOUDSPEAKERS		
Martin Logan SL3	£1,795.00	£3,400.00
IM Lab Mini Utopia + Stds Rosewood	£2,495.00	£4,899.00
Dynaudio Audience 50	£395.00	£577.00
JM Lab Nova Utopia	£On Dem	£19,999.00
Heybrook Sextet (new drivers)	£495.00	£1,200.00
Revel Studio	£7,495.00	£13,000.00
ATC SCM 10 Passive Black	£495.00	£1,100.00
CD PLAYERS & DACS/ DVD PLAYERS		
Krell KPS 25sc 24/96	£11,995.00	£23,498.00
Roksan Caspian CD	£On Dem	£995.00
TURNTABLES, ANALOGUE, VARIOUS		
Project RPM 6 "new"	£On Dem	£500.00
Musical Fidelity XLP Phono Stage	£75.00	£150.00
Project RPM9/ arm/ 25FL (Ex Dem)	£895.00	£1,350.00
VPI TNT mk IV/ Rockport 6000/ Flywheel/		
VPI Stand/ Clearauudio Accurate/ Pump etc. "new"	£8,500.00	£16,000.00
Roksan Radius (Acrylic) "new"	£On Dem	£850.00
Roksan Caspian Phono se	€On Dem	£950.00
Ortofon Rohman (2 hrs)	£850.00	£1,050.00
AV COMPONENTS/ PROCESSORS		
Lexicon MC8 Processor	£On Dem	£5,000.00
Lexicon RT10 DVD Player	£On Dem	£2,300.00

amplifiers

Krell FPB 600c	£6,500.00	£14,000.00
Krell FPB 700cx	£11,995.00	£15,000.00
Krell FPB 400 cx	£9,600.00	£12,000.00
Naim Nait 3	£475.00	£608.00
Rowland Model 12 (4 chassis)	£8,995.00	£14,500.00
Michell Alecto Monoblocks	£995.00*	£2,000.00
Cary 805 C Monoblocks "new"	£4995.00*	£8,250.00
E.S. Lab DX-S8	£On Dem	£2,995.00
Plinius SA50	£1,795.00	£2,700.00
Plinius 8200P	£On Dem	£1,550.00
Krell FPB 200	£3,995.00	£8,000.00
Krell FPB 600	£5,995.00	£12,998.00
Plinius SA 102 "new"	£On Dem	£3,750.00
Musical Fidelity P180	£395.00	£900.00
Musical Fidelity CRPS	£395.00	£900.00
Bryston 4 BSST	£On Dem	£2,350.00
Jadis Defy 7 mk III	£2,750.00	£6,000.00
Mark Levinson No 27	£1,750.00	£6,000.00
Linn Bass Active Card	£69.00	£120.00
Gamut D200 "new"	£2,250.00	£3,250.00
Musical Fidelity F15	£995.00*	£2,500.00
Audio Innovations \$1000 mk III monos	£995.00*	£3,000.00
Krell MDA 300	£4,995.00	£12,000.00
Cary SLA 70 mk II Silver	£1,295.00	£2,250.00
Boulder 500 AE	£3,495.00	£5,500.00
Linn Klassik CD/Amp silver	£895.00	£1,030.00
Boulder 1060 Power "new"	£On Dem	£16,500.00
Primare 30.1 mk II Integrated	£1,350.00	£1,500.00
YBA Passion Stereo "new"	£3,995.00	£5,995.00
Plinius 250 mk IV "new"	£On Dem	£6,350.00

Pre amplifiare

DNM 3c Primus Pre (3c psu)	£1,195.00	£2,000.00
Tom Evans The Vibe Pre	£On Dem	£2,700.0
Krell KRC	£2,495.00	£6,949.0
Graff 13.5 Pre	£1,495.00	£3,000.0
Chord DSC 1500E (dac/pre)	£3750.00*	£6,500.0
Audio Research LS7	£895.00*	£1,800.0
Audio Research LSI	£795.00*	£2,000.0
Audio Research LS3	£895.00*	£1,997.0
Musical Fidelity F22	£695.00	£1,500.0
AVI S2000 MP remote pre	£395.00	£800.0
Cary SLP98L Remote Pre x-dem	£1495.00*	£2,794.0
Boulder 1012 (pre amp/ 24.96 dac/ Phono)	£On Dem	£13,000.0
YBA Passion Pre (inc Phono)	£3,995.00	£5,595.0
Boulder 2010 Pre	POA	£30,000.0
Plinius 16L "new"	£On Dem	£3,200.0
C.A.T. ultimate reference Pre Amp Inc/Phono "new"	£On Dem	£5,750.0

Quality speakers

JM Lab Alto Utopia BE	£On Dem	£9,999.00
Wilson Witt mk I	£3,750.00	£9,000.00
Avante Garde Duo (White)	£4450.00*	£8,000.00
JM Lab Utopia	£8995.00*	£18,000.00
JM Lab Mini Utopia + Stand	£2,495.00	£4,700.00
B&W Matrix 805 (Walnut)	£295.00	£650.00
ClaraVox Magnifica	£5,495.00	£14,500.00
JM Lab Micro Utopia + Stand	£2,195.00	£4,349.00
Wilson 5.1	£7,995.00	£19,600.00
Reference 3A	£1,750.00	£2,250.00
Audio Physic Spark	£1,150.00	£1,795.00
Talon Kite Centre & Bracket	£795.00	£1,750.00
Ensemble PAI	£895.00	£2,000.00
Audio Physic Caldera	£4,995.00	£10,000.00
Aerial Acoustic SW12 Sub Woofer, Maple/remote	£2,995.00	£5,200.00
Mirage M3 si	£1295.00*	£4,100.00
Linn Kabers (Active)	£995.00	£2,500.00
Rel Q 200 E	£On Dem	£650.00
Rel Q I50 E	£On Dem	£500.00
Audio Physic Luna Sub (wood)	£On Dem	£1,799.00
Audio Physic Yara	£On Dem	£999.00
Vienna Acoustics Mahler	£On Dem	£6,000.00
Vienna Acoustics Mozart	£On Dem	£1,700.00
Vienna Acoustics 5.1	£On Dem	£3,500.00
Cabasse io 5.1	£On Dem	£2,170.00
JM Lab Sib & Cub (5.1 spk sys)	£On Dem	£859.00
Blue Room Minipod (White)	£225.00	£298.99
Blue Room Minipod + Sub (Blue)	£625.00	£749.00
Blue Room Minipod Sub	£415.00	£468.99
SD Acoustics SD I	£595.00	£1,650.00
Genelec 205 Active Monitors	£On Dem	£750.00
Audio Physic Virgo III "new"	£On Dem	£4,000.00
Audio Plan Contrast 3	£995.00	£3,200.00
Audio Physic Tempo III "new"	£On Dem	£2,000.00
Naim SBL's	£995.00	£2,225.00
Rogers LS55 "new"	£260.00*	£430.00

Dolayers

	DACS	
Musical Fidelity NuVista cd	£2,495.00	£3,000.00
Sony SCD I SACD	£2,495.00	£4,000.00
Theta Data Pro Basic Illa	£1,795.00	£3,495.00
Bow Wizzard 24/96	£2,795.00	£4,000.00
Theta DS Pro Prime II a	£995.00	£1,800.00
Mark Levinson ML 31	£3,750.00	£9,000.00
Trichord PD-S 503	£295.00	£500.00
Pink Triangle Ordinal	£295.00	£600.00
YBA CD I Delta (Twin psu)	£3,995.00	£5,500.00
Audio Synthesis DAX	£1,995.00	£4,000.00
Krell KPS 20i	£4,795.00	£9,900.00
Linn Karik Numerik	£1,595.00	£3,300.00
Mark Levinson 39	£2,995.00	£5,000.00
Marantz 17 Ki Sig (Black & Gold)	£695.00	£1,200.00
Myryad MDV 200 DVD	£750.00	£995.00
YBA CD 3 Delta	£On Dem	£2,200.00
Audiomeca Damnation CD Transport	£750.00	£1,600.00
Primare V20 DVD/CD	£750.00	£1,000.00
Audio Aero 32/192 Capitole CD (Ver. 4)	£On Dem	£4,500.00
Primare V25 CD/DVD	£On Dem	£1,000.00
Theta Pro Geny	£595.00	£1,295.00
Boulder 2020 dac	POA.	£24,000.00
Theta Data Transport AT + link	£1,995.00	£4,000.00
YBA CD Integre "new"	£On Dem	£1,195.00
the state of the s		

Turntables & analogue

		7
Tara Lab Decade 8ft pair	£895.00	£2.000.00
EAR 834p phono stage	£350.00	£500.00
Transparent Ref 20ft Spk	£3,295.00	£5,000.00
Lorricraft record cleaning machine	£On Dem	£1,100.00
Lyra Beta	£525.00	£595.00
Tara Labs The One Balanced Im	£999.00	£2,250.00
Earmax Pro	£On Dem	£425.00
Revox B160 Tuner	£450.00	£995.00
Decca London Gold (original Garrott Brothers)	£1,495.00	£ Priceless
SME 30/2 A "new"	£10,495.00	£12,289.00
Moth Record Cleaning m/c	£395.00	£ -
Project RPM4/ Ortofon 510 "new"	£On Dem	£325.00
Ortofon Rohmann	£On Dem	£1,050.00
Ortofon Kontrapunkt a/b "new"	£On Dem	£500.00/£750.00
Michell Gyro SE/ RB300 "new"	£On Dem	£1,100.00
Michell Orbe/QC	£1,495.00	£2,200.00
Audio Synthesis Phono Eq mm/mc	£795.00	£ -
Gryphon Phono Pre-Amp (dual mono) Head Amp	£795.00	£1,600.00
SME Series V Arm "new"	£1,350.00	£1,650.00
Pink Triangle PT Ext psu	£495.00	£ -
Plinius 14 Phono "new"	£On Dem	£2,750.00
Nackamichi DR 3	£195.00	£400.00
Tom Evans - The Groove "new"	£On Dem	£1,795.00
Clear Audio Reference Mc phono stage X-demo	£1,695.00	£2,065.00
Rega Planer 3 + Hi Fi News Out Board Power Supply	£320.00	£423.00
Clear Audio Symphono phono stage X-demo MM/MC	£640.00	£740.00
Lavardin Reference Phono "new"	£On Dem	£2,500.00

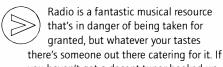
components

Lexicon DC2	£1,995.00	£3.500.00
SIM 2 HT 300	£7,500.00	£9,000.00
Primare P30 Processor	£1,295.00	£2,000.00
Linn Klassik DVD	£On Dem	£2,000.00
Lexicon MCI "new"	£3,000.00	£5,500.00
Lexicon MCI2 / MCI2B	£On Dem £810	0.00/ £8900.00
Loewe Xemix DVD "new"	£On Dem	£495.00
PLASMAS		
From NEC/ Panasonic/Pioneer/Sharp	from £4000.00	POA
Electrograph Delphi/Seleco/Sony/Sanyo	-	POA
Panasonic TH-42 PWD5 "new"	£4,995.00	

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RADIO TUNERS

FM and DAB hi-fi separates



you haven't got a decent tuner hooked up to your hi-fi already, you're missing out!

DAB or FM?

Digital Audio Broadcasting (DAB) is said to be available to 80 per cent of the population and the long-term plan is to switch public broadcasting over to digital, but hardware prices have yet to come down to a point where this would be acceptable. Its advantages over FM include hiss-free reception, the potential for a wider range of stations and the ability to display comprehensive programming information. FM's RDS system means that station name and occasionally track titles are displayed, but the range of information is fairly limited.

Where FM scores over DAB is in the lower cost of hardware and the greater reception

area. It can also provide higher sound quality if reception conditions are favourable. Absolute sound quality judgements are muddied by the fact that you are listening to different forms of compression and processing at the studio for each station.

What is clear, however, is that there are more and more radio stations broadcasting on DAB that aren't available on FM. So if it's variety of programming you're after, they have a lot to offer.

RECEPTION

The quality of signal you feed a tuner will dictate its sound quality. So serious FM listeners should get a decent external aerial and connect it with as few junctions and splits as possible. Every time you split the cable (ie take a feed for another tuner) you halve signal strength! With DAB the same applies but get a DAB-specific aerial. See www.bbc.co.uk/ digitalradio for details.



	r favourite	_			SPECIFICATIONS						
	UNER	5		W			REMOTE	SIG. STRENGTH	ROT. TUNING KNOB	ISSI	
FM (& Dab Hi-Fi Sepaf	RATES		WAVEBANDS	PRESETS		CONTROL	TH METER	NG K	ISSUE NUMBER	
BADGE?	PRODUCT	3	COMMENTS	NDS	SEE	RDS	ROL.	ER	NOB.	器	
FM TU	NERS										
	Cambridge T500	180	Very capable tuner suited to good and less good reception conditions	FM,M,L	64			0	0	193	
	Creek T43	399	Quality UK-made tuner offering classy sound in all areas at a very fair price	FM,M,L	64		0	0	0	193	
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				0	193	
EC	Magnum Dynalab MD102	2,200	Unique remote control analogue FM tuner delivers a superbly transparent sound that makes radio fun	FM	5		0	0	0	241	
BB	Marantz ST6000	180	Another budget killer from Marantz, with sound well above its class and useful features	FM, M, L	90	0		0		211	
	Myryad T-30	400	Attractive product that produces attractive sounds too: capable of very musical performance with a good aerial	FM	29		0	0		193	
36	NAD S400	600	One of the best around – bass and treble are both well extended and detail is excellent	FM	30	0	0	0		230	
36	Primare T21	600	Identical to NAD S400 and likewise a very fine tuner	FM	30	0		0		230	
98	Rega Radio 3	374	Unpretentious unit which does what it claims, very well. Unusually fine FM sound in all areas	FM,M	20		0			242	
	Rotel RT-02	279	A highly competent tuner which always sounds appealing and fuss-free	FM,M	30		0	0		242	
DAB TU	INERS			9.000						1000	
	Arcam DT-81	650	A very smart and polished DAB performer	DAB	16		0	0	0	221	
88	Cambridge Audio DAB300	150	Simple unit with limited features (no RDI) but decent sound – a very near match for more expensive models	DAB	10			0	0	242	
***************************************	Pure DRX-701ES	250	An excellent introduction to DAB, fine value, simple to use and feature loaded	DAB	99		0	0	0	234	
	Pure Digital DRX-702ES	330	Very flexible DAB (inc L-band) and FM tuner. DAB is good, FM a touch disappointing	DAB,FM,M	99	0	0	0	0	242	
	TAG McLaren T32R+DAB	2,290	Classy hi-fi at its best: top sounds on FM and DAB, and a joy to own and use	DAB,FM,M,L	99	0	0	0	6	230	

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

DIGITAL AUDIO RECORDERS

CD, MiniDisc and hard drive recorders

MiniDisc

MD's strength is versatility. You can record and then re-record many times over. Editing facilities are second to none you can erase mistakes, name tracks and re-order a disc's contents with a few simple button pushes, making it ideal for building compilations. They're pretty robust too.

Sound quality is below that of CD-R/ CD-RW. The format uses a Sony-developed compression technology called ATRAC, which discards part of the data in order to squeeze it on the disc. If you're copying from CD to MD, the result tends to sound a little cold in comparison, lacking a degree of detail and ambience. But to most people it still sounds light years ahead of cassette - clean and hiss-free.

Recordable CD

With recordable CD you have a choice of two disc types: CD-R discs are the cheapest, but you can only record once; and CD-RW discs are a little more costly, but you can rerecord on them ad infinitum.

Though the latest machines incorporate some useful editing facilities, CD-R/RW is not as flexible as MD. However, sound

quality is higher - if you're recording from a CD, the best models will give you a copy that is very close to the original. In terms of compatibility, most CD players will play back a CD-R disc, but older models might have trouble with CD-RW (though you can, of course, play the disc back on your own recorder). If you want to play a CD-R/RW on a DVD player, check for compatibility.

Hard drive

The latest contender on the digital recording scene is also the most flexible. Some HDD (hard disk drive) recorders can store whole music collections if you use a compression format such as MP3. HDD recorders are taking over from multidisc CD changers as sound servers in multiroom installations, where their ability to play more than one piece of music at a time is a great boon. HDD also offers impressive editing facilities on a par with MD, and they can also record from CD (or to CD-R/RW) at high speed.

At present, sound quality isn't the driving force behind the format - flexibility and storage capacity being bigger issues - and a plain CD-R/RW machine will outperform an HDD recorder in fidelity terms.



-	r favourit				SPECIFICATIONS					
	IGHA	L	RECORDERS		HD CA	OPTICAL	ELEC IN/OUTPUTS	ISSUE		
CD-	R/RW, MD and HD	D reco	orders	PE	CAPACITY (GB)	IN/OUTPUTS	NOUT	JE NUMBER		
BADGE?	PRODUCT	3	COMMENTS	CKS	(GB)	SIDE	SInc	BER		
	RW RECORDERS					388				
	Denon CDR-1000	400	A respectable player and recorder, though some midband congestion was noted when recording	1		8	0	218		
88	Marantz DR6000	400	No frills, but in its fundamentals this is one of the finest CD recorders on the market	1		0	0	233		
	NAD C660	500	Audiophile twin deck offering high-speed copying, HDCD replay and notably fine recording from analogue	2		0	0	243		
88	Philips CDR802	300	Tacky looks and build notwithstanding, this is a well-equipped and technically sound 3-to-1 autochanger/recorder at a good price	2		0	0	233		
BB	Philips CDR951	380	An improvement on previous models, it delivers the musical goods in some style	1		0	0	205		
88	Pioneer PDR-609	270	Classic CD recorder with outstandingly good sound for the money on both record and replay	1		0	0	243		
	Pioneer PDR-W839	350	Good-quality twin CD burner makes recordings that can be hard to distinguish from the original. Good value too	1		0	0	218		
MD RE	CORDERS	1275								
	Pioneer MJ-D508	200	Well equipped, but musically sleep-inducing player that receives its Recommendation owing to the price	1		0	0	205		
	Sony MDS-JE480	130	Straightforward and effective, but the three real killer features are price, price and price	1	Table Management	0		233		
HDD R	ECORDERS			100	200					
	Imerge S2000	1,599	Intended as the centrepiece of a multi-room installation, this three-output server combines flexibility with good sound	2	80	8	8	243		
BB	Yamaha CDR-HD1300	600	Superb combination of high-speed CD-RW drive and hard disk, adding editing flexibility to CD recording	2	80	0	0	243		

SPECS (EY) DECKS Amount of drive mechanisms on board - twin-deck recorders use one to play while the other records. HD CAPACITY Amount of gigabytes of storage capacity, for HD only OPTICAL IN/OUTPUTS Optical Toslink in and outputs for digital connection to a CD player or DAC. ELEC IN/OUTPUTS Electrical coaxial in and outputs for digital connection to a CD player or DAC.

Sevenoaks sound & vision



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

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

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

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

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Are you looking to neatly and seamlessly integrate a Home Cinema or Hi-Fi System into your home? Our Custom Installation experts are fully trained in all areas



and provide a prompt, reliable and professional service. Whether you're looking for lighting control systems, a dedicated home cinema installation with a retractable screen and built-in speakers or an integrated control system, Sevenoaks Sound & Vision has the solution.

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The STAINES store, located at **4 Thames Street**, is due to open on 18th October. Please call **01784 460777** to confirm before travelling or visit our website for more information

OPENING SOON

Subject to legal completion, we will be opening a new store in **Ealing** (North London).

www.sevenoakssoundandvision.co.uk



Product EWS

CYRUS INTRODUCES CYRUSLINK
HARD-DISC SERVER SYSTEM PRODUCTS

This exciting range includes three main components: Linkserver, Linkport and Linkwand.

Linkserver is at the core of the system. This is an upgradeable, multi-room enabled Hard Disc audio library. It can store around 5,000 albums using MP3 compression or an amazing 400 uncompressed CDs for maximum audio performance.

Users can playback music in many remote zones via client units called **Linkports**, streaming the music digitally from the main server. And as FM radio and an amplifier are already integral to the Linkport, all you need to do is add speakers to the room and you have a compact unit able to access your entire music collection.

Controlling all of this is **Linkwand** - a new software system compatible with the latest generation of Windows, CE compatible PDAs and



Webpads. Simply touch the icons on the screen to control the media library on the server, multi-room settings and all the Cyrus audio components.

Linkserver 160£2999 (Four Zone HD Server 160Gb Drive)
Linkserver 250£3499 (Four Zone HD Server 250Gb Drive)
Linkport £650
Linkwand £200
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PLEASE SEE PAGE 7
FOR ADDRESS AND TELEPHONE
NUMBER DETAILS

WITHAM (ESSEX)

WOLVERHAMPTON

Sevenoaks sound & vision





MICHELL GYRO SE TURNTABLE / RB300 TONEARM £1049.95





B&W BOWERS & WILKINS DM602 S3 SPEAKERS

£299.95

performance in both 2-channel and home cinema. Now, Series 3 continues that tradition, while raising the standards of sound quality at this level by drawing on their vast experience in the high-end sector.

"But the B&W 602 S3 are our winners.. No rival can match the wide ranging dynamics or low frequency performance of these not so compact standmounters. Add all-round sonic excellence and the choice is easy."

FREE SPEAKER CABLE* WORTH £50 WITH ANY B&W SPEAKERS OVER £280



ROTEL RCD-02 CD PLAYER £379.95 RA-01 AMPLIFIER (PICTURED)

£249.95

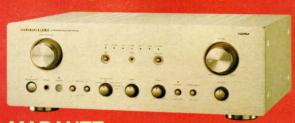
RA-02 AMPLIFIER £349.95

INTERCONNECT CABLE* WORTH £60

Best Buy

experience more experience more experience more





MARANTZ
PM7200 AMPLIFIER
£329.95 (BLACK)





PURE DIGITAL

DRX-702ES ANALOGUE/DAB TUNER **£329.95**



MUSICAL FIDELITY A3.2 A3.2 CD PLAYER £999.95 A3.2 AMPLIFIER £979.95



FREE INTERCONNECT CABLE* WORTH £100

£

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Advertisement valid until at least 19/11/03, E&OE.





MISSION

782 SE SPEAKERS

£899.95

780 SE SPEAKERS

£349.95

◀ 782 SE

"Well, with the exception of the alderwood-veneer finish, these floorstanders look identical to the standard model, although there's a new tweeter and crossover design. One of the advantages of the three-way configuration is that each driver deals with only a narrow section of the frequency range, and the designers optimise each unit to perform its respective task. Mission's engineers have excelled in this area: these elegant floorstanders sound beautifully balanced and few rivals under £1000 can match their wonderful levels of clarity. The 'special edition' tag is overused but these talented floorstanders are bona fide sonic stars."

WHAT HI-FI? June 03

780 SE

"The revamped Mission 780s are hugely enjoyable: anyone with up to £400 to spend should consider these standmounters. Mission's clever move has paid off."







FREE SPEAKER CABLE* WORTH £50

WITH ANY MISSION SPEAKERS OVER \$280

Sevenoaks SOUND & VISION

ROKSAN KANDY •

KD-1 MKIII CD PLAYER £594.95

KA-1 MKIII AMPLIFIER £594.95



KA-1 MKIII AMPLIFIER "Roksan has done an impressive job with the Kandy MKIII, creating a powerful and musical amplifier that's a step up from previous models.'



KD-1 MKIII CD PLAYER "Last year we said the Kandy CD player was very impressive but could be better - and now it is. The MkIII

model is an exceptional-sounding all-rounder."

FREE INTERCONNECT CABLE* WORTH £60

WHEN ROKSAN KANDY CD & AMPLIFIER PURCHASED TOGETHER

WHARFEDALE PACIFIC

EVOLUTION 30 SPEAKERS

£649.95

more like a revolution: Wharfedale's new an upgrade of its Pacific series.

Evolution 30s and the sonic changes leap out at you. Sitting on their chunky spikes and situated in free space, the speakers sound wonderful: low frequencies delve deep and delivery is punchy and fast...

by now we love the Evolution 30s. They're beautifully made and great

WHATHI-FI? Mar



You'll have gathered



Please Note: Some products may not be available at all outlets. Please call before travelling.*Not in conjunction with any other offer. Advertisement valid until at least 19/11/03, E&OE.



CYRUS ELECTRONICS

6 CD PLAYER £599.95 8 AMPLIFIER

£799.95 (BELOW)

Cyrus has been developing high performance hi-fi systems for nearly 20 years. Today their upgradeable, modular product range includes multi-room systems, home cinema and some of the world's finest hi-fi systems. Cyrus products are hand finished, half size die-cast enclosures and include a hidden digital command system that allows simple operation of any size system.

The new product range includes the 6 and 8 amplifiers and the stunning new high performance, CD players, the CD6 & CD8. Other models include the Pre X and Mono X Pre/Power combination and a new disc player, DVD8, featuring specially tuned video and audio circuitry.

audio circuitry.

CYRUS 8 AMPLIFIER

"The 8 is a large step forward from older generations of Cyrus amplifiers, and takes the company back into the leading pack in the sub-£1000 integrated amp sector... The Cyrus 8 is a must-audition product."

8 CD PLAYER £999.95 PRE X PRE £999.95

MONO X POWER £1199.95 (EACH)





experience more experience more



LINN CLASSIK ▼ MUSIC SYSTEM (EX SPEAKERS) £849.95



"The Classik sounds simply marvellous. Boasting fine impact and drive, it retains its grip even as it thumps out rock and dance tracks. Ask it to play quiet



acoustic music and its smooth, liquid presentation impresses still further. The Classik offers the performance you'd expect from high quality separates in one lovely package - this is a very superior product."



YAMAHA CDR-HD1300 CD-RW/HD RECORDER £529.95





SONY RCD-W3 CD-RW RECORDER £199.95



DENON DM31 SYSTEM ▶

UD-M31 CD RECEIVER £229.95
SC-M51 SPEAKERS

£69.95





MONITOR AUDIO BRONZE BRONZE B2 SPEAKERS £199.95

"...Their overall performance is faultless... The Bronze B2s sound like pure gold: at £200 they offer superb value for money... Forget "must-listen" - the B2s are 'please-listen' products."





Product of the year 2003

"The D-M30 was exemplary, as its three What Hi-Fi? Sound and Vision Awards clearly show. The D-M31 is even better, making it phenomenal value for money."

OPTIONAL RECORDERS: DMD-M31 MINIDISC RECORDER • DRR-M31 CASSETTE DECK

Sevenoaks sound & VISION



PRODUCT RANGE

An outstanding selection of products are on display and available for demonstration at all Sevenoaks Sound & Vision stores. However, some products may not be available at all outlets.

Please call to check availability before travelling.

TURNTABLES

Michell Gyro SE/RB300	£1049.95
Michell TecnoDec	£599.95
Project Debut Phono SB	£169.95
Project Debut II (Black)	£119.95
Project Debut II (Colours)	
Project 1 Xpression	£209.95
Project RPM4	£349.95

TUNERS

Arcam DiVA T61	£249.95
Cyrus FM X	£499.95
Denon TU260L MKII	£119.95
Marantz ST4000	£109.95
Pure Evoke 1 DAB	£99.95
Pure DRX-702ES Analogue/DAB	£329.95

CD PLAYERS

Arcam DiVA CD73T	£399.95
Arcam DiVA CD82T	£599.95
Arcam DiVA CD93T	
Arcam FMJ CD33T	£1299.95
Cyrus CD6	£599.95
Cyrus CD8	£999.95
Denon DCD485	£129.95
Linn Genki	£1099.95
Linn Ikemi	£2199.95
Marantz CD5400	£149.95
Marantz CD17/II M	£799.95
Meridian 507	
Musical Fidelity A3.2	£999.95
Musical Fidelity A308 ^{cs}	£1999.95
Musical Fidelity Tri-Vista SACD	£3994.95
Quad 99 CD-P	£999.95
Roksan Kandy KD1 MKIII	£594.95
Roksan Caspian	£994.95
Rotel RCD02	£379.95
Rotel RCD1072	£594.95

RECORDERS

Pioneer PDR609 CD-RW	£169.95
Sony RCDW3 CD-RW	£199.95
Yamaha KX393 Cassette Deck	£119.95
Yamaha KX580SE Cassette Deck	£199.95
Yamaha CDR-HD1300 CD-RW	£529.95

AMPLIFIERS

Arcam DiVA A65 Plus	£369.95
Arcam DiVA A80	£599.95
Arcam DiVA A85	£799.95
Arcam FMJ A32	£1149.95
Cyrus 6	£599.95
Cyrus 8	£799.95
Cyrus Pre X Pre	£999.95
Cyrus Mono X Power (Each)	£1199.95
Denon PMA355	£199.95

Linn Kolector Pre					£574.95
Linn LK85 Power					£544.95
Marantz PM4400					£179.95
Marantz PM7200 (B	lack)				£329.95
Musical Fidelity A3	2				£979.95
Musical Fidelity A3.	2 Pre				£999.95
Musical Fidelity A3.	2 Pov	ver			£999.95
Musical Fidelity A3	08				£1999.95
Musical Fidelity Tri-	Vista	300			£3994.95
Quad 99 Power					£549.95
Roksan Kandy KA1 N					
Roksan Caspian					€894.95
Rotel RA-01					£249.95
Rotel RA-02					
Rotel RA-1062					

SPEAKERS

Acoustic Energy Aegis Evo One	£179.95
Acoustic Energy Aegis Evo Three	£349.95
Acoustic Energy AE1 MKIII (From)	£1699.95
B&W DM303	£179.95
B&W DM601 S3	£249.95
B&W DM602 S3	£299.95
B&W 705	£899.95
KEF Q1	£249.95
KEF Q3	£399.95
KEF XQ1	£999.95
Linn Katan	£649.95
Linn Ninka	£1099.95
Mission m31	£129.95
Mission 780SE	£349.95
Mission 782SE	£899.95
Monitor Audio Bronze B2	£199.95
Monitor Audio Silver S1	£299.95
Monitor Audio Silver S6	£599.95
Monitor Audio Gold Reference 10	£799.95
Monitor Audio Gold Reference 20	£1499.95
Quad 11L	£379.95
Quad 22L	£894.95
Ruark Epiloque II	£344.95
Wharfedale Pacific Evolution 30	£649.95

HI-FI SYSTEMS

Denon 201 Ex Speakers	£549.95
Denon DF101 Ex Speakers	
Denon DM31 Ex Speakers	£229.95
Linn Classik Music Ex Speakers	
Onkyo CS210 Ex Speakers	
Teac Legacy 600 Inc Speakers	
Teac Reference 300 Ex Speakers	
Teac Reference 500 Ex Speakers	£599.95

DVD SYSTEMS

Denon ADV1000 Ex Speakers	£699.9
Jamo DVR50/A305PDD	
Linn Classik Movie Ex Speakers	£1499.95
Linn Classik Movie Di Ex Speakers	
Onkyo DR-S2.2 Ex Speakers	. £899.95
Pioneer DV565A/C-501 Ex Speakers	£599.95
Teac Legacy 700/LS-L800 Speakers	£949.95

DVD PLAYERS

DIDIENIO		
MAKE & MOOEL	REGION 2	MULTI REGION
Arcam DiVA DV88 Plus	£999.95	£999.95
Arcam DiVA DV89	£1299.95	£1299.95
Cyrus DVD8	£1199.95	£1199.95
Denon DVD-2900 Universal	£749.95	£799.95
Denon DVD-A1	£2149.95	£2199.95
Harman Kardon DVD21	£249.95	£249.95
Harman Kardon DVD25	£349.95	£349.95
Marantz DV4300	£249.95	£249.95
Onkyo DV-SP500	£249.95	£249.95
Pioneer DV360	£109.95	£129.95
Pioneer DV464	£129.95	£149.95
Pioneer DV565A Universal	£199.95	£229.95
Pioneer DV656A Universal	£299.95	£319.95
Pioneer DV757Ai Universal	£649.95	£699.95
Tag McLaren DVD32FLR	£2994.95	£2994.95
Teac DV50	£4499.95	£4499.95
Toshiba SD330E	£99.95	£119.95
Wharfedale DVD M3	£79.95	£79.95

DVD RECORDERS

MAKE & MOOELREGION 2	2 MULTI REGION
Panasonic DMR-E50 DVD-R £319.95	£ TBA
Philips DVDR70 DVD+RW£299.95	£299.95
Philips DVDR75 DVD+RW £399.95	£399.95
Pioneer Latest Models £ POA	AOA 3
Sony RDR-GX7 Recorder£699.95	£ TBA
Toshiba RD-XS30 DVD Recorder ,£569.95	£599.95

A/V AMPLIFIERS RECEIVERS & PROCESSORS

Arcam AVR200 A/V Receiver	£799.95
Arcam AV8/P7 A/V Pre/Processor/Power	£5499.95
Cyrus AV8 AVV Processor	£1099.95
Denon AVC-A1SR A/V Amplifier	£2499.95
Denon AVC-A11SR A/V Amplifier	
Denon AVR1604 A/V Receiver	£299.95
Denon AVR1804 A/V Receiver	£399.95
Denon AVR2803 A/V Receiver	
Denon AVR3803 A/V Receiver	£799.95
Harman Kardon AVR2550 A/V Receiver	£399.95
Harman Kardon AVR5550 A/V Receiver	
Harman Kardon AVR8500 A/V Receiver	
Marantz SR4400 A/V Receiver	
Onkyo TX-SR501E A/V Receiver	
Onkyo TX-SR601E A/V Receiver	
Onkyo TX-NR900E A/V Receiver	
Pioneer VSX-C301 A/V Receiver	
Pioneer VSX-C501 A/V Receiver	
Pioneer VSX-D812 A/V Receiver	
Pioneer VSX-AX3i AVV Receiver	
Pioneer VSX-AX5i A/V Receiver	
Pioneer VSA-AX10i A/V Amplifier	
Rotel RSX1065 A/V Receiver	£1/99.95
Rotel RSP1066/RMB1075 A/V Pre/Power	
TAG McLaren AV30R AV Processor	
TAG McLaren AV192R AV Processor (From)	
Yamaha DSP-AX640SE AV Amplifier	
Yamaha RX-V440RDS AV Receiver	
Yamaha RX-V640RDS A/V Receiver Yamaha RX-V1400RDS A/V Receiver	
Tallialia nA-V1400MD3 AVV Necelver	£/99.95
OUDWOODED.	

SURWOOFFRS

OODWOO! LIIO	
B&W ASW675	£649.95
B&W ASW750	£1199.95
MJ Acoustics Pro 50 (Black)	£299.95
MJ Acoustics Pro 100 (Black)	£599.95
MJ Acoustics Reference 100 (Black)	£349.95
MJ Acoustics Reference 1 (Black)	£699.95
REL Q150E MKII (Brittex Black)	
REL Q201E	£724.95
REL Q400E (Brittex Black)	£999.95
REL Quake (Brittex Black)	
REL Strata III (Wood)	£699.95
REL Storm III (Brittex Black)	

A/V SPEAKER PACKAGES

Acoustic Energy Aego 5	£449.95
Acoustic Energy Aego P5	
Acoustic Energy Evo 3B	£899.95

B&W VM1/AS1	£849.95
Energy Take 5.1	
Energy Encore	£999.95
Jamo D7 THX Ultra 2 (from)	£3249.95
KEF KHT1005	£499.95
KEF KHT2005.2	£799.95
KEF Q7 AV	
M&K K5	£1715.95
M&K K3	£1894.95
M&K 850/CS35/V850	
Mission m70	£479.95
Monitor Audio Bronze B4	£949.95
Ruark Vita 120	

PLASMA

Fujitsu P42HHA10 42"	£3699.95
Hitachi 32PD3000P 32"	£2599.95
Hitachi 42PD3000E 42"	
Panasonic Latest Models	
Panasonic TH42PW6B 42"	£3199.95
Philips Latest Models	
Pioneer PDP433MXEV 43"	
Pioneer PDP433HDE 43"	
Pioneer PDP434HDE 43"	£4199.95
Pioneer PDP503HDE 50"	
Sony KE32TS2 32"	
out, reserve se	

LCD TV

Panasonic Latest Models	£ POA
Sharp Aquos LC-13B4E 13"	£449.95
Sharp Aquos LC-13E1E 13"	£429.95
Sharp Aquos LC-15B4E 15"	£549.95
Sharp Aquos LC-15E1E 15"	£499.95
Sharp Aquos LC-20B4E 20"	£999.95
Sharp Aquos LC-20E1E 20"	£949.95
Sharp Aquos LC-22SV2E 22" £	1299.95
Sharp Aquos LC-30HV4E 30"£	2799.95
Sharp Aquos LC-37HV4E 37"	4699.95
Sonv KLV17HR1S 17"	£899.95

PROJECTORS

Marantz VP-12S2 DLP	£6999.95
NEC HT1000 DLP	£3999.95
Sanyo PLV-Z1 LCD	
Screenplay SP5700 DLP	£2999.95
Sharp XV-Z91E DLP	£2099.95
Sim 2 Domino 20 DLP	
Sim 2 HT300 Plus DLP	£7999.95
ThemeScene H30 Cinema DLP	£1399.95
ThemeScene H56 Cinema DLP	
Yamaha LPX-500 LCD	£3299.95
Yamaha DPX-1000 DLP	

SPECIAL OFFERS

FREE INTERCONNECT CABLE WORTH £60

WHEN ANY CD & AMPLIFIER COMBINATION FROM THE FOLLOWING MANUFACTURERS IS PURCHASED TOGETHER:- ARCAM DIVA • ROTEL • ROKSAN KANDY

FREE INTERCONNECT CABLE WORTH £100

WHEN ANY CD & AMPLIFIER COMBINATION FROM THE FOLLOWING MANUFACTURERS
IS PURCHASED TOGETHER:- MUSICAL FIDELITY • ROKSAN CASPIAN

FREE SPEAKER CABLE WORTH £50

WITH ANY B&W • KEF OR MISSION SPEAKERS OVER £280

FREE DIGITAL CABLE WORTH £50
WITH THE DENON AVR3803 AV RECEIVER & WITH ANY HARMAN/KARDON OR ONKYO AV RECEIVER

FREE BEYER DT231 GALACTIC HEADPHONES

WORTH £44.95 WITH THE DENON D-M31 SYSTEM

£ PRICING POLICY
SEVENDAKS SOUND & VISION OPERATES A PRICING POLICY - SEE DETAILS ON PAGE 13

*SPECIAL OFFERS - Not in conjunction with any other offer or promotion and when sold at the prices quoted in these adverts. Some products may not be available at all outlets.

*Advertisement valid until at least 19/11/03, E&OE.

Derience more experience more



SEVENOAKS OUTLETS NATIONWIDE

BROMLEY 39A EAST STREET

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CHELSEA 403 KINGS BOAD

020 7352 9466

CROYDON 369-373 LONDON ROAD

020 8665 1203 OPEN SUNDAY

EPSOM 12 UPPER HIGH STREET

01372 720720 OPEN SUNDAY

HOLBORN 144-148 GRAYS INN ROAD

020 7837 7540

KINGSTON 43 FIFE ROAD

020 8547 0717 OPEN SUNDAY

SOUTHGATE 79-81 CHASE SIDE

020 8886 2777

STAINES 4 THAMES STREET NEW

01784 460777 OPENING MID-OCTOBER

SWISS COTTAGE 21 NORTHWAYS PDE. FINCHLEY RD

• 020 7722 9777 OPEN SUNDAY

WATFORD 478 ST ALBANS ROAD

01923 213533 OPEN SUNDAY

WEYBRIDGE 43 CHURCH STREET, THE QUADRANT

01932 828525 NEW

**NEW STAINES STORE • THIS STORE IS DUE TO OPEN 18™ OCTOBER, PLEASE CHECK BEFORE TRAVELLING



BEDFORD 29-31 ST PETERS STREET

01234 272779

BRIGHTON 57 WESTERN ROAD, HOVE 01273 733338

BIRMINGHAM ARCH 12, LIVERY STREET 0121 233 2977

BRISTOL 92B WHITELADIES ROAD, CLIFTON NOTTINGHAM 597-599 MANSFIELD ROAD

0117 974 3727

CAMBRIDGE 17 BURLEIGH STREET

01223 304770

CARDIFF 104-106 ALBANY ROAD

029 2047 2899

CHELTENHAM 14 PITTVILLE STREET

01242 241171

CRAWLEY 32 THE BOULEVARD

01293 510777

EDINBURGH 5 THE GRASSMARKET

0131 229 7267

EXETER 28 COWICK STREET

01392 218895

GLASGOW 88 GREAT WESTERN ROAD

0141 332 9655

GUILDFORD 73B NORTH STREET

01483 536666

HULL 1 SAVILE ROW, SAVILE STREET

01482 587171

IPSWICH 12-14 DOGS HEAD STREET

01473 286977

LEEDS 62 NORTH STREET

0113 245 2775 OPEN SUNDAY

LEICESTER 10 LOSEBY LANE

0116 253 6567

LINCOLN 20-22 CORPORATION STREET

01522 527397 (OFF HIGH STREET)

LIVERPOOL 16 LORD STREET

0151 707 8417

MAIDSTONE OF WEEK STREET

01622 686366 OPEN SUNDAY

MANCHESTER 69 HIGH ST. CITY CENTRE

0161 831 7969

NEWCASTLE 19 NEWGATE STREET

0191 221 2320

NORWICH 29-29A ST GILES STREET

01603 767605

0115 911 2121

OXFORD 41 ST CLEMENTS STREET

01865 241773

PETERBOROUGH 36-38 PARK ROAD

01733 897697 OPEN SUNDAY

PLYMOUTH 107 CORNWALL STREET

01752 226011

POOLE LATIMER HOUSE, 44-46 HIGH STREET

01202 671677

PRESTON 40-41 LUNE STREET

01772 825777 OPEN SUNDAY

READING 3-4 KINGS WALK SHOPPING CENTRE

0118 959 7768

SEVENDAKS 109-113 LONDON ROAD

01732 459555

SHEFFIFI D 635 OLIFENS BOAD HEELEY

0114 255 5861 OPEN SUNDAY

SOLIHULL 149-151 STRATFORD ROAD

0121 733 3727

SOUTHAMPTON 33 LONDON ROAD

023 8033 7770 OPEN SUNDAY (FROM NOVEMBER)

SWANSEA 24 MANSEL STREET

01792 465777

SWINDON 8-9 COMMERCIAL ROAD

01793 610992

TUNBRIDGE WELLS 28-30 ST JOHNS ROAD

01892 531543

WITHAM (ESSEX) 1 THE GROVE CENTRE

01376 501733

WOLVERHAMPTON 29-30 CLEVELAND STREET

01902 312225 OPEN SUNDAY

OPENING HOURS: PLEASE TELEPHONE OR VISIT OUR WEBSITE E-MAIL: [insert store name]@sevenoakssoundandvision.co.uk

WHO ARE SEVENOAKS?

Founded in 1972. Sevenoaks Sound & Vision is one of the largest and most successful hi-fi and home cinema retailers in the country.

Each Sevenoaks Sound & Vision outlet stocks a wide range of quality products, covering all categories of specialist home entertainment, from Hi-Fi separates and systems to DVD players, widescreen plasma televisions and projection systems, all at highly competitive prices.

Friendly staff are available in all stores to advise, demonstrate and guide you through the home entertainment jungle.

NEW OUTLETS

We are pleased to announce the Weybridge store is now open and the store in Staines is due to open 18th October. We will also be opening in Ealing (North London) - Subject to legal completion.

CUSTOM INSTALLATION

Sevenoaks Sound & Vision's Custom Installation Service enables the integration of a home cinema or hi-fi system into your home as neatly and seamlessly as possible. All electronics can be hidden away, speakers discreetly mounted either in the wall or ceiling and the complete system operated via remote control.



Our installation experts are fully trained to the highest standards in all areas and provide a prompt, reliable and professional service. Whether you're looking for a multiroom system, a dedicated home cinema installation with a retractable screen and built-in speakers or an integrated control or lighting system, Sevenoaks Sound & Vision has a diverse range of products available to cater for all your requirements.

SEVENOAKS WEBSITE

The Sevenoaks Sound & Vision website has news and information on the Sevenoaks group and its outlets.

There are regularly updated special offer and stock clearance lists with hundreds of products available and detailed pages to help you locate your nearest outlet. To find out more, click on www.sevenoakssoundandvision.co.uk

DEMONSTRATION FACILITIES

Our comfortable demonstration rooms are among the finest in the country, many complying with full THX specifications.



STOCK CLEARANCE

With 49 outlets nationwide, the Sevenoaks Sound & Vision group stock and display a wide range of products. As models and product ranges are changed or superseded, the preceding models are made available at a reduced price, for clearance. Visit our Website for an up-todate list of the clearance stock.

PRICING POLICY

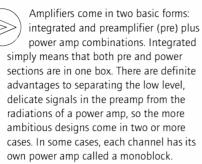
Whilst we do not claim always to be the cheapest, we try to ensure our prices are highly competitive. Take into account the expert advice, unrivalled product selection, demonstration facilities and excellent pre, during and after sales service and the lower price might not look such good value.

In the event you can find the same products and excellent service at a lower price. please bring it to our store managers' attention. We will always endeavour to offer you the best deal

www.sevenoakssoundandvision.co.uk

STEREO AMPLIFIERS

Integrated and pre/power amps



Amplifiers use two basic technologies: transistors or valves. Transistors are popular because of their practical and technical advantages, but valves - aka tubes - live on owing to aspects of sound quality that trannies can't replicate. If you want to play your music loud, use trannies; if you appreciate acoustic music, try valves.

The fundamental of amp/speaker interfacing is power rating and speaker sensitivity. You can drive a high-sensitivity speaker with a ten watt valve amp, but it takes a 200W behemoth to get the best out of speakers which present a difficult load. As a rule, you can't have too much power.

How to choose an amp

The main areas in which amps vary are: timing, dynamics, stereo imaging and transparency. Timing is the ability to present the attack and decay of each note precisely; amps with strong timing have a snap and coherence that is very appealing.



Dynamics is a general term for the ability to portray variations in level between individual notes and is different to dynamic range (the difference between the loudest and softest notes). Dynamically strong amps tend to have more life and energy.

Stereo imaging is how solid or three-dimensional an instrument or voice sounds. The point of having two rather than one speaker is to make it possible to recreate the soundstage of the original recording, thus amps that have strong imaging skills can create a sonic space that seems to extend the room.

Transparency of detail is the most obvious difference between amps. One amp will present more subtlety than another, but the drawback with using this as your main criterion is that a forward or 'bright' sounding amplifier will emphasise detail at the expense of overall musical coherence.

ALL THE TIME FOR BEST RESULTS?

All audio electronics perform better when they are warmed up, and this is particularly the case when it comes to amplifiers. If there's no way that you can leave it on all the time, make an effort to switch it on at least 20 minutes before listening.

WHAT IS BI-WIRING AND **BI-AMPING?**

Bi-wiring is when you run separate cables to the treble and bass/mid terminals on the speaker. In most instances, this improves sound quality so long as identical cables are used. Bi-amping is using two stereo amps to drive one pair of speakers, using one amp to drive the treble and the other for the bass/mid sections of the speakers.

WHY DO VALVE AMPS HAVE **SO LITTLE POWER?**

Valve amps are inherently low powered in absolute terms - at least when you compare them to their transistor-based cousins. But when partnered with high-sensitivity loudspeakers, they are quite capable of producing perfectly adequate head-banging levels.

STEREO

Stereo amps can be used in home cinema set-ups as well. You don't get the surround and centre channels, but well set-up stereo speakers do a remarkably good job of creating atmosphere for movies. Stereo amps tend to be better at reproducing music as they don't have the (electrical) noiseinducing digital processing of AV amps. AV amps cost three to four times as much as stereo models of a similar quality.



Arcam DiVA A65 Plus £370

Arcam's entry-level integrated is a terrific budget option. Its sound is both bold and articulate, making it a fine all-rounder at a highly tempting price.



Rotel RA-1062 £595

Rotel's latest is a true giant killer, packed with power and detail. It'll drive virtually any speaker and is capable of embarrassing a good many more costly designs.



Type S21 MI £1,399

This AVI's full name is Lab Series Integrated Amplifier Type S21 MI - a lengthy moniker for such a neat little amp with a hugely accomplished sound.



Exposure XXIII/XXVIII £2,790

A beautifully natural and dynamic sounding pre/power amp combo - a transistor design with a touch of the valve amp sound.

5				SPECIFICATIO			IUNS	23	
	IEKE		AMPLIFIERS	=	PH(REMOTE CONTROL	HEADPHONE SOCKET	POWER OUTPUT (W)	ISSI
iteç	rated amplifiers			LINE INPUTS	PHONO INPUT	CONT	JE SOC	UTPUT	SSUE NUMBER
DGE?	PRODUCT	£	COMMENTS	SIN	PUT	ROL	Ř	3	BER
P TO .	E1,000				5,6				
	Arcam DiVA A65 Plus	370	Highly articulate and fluent, offers unusual insight for its price	5		9	0		23
	Arcam DiVA A75 Plus	470	Quick, lively and well-presented amplifier, bass is sharper and more tuneful than its predecessor	5	0	0	0	50	224
	Arcam DiVA A80	600	Affordable integrated, with sophisticated control system, and crisp, detailed sound	5		0	0	85	24
	Arcam DiVA A85	800	Powerful, sophisticated and flexible – no longer quite the king of the sub-£1,000 crop but still a strong contender	7		0	9	105	244
	Cyrus 8	800	Impressive at low to medium volumes, and a clear improvement on its predecessor, but deteriorates at high power levels	7			0	70	239
	Exposure 2010	599	Neatly turned-out amplifier with mainstream appeal. Sounds musical, if a touch 'safe'	6				50	214
	Exposure 3010	1,000	A mix of old and new, combining greater power with Exposure's traditionally sweet and enthralling sound	6	0	0	0	120	24
	Myryad Z140	450	Slimline beauty with genuine integrity and coherence, if relatively limited power	5		0	0	50	23
	NAD C320BEE	220	Spirited and enthusiastic amp with slight bass hump and a sound that will suit relaxed speakers	7		0	0	50	232
	NAD C370	450	Flexible, ultra high-power integrated amplifier delivers a real punch, but is not without finesse	6			9	120	217
	Naim Nait 5	825	As always with the Nait, less is more, and the Nait 5's 30 watts seem to go a lot further with some sources	6				30	214
	Primare A10	500	Beautifully made, smooth and easy sounding, and though not overtly detailed it is well organised musically	6		0		50	208
9	Primare I20	750	An amplifier with attitude: punchy fast and secure sounding, with excellent build quality for the money	4		0		70	239
3	Rotel RA-02	349	Agile and capable slimline design with an engaging sound that draws you into the music	4	0	0		40	232
3	Rotel RA-1062	595	The pick of this season's crop. Fabulous sound with the ability to drive almost any speaker in its path	5	opt	0	0	95	244
	Sugden A21a	899	This single-ended, Class A transistor amp has exquisite resolving ability and presence – an authentic classic	5				25	224
BOVE.	£1,000 Arcam FMJ A32	1,150	Remarkably flexible and well-featured, with excellent sound quality for the price	7		0	0	100	228
	ATC SIA2-150			5		0	-	150	228
	AVI Lab Series S21 MI	2,375 1,399	Starkly revealing powerhouse that eats most integrateds for breakfast		ont				
	Canary Audio CA-608		Terrific power, control and resolution but effortlessly musical and fine value		opt	-		200	
	Karan KA-i180	2,250	If you value the grand scheme of things and appreciate a bit of dynamic vigour this could be the amp for you	4				24	202
		3,900	Lean, sharp and articulate, this impressively constructed heavyweight is almost up there with the audiophile pre/power elite	4				180	
	Krell KAV400xi	2,698	The best integrated Krell yet is quick, agile, solid and finely detailed	5				200	
-	Marantz PM-14 Mkll Kl Musical Fidelity Tri-Vista 300	2,000	Highly sophisticated and well equipped, with a refined and relaxed sound quality that's hard to resist If you audition one, you will want to be one of the handful of Tri-Vista owners	5		0		100 350	

	r favourite			SPECIFICATIONS							
2	IEKEU	Al	MPLIFIERS	PR	POWER AMPLIFIER	_	P	REMOTE CONTROL	POWER OUTPUT (W	ISSUE	
Pre	/power amplifiers			PREAMPLIFIER	AMPL	LINE INPUTS	PHONO INPUT	E CONT	OUTPU	JE NUMBER	
	? PRODUCT	£	COMMENTS	哥	田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田	SIN	PUI	ROL	8	BR	
OP T	0 £2,000							08			
88	Arcam DiVA A85/P85	1,330	Integrated/power amp combo won't suit all systems, but delivers classic A85 virtues plus extra gravitas and range	0	0	7		0	85	225	
EC	Arcam FMJ A32/P35	1,980	One of the few correctly matched integrated/power combinations, the sound has real gravitas and sophistication	.0	0	7	0	0	100	227	
EC	ATC CA2	750	Stripped-down version of ATC's range topper delivers considerable transparency and bandwidth. Excellent value	0		5		0		221	
88	Creek P43R/A43	900	Great value, with a particularly impressive way with dynamics	0	0	6		0	140	212	
68	Croft Vitali/Series 5C	2,000	Oddball retro style and ergonomics, but truly magical voice coherence and projection, great transparency	0	0	3	0		30	216	
	Densen Beat 200/300	1,985	Classy jet black cast boxes pack plenty of punch with good total musical coherence (remote £300 extra)	0		6	opt	opt	100	216	
EC	Musical Fidelity A308CR	3,898	Bold-looking design with an absence of sonic signature that proves there is life after Nuvista	0	0	4	0	0	250	231	
	NAD Silver Series S100/S200	2,000	Beautifully built kit that sounds as good as it looks, with heaps of power	0	0	7		0	200	200	
EC	Naim NAC112/NAP150	1,425	Clean, clever simplicity, plus a very well-balanced sound that's much sweeter than earlier Naims	0	0	6		0	50	213	
88	Rothwell Indus/Rubicon	1,488	Quirky valve combo with passive pre-amp has a lovely neutrality and consistency across a wide dynamic range	0	0	6			10	216	
ABO	E £2,000					200					
	Audio Note M2Phono/P2SE	2,698	Wonderfully natural and inviting sound with great warmth and drama, but limited loudness capability	•	0	4	0		18	216	
EC	Audio Research LS25/VT100	12,199	This is not so much a fine valve amp, as a fine amplifier, full stop (LS25 MkII/VT100 MkII)		0	6	0	0	100	216	
EC	AVI S2000M	2,398	This preamp/monoblock pairing does most things very well and images better than most	0	0	5		0	150	221	
EC	Border Patrol P20	6,750	Muscular 300B P-P design with fluidity and dynamics to match the best	0	0				20	231	
	Bryston BP25/4BSST	4,000	Extremely transparent, high-power combo, you'll listen louder and longer because you can	0	0	8	opt	0	300	241	

1,500 Smooth, detailed singing quality, elegant appearance and healthy power yield

BB

Primare A30.1

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

100 214

BUYER'S BIBLE STEREO/AV AMPS

Ou	ur favourite 🖹 BEST BUY 🔟 EDITOR'S CHOICE						SPECIFICATIONS								
		Al	MPLIFIERS continued	PREAMPLIFIER	POWER AMPLIFIER			REMOTE	POWER OUTPUT (M)	ISSUE N					
_	PRODUCT Classé CP-35/CA-101 2,797 Very classy Canadian pre/power combo with a natural, open and no-nonsense sound Electrocompaniet EC4.7/120DMB 3,448 Bulky Norwegian combo has wonderful transparency, wide dynamic range and fine musical tension Exposure XXIII/XXVIII 2,790 Highly natural and dynamic amplifier that offers the fluidity and energy of valves via transistors Gamut D200 Mk3 3,975 A great power amp that's now even better — one of the best regardless of price Halcro dm10/dm68 75,900 Extravagant, extreme and massive amp combo will probably polarise opinions, but delivers stunning midrange cla Krell FPB 700cx 14,998 Reference class amplifier may represent overkill in many systems, but when no compromise is called for, this is Linn Klimax Kontrol 6,000 Super-slim stereo power amp uses advanced switch-mode power supplies to fast, engaging effect				NPLIFIEF	LINE INPUTS	PHONO INPUT	CONTROL	PUT (W	NUMBER					
EC		2,797		0	0	4			100						
Re	Electrocompaniet EC4.7/120DMB	3,448	Bulky Norwegian combo has wonderful transparency, wide dynamic range and fine musical tension	0	0	6		0	120	216					
88	Exposure XXIII/XXVIII	2,790	Highly natural and dynamic amplifier that offers the fluidity and energy of valves via transistors	0	0	6	opt		70	241					
EC	Gamut D200 Mk3	3,975	A great power amp that's now even better - one of the best regardless of price		0				200	247					
EC	Halcro dm10/dm68	75,900	Extravagant, extreme and massive amp combo will probably polarise opinions, but delivers stunning midrange clarity	0	0	5	0	0	225	243					
EC	Krell FPB 700cx	14,998	Reference class amplifier may represent overkill in many systems, but when no compromise is called for, this is it		0				700	234					
EC	Linn Klimax Kontrol	6,000	Beautifully executed example of Scots audio art, sounds as clean as it looks and is a lot more transparent than most	0		4		0		238					
EC	Linn Klimax Twin	6,000	Super-slim stereo power amp uses advanced switch-mode power supplies to fast, engaging effect		0				125	230					
EC	Mark Levinson No380/No334	9,490	Pre has precision and warmth with unusual configurability, power has refinement, authority and transparency to spare	0	0	6		0	125	195					
	Naim NAC202/NAP200	2,720	More sophisticated than its forebears with a fleet-footed sound that draws you into the music	0	0	8		0	70	241					
EC	Naim NAP500	10,995	Wonderful neutrality, bandwidth and dynamic range, plus Naim's traditional leading-edge definition		0				140	208					
EC	Naim NAC552	11,750	Extremely expensive preamp, but still solid value. Magnificent sound with fine flexibility and convenience			6		0		233					
	Primare PRE30/A30.2	2,400	Beautifully built with great selection of features and serious power delivery	0	0	7		0	120	241					
EC	Steinhart DVP 2XR/Fidelio 102 DD	7,440	Brilliantly musical, making even difficult material enjoyable, but gets hot and has ergonomic foibles			7	0		100	236					
EC	Sugden Masterclass AA	5,600	Yorkshire's finest class A kit. Dynamic and tonally rich, this gives even valve amps a run for their money	0		7		0	35	246					
EC	Unison Research Unico Pre/DM	2,590	Hybrid designs with a rich powerful performance that makes a fine balance between valve and solid state sound	0	0	3	0	0	150	242					

AV AMPLIFIERS

Surround sound amps for music and movies

The multichannel, surround sound or AV amplifier is a popular option, thanks to the success of the DVD player and home cinema. Now you can buy five channels or more of amplification for the price of two. Now that multichannel music is also on the agenda, there's a lot to be said for a good AV amp or receiver (an amp with a radio tuner built in).

So if you fancy hearing what DVD-Audio, SACD or even music DVD-Video can do, then check out a multichannel amp and speaker set-up - they're stunning with movies and none too shabby with music.

AV amps are usually designed primarily for movies and come with digital processing for the various soundtrack formats - Dolby Pro-Logic (analogue), Dolby Digital and DTS, which offer discrete surround sound in 5.1 and 7.1 channel formats. More ambitious designs also offer THX post processing, designed to emulate the sound of the mixing theatre at home.

Processing in AV amps is needed because the surround formats on DVD-Vs are compressed, limiting their high-fidelity



potential. This is why new formats SACD and DVD-A, which don't use 'lossy' compression, were created for music.

All this processing power can take its toll on analogue formats. The best multichannel amps for music are often the simplest, but any that offer a complete bypass option with six-channel input are suitable. It's also worth looking at real power – five or seven channels of amplification are not easy to produce with a feeble power supply, and the cheaper amps in particular often fail to live up to the claims.

HOW MANY CHANNELS?

Depends on how many speakers you want. Multichannel music discs come with six or 5.1 channels, but for new movies, 7.1 systems are where it's at. 7.1 set-ups also mean you have speakers directly behind you preferable for music discs.

WHAT'S THE DIFFERENCE **BETWEEN A PROCESSOR AND AN AV AMP?**

Processors don't have amplification on board and you need separate power amps. AV amps and receivers have processing and amps in the same box.

WHAT DOES THE .1 IN 5.1 STAND FOR?

This is the LFE (low frequency effects) or bass channel that is reproduced by a subwoofer.

-F MEETSS

With DVD-Audio and SACD offering high-quality multichannel music, surround sound is no longer just a home cinema thing. An increasing number of people want to build a multichannel system that will do their music as well as their movie DVDs justice, and the number of AV products delivering sufficient quality is on the increase. But most aren't cheap - building a top-quality system with five or more channels is inevitably more expensive than sticking with stereo.

There are some very decent integrated options below £1,000, though the best (and most costly) route is to buy a separate processor and power amp(s). Or you can add AV amplification to a stereo model you can't bear to part with.

AV AMPS BUYER'S BIBLE

TOP BUYS



Harman Kardon AVR 5550 £850

Here's a rarity - a sub-£1,000 AV amp that does a good job with both stereo and surround sources, and is easy to use too.



AVC-A1SR £3,000

Denon's AV behemoth is arguably the best integrated multichannel amp to date - superbly cinematic and one of the very few with genuine 'hi-fi' music credentials.



CVA306/CVA535 £3,748

Valve-driven multichannel pre and solid state power amp make a seductive alternative to process-heavy AV amps.



A fantastic achievement from this respected UK brand - an top-ranking AV processor and seven-channel power amp.

Our favourite BEST BLY CE EDITOR'S CHOICE **AV AMPLIFIERS** 5-CHANNEL ISSUE NUMBER COMPATIBL POWER (M) LINE INPUTS Multichannel amplifiers RECEIVER BADGE? PRODUCT COMMENTS £ INTEGRATED AV AMPS Arcam AVR200 229 800 Upgraded AVR100 with Dolby Pro-Logic II and some bass management. Great for stereo, a bit bass-light for multichannel (2) 6 70 93 Denon AVR-3803 899 (8) 110 239 Feature packed 7.1 channel AV receiver which needs a lot of studying but does everything well 11 0 Denon AVC-A11SR 1,800 Feature-packed with superb spatial processing, combined with powerful, though slightly opaque overall audio quality 11 48 9 235 Denon AVC-A1SR 8 170 232 3 000 An AV amp with genuine high-res hi-fi credentials. Includes a ground-breaking 'wide bandwidth' digital audio link (3) Harman Kardon AVR 5550 850 The upgrade to the AVR 5500 comes with features that are actually of some use to the audiophile and a meaty sound to boot 0 9 (6) 85 240 Marantz SR9200 2.000 Powerful, cool-running UK-customised THX receiver with spacious, relaxed sound quality with music and movies alike 6 9 43 0 235 80 Pioneer VSX-D2011 900 60 0 140 235 Outstanding sonic performance for the price and a remarkable features list to boot 10 EC Pioneer VSA-AX10i 2.700 Seven channel tour de force with automatic speaker set up and eq, excellent with music, movies and DVD-A/SACD 8 **(b)** 150 229 Sony VA-777ES 1,500 Smart circuitry gives this model unusual precision and transparency, and it is a fine all-rounder 9 100 210 CESSORS AND POWER A AVP Arcam AV8/P7 5.498 State-of-the-art processor (£2,999) and seven-channel power amp (£2,499). An excellent fusion of stereo and surround sound 7 (0) 180 235 Bryston SP1/9B THX 7.100 Stripped-back 5.1 channel processor/amp combo reaches genuine audiophile heights 6 120 219 Copland CVA306/CVA535 3 748 5 125 236 Tube analogue six-channel pre transforms multichannel audio from a novelty into a genuine advance for the high fidelity art 2,900 Cyrus AV8/3x Smartpower Classic Cvrus sound translated to a multichannel arena, limited features and power, but civilised sound 3 105 238 EAD TheaterMaster 8000 Pro 5,200 Arguably the most 'musical' sounding AV processor to date - tested with the PowerMaster 8300 multichannel power amp 9 8 242 Marantz PS-17/2 x SM-17 3.400 Classy and capable system, great steering, warm solid sound and high detail resolution, and some great gadgets 10 60 238 Meridian 861 6 60 230 9.833 Powerful surround processor with flexible modular construction, marvellous versatility to drive any speaker configuration Myrvad MDP500/MA240/360 9 3.799 Superb three-box, five-channel AV amplifier. Great with movies and beats most multichannel amps hands down with music ont 120 215 Naim AV2/NAPV175/NAP150 4,175 First truly credible multichannel system from Naim is idiosyncratic but offers excellent basic sound with modest spatial steering 5 0 50 238 Parasound Halo C1/A51 8.500 Powerful and flexible processor/power amp combo with impressive sound. Excellent value - processor includes onboard screen 11 60 250 243 5 Primare SP31 7/A30 5 60 120 238 4 200 Great all-round system which brings the qualities of good stereo high fidelity to a multichannel world 4 Roksan DSP/5ch amp/VSU 2,440 Clean, powerful stereo expanded seamlessly, if without distinction, to 5.1 channels 80 210 6 TAG McLaren AV32R EX 2.994 Flexible AV processor, unusually good with music. Excellent for multichannel system in standard or seven-channel 'EX' form 0 215

SPECS KEY RECEIVER Integrated multichannel amp with built-in radio tuner. LINE INPUTS Input sockets for source components with a line level output: CD players, DVD players, tape decks, tuners, phono stages etc.

7.1 CHANNEL COMPATIBLE The amp either has seven-channel in and outputs or in some instances is equipped with seven channels of amplification

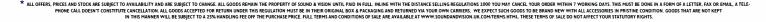
5-CHANNEL POWER (W) Power output in watts per channel of all channels driven by the amp





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+ 200W

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SUBWOOFER 10-BIT/54MHz

VIDEO D/A CONVERTER DVD-R,CO-

R/RW,SVCD, MP3,JPEG EGION (7)

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SONY

100W X 5 +

200W RMS Subwoofer

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ONE SYSTEM DESIGN

SACD, DVD-R.

VCD, MP3

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SYSTEM

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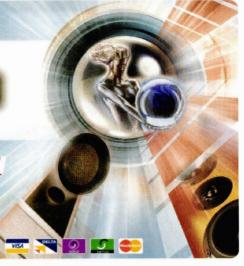
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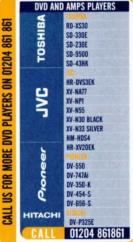














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On sale Friday, October 31

STEREO SPEAKERS

Speaker pairs for stereo sound

While loudspeakers are relatively straightforward in construction, they have one of the most difficult jobs in hi-fi – turning an electrical signal into an acoustic one. Most consist of two or more drive units in a box that usually has a port in it to make life easier for the cone in your mid and/or bass driver. Alternatives to this arrangement include panel speakers, which use electrostatic or ribbon technology, and horns, which use drive units in complex cabinets that greatly improve efficiency.

Box speakers are either designed to stand on the floor (floorstanders) or on a stand (stand or shelfmounts). Floorstanders have greater internal volume which can translate into greater efficiency and/or bass extension, but less substantial designs also introduce cabinet resonance and thus distortion. But they don't need stands and therefore have the aesthetic edge. Standmounts have less cabinet to vibrate and often score in terms of imaging and timing, but need good stands to work well.

Positioning

The closer the speaker is to a wall, the greater the reinforcement of bass. As all rooms differ, there's no simple formula for placement and experimentation will yield the best results. Altering the angle at which the speakers face the listener can also make a difference to balance and stereo image.

Going multichannel

Many stereo speakers can be augmented with centre and surround channels from the same brand to create a multichannel system. The most important element is a centre channel, which needs to match the stereo pair as closely as possible. For the best musical results, surrounds should be as per the front left and right channels, but if space or funds don't permit, smaller designs can be used quite effectively.

/=:

Though some speakers have a power rating, this isn't as informative as a rating for how difficult they are to drive, nor does it indicate wattage extremes for the partnering amp. In practice, an amplifier cannot be too powerful. Our listings quote ease of drive to indicate how much power

your amp needs to avoid a mismatch. An above-average (A+) speaker will work with amps rated at 25W plus, while an average (A) speaker will need 50W or more, and a below average (A-) speaker could require 100W plus to sound its best. These are guidelines rather than rules.



Choosing speakers

Because speakers and the rooms they are used in vary so much, choosing a pair tends to be quite subjective. To find some that will suit you, try to listen to a good variety to hear how they differ, and if possible, audition some at home. Tonal balance tends to vary the most, but is less important than more subtle factors such as timing and dynamics. Finally, listen with your ears not your eyes - great-looking speakers aren't necessarily great sounding.

Spikes

Floorstanding speakers and stands have threaded inserts for spikes that allow rigid coupling with the floor. These have the advantage of draining resonance from the speaker and giving tighter bass, but can result in more vibration getting back to the electronics and often cause the floor to resonate as well.

A-30

IF SPEAKERS ARE RATED AT 75 WATTS. DOES THAT MEAN I NEED A 75 WATT AMP?

No, see the box on power for the full story.

WHICH SPEAKERS ARE BEST **FOR SMALL ROOMS?**

Those designed to work close to the wall will be smoother in confined spaces. Speakers that have relatively dry, tight bass will also sound better.

WHICH SPEAKERS ARE BEST FOR BIG ROOMS?

Big, efficient, easy-to-drive designs are more likely to be able to fill a room better than compact models.

DO I NEED TO BUY CENTRE AND SURROUND CHANNELS FROM THE SAME BRAND AS **MY STEREO SPEAKERS?**

Yes, assuming that you're wanting to create a homogenous surround sound experience, where voices don't change when they move from one channel to another.

TOP BUYS



A new dual-concentric main driver plus super-tweeter in a solid standmount box results in a neutral yet expressive speaker at a very tempting price.



Focal-JMlab Cobalt 816 Sig S £999

One of the best all-round performers below £1,000, combining a lively and dynamic character with an unusually smooth and neutral balance.



B&W 703 £2,000

A hi-tech, three-way floorstander sporting a 'surroundless' midrange driver. Delivers a thoroughly engaging sound with great bass and an expressive midrange.



Living Voice Avatar OBX-R2 £4,000

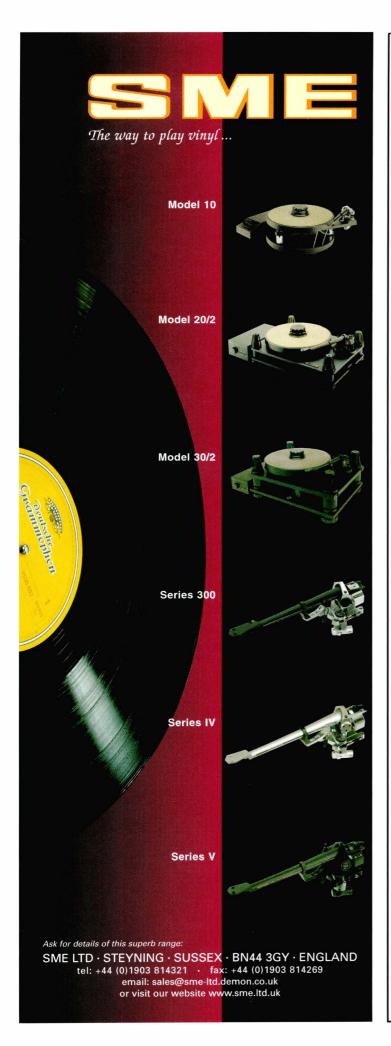
Newly revised for 2003, the top model in Living Voice's Auditorium range is capable of delivering both the music's spirit and also its finest detail.

SPECIFICATIONS

Our favourite BESTEUV CE EDITOR'S CHOICE

STER Stereo speakers				SIZE W,H,D (CM)	FLOORSTANDER	EASE OF DRIVE	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
ADGE? PRODUCT		£	COMMENTS	(CM)	PER	RNE	\mathbb{F}	ACE	À	BER
UP TO £1,000							325			300
Acoustic Energy A	egis Evo 1	180	An unusually classy and sophisticated performer for the price; laid-back sound and good looks too	19,36,24		Α	30	0		22
ATC SCM12		999	Transparent, engaging and quick — a revealing, high-fidelity performer that's not afraid to bare all	22,39,25		Α	62	0		23
Audio Note AZ O	ne	449	Delivers music with great gusto and enthusiasm, but also more than its fair share of coloration	23,83,29	0	А	30		0	21
AVI Biggatron Re	d Spot	599	Good bass coherence and timing, but the lean and decidedly forward balance won't be to every taste	19.5,37,30		Α	30		0	21
B&W DM303		180	Chunky looking and lively sounding, with deep bass, a fine midband and a restrained top end	20,33,23		Α	23		0	22
B&W DM602 S3		300	Old-fashioned size/shape, but this timeless design has a rare combination of grip, authority and headroom	24,49,29		А	25	0		23
B&W DM309		330	Much of the grace and punch of the smaller DM303 – a suberb floorstander for the money	20,91,30	9	А	60	0		23
B&W DM603 S3		600	Excellent all-rounder, smooth for its price with fine bass and mid, though top might be more refined	20,91,29	0	A-	25	0		23
Blueroom Minipo	b	249	Wonderfully blobular styling aside, it's hard not to fall for the Minipod's openness, expression and detail	18,34,17		Α	50		9	22
Castle Durham 3		399	A very attractive near-miniature wallmount with a lively and communicative disposition - lots of fun	19,37,22	0	Α	45	0		22
Castle Conway 3		930	Lovely real wood finish and a beautifully balanced sound, fine dynamics and transients, but might have more 'air'	22,91,27	0	A+	30	0		23
Dali Royal Tower		750	Cutely compact floorstander has a delightful liveliness and lightness of touch to match its luxury real wood finish	17,85,22	0	А	25		0	23
Dynaudio Audien	ce 42	400	An aristocrat of the vinyl-covered miniature breed. A terrific small speaker for the price	17,29,24		А	40			21
Dynaudio Audien	ce 62	729	Pricey but cute vinyl floorstander that is a class act sonically - lightweight, but clean and dextrous	20,86,26		А	30	0		23
Elac JET 205		650	Sweet, smooth, clean and delicate tweeter justifies hefty price tag, but a little lacking in warmth and body overall	20,33,29		А	40	0		23
Energy Connoisse	eur C-5	600	Has a marvellously even and neutral overall balance, if a little too laid-back with restrained dynamic expression	20,95,37	0	A+	23	0		24
B Epos ELS3		200	Few affordable speakers sound as clean and convincing while taking up so little real estate	18,27,19		A-	60	0		24
Epos M12		499	Retains the beguiling midband coherence that made the ES12 such a favourite. A genuine class act	20,38,26		Α	40	0		21
Focal-JMlab Cob	alt 816 S	999	Great all-rounder — lively and dynamic, smooth and neutral, marred only by a slight treble 'sting'	22,98,31	0	A-	25	0		24
KEF Q1		250	Stylish if slightly small-sounding stand-mount with fine midband coherence; works well close to a wall	22,35,30		Α	30		0	23
Mission m73		199	Good-looking floorstander. Dynamics are a little limp, but it has a good overall balance. Excellent value for money	20,88,31		Α	25	0		21
Mission 782SE		900	Definitely one of the prettiest speakers around. Very even balance but could sound more exciting	17,80,30	0	Α	35	0		24
Monitor Audio Br	onze B2	200	A lively and entertaining speaker with tight controlled bass and pronounced midband	18.5,35,25		Α	42		0	23
Monitor Audio Sil	ver S1	300	Super-quick sonics thanks to the C-CAM metalised drivers. Resolution and speed – a great value box	18,30,24		Α	45		0	23
Monitor Audio Sil	ver S8	800	A thoroughly impressive all-rounder, notable for its wide dynamic range, excellent imaging and fine neutrality	19,90,27	0	Α	20	0		23
Monitor Audio Sil	ver S10	1,000	Timing might be less than the best, but the full balance and fine dynamic range deliver plenty of detail.	20,100,27	0	A+	20	0		24
MonoPulse 32		695	Very creative style and construction with an unusually vivid and communicative if less than smooth sound	21,98,23	0	Α	30	0		24
Neat Petite III		845	The treble is peaky, but this is still one of the most coherent and communicative miniatures around	20,31,20		Α	30		0	21
Opera SP-1		525	A strong case for serious hi-fi with curves. Sound is clear, crisp and detailed	16,29,23		Α	50		0	22
PMC DB1		555	Lacks a little weight and authority, but beautifully balanced, free from boxiness, and loads of fun for a tiny	16,29,24		Α	50		0	24
B PMC TB2		700	A worthy successor to the TB1, which sets a high standard in its size/type for neutrality and transparency	20,41,31		Α	30	0		21
Sonus Faber Cond	orto Homo	999	Looks good and sounds better. Great midband communication skills, well aligned for close-to-wall siting	24,36,34		A	40		0	23

SPECSILEY SIZE WXHXD (CM) Width, height and depth of one cabinet in centimetres. FLOORSTANDER Speakers that don't require stands, EASE OF DRIVE How much power the amplifier needs (approximately) to drive the loudspeaker effectively. A+ 25 watts plus A 50 watts plus A- 100 watts plu



definitive audio

Peddlers of fine wares, including:

Record players: SME models 10, 20 and 30; Kuzma;
Nottingham Analogue; Michell; VPI; Living Voice Mystic Mat.
Arms: Rega; SME Series IV and V; Kuzma inc Airline; Triplanar.
Cartridges: VanDenHul; Kuzma; Reson; Cartridge Man; Benz-Micro;
Kondo.

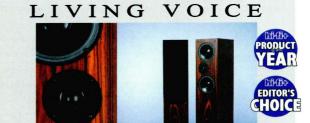
Amplifiers: Kondo; Border Patrol; Canary; Sugden; Art Audio; Monarchy; Western Electric; Icon; Tom Evans Audio Designs.

CD Players: Resolution Audio; Wadia; Sugden.

Louspeakers: Living Voice; Vitavox.

Cables and Tables: Kondo; Living Voice.

Sale of part exchanged and ex-dem items	Sale	New
Canary Audio CA301 Stereo - champagne facia - marvellous	£3400	£5400
Clearaudio Insider Wood Reference - only 10 hours use - a very unusual		
opportunity to acquire this high end cartridge	£4000	£7500
EAR MC3 moving coil transformer 4/12/40 ohm - as new	£500	£750
Chord DAC 64 - four days old - whoops!	£1600	£2000
Lavardin IT 12 months old - perfect	£2400	£3400
Monitor Audio MA10 Gold - very good condition	£400	£800
Wadia 830 CD player - fully serviced, new laser - warranty	£1400	£3000
Tom Evans Groove - mc phono stage - 500 ohms, 0.2mV - as new	£1300	£1850
Horning Agathon - 98dB 2 way horn - Mahogany - new PM6As (alnico)	£1400	£3800
Jamo Concert 8 - 21/2 years old - beautiful maple finish - spotless	£600	£1365
Ruark Crusader II - April 2000 very good condition	£900	£1800
Arcam CD 72 (it's a CD player)	£200	£400
Michell Gyrodec with RB300 and QC PSU	£750	
Roksann Xerxes Cognoscenti - black marble finish, lid, vgc, boxed	£800	£2000
Nottingham Analogue - Mentor with LV Mystic Mat - spotless	£1400	£2900
Tube Technology Unisys integrated amplifier EL84 Class A - 30watts	£1500	
Avid Acutus turntable - 10 hours use if that, perfect.	£4000	£5000
Avid Volvere Sequel turntable - sealed box new	£3000	£3500
Avid Volvere turntable - sealed box new	£1500	£2000
Stemfoort ST100 - line integrated amplifier	£350	
AudioNote ANJ-D - walnut - Huygens high mass stands	£500	£1400



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"The Avatar is a near perfect balance of size, bandwidth, efficiency and tonal refinement. Its slim lines and small footprint deliver a genuine 94db sensitivity, and excel when it comes to delivering the scale, vibrance and colour of the music. Its unobtrusive quality allows it to cut straight to the heart of a performance, unlocking the music trapped in the recording, whilst its refinement makes it equally at home with both basic and surprisingly expensive amplification."

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HI-FICHOICE BUYER'S BIBLE

	r favourite				SPI	CIFI	CATIO	NS		
Stere	eo speakers		SPEAKERS continued	SIZE W.H.D (CM	FLOORSTANDER	EASE OF DRIVE	BASS FROM (HZ)	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
BADGE?:	PRODUCT Spendor S3	£ 600	COMMENTS Beautifully voiced, unboxy, lacks some dynamic and loudness capabilities. Best suited to small rooms	17,31,21	ىد	A- 36 A+ 45 A- 36 A+ 20 A- 36 A- A- 40 A- 45 A- 46 A- 36 A- 46		111	0	223
	Spendor SR5	1.000	This wall-mount very cleverly avoids the usual colorations, delivering a very dynamic if rather dry sound	31,31,18		-			0	24
BB	Tannoy Mercury mX3-M	229	Beautifully balanced and voiced, with low coloration and good transparency, but could be more dynamic	19.87.25	0			0		23
	Tannoy Sensys DC1	449	Modest sensitivity but beautifully balanced with fine authority at a very realistic price	21,41,29	-		40	_	9	24
	Tannoy Eyris 1	600	Pricey but very cute wallmount miniature; oddball, but has marvellous midband subtlety and delicacy	17, 35, 26			40		0	22
BG		649		21,97,29	0		25	0		24
200	Tannoy Sensys DC2		A great-value speaker combining a super-tweeter and Dual Concentric drive unit at a real-world price			-		0		
	Tannoy Eyris 2	999	This super-slim and cutely different-looking floorstander is very communicative, despite weak treble	17,91,26	0	А	20			23
ABOVE									ME	
EC	ATC SCM10A	1,269	Stylish, active powerhouses with plenty of subtlety when required (balanced connection only)	23,39,31		-	45	0		22
	ATC SCM20 SL	2,051	Not too transparent, but has great dynamic grip and bass to die for. Needs a powerful amp	24,44,33		A-	65		0	219
	ATC Active 20	2,538	30k + 300W equals resolution and bass that most amp/speaker combinations dream about – a bargain	56,28,36		act	45	0		24
EC	ATC SCM50A SL	7,255	350W of power combine with superb drive units and a 48kg cabinet to provide alarming resolution	35,72,48		Α	38	0		21
	Audio Note AN-E/D	1,520	This classic large standmount might have throwback aesthetics, but it delivers an exceptional all-round sound	36,79,28		Α+	20	0		20
	Audio Note AN-J/SPe	1,675	Retro styling, but a vigorous and dynamic performer that creates fine musical tension	33,59,25		Α	38	0		21
	B&O Beolab 5	10,000	Radical, environmentally independent active speaker has exceptional bass, neutrality, and imaging	49,97,49	0	n/a	<20	0	0	24
	B&W Nautilus 805	1,400	A small-sounding loudspeaker dynamically, but very stylish, clean and 'unboxy', delivering loads of detail	24,42,31		Α	28	0		19
EC	B&W 703	2,000	Elegant floorstander with excellent bass drive and mid dynamic range, but slightly strong and obvious top end	23,101,36		A-	20	0		24
EC	B&W Signature 805	2,500	Gorgeous standmount sounds delicately transparent and laid back with very superior resolution and imaging	24,42,34		Α	30		0	24
EC	B&W Nautilus 802	6,000	Outstanding example of the high-tech speaker builder's art. Needs real power, but gives real sound	39,111,55		A-	34	0		18
EC	B&W Nautilus 801	8,500	The 801 is a magnificent loudspeaker in nearly every respect, but it is one that likes to play loud	52,111,69	A-	34	0		18	
EC	B&W Nautilus 800	11,000	Unequivocal challenge for world domination. One of the most revealing speakers around		0	A-	<20	0		23
	BC Acoustique Araxe	1,300	Neat compact floorstander is a very lively communicator, if a little short on deep bass grunt	21,92,30	0	-	40	9		20
	Beauhorn B2.2 Revelation	3,984	Magnificent midband and fine overall balance but limited bass is best with small-scale material	34,130,75	0	-	80		0	24
88	Castle Harlech S2	1,000	Improved Harlech is slightly aggressive, but lots of fun, and very good-looking too	20,96,33	0	Α	50	0		21
_	Castle Howard S3	1,350	A solid all-rounder with uniquely spacious imaging, bit pricey compared to some though	21,99,32	0		38	-		229
-	Dali Noble	1,059	Easy on the eye and the ear, but unerringly musical. Some might prefer harder-hitting dynamics and bass	18,117,23	0			_	0	22
	Dynaudio Contour 1.3 Mkll	1,198	Outstanding performer among compact standmounts; neutral, with fine punch and dynamic range	20,38,29		-	-			21
_	Dynaudio Audience 82	1,460		22,106,36	63	-		0		22
-			Bulky, with vinyl finish, but offers exceptional neutrality, bass extension, power handling and loudness potential		499					
	Eclipse TD Lulét 307/316	1,250	Extraordinary satellite plus sub solution sounds a cut above other sub/sats. Can be expanded to multichannel	12,16,16.2	_			-		24
	Ferguson Hill FH001	6,853	Looks and sounds wonderful, with realistic dynamic expression, but needs careful amp matching and sub(s)	90,166,80	0				0	24
_	Focal-JMlab Micro Utopia	3,500	New 'Be' version is clearly an exceptional standmount, capable of revealing the innate quality of the music	25,42.5,38		-		0		24
	Graves Audio Koronglay	1,999	Fast and very time-coherent, but rather bass-light and aggressive higher up — valve amps preferred	25,109,36	0	-			0	24
	Harbeth Super HL5	1,699	Looks old-fashioned, but classic monitor combines authority and transparency with good neutrality	33,64,31		А	30	0		23
88	Infinity Intermezzo 2.6	1,600	Bi-amp speaker sounds laid back and 'disappears' acoustically; highly enjoyable, looks and sounds great	25,38,29		A+	27	0		23:
	Jamo D870	2,200	Handsome floorstander is a good basic communicator, though ultimately just a little 'cold' and 'shiny'	27,105,38	9	A-	20	0		24
	KEF Reference Model 205	4,000	Great looking speaker with a smooth, neutral and slightly 'cool' sound that could be tauter and more exciting	29,116,43	0	A-	20	0		24
	Leema Xen	1,000	A true micro-mini-monitor with remarkable powers of analysis and great musical insight, if a touch forward	14,22,23		A-	50		0	24
	Living Voice Auditorium	1,700	Gloriously coherent and dynamic midband, though the top end is restrained and bass was uneven in our room	21.5,86,28	0	A-	30	0		247
EC	Living Voice Avatar	2,700	Dynamic and highly resolved, yet physically discreet design with a relaxed balance	22,104,27		A+	40	0		218

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BUYER'S BIBLE STEREO/AV SPEAKERS

	r favourite				SP	ECIFI	CATIC	NS		
3	IEKE	J	SPEAKERS continued	SIZE W.H,D (CM)	FLOORSTANDER	EASE	BASS FROM (HZ)	Ŧ	CLOSE TO WALL	ISSUE
Ster	eo speakers			V,H,D (RSTAN	EASE OF DRIVE	ROM	FREE SPACE	TO W	ISSUE NUMBER
ADGE?	PRODUCT	£	COMMENTS	CM)	DER	RIVE.	Œ	ACE	Æ	BER
EC	Living Voice Avatar OBX-R2	4,000	Has Dynamics, tonal colour, detail, space and time resolution in spades. External crossovers require extra cabling	22,100,27	0	A+	35	0		24
	MartinLogan Clarity	2,498	Relatively affordable and easy to live with electrostatic hybrid with class-leading resolving power	26,135,31	0	A-	46	0		24
88	Meridian M33	1,560	Compact active wallmount packs remarkable dynamic vigour into a very discreet package	15,38,22		act	45		0	21
	Mirage OM7	2,000	Warm, full and laid back Omni has weak stereo focus but brings the musicians into your room	30,115,16-39	0	A-	25	0		24
	Naim Allae	1,990	Chunky little floorstander has a 'cold' overall balance, but remarkable powers of musical analysis	24,94,28	0	Α	40	0		22
EC	Naim SL-2	4,995	Delivers magnificent musical analysis and communication skills in a notably discrete physical package	28,103,33	0	A-	20		0	23
EC	Naim NBL	6,925	Elegant, large floorstander is exceptionally informative, with an awesome dynamic range and dry, forward balance	29,116,47	0	A-	20	0		20
EC	Neat Ultimatum MFS	2,995	Wonderful five-driver standmount sounds bigger than it looks. Very spacious and informative, if a little bright	22,38,37		A+	25	0		24
EC	Neat Ultimatum MF9	8,500	Superb musical communicator with splendidly deep and agile bass and fine open neutrality	22,150,40	0	A-	20	0		22
	PMC LB1	1,150	Still fully competitive eight years after our original review, this genuine compact monitor is now a modern classic	17.5,53,26		A-	40	0		19
88	PMC FB1	1,410	Has the lively coherence of a simple two-way, alongside impressive bass weight and extension	20,105,31	0	А	20	0		20
EC	PMC IB2	6,150	Stunning in an understated way, this speaker creeps up on you and hooks you with its transparency and power	33,74,47		A-	25	0		23
EC	Royd Revelation RR2	1,199	Pretty little floorstander delivers genuinely deep bass without 'thump'; lovely clean, open midband too	19,89,18	0	A-	20	0		22
	Ruark Prologue II	1,250	Attractive shape with a punchy and unusually open and neutral sound that's impressively free from harshness	22.5,96,24	0	A+	40		0	22
	Ruark CL20	1,650	This punchy rock'n'roller has plenty of drive and enthusiasm, but can sound aggressive	23,93,34	0	Α	38	0		21
86	Snell E.5 Mk2	1,520	Large floorstander has serious deep bass extension, and also a delicate midband with low coloration	22,109,30	0	А	20	0		21
EC	Sonus Faber Cremona A	2,149	Standmount 'Auditor' version of the Cremona makes a soundstage bigger and better than its size suggests	19,35,32		Α	48	0		24
	Spendor S8	1,700	Classic midband neutrality and transparency, the S8 has great subtlety and fine bass grunt too	23,92,32	0	A+	40		0	22
EC	Spendor S9	2,500	Meaty three-way with superb bass and explicit mid — one for detail fans	24,99.8,38	0	A+	37			22
EC	Tannoy Dimension TD8	4,000	This stylish speaker is a splendid all-rounder, with fine dynamics, precise imaging and minimal coloration	30.5,85.5,30	0	A-	25	0		24
EC	Tannoy Dimension TD10	5,000	Extremely competent and rhythmic speaker, a futureproof supertweeter and detail to die for	35,101,37	0	A-	38	0		21
EC	Tannoy Dimension TD12	6,500	Art Deco-inspired style, plus magnificent headroom and genuine monitoring neutrality – a tour de force	42,126,41	9	A-	23	0		22
HE	Totem Forest	2,390	Low sensitivity but wonderfully open neutrality, at heart a beautifully communicative and musical loudspeaker	19.5,90,27	0	А	25	0		24
	Triangle Zays 222	1,295	Wonderful freedom from time-smear gives invigorating and realistic dynamics, but colorations are also obvious	26,116,32	0	А	22	0		24
	Triangle Naia	1,900	Exciting, vivid and communicative, but also a bit untidy and uneven, the Naia is a whole lot of fun	23,119,32	0	A-	25	0		24
	Vandersteen 2Ce Sig	1,990	Very superior midband neutrality, impressive freedom from boxiness and splendid stereophony. A classic	41,109,26	0	A-	30		0	22
EC	Wilson Benesch Chimera	15,000	Elegant with lovely sonic delicacy and plenty of weight too. Works best at low levels, but a difficult load to drive	24,145,55	0	A-	20	0		23
EC	Wilson benesch Discovery	5,500	Innovative three-way with built-in stand, combines great subtlety with weight and headroom	23,47,38	0	A-	45	0		21

AV SPEAKERS

Speaker solutions for multichannel surround sound

Multichannel speaker systems have a front left/right (L/R) stereo pair, a centre or dialogue channel, two (5.1) or four (7.1) surround speakers and often a subwoofer. For best results, each of these speakers bar the sub should be identical. The problem is that few surround systems are dedicated to music and perform a home cinematic role as well, meaning the

centre speaker has to sit above or below a

video monitor. Centre channels are usually wide and short for this reason.

This should not be a barrier to great surround for music and movies however, as many brands make centre channels with a very close sound to their L/R designs.

Music vs movies

High-resolution SACD and DVD-A music recordings tend to be mastered with

surround speakers in the ITU standard position which is as far behind the listener as the front channels are in front. 5.1 movie soundtracks tend to place surround channels not so far behind and to the side of listeners. Usually, practical limitations will dictate a limited range of placement options, but if you are a dedicated music fan, check out the ITU set-up regulations in the booklet supplied with SACD discs.

SET-UP

Ideally you should set up surround speakers with as much care as you would stereo systems, but practical issues tend to have a significant bearing on surround and centre speaker placement. Surround channels can be floorstanding or wallmounted, and centres usually have to perch on the TV or underneath it. Given these limitations, adjust your L/R front speakers to give the best tonal match with the centre. If there's more than just you listening, 'toe in' the speakers so that their axis crosses in front of the listening position - this gives a wider stereo image. And if there's a subwoofer it should be placed near the front speakers. Use a sound pressure metre (available from Tandy among others) to accurately set levels.

SUBWOOFERS

Subs start working where stereo speakers run out of steam at low frequencies. The idea is to create deeper, better-controlled bass rather than more of it. They usually have onboard amplification (active) and connect to either the LFE (Low Frequency Effects) channel in a home cinema set-up or the speaker terminals in a stereo set-up.



B&W

600 S3 package £900

Incorporates 602s, 601s and an LCR 600 centre speaker. Great in both stereo and multichannel surround modes.



KEF Q AV7 £1,300

With the latest Uni-Q refinements, this system is astonishingly accomplished and amazing value.



Mission

m5 package £1,450

A five-speakers-plus-sub package giving a strong performance with both music and film soundtracks. Excellent value.



Mirage Omni 2 £2,650

Dark tonality but superb imagery makes this an excellent all-round choice for music and movies alike.

A 5 20

210

Our favourite BEST BLY 60 EDITOR'S CHOICE

A	V SPEA	K	ER PACKAGES	EASE	NUMBER OF	BASS	Т	CLOSE	ISSUE
Muli	tichannel speakers			유	SPEAKERS	FROM (HZ)	FREE SI	10	IE NUMBER
BADGE?	PRODUCT	£	COMMENTS	DRIVE	ERS.	(H)	ACE	WALL	IBER
	B&W 300	900	An excellent compromise between the requirements of music and those of home cinema (inc. subwoofer)	Α	6	27	0		241
BB	B&W 600 S3 package	900	Unquestionably delivers the sonic goods. High-quality drivers in standmount enclosures (uses 602 S3s at the front)	Α	5	22	0		224
	Castle CAV Sterling	1,250	Lovely real wood veneers. Sound has fine dynamic drive and expression, but can sound a little hard	Α	5	28		0	224
	Dynaudio Audience 42	1,142	Multichannel package for hi-fi purists with real authority and imaging, but needs subwoofer for full-bore movie sound	A-	5	53			241
	Focal-JMLab Cobalt	1,797	A little lean and bright, but with righteous dynamic expression and lively communication skills	Α	5	22	0		224
	Focal-JMlab Electra	3,017	Bold, solid system, tremendous consistency and easy to expand with an added subwoofer	Α	5	50	0		232
88	KEF Q AV7	1,300	With latest Uni-Q refinements, this system is astonishingly accomplished and amazing value	A+	5	35			232
	Mirage Omni 2	2,650	Dark tonality, but superb imagery makes this an excellent all-round choice	Α	5	30	9		232
BB	Mission m5	1,450	Main m52 is a clean, attractive full-range stereo speaker, while the m5as does big bass for movie fans	Α	6	28	8		241
	Mordaunt-Short Declaration 500	1,600	Good value vinyl THX Select package with Power Towers. Good authority, but must be 5.1-connected	Α	5	25		0	210
	PMC FB1/TB2	2,485	Classy, if bulky and pricey, package has good transparency, coherence and weight	Α	5	20		9	210
	Rega Jura/Ara/Senta	938	Classy real wood package does a good all-round job, but sounds bright and might have more surround weight	Α	5	25		0	210
	Spendor S-Series	1,650	Ultra-tinies lack some dynamic and loudness capabilities, but beautiful voicing and freedom from boxiness	A-	5	30		0	224

Lacks some grunt, but smooth and refined with seamless surround coherence. Excellent value

EASE OF DRIVE How much power the amplifier needs (approximately) to drive the loudspeaker effectively: A+ 25 watts plus A 50 watts plus A - 100 watts plus. NUMBER OF SPEAKERS The amount of individual loudspeakers in the package. BASS FROM How low the speaker goes, the smaller the number the deeper the bass FREE SPACE The speakers work best away from wall(s). CLOSE TO WALL The speakers will work best when up against a wall (but avoid corners).

Our favourite BEST BUY ELETTOR'S CHOICE

500

Tannoy mXAV4

	REL Storm III 900 Excellent sub with powerful, detailed and deep bass. Comprehensive facilities, including flexible filter adjustment				POWER	BASS FROM	ISSUE NUMBER
BADGE?	PRODUCT	3	COMMENTS	<u>S</u>	3	(ZH)	贸
	Acoustic Energy Aesprit 308	650	Tuneful and dynamic sound with music or movies from this compact sub, which comes with a handy remote	41,37,30	200	35	225
EC	B&W ASW850	2,000	Does all the things subwoofers should do with music and movies alike, but transparently and seamlessly	53,56,52	1000	18	246
	Monitor Audio ASW100	300	For the price, this compact subwoofer performed well	32,32,34	120	27	225
BB	REL Q150E	500	Great value compact 'cube' sub adds genuine weight and drive thanks to superior filtering	29,32,33	150	20	239
	REL Strata III	700	A little more bottom octave might have been preferable, but in terms of agility and coherence, this is a fine hi-fi subwoofer	42, 52, 33	100	20	210
	REL Storm III	900	Excellent sub with powerful, detailed and deep bass. Comprehensive facilities, including flexible filter adjustment	42,62,33	150	18	225
EC	REL Stadium III	1,500	It's a bulky piece of furniture, but offers superior filtering as well as an ability to delve deep into the bass nether regions	59, 56, 39	200	16	217
88	Ruark CL300	2,000	Shows what a good subwoofer can do: controlled, detailed and dynamic. A delight with music and movies alike	60,52.5,40	300	30	225
	Titan Saturn	800	Very bulky sub has curious styling, but decent filtering gives good weight and headroom	72,48,72	200	20	239

SIZE WXHXD (CM) Width, height and depth of one cabinet in centimetres. POWER (W) How many watts the onboard amplifier of active models delivers. BASS FROM How low the sub goes, the smaller the number the deeper the bass

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HEADPHONES



For your ears only



Headphones come in several varieties and some are designed for particular usage. The majority of 'cans' use dynamic cone and coil-type drive units and can be used with anything from a personal stereo to a dedicated amplifier. Other types also exist, most significantly electrostatics that use a charged panel membrane to produce a distinctly refined sound. These are supplied with their own dedicated amplifiers, which tends to increase the price.

Cans are split into several types. There are open and closed-back designs, the latter being best for noisy (or noise sensitive) environments as they minimise leakage and intrusion. Open-back types tend to have a more open, less 'in-head' sound. There are also three variants of earpad design: circumaurals enclose the ear and press on your head, supra-aurals press on the ear and intra-aurals sit in the ear and are particularly popular with personal stereo users.

Getting the best from your cans

Getting a good result with headphones is not quite as straightforward as it should be. Merely plugging them into the output on your CD player or amp will not give particularly engaging results unless you are very lucky. If you are planning on serious listening, invest in a dedicated amp – the increase in dynamics is not in the least bit subtle. A variety of models are made and prices start at around £80 for a QED, a little more for designs from, say, Creek or Musical Fidelity. And if you're really into cans, look up the valve-powered Earmax.

_	r favourite					SP	ECIF	ICATI	ONS		
	EADP reo headphones	H	DNES	ELECTROSTATIO	SUPRA-AURAL	CIRCUMAURAL	OPEN BACK	CLOSED BACK	WEIGHT (g)	3.5MM JACK ADAPTOR	ISSUE NUMBER
BADGE?		3	COMMENTS	0		1	^	-	-		
BB	AKG K44	20	Lively, enjoyable and remarkably detailed: a bargain			0		0	190	0	219
	AKG K100	36	Leather-clad groover with bags of power and clarity, for a respectable asking price		9		0		190		205
88	AKG K270 Studio	129	Pro oriented design which is very transparent and great with acoustic material			0		0	270		230
EC	AKG K1000	550	Neutral, analytical and completely out of the head sound, suitable for connection to speaker outputs only				0		270		244
	Audio Technica ATH-D40fs	105	Detailed and involving sound with a professional 'studio' quality appeal						250		194
88	Beyerdynamic DT990	150	Impeccable balance, very extended bass and treble, and bags of detail place this model ahead of the pack			0	0		250	89	245
88	Grado SR60	90	For sheer musical enjoyment these are hard to beat. Retro styling may not be to everyone's taste		0		0		200	*	194
88	Grado SR80	110	Not perhaps as neutral as some but they communicate well and that's the point of the exercise		0				200	-	230
	Philips HP890	70	A remarkably sophisticated and very comfortable headphone			0			330	8	219
88	Sennheiser HD590	160	Assured and confident headphone with very low coloration and great comfort			0	0		270	0	205
	Sony MDR-CD480	40	Generally neutral and nicely detailed – comfortable too						250	*	219
EC	Stax System li	400	Luxury option at its price, but the sound delivery is five-star quality all the way	0		0	0		295	0	205

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



CABLES



Wires to hook your system together

Hi-fi cables come in two varieties: interconnects and speaker cables. Interconnects come in preset lengths, generally with RCA phono plugs attached, though some equipment uses XLR connectors for balanced connection. Speaker cable is sold by the metre and can be used without plugs or can be fitted with screw or solder-on types.

Choosing the best cables is not quite as

straightforward as it might seem. One problem is that components interact with the cables you use and this often results in audible effects, but there are few cables that are fundamentally incompatible with any components, and we recommend the advice of a good dealer. In any case, you should look to spend as much as you can afford.

Digital cables come in two flavours: electrical and optical. In most instances

electrical varieties sound better than optical, but if you are after a smoother sound the light carriers have the advantage, as they do if long lengths are needed (10m+). Optical outputs tend to have Toslink connectors (around 99 per cent), but some electrical digital outputs are of the superior BNC type, which uses a bayonet-type socket. Check which type your digital component has before buying a digital interconnect.

A	ADIF				SI	'ECII	ICATI	UNS	
	ABLES		cables	STRANDED	SOLID CORE	COPPER	SII	DIGITAL CABLE TYPE	ISSUE NUMBER
	PRODUCT	£	COMMENTS	- DED	윢	Ř	SILVER	JAK.	BE
NALO	IGUE INTERCONNECTS			- 20				27	
	Chord Calypso	30	Informative, clear sound at a decent price	8		0			2
	DNM TBB75	75	Bass not always completely consistent, but sound has great clarity and insight		0	0			24
2	Ecosse The Composer	30	A high degree of realism and delicacy, and a fantastic price (0.8m)	0					2
	Ecosse Reference Diva	100	Very good performance in all areas, with particularly fine, tuneful, bass (0.8m)	0		0			22
88	Ixos Gamma Audition II	30	Detailed and neutral, with just a hint of pleasant mellowness	0		*			2
	Kimber Silver Streak	242	Not the cheapest around, but more than justifies itself with terrific poise and balance of virtues	0					24
8	Monster Interlink 400 Mk2	70	Really lively and enjoyable sound	0		0			22
	QED Qunex 1	20	Well balanced and easily rivals more expensive cables	0		0			2
	Townshend Audio DCT1 00	99	Unusual construction with copper strip conductors, giving very detailed sound, but just an occasional hint of hardness		0	0			2
C	Townshend Isolda DCT	300	Unusual construction and cryogenically treated too: whatever the reason, a remarkably capable wire		0	0			23
8	van den Hul The Bay C5	45	Terrific detail, nice balance – a great cable	0					2
88	van den Hul The Well	49	Hybrid cable with carbon-fibre conductors added. Very slight bass coloration does little to detract from fine performance	0					2
18	van den Hul D102 Mk III	79	Hybrid conductors (carbon and copper) and intelligent construction give strong bass and excellent detail	0					2
IGIT	L INTERCONNECTS			573					
	Audioquest Digital One	35	A neutral and capable cable that adds little or no character to the sound			0		Е	2
88	QED Qunex P75	25	A superbly capable interconnect that's highly detailed and well balanced			0		Ε	2
38	QED Qunex SR75	50	Lots of bass and good clear midrange and treble at a sensible price	0		0		Е	2
	Ross OP004	20	Sounds much like most other Toslink leads: slightly lacking detail, but good value					0	2
3B	Supra Trico	40	Very well made digital/video cable which noticeably improves the sound of a cheap DAC			0		Е	2
18	van den Hul Optocoupler II	49	Noticeably has the edge over other optical leads, but still second best to electrical types					0	2
PEA	TER CABLES PRICE PER METRE			600					87
	Black Rhodium S300	18	Tight, precise and extended bass makes this a great cable for rock 'n' roll			0			2
	Black Rhodium S130	20	Bi-wire cable with great kick in the bass, though the treble can sound dry and recessed	0		0			2
	Ecosse Reference MS2.3	23	Favours excitement over refinement: can be slightly bass-shy, but plenty of life	0		0			2
С	Electrofluidics 2020	45	Excellent bass extension and very fine performance elsewhere – one of the best all-round cables available		0	0			2
8	lxos Gamma 6003	3	A little midrange dryness, but bass is among the best at this price; strong and consistent			0			2
18	Kimber 4PR	5	Considering the price, this cable's very slight dryness is forgivable when everything else is so right			0			1
38	Kimber 8VS	18	Beautifully full, open and transparent sound right across the board. Price for 1m terminated pair			0			2
	Kimber 8PR	21	Bass very full, just occasionally a touch flabby, but detailed and sweet upper frequencies make this a good value cable			0			2
36	Kimber 8TC	39	Very capable in all areas, particularly good at imaging and with firm bass. Price for 5m terminated pair	0		0			2
18	QED Silver Anniversary	5	A few minor flaws, but overall performance is very assured for this price	8		0			1
_	QED XT300	10	A natural and well controlled sounding cable that's cost effective for mid-priced systems	-		0			2
	QED Profile Silver 12	15	Very slightly laid back, but good tone and detail – wears its achievements lightly			0			2
	Supra Ply 3.4/S	8	Good in all areas, with rich bass and just a touch of treble roughness	0		0			2
	συρια Fly 3.4/3	O	about in an areas, with non-bass and just a touch of treble roughness	- 10		100			2

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



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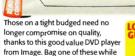
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BUYER'S BIBLE STANDS AND SUPPORTS

STANDS AND SUPPORTS

Equipment racks and speaker stands



In hi-fi there are two types of stand. One is a rack that holds turntables, amps, CD players and so on and is described as an equipment support, and the other is a speaker stand. The

latter comes in three basic varieties, two for standmount speakers: lightweight, multilegged types; and heavy designs with fewer legs and the ability to be mass-loaded for extra solidity. The lighter variety is

said to have a quicker sound, while heavyweights give deeper bass and a calmer sound. The third speaker stand type is a platform that sits under floorstanding speakers or speaker/stand combinations, the pneumatic Townshend Seismic Sink being an example.

There are two speaker-to-stand interfacing options: spikes or Blu Tak in each corner of the top plate. Try both and take your pick.

Ou	r favourite	1	BEST BUY EC EDITOR'S CHOICE						
					SPEC	IFICA	TION	S	
E	QUIPN	1	ENT SUPPORTS		TOP PLATE S		NUMBER OF	SHE	ISSUE NUMBER
Equi	ipment supports			HEIGHT	SIZE ((WELDED	SHELVES	SHELF TYPE	MUM
BADGE?	PRODUCT	3	COMMENTS	当	(CM)	Œ	/ES	PE	Ħ
	Aavik Furniture A4	350	Good sound and stylish Scandinavian looks at an affordable price	80.5	47		4	MDF	193
	Alphason A5-G	399	Nice looking, very solid and practical with a pretty well balanced sound, but lacks a little detail	80	66,46		5	Glass	247
	Atacama Equinox	280	Stable, modular design with style. Excellent bass transients and a fresh design concept	81	50,50		4	Glass	217
88	Audiophile Furniture Base	615	Price is justified by its earth-shattering sonic abilities – a worthy upgrade	82	43		4	MDF	193
	Avid Isoschelf	1,100	An enthusiast's equipment support stand free from coloration, If a little fiddly to set up	87.5	48		5	MDF	193
68	Clearlight Audio RDC Aspekt	550	Stunning neutrality and detail from a well-damped design. Its performance makes the price tag good value	75	53.5,45		4	MDF	217
	Custom Design Aspect 650	270	Smart looks and practical thanks to adjustable shelves. Sound is fair with some loss of detail	66	46	0	4	Glass	206
(93)	Custom Design Concept 400	699	Slightly drab appearance, but good sound and efficient use of space	74	48,40		4	Metal	247
	Isoblue 'The Stand'	460	Attractive modular design that's as easy on the ear as on the eye	47	48,40		4	MDF	247
EC	Naim Fraim	1,825	Pricey but very classy looking and sounding, with modular flexibility	96	45,34		5	Glass	232
	Quadraspire Q4 Reference	480	Excellent performance from the school of wobbly racks. Natural sounding and plenty of detail	51.5	49,39.5		4	MDF	217
	Russ Andrews Torlyte Rack	988	Attractive modular system made of very light Torlyte: a touch of added warmth is its only vice	68	54,49	1	4	Torlyte	240
BB	Sound Organisation Z560	195	Excellent value rack, five shelves too! Well balanced and under 200 quid!	92	50,40		5	Glass	217
-8	Standesign Design 4	190	An all-in-one support at a budget price, with good sonic performance	88.5	50.8	0	4	Glass	193
EC	Townshend Seismic Stand II	1,140	multi-shelf air-suspension support which isolates like few others. Recommended	92	58, 45		5	MDF	240

Our favourite BEST BUY CE EDITOR'S CHOICE **SPEAKER STANDS** TOP PLATE SSUE NUMBER SIZE Speaker stands (CM) BADGE? PRODUCT 60 14518 202 Atacama Nexus 6 An excellent all-round performer and a genuine hi-fi bargain 60.50 Custom Design R/S300 Mkll 100 A solid stand improving on the original, with better focus and detail 16.5.18 202 hne Cableway 399 Looks great, sounds great, so start saving! Clean and sweet, and neutrality is exceptional with orchestral materia 63 220 Kudos S50 115 Formidable bass with real authority, and a wide dynamic range across a broad bandwidth 15. 20 220 Partington ANSA 60 90 Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent 18 15 Partington Dreadnought 100 Fully welded high-class engineering gives a very clean, open sound at a sharp price 61 17 15 220 Sound Organisation Z522 95 Very hefty build for the price helps to deliver a solid sound with good authority and drive 16 220 Townshend Seismic Sink 38.48 499 Unique inflatable plinth that works wonders with decent floorstanders, as well as standmounted speakers 202

EQUIPMENT SUPPORTS SPECS KEY HEIGHT Of complete stand. TOP PLATE SIZE (CM) Width by depth of the supporting platform(s). Single figures indicate a square platform. WELDED As opposed to bolt-together construction. NUMBER OF SHELVES To put your kit on (different configurations are often available). SHELF TYPE Material that shelves are made of

SPECIAL RESTANCES SPECIAL HEIGHT Of each stand, not including spikes. TOP PLATE SIZE (CM) Width by depth of platform. Single figures indicate a square platform. Speakers generally overhang top plates FILLABLE The stand can be mass-loaded with sand and/or lead to stop ringing. WELDED As opposed to bolt-together construction. NUMBER OF LEGS That support the stand.



GLOSSARY

TECHNICAL TERMS

5.1-CHANNEL AUDIO Six discrete channels, typically front left and right, centre, surround left and right, and LEE (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

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, incompatible with older CD players.

CLASS A The operation of an amplifying stage or device in which current always flows, as opposed to Class B, where some of the devices are effectively turned off some of the time. Class A tends to have the advantage of offering lower distortion while Class B tends to generate less heat.

CLASS AB Most practical amps operate in Class A for the first fraction of a watt and Class B thereafter

CLIPPING An amplifier's output waveform is 'clipped' if the volume is advanced too far and no more 'volts' are available to sustain ever-increasing power levels. Distortion increases

CLOCK Any electronic oscillator that is used to generate a timing reference signal. Used to synchronise the data being taken from a disc.

CROSSOVER A simple electrical network which divides the full bandwidth signal received from the power amplifier. apportioning appropriate parts of the spectrum to the various drive units.

DAB (digital audio broadcasting). Digital radio using frequencies in the band 217.5 - 230MHz. Broadcasters use varying degrees of compression and offer a broad range of programming.

DAC or Digital-to-Analogue Converter. The stage in any digital component at which incoming digital data is used to reconstruct a recognisable analogue (music) waveform

DOLBY DIGITAL DD (AC3)

A compressed digital audio format that typically contains five or more entirely discrete channels, eq 7.1 EX where side and rear channels are used.

DOLBY PRO-LOGIC, DPL Forerunner to DD that 'steers' information to the front L/R, centre and mono surround

channels via an analogue matrix

DRIVE UNIT/DRIVER A transduce which converts electrical energy into acoustic energy, eg bass driver, tweeter DSD (direct stream digital) The coding format used for SACD offers a frequency response of over 100kHz and a dynamic range over 120dB, it has over four times the data capacity of CD.

DSP or Digital Signal Processor. Integrated circuit that handles the decoding of digital audio streams. In 5.1 processors it separates the left from right and front from rear while managing the various bass options

DTS or Digital Theatre Sound Competitor to Dolby Digital with a reduced 41 compression ratio that. ostensibly, promises higher quality.

DVD-A High-resolution variant on DVD offering up to 192kHz bandwidth and 24-bit dynamic range. Discs are compatible with standard DVD players.

ELECTRICAL DIGITAL Any digital connection that uses an electrical cable rather than optical. Includes the balanced ('AES/EBU') interface.

FILTERS Filters are intrinsic to digital audio, both analogue and digital. These are often very sophisticated in design, and in total they probably have rather more to do with the 'personality' of CD player sound than most other factors.

FREQUENCY RESPONSE The range of frequencies, from low to high, which a loudspeaker will reproduce

IMPEDANCE With speakers, the complex electrical load that a loudspeaker presents to the amplifier which is driving it.

JITTER An insidious distortion specific to digital audio caused by the clock used to regulate the conversion of data into analogue audio, being imprecise.

KBPS (Kilobits per second) Digital data rate measurement system used primarily with highly compressed formats such as MP3, DAB etc. The higher the amount, the better the quality.

LINE LEVEL Practically every modern source component (except phono cartridges) gives an output in the region of 1-2V, referred to as 'line level'. It follows that all inputs labelled 'CD', 'tuner', 'aux' or 'tape' are designed for this input level and are thus interchangeable

LOSSLESS COMPRESSION A

method of reducing the number of data bits (density) without corrupting the original description of the musical signal.

LOSSY COMPRESSION Reduction in data density by recourse to a 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.

MP3 (MPEG layer 3) Lossy compression format for digital audio that drastically reduces data content in order to squeeze music through internet connections or allow hundreds of CDs to be stored on a

OUTPUT IMPEDANCE A measure of resistance to alternating current, a source with low output impedance (below 100 ohms) helps ensure compatibility with most amplifiers, even with long interconnect cables.

PCM (pulse code modulation) The digital coding system for analogue waveforms used for CD and DVD. Quality is limited by the oversample and bit rates used - CD is 44.1kHz/16-bit while DVD-A is capable of 192kHz/24-bit.

PRESENCE BAND Critical section of the audio band at the point where midrange and treble meet.

QUANTISATION NOISEA form of distortion or noise resulting from errors in the description of the musical signal by the

SACD (super audio CD) was launched in 1999 and is a Sony/Philips format based on DSD coding that offers high resolution stereo and multichannel sound from hybrid discs that can also be played on ordinary CD drives

SAMPLE RATE The rate at which the musical waveform is sliced up into discrete chunks. For CD this is 44.1 kHz or once every 0.023msec. DVD will also support 48kHz and 96kHz

SENSITIVITY The relative loudness that a speaker generates for a specific voltage input. Expressed in decibels per watt (dB/W).

THX Standards system for home cinema set-ups which includes amplifier power and speaker dispersion characteristics. THX Ultra is more stringent than THX

TOSLINK The proprietary name given by Toshiba to the optical fibre signal transmission system it invented for consumer applications.

TRANSISTOR/MOSEFT The two main types of power semiconductor used in solid state amplifier output stages. TREBLE High frequencies, the top end

of the audio band, ie above 3kHz. TWFFTFR Treble driver

TWO/THREE-WAY Loudspeaker crossovers split the signal into two or three frequency bands, a two-way speaker can have more than two drive units.

WATTS (per channel) The watt is the unit of electrical power and the WPC rating is the maximum average undistorted power that an amp can deliver to a typical speaker. However, speaker sensitivity variations can make more difference than amplifier output.

DESCRIPTIVE TERMS

AGGRESSIVE Forward and bright sonic character.

AMBIENCE The impression of an acoustical space, such as the performing hall in which a recording was made.

ANALYTICAL Highly detailed. ARTICULATE Intelligibility of voice(s) and instruments and the interactions

ATTACK The leading edge of a note and the ability of a system to reproduce the attack transients in

BALANCE Essentially tonal balance, the degree to which one aspect of the sonic spectrum is emphasised above the rest. Also channel balance, the relative level of the left and right stereo channels.

BODY Fullness of sound, with particular emphasis on upper bass. Opposite of thin

BOXY The sound of a loudspeaker with audible cabinet resonances. BRIGHT A sound that emphasises the

upper midrange/lower treble. DARK A tonal balance that tilts downwards with increasing frequency. Opposite of bright

DECAY The fadeout of a note, it follows the attack.

DEFINITION (or resolution) The ability of a component to reveal the subtle information that is fundamental to high fidelity sound.

DEPTH (of image) The perception of music being reproduced behind the loudspeakers and inhabiting a reproduction of the acoustic space of the original recording.

DETAIL The most delicate elements of the original sound and those which are the first to disappear with lesser

DRY A sound that is devoid of 'juice', which usually comes across as finegrained and lean. Also a loss of reverberation as produced by a damped environment.

DYNAMIC The suggestion of energy and wide dynamic range. Related to perceived speed as well as contrasts in volume both large and small.

EUPHONIC An appealing form of distortion that generally enhances perceived fidelity, often ascribed to the harmonic elaborations of some

FAST Good reproduction of rapid transients which increase the sense of realism and 'snan'

FOCUS A strong, precise sense of image projection

FORWARD(NESS) Similar to an aggressive sound, a sense of the image being projected in front of the speakers and of music being forced

GRAINY A slightly raw, exposed

sound which lacks finesse GRIP A sense of control and sturdiness in the bass.

GRUNT See grip.

HARD Uncomfortable, forward, aggressive sound with a metallic

HARSH Grating, abrasive. IMAGING (stereo) The sense that a voice or instrument is in a particular place in the room.

JUICY Sound that has joie de vivre, energy and life.

LOW-LEVEL DETAIL The quietest sounds in a recording.

MUSICAL or musicality. A sense of cohesion and subjective 'rightness' in

NATURALNESS Realism. **OPAQUE** Unclear, lacking transparency.

OPEN Sound which has height and 'air', relates to clean upper midrange

PACE Often associated with rhythm, a strong sense of timing and beat. PRESENCE A sense of an instrument or voice occupying a place in the listening room

PRESENCE RANGE The upper midrano

SEISMIC Very low bass that you feel rather than hear.

SIBILANCE An emphasis of the 'S' sound, often heard on radio, SNAP A system with good speed and transient response can deliver the immediacy or 'snap' of live

SPEED A fast system with good pace gives the impression of being right on the money in its timing.

STURDY Solid powerful robust

THICK A lack of articulation and clarity in the bass.

THIN Bass light.

instruments

TIMBRE The tonal character of an

TIMING A sense of precision in tempo. See speed and pace.

TRANSIENT The leading edge of a percussive sound. Good transient response makes the sound as a whole more live and realistic.

TRANSPARENCY, transparent. A hear-through quality that is akin to clarity and reveals all aspects of detail. TWEAK To tune a system or component in an attempt to get the best performance from it.

TWEAKER Someone who enjoys this

VEILED Loss of detail due to limited transparency.

WARM A fullness in the lower midrange/upper bass.

WEIGHT A sense of substance and underpinning produced by deep, controlled bass.



Welcome to the Hi-Fi Choice accessories shop

Choice Bits is the easy way to buy the best audio accessories available today. Simply pick up the phone, order online, drop us an email or fill out the order form opposite and pop it in the post. Ordering couldn't be simpler!

This issue we've simply gathered together some of our finest accessories. Whether you prefer analogue or digital, these will give your system or your music collection that added lift in performance.

Not widely known in the UK, Bedini's Mkll Clarifier is the audiophile's number one choice in the US for achieving that extra level of clarity from Compact Discs - as is Audio Prism's CD Stoplight.

This issue's 'timeless classic' has to go to the DECCA 2+2 record brush. The 2+2 has been a favourite with audiophiles almost since the dawn of LP disc spinning.

SHOWCASE

Bedini Clarifier

High-quality demagnetising CD treatment

Key features

- Improves the performance of all CDs within your collection
- New improved
- · Hand-held design
- Cost-effective long-term solution



Bedini Clarifier MkII

By demagnetising the residual charge from the ferrous materials which are within the aluminium of your CD and used to print CD labels and track

listings, your audio enjoyment will improve simply because magnetisation lowers the quality of the output and pollutes the audio signal.

This new hand-held Clarifier from Dedini features 'enhanced beam penetration' and is one of the most inexpensive ways to improve the sound of your entire music collection.

Use this on your discs and you'll find music sounds more 'elastic' and 'free', with more 'air' in the high frequencies, while the background noise levels will seem to be reduced. If you want to maximise your CDs' sound it's a must.

Only £69.95

Audio Prism CD Stoplight



CD Stoplight is designed to absorb the laser's infra-red wavelength, which in turn improves the sound of any CD. Expect to hear increased soundstage, definition and improved base solidity.

Only £19.95

Van Den Hul Polarity Tester Featuring LCD Display

To call this device just a polarity checker is to sell it somewhat short. Not only is this product an excellent polarity checker, but it also detects the location of mains carrying cables as well as allowing you to find the faulty ones. By positioning cables correctly you'll be able to detect electrical fields radiated from your cables, making cable dressing a far more precise

process. And in addition, the Van Den Hul Polarity Checker also acts as a compact voltmeter. Build quality is to the usual high

van den Hul standards. The polarity checker features a compact LCD display and two buttons - these being all that's required to access its multiple functions. This easy-to-use tool comes in a compact safety case and is essential for any audiophile's toolbox.

Only £17.50

DECCA Disc Care 2+2 Record Brush



A decade of research and development into record brush design has resulted in the combination of carbon fibre and polyamide fibres that offer an advance in simple day-to-day record care. The two sets of brushes and fibres not only eliminate static but keep surface dust to a minimum.

Only £9.95

AVIA Home Theatre Set-Up & Calibration Disc



'AVIA' is the most complete and easy-to-use tool for precisely setting up and optimising your home theatre system. Relax, sit back and watch the on-screen video presentation that will teach you the basics about signal sources, processors, speakers, displays, making connections, arranging your viewing environment and calibrating your system. It's suitable for the novice or professional alike, its intuitive interactive menus allowing you to choose your level of understanding.

Only £39.95

A.R.T. Q-Ring



The Q-Ring works like a small insulation transformer, not only for common RF interference, but A.R.T. claims that it is also the most economical and efficient means to absorb and stop ultrahigh-frequency pulse. Use one of these on your mains cables and the effect can be startling.

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FOR SALE

ACOUSTIC RESEARCH EB101

turntable, black, good condition including box, instructions and Ortofon MC15 Super cartridge £100 ono. 0161 773 3971 or 07703 201199 (Manchester).

AKAI 4000 DS MKII reel to reel tape deck, analogue heaven, plus another for spares. Pioneer TX606 analogue tuner, excellent clarity and sensitivity, offers. Ian 01483 729552 (Surrey).

ARCAM ALPHA 9 CD £380, integrated amp £250, preamp £220, power amp £160 (two available). All boxed in excellent condition with owner's manuals and remotes. 3-4 yrs old. Mark 01653 694170 evenings (York).

ARCAM DIVA A75+ amplifier and P75+ power amp. Excellent bi-amp combination. 2002 models, mint condition, boxed, £350 the pair, can split. 01323 486216 (Eastbourne).

AUDIO RESEARCH PH3 phono amp. All new valves, manual and box, £725. Mr Smith 01903 247779 (Sussex).

AUDIO SYNTHESIS DAX

Decade, balanced output DAC. Very good cond with box. Iain 0116 2603603 or email iainbradshaw@totalise.co.uk (Leics).

AUDIOLAB 8000 CD player, mint condition £450. 01933 674425 (Wellingborough).

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Cambridge Audio C500 preamp 2xP500 power amps, all boxed and mint. £250 Mick 07932 2330269 (Lancs).

CAMBRIDGE AUDIO DISC

Magic 1 CD transport and Isomagic S700 DAC £150. 07932 330269 (Lancs).

CAMBRIDGE AUDIO T500

FM/AM tuner boxed. Mint condition £80. Also CT200 twin cassette, mint £70. Mick 07932 2330269 (Lancs).

CYRUS CLS50 standmount loudspeakers finished in cherry veneer, boxed, showroom condition, rarely used. (£550) £275. 07753 625783 (Kent).

DENON DCD-S10II CD player, high end, gold finish, balanced phono, as new. Excellent musical sound, boxed (£1,300) £450. 01273 541462 (Sussex).

DYNAUDIO CONTOUR 2.8

floorstanding loudspeakers. Rosewood, excellent condition, boxed (£3,200) £1,100 ono. 01256 355808 or 07769 546957 (Hampshire).

EAR 864 high-end valve preamp includes phono input facilities. Boxed, excellent condition. £1,075 ono. 01745 331681 eves or 336553 day. (N Wales).

KRELL KAV3001 integrated amp, 150wpc, remote, manual, boxed, as new (£2,550) £1,350 ovno. 07976 833168 (Bath).

LINN KAIRN preamp mm/mc, remote, mint £450. Isobariks, active, walnut, boxed, stands £450. LK100s x4, active modules, mint £995. Also LK280 spark, boxed, mint, £295. 003531 2954076 (Dublin).

LINN KAN stands (sound org) offers. Armstrong 521 amplifier £30, ferrograph 631 R to R exceptional £275 ono. 01708 457691 (Essex).

LINN MAGIC I amplifier, excellent condition, hardly used. £350. 02392 693686 (Portsmouth).

MAGNEPLANAR MG-IC

speakers, white, with stands. Excellent condition, boxed, £300 ono, buyer collects. Stephen 020 8919 1706 (London).

MICHELL ISO HR (moving coil) with Hera power supply. Modified by the designer. Musical Fidelity A3 CD player with invoice and manual, looks and sounds as new £450. 01942 897557 or 07977 573114 (Manchester)

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3D CD player mint, boxed £2,300 ono. Jamo D8 Sub (£950) £495 ono. 01803 522041 (Devon).

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CD player. 01992 572098 (Esx).

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FOR SPARES faulty or non-working Quad 44 preamps, 405 power amps or boards. Mike 01758 613790 (N Wales)

YAMAHA 1000M, good condition, cash paid can possibly collect. Email crosbaf@oceanfree.net.

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ORTOFON MC30 supreme cartridge approx 500 hours use. Box and receipt £150. 01943 468835 (W Yorks).

PASSLABS X2 line stage, balanced, three years old, vgc, (£2,250) £800 if collected. Alan 01772 735288 (Preston, Lancs).

BUYING TIPS

Buying second-hand can be a great way to pick up a bargain. A formerly expensive second-hand component might well prove a better long-term bet than a brand-new product if the price is right.

Do some research on which brands have a good service back-up, so if something does go wrong, you can get it fixed. Unless you purchase from a dealer, you're unlikely to get any warranty, so it's up to you to ensure the fitness of any gear that you buy.

Usually, speakers should be less prone to breakdown than amps, and amps should be more reliable than CD players. But any abused component could be trouble – have a proper dem, and judge the seller as well as the goods!

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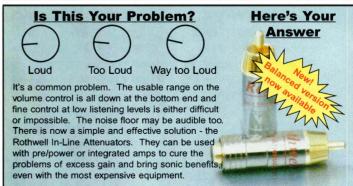
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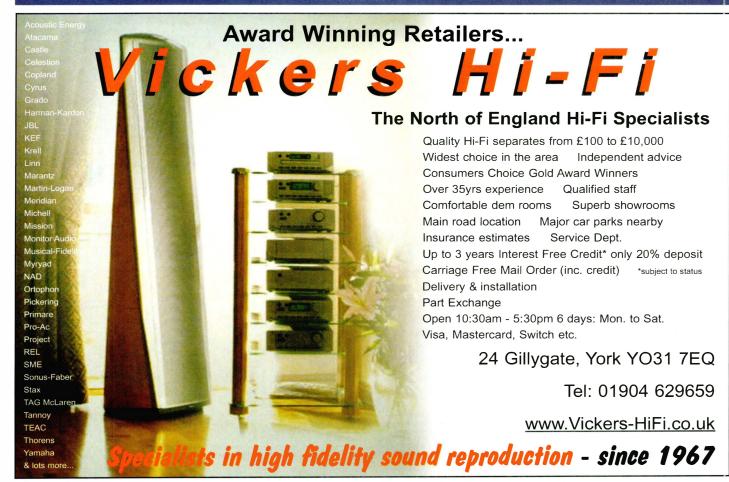


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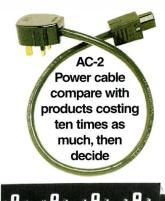
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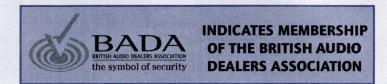
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EXTREME



Hear here?

David Vivian digs deep into his subconscious to explore the mind-blowing world of psychoacoustics

o androids dream of electric sheep? Only if they're having trouble dropping off. Does a tree falling in the woods make a noise if no one is there to hear it? Don't know, don't care. If you've got a really good hi-fi, are the tunes you hum along to in your head better than those of someone who listens to a transistor radio? That's more like it – pulp philosophy we can all relate to.

Weird, isn't it? We think we've got a pretty good grasp of the apparatus of music reproduction: the digital and analogue disc, the amplifier, the speakers. It's what makes up the hi-fi we all know and love. We throw money at it, spend valuable time setting it up and tweaking it, feed it a constant diet of CDs, DVD-As, SACDs and LPs. But we seldom give a thought to the most important hi-fi component of all. Us. Or, to be more specific, our minds. How we actually make sense of anything largely remains a mystery to science, especially

at 12.30 on Saturday night after eight pints of Old Scruddles Depth Charge. We think therefore we are, but as soon as we try to pin down the nature of consciousness – and how it constructs what we call 'reality' – even the brightest bonces get scratched.

Most theoretical physics boffs tend to agree, however, that life, the universe and everything are purely functions of perception and that the processing and manipulation of data taking place inside our heads far outstrips anything devised by the hand of man, including 64-bit DACs. Ever wondered why your hi-fi, far from sounding consistently wonderful, can go from brilliant to irritatingly 'off' in the space of a day or less without anything physical having changed? It's you. Try this. Play a stereo recording you're very familiar with and listen carefully. Now swap the channel leads and play it again. You'd expect to hear the same thing with the stereo image reversed. But you won't.

"The processing of data taking place inside our heads far outstrips anything devised by man, including 64-bit DACs."

Initially you won't be aware of the reversal but the stereo image will now appear oddly narrow and bunched up in the middle. Your brain has already decided what the spatial structure of the music should be and is trying to impose that on what your ears are actually hearing. Spooky.

The study of psychoacoustics has a fair stab at explaining how we perceive pitch and rhythm but more or less throws up its hands when it comes to linking this with a deep emotional response. Take things down to a more fundamental level, though, and things get very strange indeed.

A couple of years ago I bought a book called *The End Of Time* by philosopher and theoretical physicist Julian Barbour in which he proposed that motion and the flow of time are illusions created by our conscious minds and that reality is a static universe in which history and the future exist together as self-consistent packets of experience called 'nows' through which our lives describe a path. I corresponded with Julian for a few months over this with a sinking feeling that the process of listening to hi-fi – the intense sense of flow and continuity – was really just a construct of my brain.

I decided to hit the great man with an analogy. It's all a bit like a jukebox, I said, stacked with an infinite number of instantaccess solid-state 'many world' data chips. These represent the static, timeless universe — mathematically structured configurations that contain the information necessary to reproduce fluid audio-visual 'reality' in all its possible forms. Our brains provide the digital to analogue conversion that allows us to see the motion and hear speech/music of 'existence'.

Never heard from him again. HFC

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