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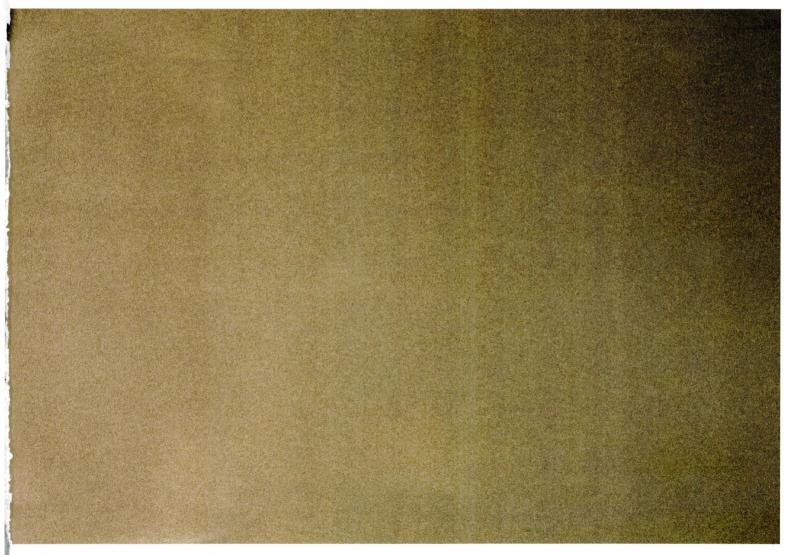






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to ever grace my living room"

Paul Messenger, Hi-Fi Choice, December 2002

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### Intro



#### MAY 2003 ISSUE 241

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#### CONTRIBUTOR

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 sensational (trust us) and his ove of music knows no bounds



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



PAUL MILLER Science officer Miller is hi-fi's undisputed king of lab testing. He employs his own specially designed equipment to pull apart every measurable barameter 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 obsession for more than 20 years. In that time he has contributed to almost every hi-fi periodical you can think of (and several more besides). Few can match his encyclopedic knowledge of all



Richard is one talented guy: a professional musician, experienced recording engineer and a highly knowledgeable hi-fi enthusiast to boot. He's particularly nerdy about cables. It's probably freeudian. hose of you who scour the music press each month will have noticed a new magazine on the scene. *Bang* is named

after legendary rock journalist Lester Bangs and published by the same people who bring you *Hi-Fi Choice*. Its premise is simple: put the passion back into music journalism with flairy writing and colourful opinions, the desire to explore new music and set a proactive agenda. It was the launch party the other night and... I can safely say that the spirit of rock and roll has been found alive and kicking.

Few would expect to find said spirit nestling within the pages of a hi-fi magazine, but I contend that *Bang* and *HFC* are not so different in ethos and attitude. We too scour the scene for the latest and greatest sounds, fired by a passion for music and its emotional potency. Throughout its 28-year life, the mag has sort to set an agenda for the transmission of music's energy and emotion through kit capable of doing it justice. Hi-fi is the conduit through which recorded music may best communicate, and we bring all this to you because you love your music as much as we love ours.

This month our search has led us to a fine and varied collection of components including a clutch

of superb pre/power amp combos, fit to serve at the heart of your system and pump musical current through its veins. Like rock and roll, the spirit of hi-fi is alive. And kicking...



Tim Bowern editor

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For 28 years, our unique tests have brought you the most accurate guide to buying hi-fi. Our mix of thorough Group Tests and in-depth solo reviews ensures HFC is the magazine to trust.

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# PRODUCT NEWS



# SONY LINKS UP

Sony has announced the first products to feature its high resolution i-Link digital connection for SACD. I-Link is a FireWire/IEEE1394 digital interface like that in Pioneer's DV-757Ai universal DVD player and VSA-AX10i AV amp. Sony has incorporated i-Link into two new ES components, the SCD-XA9000ES SACD player and TA-DA9000ES AV

amp. The SACD player will be the flagship in Sony's ES range, sporting a tri-powered digitalto-analogue conversion system that's designed to reduce noise levels whilst maintaining the format's wide bandwidth. Bass management and speaker set-up potential is significantly improved thanks to a new 'multichannel management system' in both player and amp. The TA-DA9000ES amplifier delivers seven times 200 watts and features all the latest surround sound processing including DTS ES, 96/24 and NEO:6, Dolby Digital EX and Pro-Logic II. Prices are anticipated to be above current ES levels but you won't be able to buy one until October.

🕿 Sony UK 08705 111999 🌐 www.sony.co.uk

## DIGITAL PURISM NEW DAB TUNERS FROM PURE

DAB specialist Pure has unveiled three new digital radios in three very different forms. The new products include a mobile phone sized portable unit, a new Evoke-2 desktop unit and the flagship full-width DRX-702ES. The new Pocket DAB 1000 personal unit has an aerial integrated into the headphone lead – a significant development over existing pocket designs – and can display up to two lines of text.

The main feature of the free-standing products is both DAB and FM circuitry in one box – giving users the best of both worlds. The £160 desktop Evoke-2 is both battery and mains powered and features scrolling LCD text, auto-tuning, an optical output and a full range speaker complete with reflex port.

Meanwhile, Pure's new flagship radio separate, the £330 DRX-702ES, boasts the latest DAB processor from Frontier, an AM/FM

tuner with multi-language support and dual-band reception for use throughout Europe. Other features include USB connectivity, 99 presets, RDS and fast data tuning. Pure 01923 260 511 # www.pure-digital.com





## COMPACT CASTLE MINI CASTLES FOR THE HOME

Castle adds turrets to its speaker range this month with the launch of the Compact System, a small-scale multichannel speaker package that benefits from real wood hand-finished cabinets in a range of veneers. Designed for near-wall or even on-wall placement, the Castle satellite speakers use a 112mm woven glass fibre cone housed in a sealed box accompanied by a wide bandwidth tweeter which is claimed to go up to 40kHz. Castle's subwoofer uses a 250mm paper cone with 150 watts of power behind it and according to Castle, a "low wind-noise double trumpet port tube" – fab! The Compact system is available in early May priced at £1,000 for the 5.1 version in standard veneer, or £1,200 for luxury yew and rosewood.

☎ Castle Acoustics 01756 795333 ⊕ www.castle.uk.com



#### DINKY DSP NEW DSP-ACTIVE SPEAKER FROM MERIDIAN

Meridian has launched a smaller and more affordable version of its flagship DSP-based active speaker. Like its elder brother, the new DSP7000 offers the listener control over bass, treble tilt and phase, and of course volume. The pressure-laminated panels use layers of woods and metals to provide a stiff box with high damping.

Bass is supplied by twin 200mm drivers with the tweeter and midrange units housed separately in the main cabinet. The drivers are powered by four independent 100-watt amps claimed to offer low noise, high detail and fast bass. Various shiny finishes are available with prices starting at £16,175 per pair. Meridian Audio 01480 445678 www.meridian-audio.com



# LIFE IN THE FAST LANE MORE PROCESSING POWER TO TAG'S ELBOW

TAG McLaren's stalwart AV32R multichannel processor has been updated to 'THX Ultra2 Dual Processor 7.1' status, incorporating a new board that offers six times the processing power of its predecessor. This extra digital muscle is provided by dual super Sharc DSPs and brings THX Ultra2, a height channel, DTS 96/24, extended bass management and most significantly TMREQ, the TAG McLaren Room Equalisation Suite. This software application offers eight channels of 96kHz/24-bit equalisation with sophisticated filtering to allow the elimination of unwanted room-induced resonances for each channel. TAG also claims its new power supply offers sonic improvements, prompted by the introduction of the power-hungry dual DSPs. The new AV32R retails for £3,995. Existing models can be upgraded. TAG McLaren 01480 415600 # www.tagmclaren.com



# GR8 MC8 PROCESSOR

Multichannel specialist Lexicon has unveiled a more affordable processor based around its MC-12 digital controller. Available in both balanced and unbalanced configurations the new MC-8 is based around four Sharc DSP engines and a Cirrus logic DSP chip. Audio lovers will relish the ten 24-bit/192kHz DACs – one for each output, and, of course, it supports all the latest surround formats. With a full array of inputs it's fully DVD-A/SACD compatible courtesy of a 5.1 channel input and can process analogue signals in the multichannel digital domain. Available in spring for £5,000.

#### CAPTAIN CORELLI AUDIO ANALOGUE'S NEW POWER AMP

A new stereo power amp from Audio Analogue has been designed to match the Italian company's Puccini integrated amps. The Corelli takes its name from one of Italy's musical pioneers and continues the brand's intention to provide audiophile-standard electronics at real-world prices. It offers 60 watts of power per channel into a standard eight ohm load from two oversized toroidal transformers, all housed in a robust chassis with a substantial 10mm brushed aluminium faceplate. To ensure optimum

compatibility, the gain of the Corelli has been matched with that of the Puccini integrated amp to give an effective bi-amp upgrade path. Alternatively, one or even two Corellis may be partnered with Audio Analogue's Bellini preamp. The Corelli is available now priced at £645. DKD 01753 652669 # www.ukd.co.uk



# audiofile ⊗ product News

# Soundbites



XITEL claims that speaker hum can be a thing of the past with its new £20 gadget (below). The Ground Loop Isolator is said to break the earth between source component and amplifier therefore ensuring there is no path for current from an electrical imbalance to flow. The device uses RCA plugs to connect to an amplifier and has RCA inputs for incoming signals. ⊕ www.niftygadgets.net



6.6

SONY'S Master proprietary digital amplification, originally developed for SACD applications, has now filtered through to its Micro hi-fi systems. The newly launched CMT-CPX1 will be Sony's first micro product to carry the S-Master technology, allowing the use of even smaller circuit designs. How small can micro hi-fi go we wonder? © 08705 111999

FIREWIRE is bringing the PC and home audio worlds together. Texas Instruments and Dolby Laboratories are developing a FireWire converter that allows Windows XP and Media Centre software to send two and 5.1



## Soundbites

channel audio PC files including MP3 and WMA to Dolby Digital receivers with a Firewire/IEEE1394 interface. www.dolby.com

CAMBRIDGE AUDIO has a new LCD screen learning remote priced at £50. The universal M1+ **Multimedia Explorer** learning remote means that you can operate all of your hi-fi and AV kit from one control using the touch-sensitive, backlit handset. The M1+ is available from Richer Sounds stores nationwide. **2 0870 900 1000** 

#### **Hi-Fi diary**

- National Vintage **Communications Fair** Birmingham NEC 01392 411565 A show for collectors of classic kit
- High End Show, Frankfurt +49 202 702022 or email paxa@highendsociety.de One of Europe's best-known high-end hi-fi events

24-26 CEDIA UK Expo, Brighton Annual showcase for the custom install brigade

29-1 IFA Berlin 2003 Berlin, Germany 020 7886 3103 Europe's largest consumer electronics expo

- 26-28 HiFi Show & AV Expo Heathrow, London 020 8774 0847 London's established hi-fi show
- 26-28 What Hi-Fi? Sound and Vision Show, London A new London event for 2003



# **ARCAM UPSAMPLES** NEW CD FLAGSHIP JOINS THE UPSAMPLING BRIGADE

Arcam is the latest electronics manufacturer to  $\diamond$ release an upsampling CD player to the UK market. Based on the FMJ CD23 recommended by Choice in April last year, the new CD33 is £1,300-worth of the latest in British CD technology. At the heart of the player is an Analogue Devices chipset that upsamples to 192kHz. This is followed by high frequency analogue output filters to improve phase and frequency response.

The CD33 also uses four Wolfson DACs per channel, Burr Brown and Analogue Devices op amps and a lownoise four-layer PCB. Arcam has also hinted at more FMJ products including the release of a new £1,800 DVD player called the DV27A - a high-end player set to replace the DV27. This will be available alongside the brands' first DVD-Audio compatible player, the DiVA DV89. Expect a review of the new CD33 soon. Arcam 01223 203200 @ www.arcam.co.uk

# EXPOSI THE LATEST KIT FROM EXPOSURE

A new CD player, integrated stereo amp and power amp are set to bolster Exposure's upmarket portfolio. Due for launch in May, the new 3010 series will run in between the more affordable 2010 range and the well-regarded Classic range (the XXIII/ XXVIII pre/ power combo is reviewed on p35). Heading the range is the £1,200 3010 CD player, sporting twin Burr-Brown 24-bit DACs, double-sided PCBs and a large toroidal power transformer with separate windings for the transport and audio stages.

A matching 3010 integrated amplifier priced at £1,000 offers 100 watts of power and a host of high quality electronics, all of which can be used in bi-amp configuration with Exposure's new 3010 power amp, also rated at 100 watts. All 3010 products benefit from aluminium casework with an extruded front panel and come with a three-year quarantee.

2 01273 423877 @ www.exposurehifi.com



## **PIZZA THE** ACTION NEW ITALIAN CD PLAYER FROM UNISON RESEARCH

Italian music devotee Unison Research has launched its first CD player in the UK. The new Unico is a 'clean sheet' design which incorporates a variety of distinctive features. The use of a CD-ROM mechanism has been favoured for robustness and reading precision and, unsurprisingly, Unison has also included a valve amplification stage in keeping



with its amp range. A Crystal 24-bit/192kHz chipset is used for D-to-A conversion and a Philips flash memory chip facilitates an unusual display indicating valve warm-up. A splendid hardwood and aluminium remote handset finishes off the distinctive package, available now priced at £1,100. 2 UKD 01753 652669 @ www.ukd.co.uk

# marantz



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# THE DYNAMIC DUO



# DENON AND MARANTZ BUY MCINTOSH

D&M Holdings, parent company to both Denon and Marantz Japan, has acquired McIntosh Laboratory, the high-end American electronics manufacturer, from the Clarion



Corporation. McIntosh, which makes hi-fi, home theatre and car audio products is renowned for the retro styled and often vacuum tube based components that it has been making in Binghampton, New York for 53 years. With an annual revenue of \$25 million the company will continue to operate autonomously under this new ownership.

Tatsuo Kabumoto, president and CEO of D&M Holdings, said: "McIntosh is one of the most highly acclaimed brands in the world. The company brings to D&M an exclusive world-wide dealer network that will yield synergies with our current distribution channels."



# **NORWICH GOES DAB**

Norwich has joined the DAB revolution with NOWdigital's launch of a digital radio multiplex for the area. New DABonly stations for the area include Passion For The Planet, The Storm and 3C (Continuous Cool Country) alongside Broadland 102 - "Norwich's favourite radio station". Whether you'll be able to catch Alan Partridge in the third best slot on Radio Norwich is less clear.

# **COPY PROTECTION NAIMED**

Over zealous copy protection technologies are undermining the playability of new discs on dedicated CD players. The systems

including Cactus Data Shield and Sony's Key2audio are meant to stop discs being ripped on a PC. But these systems are so disruptive that Naim Audio has produced an update for some of its older CD players called the PIC chip. According to Naim's Doug Graham: "the



discs causing these problems are not technically CDs because they do not adhere to the Red Book definition of a CD". Naim owners experiencing difficulties should go to the Forum on the Naim Audio web site to see if their player can be PIC'd.

The latest disc with the problem is Massive Attack's *100th Window*, but there are many others. Internet users can visit www.fatchucks.com/z3.cd.html for a list of problem discs.



# **MICHELL TURNS THE TABLES**

Turntable specialist Michell Engineering has a new manager. Founder John Michell suffered a second bout of cancer over Christmas and has taken semi-retirement. He now acts as a consultant in design and R&D from home while his daughter and son-in-law, Julie and Steven Rowland, run the business.

John says the break from day-to-day management has left him with the energy to work on new ideas, the first of which is the Michell Technodec – a non-suspended version of the Gyrodek due to retail for £575. John has also been working on the Rega RB250 arm that he sells on the deck, creating the JM counterweight and using Cardas cable inside. The counterweight places the mass below the arm beam and has alternative weights to allow it to sit right next to the bearing. Price will be £300.



# **ATC ALIGNS WITH THE DARK SIDE**

ATC's active loudspeakers were chosen to monitor the 30th anniversary remix of Pink Floyd's *The Dark Side Of The Moon*. The 5.1 channel SACD mix was done by engineer James Guthrie using three ATC SCM-150A SL monitors, two SCM-50A SLs and a single SCM-01/15 active subwoofer.

Guthrie commented: "this was a very difficult 5.1 mix, not from a musical point of view, because the record really lends itself to a 3-D treatment, but because everyone knows the original mix so well. Knowing you are about to start work on something controversial can be unsettling." He added: "The issues with 5.1 mixing all come down to one thing – have you retained the emotional impact of the songs? All this technology is meaningless if you've turned the album into a video game."

Guthrie decided to get as many of the original tapes as possible and mix the entire project on 16-track Studer multitrack tape players of the same vintage used on the original Abbey Road sessions.

Controversy surrounds the album in many ways not least because there has always been a four-channel mix made by the original Dark Side engineer Alan Parsons for Quadraphonic.



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# **BERYLLIUM DREAMS**

The 'new' wonder material for tweeters has actually been used in hi-fi for over 25 years. So why is it such a big deal now?

Beryllium

25mm beryllium dome and 13mm throat.

t has greater stiffness for less mass than titanium, yet also the superior self-damping characteristics to magnesium." That's beryllium, according to Dominic Baker, onetime UK hi-fi journalist and now a senior engineer at Focal-JMlab.

Beryllium is a metal, and a very uncommon and horrendously expensive one at that. But it has properties – especially its exceptionally high stiffness-todensity ratio – that are very attractive to the speaker designer. It's not a brand new concept.

Top: Focal-JMlab's beryllium tweeter. Right: the Grande Utopia Be flagship. Below: Horn tweeter on JBL K2 S9800.



Way back in the earliest editions – from No3 in 1976 – *Hi-Fi Choice* enthusiastically Recommended Yamaha's NS1000 loudspeaker, a costly three-way design which used beryllium dome diaphragms for both the midband and treble units.

Although Yamaha's NS1000 is an acknowledged classic that stayed in production for an unusually long time, no other brand in the era followed the beryllium example – probably because Yamaha developed its own vapour deposition techniques for using this very difficult material.

However, 25 years later, as the super-tweeter era is dawning, beryllium might be making a comeback, judging by the fact that two of the world's top hi-fi speaker brands have both recently introduced speakers using beryllium diaphragms – and to very good effect too.

We reviewed JBL's superlative K2 S9800, in *HFC* 235. The K2 is unusual in using a large bi-radial horn to load a compression driver that operates from 800Hz up to 10kHz – very different from conventional speakers. This compression driver has a 75mm beryllium dome and 37mm throat, and hands over above 10kHz to another compression driver with Interestingly, this domestic beryllium application followed a year or so behind the company's Pro division, which first started down the road with the VERTEC Theatre PA system, complete with type 2345 beryllium diaphragm compression treble drivers, a couple of years back.

Following hard on JBL's heels – but adopting its own very different approach – Focal-JMlab is in the middle of introducing a complete new range of Utopia flagship models, all featuring a new beryllium tweeter and a Be suffix. The company is inordinately proud of the fact that, thanks to special machinery it has helped develop, its beryllium tweeter domes – inverted of course, in the company tradition – are allegedly only half the thickness (at around 20 microns) of those used by JBL

Following the emergence of 'super-tweeters' from brands such as Tannoy and KEF, JMlab's basic rationale for moving from titanium to beryllium is to extend the top end. The company believes strongly that it's better to widen the bandwidth of a single tweeter than attempt to integrate a second one – an assertion that seems entirely valid – and that, due to its superior stiffness to density ratio, beryllium is the right material to do the job.

Certainly the new top-of-theline Grande Utopia Be sounds enormously better than its predecessor, though it should also be pointed out that the new tweeter is only one of a considerable number of changes between the new speaker and the earlier model. "Beryllium is a metal, and a very uncommon and horrendously expensive one at that. But it has properties that are very attractive to the speaker designer."

It's hard to say what long-term impact beryllium's second coming will have. There's no denying the excellent sound of the above examples, but high cost will remain a major deterrent, and the rumour mill mentions other materials – B&W is believed to be working on diamond, for example.



# audiofile BEATS'N'PIECES

#### **TIME MACHINE**

**FIVE YEARS AGO Hi-Fi Choice** May 1998



Is it really five years since the Linn Classik was born? A bold step towards the 'lifestyle' consumer, the Classik offered a

C.D. preamp and power amp all in one box. News of a facelift for Audiolab kit reached HFC as new owners TAG McLaren unveiled a relaunched 8000 series and a bid to reposition the brand into the high end - we know the rest... We also assessed the first digital amp, the TACT Millennium a £5,000 super-efficient techno-wonder, hailed as an audio revolution. Five years on and it's still waiting for some serious competition ..

#### **TEN YEARS AGO** Hi-Fi Choice May 1993

HFC was delighted to take delivery of SME's new model



20 record player £4 000 of high-end vinvl replay released at a time when CD had taken a stranglehold. Regardless, the

verdict was verv ehthusiastic - the SME 20 was the new reference in the editor's rig. We also reported on record industry jitters about the emerging DCC and MD formats threatening the corporate coffers. How awful for the record industry - wasn't it \$28 million FMI gave Mariah Carey to stop singing for them?

# **SYSTEM BUILDER**

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



#### **BEETHOVEN: SYMPHONY NO9**

Philharmonia Orchestra, cond. Otto Klemperer EMI By any standards, Klemperer was one of the giants of symphonic interpretation, and he was nowhere more at home than in Beethoven's Ninth. This recording has inspired generations of music lovers since its appearance in 1957. At that time, its sound quality (courtesy of 'dream team' Walter Legge and Douglas Larter) was truly demonstration quality - in many ways it still is.

True collectors will want an early stereo LP issue (mint ones are rare!), but in this latest CD reissue EMI has scrubbed it up well, eschewing noise reduction and excessive fiddling. Yes, very high frequencies are not as bright as modern recordings, but then neither is live music. And the terrific incisiveness of the Klemperer sound is there in all its glory. This system will reveal the unique power and intellect of this stunning performance.



#### WEBSITE OF THE MONTH

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#### www.vh1.com

Bet you didn't know that the classic music TV station Vh1 actually gets more viewers than its 'new' music cousin, MTV? The website is equally popular and an extremely good resource for finding quality information on artists. This is the US site, which has more info, although check the UK pages for useful updates on forthcoming programming. We particularly like the Artists A-Z, which offers the latest news and views on a wide variety of bands. The homepage is always worth a look as it is updated frequently and tends to feature the latest acts as well as strong editorial on well established artists.

#### **CD PLAYER**

Arcam FMJ23T £1,200 An exceptionally refined CD player, thanks in part to its dCS-sourced 'Ring DAC'. Its highly detailed sound and deft touch gets right to the heart of

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#### LOUDSPEAKERS

the music.

ATC SCM20 SL £2.051 If its well driven, this is a great speaker for orchestral music, with extended bass, clear treble and the resolution to differentiate between the various instrumental sections tonally, dynamically and spatially.

#### AMPLIFIERS

#### NAD Silver Series \$100/ \$200 £2,000

Klemperer's musical approach was always strong on control, and here you'll need an amp that can grab a speaker and drive the nuts off it - without sacrificing tonality or detail. The S200 power amp does just that while the S100 pre is very transparent.

# audiofile BEATS'N'PIECES

#### **CLASSIC DEMO DISCS GREAT MUSIC FOR HI-FI AUDITIONS**



#### MEGADETH **Cryptic Writings**

"You'll need something fast in your collection to test the transient speed and musicality of a system. Megadeth's beautifully produced Cryptic Writings (on HDCD) is a slick, hard-hitting rockmungous piece of work guaranteed to

highlight system weaknesses and test the transparency of any rig. The jazz-trained guitarists offer a more melodic and structured approach to songwriting than most metal and it's definitely one to try if you're seeking sonic thrills from your hi-fi wish list."

Torrin Wilson, 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 #8

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



#### **Buzzes and rattles**

You'd be surprised just how many things in your listening room buzz and vibrate. In some cases the effect is so pronounced you can actually hear it - teacups rattling, furniture resonating, especially if there's a strong powerful bottom end. But often the effect is masked because the music's louder. Yet unwanted resonance and

vibration still has an effect on sound quality - even if you're not consciously aware of it as you listen. Those with separate sub-woofers can try this experiment. Switch off the main speakers and play the subs on their own, choosing a track with a strong meaty bass line. You should hear clean, powerful, low frequencies devoid of buzzes and rattles. With only the subs playing, the source of any sympathetic vibration should be easy to pinpoint and deal with. With these resonances under control, the music will sound noticeably cleaner and more transparent.

#### **ON THE OFFICE STEREO** MUSIC THAT AMUSED US WHILE CREATING THIS ISSUE

Public Enemy Nation Of Millions Rolling Stones Beggars Banquet The Jayhawks Rainy Day Music L'il Kim La Bella Mafia Smog Supper **Goldfrapp** Black Cherry Eliza Carthy Anglicana Radiohead Hail To The Thief The Cardigans Long Gone Before Daylight



## **NEW MUSIC** IN THE STUDIO ARTISTS RECENTLY ABSENT FROM THE CUT AND THRUST OF SHOWBIZ HYPE DUE TO FINISHING THEIR LATEST ALBUMS



## TRICKY Vulnerable May

In 1995's Maxinquaye, Bristol's trip-hop pioneer and one-time Massive Attack collaborator made one of the albums of the nineties. Since then his career has drifted. He's now relocated to LA and Vulnerable may be his best since his debut.

## STARSAILOR Title: tbc summer 2003

The follow-up to Starsailor's halfmillion selling 2001 debut, Love Is Here, has already achieved notoriety: it may be the last album Phil Spector ever works on, after a female companion was found dead at his LA home. Spector only produced two tracks but the album is said to have a more upbeat feel than their first.

Title: tbc summer 2003 The Vines' blistering debut Highly Evolved was recorded in Los Angeles and they were rewarded with a top ten album on both sides of the Atlantic. But the band has returned home to Australia to complete the follow-up. Singer Craig Nicholls says they had enough songs left over for another album, but he's written more anyway, including Amnesia, Autumn Shade 2 and ... er, Fuck The World.

#### THE EAGLES

Title: tbc late 2003 With a reformed Fleetwood Mac returning in April with a new album, the only other seventies band to rival them in sales is also getting in on the act. The Eagles have been recording on and off for the past two years for what will be their first new studio album since 1979's The Long Run.

"We're surprised how well it has been going," says the band's Don Henley. "There could even be enough material for two albums."



#### Welcome To The Monkey House May

The Dandy Warhols had been around for a decade before they struck it huge with the Stones-style single, Bohemian Like You, from their 2000 album, Thirteen Tales From Urban Bohemia. The follow-up is produced by the band's Courtney Taylor-Taylor and ex-Duran Duran man Nick Rhodes with help from David Bowie's old producer Tony Visconti. Songs include Hit Rock Bottom and The last High, co-written by Evan Dando.

#### ALSO COMING SOON...

Radiohead Hail To The Thief (Capitol) June, Super Furry Animals tbc (Epic) July, Marilyn Manson Golden Age Of Grotesque (Polydor) June

Eliane Elias Kissed By Nature (RCA) May, Ryuichi Sakamoto A Day In New York (Sony Classical) June, Christopher O'Reilly True Love Waits (Sony Classical) June

28 Days May, Changing Lanes June, Miles Davis At The Isle Of Wight June, Six Feet Under June COM

First tests of essential new kit from hi-fi's front line



Orelle

SA100 evo

# Orelle SA100evo stereo amp £1,200 (EXCLUSIVE)

Orelle is one of those respected hi-fi names from the past that is resurfacing this year. However, Orelle is unique in that it hasn't changed hands and is still handled by Abbas Hussain, tireless promoter of the Orelle brand, even when there were no products to promote. The SA 100evo is the first of the new range – expect pre/power amps, tuners, CD players, DVD players, speakers and more soon.

All have a distinctive rounded aluminium casing which looks and feels better than the average square box. This is not simply aesthetically pleasing, it forms a part of what Orelle calls its Critical Acoustic Tune System and is designed to wick vibrational energy away from the amplifier circuits which is said to improve the speed and detail of the sound. Moreover, the entirely non-magnetic casework helps to improve the sound still further by minimising electromagnetic interaction and case-bound eddy currents.

In the SA100evo, all the control surfaces are off to the far right of the panel and a small, elegant remote comes with the integrated amplifier as standard (a bigger, does-it-all remote is also available for Orelle system owners, but this is all you need to drive the SA100evo). The 80-watt, six input amplifier has some clever touches under the lid, such as a symmetrical pre-driver circuit (called X-Flow), microprocessor controls that default to standby when not being operated and an integrated temperature sensing system to actively compensate for the thermal conditions of the output transformers. That means more accurate bias current, which in turn means more accurate sound at all volume levels.

Orelle has always managed to produce a very clean, detailed sound and the SA100evo offers no change there. This is a precise, high-resolution amp that presents a big, wide and deep image that is filled with information  
 KEY FEATURES

 8 do watts per channel (8 ohms, both channels driven)

 six line-level inputs

 six line-level inputs

 Moving magnet phono option

 Bi-wirable dual binding posts

 Preamp output

 Remote control

 about both the instruments and the space they are playing in. The sweet, almost Afro-Cuban melodies of Orchestra Baobab are remarkably well defined in a natural soundstage that calls to mind early 1960s recording studios. If your speakers have any form of imaging capabilities, the Orelle will capitalise on that capability.

This detail is a bit of a double-edged sword, however. It makes less than excellent recordings sound a bit thin and weedy. Video signals especially can sound bright and crispy, without the bottom-end confidence a less accurate amplifier can bestow by default, in sounding flappy and boomy. It is not the most rhythmic amplifier

*"This is a precise, high-resolution amp that presents a big, wide and deep image that is filled with information."* 



for the money, but it is hardly a sluggard. Play You Can't Always Get What You Want from the jaw-dropping new Abkco CD/SACD remaster of the Stones' Let It Bleed and the infectious rhythm is good, but not outstanding.

On/Stby

C/F

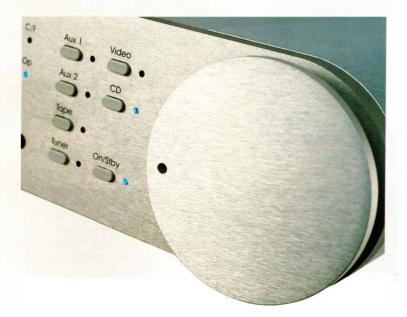
Op

Tune

Information retrieval and stereo soundstaging are two of the most important aspects of any true hi-fi system, and these are what Orelle does best. It's not for everyone, but for many, this fidelity and detail will more than compensate for the slight lack of rhythmic drive and bottom end heft. 20 Orelle 020 8991 9200 20 www.orelle.co.uk

#### **PROTECTION SYSTEM**

Even the protection circuitry of the SA100evo has been thought through. Instead of sitting in the system at all times, the protection circuit acts like an independent adjudicator, sitting at the sidelines of the audio circuit until the amp gets into trouble. At that point, the protection circuit kicks in and keeps the amp or speakers from damage. Normally protection systems are in place all the time – even if benign, they are always there. No protection system at all would be a very bad thing, even if it's musically superior. Orelle's is a good compromise.



# Thorens TD190-1 turntable £290 EXCLUSIVE

If the manufacturer's name means nothing to you, you're definitely not part of the 'LP generation'. From the 1960s-1980s, Thorens was probably the best-selling turntable brand in Europe. The TD150 (a precursor, in many ways, of the Linn Sondek) sold well for years, as did many of its successors, but the brand seemed to lose its way in the 1990s and quietly slid off the UK map.

Now, with a new UK distributor and a new range on offer, the Swiss-based maker is back. Models range from the £270 TD170 to the tasty-looking TD850 for a grand, with this one on the second rung. Construction is the usual particle-board and pressed metal kind of affair you'd expect at the price, but neatly and efficiently done with one of Thorens' good-quality arms and an Ortofon cartridge pre-fitted. A DC motor and flat belt drive the pressed metal platter at 33, 45 and 78rpm – and yes, you can get a 78 stylus for the cartridge! Set-up takes no time and ease of use scores highly.

Sound is a major step up on the cheapest decks around, with good (not perfect) speed stability, no audible rumble, low surface noise and a really nice, full-bodied sound. It's not the best resolution but it's never less than listenable and informative. With Thorens's fabulous reputation for reliability added, this is a very safe recommendation. FBI Distribution 01482 212213 www.thorens.com

# KEY FEATURES Automatic operation Three speeds: 33, 45, 78 DC motor: power supplies available for all countries Arm and cartridge pre-fitted Cartridge replaceable (standard mounting) Spring-loaded downforce and anti-skating Requires phono input or dedicated head amp





#### $\star$ $\star$ $\star$ $\star$

# Myryad MDV 300 DVD player £900 ACCUSIVE

The market for DVD players in this price category has gone from 'competitive' to 'red hot' in recent times. There's now a raft of players that offer much more for your money than ever before, so it's worth considering which connections/formats you might want in the future and which ones you'll happily dispense with.

The MDV 300 is a case in point. This is a dedicated DVD-Video player, designed with video performance at the top of the list of priorities. So look elsewhere if you want to get into DVD-Audio or Super Audio CD. Likewise if you want the option of PAL progressive scan, although the current lack of PAL progressive monitors makes this not so much an oversight as a moot point. The MDV 300 offers NTSC progressive scan through component video outputs, as well as the standard RGB Scart, S-Video and composite connections.

It also includes a new 32-bit/ 135mHz video processor (see panel), lending the MDV 300 a visual air of authority and control. Picture quality is fine when connected through a standard RGB Scart cable. However, use the progressive scan connections with a

#### Plays DVD-Video, CD CD-RZRW VCD SVCD, MP3, WMA and Kodak Picture CD Progressive scan video output Component video outputs Built-in 5.1 channel Dolby Digital and DTS decoding 24-bit/192kHz audio DAC 10-bit/54kHz video DAC Video equaliser controls O My-Link bus

suitable monitor (and an NTSC DVD)

and the player comes into its own. Contrast and line definition have a scintillating precision in Minority Report, the film's fast-moving scenes rendered with impressive stability. The player also offers very dense and solid blacks - it delivers the eerie shadows of Unbreakable very well indeed.

However, the Myryad's colour balance, while pleasingly rich and vivid, can be a little too gaudy at times. The Hobbit population of Lord Of The Rings is a little too ruddy-cheeked in comparison to the more restrained colour balance of some players. This is easily adjusted, however, thanks to the MDV 300's remote-control-adjustable Video EQ button that allows you to tweak the picture to taste.

The Myryad has excellent casework and attractive styling, with a fascia machined from solid 6.3mm aluminium. The rigidity of the build clearly contributes to the stability and control of the performance, which extends to its sound quality.

The MDV 300 offers a musical performance with a very punchy, muscular bass and vibrant dynamics.

"The MDV 300 offers a musical performance with a very punchy, muscular bass and vibrant dynamics. The bullets-and-a-bassline lobby scene in The Matrix, for example, comes over with a fine degree of control and insight."



The bullets-and-a-bassline lobby scene in The Matrix comes over with a fine degree of control and insight. This impressive sonic delivery extends to CD mode where the player exudes a fast and precise musicality when dealing with the subtle interplay of Miles Davis's Big Fun. Some might, however, find the treble performance a little too smooth, taking some of the musical bite from the edgy instrumentation on The White Stripes' Elephant album.

While the MDV player offers high levels of performance, it's up against the stiffest competition in the format's history. It does its job well but with rivals offering similar performance but more features, the MDV 300 doesn't quite do enough to rise above the increasingly competitive pack. BBG Distribution 020 8863 9117 www.myryad.co.uk

#### IMPROVEMENTS

The MDV 300 features a number of improvements over its predecessor, the MDV 200. The new player features a brand new high-quality video processor, the new Zoran Vaddis V. This 32bit/135mHz processor is also used in Arcam's DV88 Plus and delivers pixel-bypixel motion adaptive progressive scan.

The musicality of the 300 is due in no small part to its audio DAC, a Burr-Brown PCM 1606 6-channel 24-bit/192kHz unit. This enhanced multi-level delta-sigma converter is superior to that on the MDV 200. The DAC's multi-level operation makes it far more resistant to clock jitter and other digital errors that impair audio performance. Myryad has improved things further by giving this audio DAC its own individual low-noise power supply to isolate it from the video and motor drive circuitry.

**f** 

# Epos ELS 3 speaker £200

With a name like ELS you'd be forgiven for thinking that this new Epos is an electrostatic, but the shape and price say different. In fact this is the least expensive and dinkiest box to come out of the Epos stable to date. It's being sold as a multichannel speaker as well as a stereo one, its diminutive nature making it a convenient choice as a surround or centre channel. The 25mm tweeter and 130mm woofer are fully shielded so that they don't upset your telly.

A two-way reflex design like most of the slightly bulkier competition, it uses a 100mm polymer cone for mid and bass duties and hands the higher frequencies over to a 25mm metal dome. Ease of load is inevitably a little more tricky than average (87dB, four ohm) but most decent integrated amps or multichannel receivers shouldn't have a problem getting them going.

It's really very cute, a one-hand lift, but it doesn't let this fact stand in its way when it comes to the job in hand. This is a stonking little speaker that does far more than you might expect. Expectation is always tricky with small

*"It times well and images beautifully – two factors that are critical to a convincing musical experience."* 



Two-way, reflex loaded enclosure 100mm polymer bass cone in 130mm chassis 25mm metal dome tweeter 87dB sensitivity A ohm impedance Single wire, plug connection only 4mm banana plugs supplied Finish: light and dark cherry or black ash vinv Size (HxWxD): 27x17.5x18.5cm



speakers – you're almost surprised when they are good, so they have a clear psychological advantage, one that's fully harnessed by the likes of Bose with its sat/sub systems. But we're no strangers to compact £200 speakers and this one's a clear winner.

It creates scale and depth of image with ease – the smaller the cabinet the easier it is to control, so the music is wide and deep with instruments sounding more real as a result. It's also unusually transparent and coherent – you can hear right into the mix and the way the music is delivered is both fluent and clean.

It even has pretty impressive bass capabilities, which while unlikely to shake the furniture will be more than enough to annoy the neighbours, tracks like Goldrapp's *Brown Paper Bag* coming across in dynamic, deep and surprisingly tactile form. The voice has remarkable presence while the keyboard has something of the hammer dulcimer about it. There's no shortage of atmosphere here.

There are limitations to what such a compact speaker can achieve and this is most apparent in terms of level – they harden up if you push the volume too far. But that's not uncommon with budget loudspeakers as a whole so don't judge it too harshly.

What it does with aplomb is time well and image beautifully – two factors that are critical to the recreation of a convincing musical experience. Timing counts because, well, apart from being the secret of living, it's fundamental to music. The rhythm, as Yello once said, is divine – but only if it's reproduced in a precise manner. And in terms of dynamics the Epos pair scores unduly well for the speakers' size, helping to capture a credible sense of music's life and soul.

What we have here is a new low-cost speaker with very considerable hi-fi appeal, and in many respects a genuine bargain. Some speakers will give you higher volume without distortion and others will deliver deeper bass, but few sound as clean and convincing while taking up so little precious real estate. Epos 01442 260146 www.epos-acoustics.com

#### A BRIEF HISTORY OF EPOS

Epos made its name with a relatively compact loudspeaker, the ES14 back in the eighties. The brand, creation of international speaker designer extraordinaire Robin Marshall (now with Harman/Infinity) has had a turbulent history. It was purchased by Mordaunt-Short when it was part of the TGI group alongside Creek electronics. When TGI got into difficulties it looked as if it might be the end of the road but Mike Creek saw the opportunity to revive the name and has enjoyed considerable success with models such as the M12.

#### ××××

# Bluenote A6 speaker £1,099 ACCOUNTER

Italian manufacturer Bluenote is based in Florence, and the new A6 floorstander (along with its standmounting sibling, the A3) is now available in the UK thanks to Eminent Audio, the company behind Croft amplifiers.

Bluenote specialises in a thin-wall speaker construction, eschewing the thick baffles and cabinets that some manufacturers swear by. This also has the side effect of making this model

#### KEY FEATURES

Two-and-a-half-way vented box speaker
 Z8mm ferrofluid silk dome tweeter
 Two 13cm treated paper cone bass/mid drivers
 87db/W/m sensitivity
 80hm impedance
 35Hz-20kHz frequency response

Size (WxHxD): 19x100x19cm



very light for its size. Available in Italian Walnut or Piano Black lacquers, the finish on our review pair is attractive. However, the machining on the front panel where the drive units are mounted is quite uneven. At the price (£1,099 per pair) you'd be forgiven for expecting more precise craftsmanship.

The A6 utilises a two-and-a-half-way driver configuration: the two 13cm main drivers are split so that the upper unit covers bass and midrange while the lower is dedicated to bass. Their cones are of the treated paper variety, hand-produced by Bluenote to create a very stiff material. A 28mm ferrofluid silk dome tweeter completes the driver complement.

Due to the highly rigid driver materials, the A6 needs considerable running in. After around 100 hours of continuous use, they have a very open and communicative sound, very attractive for its sense of acoustic and instrumental realism. Estonian composer Arvo Part's *Tabula Rasa* is given an excellent airing, with fast timing and midrange detail imbuing the recording with a very threedimensional soundstage.

This soundstaging is the A6's most pleasing feature – position a pair equidistant from your listening position and with a small degree of toe-in, and the stereo image it delivers is intricately detailed and convincing. The instrumental positioning and ambient information it digs up from a recording of *Beethoven's String Quartets* is highly impressive.

This insightful midrange makes the speaker ideal for classical recordings, while it performs less impressively with modern dance or rock discs. While its

"The instrumental positioning and ambient information the A6 digs up from a recording of Beethoven's String Quartets is highly impressive." levels of detail and dynamics mean its never less than entertaining, a lean bass performance and uncompromising treble puts it somewhat at the mercy of the recording.

According to Eminent Audio, Bluenote's thin-wall design is specifically aimed at a very open performance, as opposed to what it calls the "over-dampened, strangled sound" of some speakers. While this openness is indeed a virtue, the A6's treble can at times veer into an unforgiving, slightly strident quality. The razor-edged guitars and fizzy cymbals on The White Stripes' *Elephant* album give a rather tiring performance.

The Bluenote A6 has a particular appeal, and its open and detailed midrange is commendable. However, there are significantly better allrounders at this price and if you're not the classical-only type of music fan, there are better options out there. Eminent Audio 01746 769 156 www.eminentaudio.co.uk



#### A DIFFERENT APPROACH

Florence-based company Bluenote is no blind follower of fashion – the A6's unusual thin-wall construction and singlewire terminals are evidence of this. But the A6's most intriguing idiosyncrasy is at the bottom of the speaker. There are no supplied spikes, nor the holes to mount them, just four small rubber feet. Those with thick carpets will need to give this some consideration.

Bluenote also hand builds its own drivers, using relatively large magnets and voice coils. Great care is taken to create rigidity in the diaphragm, which is why you should expect to run a pair of A6s in for at least 100 hours before they reach optimum performance.



# **TEAC Distinction Series system £720** C-1D CD player £240 T-1D FM/AM tuner £200 A-1D amp £280

After considerable success with the cut-size Reference Series, TEAC is back with a new modular range of hi-fi components – the Distinction Series. The initial products in the series are the three you see here, the C-1D CD player, A-1D stereo amp and T-1D FM/AM tuner.

While elements of the Distinction design put us in mind of the 'stylesystem' approach of other TEACs, the Distinction Series components are in fact full sized hi-fi separates, each one measuring 435mm in width. This is no micro system.

Impressively sturdy casework and attractive aluminium front panels

#### **UNIVERSAL REMOTE**

Should you wish to round the system off in style, TEAC has the perfect answer, the RC-L2 universal remote control. The RC-L2 is a very neat touch-screen device compatible with every component in the Distinction Series. It has a learning facility so by punching in the right manufacturer codes, it can control just about any other components you have, such as your TV. Its well-designed user interface comes courtesy of a large, backlit, illuminated screen. You can even load data onto the device from another RC-L2 or from your PC, for which a USB port and CD-ROM are provided. The RC-L2 adds £120 to the price of the whole system.

TEA

create a positive first impression, as do the large displays on the CD player and tuner. The tuner also acts as a timer control for the amp via a single-wire 'power control' connection.

The A-1D amplifier has line-level inputs for six separate components, one of which can be a recordable tape loop thanks to a pair of accompanying outputs. It also carries a pair of preamp outputs, but there is no phono stage for vinyl junkies.

Taken as a whole, the three units combine to make for a decent system in performance. A generally good tonal balance is immediately evident with both CD player and tuner, as is the system's impressively responsive approach to the dynamics of Simon Rattle's take on Stravinsky's *Apollo*.

The bass performance is precise and punchy with a CD of Boards Of Canada's *Geogaddi*, although some might find it a bit lean. But partner the system with speakers that are quite

generous with the bass and the result is a very strong balance of weight and punch. The midrange is open and detailed. This is also true of the T-1D tuner, which provides very clear and stable reception throughout the bands, giving a very effective airing to stations from Jazz FM to Radio One. However, there is a slightly hard edge to the upper mid and lower

#### KEY FEATURES

 Three-box separates system
 10mm aluminium front panels
 C-10: 1-bit DAC
 Optical digital output
 A-10: power rated at 50W/ch into 8 ohms
 Headphone output
 T-10: 30 FM/30 AM

station memory

*"The system's dynamics give it a real musicality and its precise timing provides a genuine sense of rhythmic flair with the scatter-gun drumming on Miles Davis' Big Fun album."* 

treble frequencies. The system deals beautifully with the earthy strum of the first – eponymous – Bob Dylan album, but the angular guitars on The Strokes' *Is This It* are given a slightly unforgiving treatment. That said, the system's dynamics give it a real musicality and its precise timing provides a genuine sense of rhythmic flair with the scatter-gun drumming on Miles Davis' *Big Fun* album.

The only real downside to the system is that, affordable though it is, none of the individual components can match the class leaders at their particular price points. 'Style' issues aside, a CD/amp combination from the likes of NAD plus a Pure DRX-701ES digital tuner will get you a system that, for similar money, will perform to a higher level. If you're driven by the aesthetic desire for a onemake, one-look system, there's a good argument for the Distinction Series. But if sound quality is your priority come what may, the same money can buy you better performance. **2** TEAC 01923 819630 www.teac.co.uk



# for those with eyes as well as ears

### The Nucleus Micro is different.

A 4" diameter, all metal sphere, available in a choice of eight colours, Nucleus Micro's are capable of producing a level of audio performance that defies their physical dimensions.

When coupled with dedicated subwoofers, their unsurpassed dynamics and realism take movies and music to another dimension.

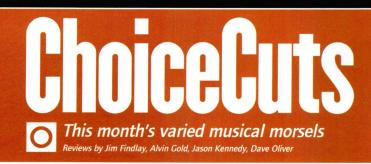
The Nucleus Micro is available through our network of approved retailers, a full dealer list can be found at www.anthonygallo.co.uk or call us on 01555 666 444 to find your nearest stockist.

If you have need of a system that is at once discrete and musically engaging, majoring on communication, clarity and transparency, then look no further. Indeed, if it's the latter qualities that you prize then the Gallo Micros could be your speaker of choice regardless of type. Don't confuse these with the six in a box toys that everybody and their wife seems to be offering these days. This is a genuine hi-fi speaker.

# Discover why black speaker boxes are yesterday's news

ANTHONY GALLO ACOUSTICS UNITED KINGDOM

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#### **NEW MUSIC FORMATS**



REM Automatic For The People DVD-Audio

(24/48 surround & stereo, DTS & Dolby Digital 5.1) Warner Brothers

Music: REM's most successful album so far is not surprisingly their first to make it onto a high-resolution format. Even if you're not a big theme of the tredle with a logical 2020.

REM fan you will know at least three of the tracks on this classic 1992 album. The hits include *Everybody Hurts, Man On The Moon* and *Drive* alongside nine other bittersweet tracks that are replete with acoustic instrumentation and emotional undertow. In many ways this was the album that marked the point at which REM came of age and established themselves in the world at large. The point at which *Green* enthusiasts like myself began to lose interest!

**Sound:** It sounds gorgeous and was clearly a very good recording from the start. Some may blanche at the placement of instruments in rear channels but the holographic transparency is welcome and a great example of the advantages of high resolution audio.



#### DVORÁK: SLAVONIC DANCES Budapest Festival Orchestra, Iván Fischer (conductor) SACD

(multichannel SACD plus stereo CD layer) Philips 470 601-2

Music: The Slavonic Dances were originally composed for two pianos and subsequently

orchestrated, brilliantly it should be said. The deservedly popular Dances are generically Slavian, full of dancing rhythms and pointed melodies, though the origin of most of the tunes has never been uncovered. There are more versions of this work than you can shake a baton at, but this account from lván Fischer and the Budapest players is particularly strong, with committed, incisive playing and a truly idiomatic pulse. Great stuff, and pure enjoyment throughout.

Sound: Although not a great recording, this is a very good one, which is both highly detailed yet pungent, with a well proportioned multichannel mix which envelops the listener while providing reasonably natural stereo perspectives.

#### **DVD: THE CINEMA SELECTION**

Because these days hi-fi doesn't just mean music



#### 8 MILE

Universal Film: The man still known to his mum as Marshall Mathers III scores his first leading role in this bleak portrait of Detroit's hip-hop underground. Eminem draws heavily on his own experience to play Jimmy 'Rabbit' Smith, a wannabe MC pitted against local hoods in a struggle to rap his way out of poverty. And a pretty convincing job he makes of it, too – his performance didn't trouble the Academy, but he has a watchable charisma and the verbal jousting is absolutely breathtaking. A gritty, occasionally unpleasant but ultimately uplifting film.

**Sound and vision:** It's difficult to assess the picture quality, as 8 Mile is a deliberately grainy film, but the effect is suitably engrossing. DTS oversees the sounds and while you'll be looking to your main and centre speakers for most of the action, the abundant music is clear as a bell.

#### **CD AND VINYL**



#### CANTUS

#### ...Against The Dying Of The Light Cantus Recordings

Music: Cantus is an 11-strong male voice vocal ensemble based in Minnesota, and this collection includes mostly unaccompanied compositions from eleven composers, from Sibelius to Pablo Casals, from Schubert to Debussy. The performances are superb, but what surprises is that the programme hangs together in a coherent way, following what Cantus describe as a "musical and poetic progression from grief and sorrow to consolation and joy". Sound: This is an absolutely top-flight. reference-class recording, engineered by John Atkinson of Stereophile fame. The lively nature of the recording acoustic, a chapel in Faribault, MN, has been tamed by the skin of its teeth, producing a remarkably vivid sense of presence and scale.



SAVINA YANNATOU Terra Nostra

Music: This powerful combination of traditional Greek folk music and jazz probably shouldn't work on paper, but in reality it's spellbinding. Making her name with classical music, Yannatou has experimented with folk musics. from all around the Mediterranean and Balkan regions, but this is no worthy exhumation of dying traditions. The players in her band breathe new life into the sometimes ancient rhythms, giving their leader room to soar with a technique that's awesome but never merely grandstanding. Sound: Though recorded live in Athens, the sound is pristine, with equal attention given to all the acoustic instruments, and the audience not even apparent (until the rapturous applause at the end).



#### ANI DIFRANCO

#### Righteous Babe

Music: The punk folkie from Buffalo, New York has come away from her purely solo guitar and righteous hollerings of her 1989 debut. The acoustic guitar is still there, and the impassioned vocals, but now she's augmented the previously spartan arrangements with a band (occasional bass and drums, keyboards, even some horns and vocal effects) to fill out her often angry, always passionate examinations of sexual and national politics. The extra instruments add to the effect, but never get in the way of what Ani does best - giving it loads from the heart.

Sound: Ani's vocals and guitar are pushed well to the fore, as they should be, but the overall mix sounds a bit unnecessarily compressed in places.



#### THE WHITE STRIPES Elephant

XI

Music: Surely the most over-hyped album of the year, the Stripes' latest bark 'n' yelp fest won't disappoint fans, but they're the luckiest band in the world to have got so far with so little. It's carefully marketed, contrived blues lite, not lacking in energy, for sure, but strangely devoid of passion. As rock 'n' roll, Jack White's pubescent screech is closer to Ricky Nelson than Little Richard and if Meg's blasé vocal on In The Cold, Cold Night is the album's high point, the sad pub rock stumble through I Just Don't Know What To Do With Myself is its lowest, driving home their hamfisted lack of soul. Sound: Deliberately low-fi, it's meant to be abrasive, but a bright system won't help you appreciate the album's top-heavy overtones.



This year Vini Reilly, aka The Durutti Column, releases his 20th album of subtly magnificent guitarchitecture, and tells us why he still loves MiniDisc

he story has been told often but it's worth repeating. On 24 January 1978 Granada TV's Anthony Wilson was told by his accountant that he'd never make great money as a presenter. The same day he called his friend Vini Reilly and asked him to play guitar with a Manchester group called The Durutti Column (named after the anarchist faction in the Spanish Civil War led by Buenaventura Durutti). When the group disintegrated around him, Vini was left solo – but he kept the name. Schooled in classical music, blues and jazz, Reilly was an extraordinary musician and his ironically titled first album *The Return Of The Durutti* 

*Column* was an Impressionistic masterpiece. His gently echoing guitar glissandos would go on to grace twenty albums over the next 23 years including the latest, *Someone Else's Party*. Reilly has always been quick to embrace new technology and, perhaps remarkably, he's the artist behind the first CD-only release and the first DAT-only release, as well as embracing such formats as the three-inch CD single, CD-ROM and five-inch CD-Video.

HFC: You released the very first CD-only album, *Domo Arigato* (FACD 144, 1985),

which appeared two months before Eno's *Thursday Afternoon* disc, right? VR: It was great and it was Tony Wilson's idea except it was a really bad album. Tony decided he would mix and produce the album in a mobile studio in the middle of Tokyo at three o'clock in the morning. Now Tony doesn't know how to use a mixing desk. So all the natural reverb and warmth of every instrument was killed dead. When it came out we got a lot of publicity from the CD angle. But I was afraid people would ascribe the sound to CD as it came out flat, dull and lifeless. Remember these were the days when people thought that after ten plays the music on CD would vanish forever!

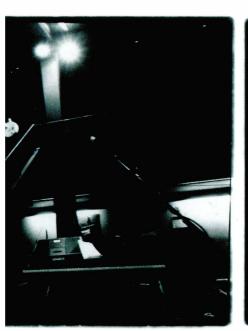
#### You also released the first-ever DAT album, *The Guitar And Other Machines* (FACT 204D, 1987). What was it like to do that?

It didn't get us very far at all because it was so tiny that the record stores couldn't really display it! It really had very little impact with the public at the time though all the magazines went crazy for it. It had a huge impact on journalists and people coming to Manchester to hear the album on DAT, but outside the media it had no effect!

#### In your catalogue there are numerous strange formats like Flexidisc, threeinch CD single, CD-ROM and CD-Video. SACD and DVD-Audio are now making their presence felt – which is your favourite format?

MiniDisc! It's just so easy it's fantastic. I notice we're doing this interview on MiniDisc (in a Sony MD Walkman MZ-R37, since you're wondering – Ed). People talk about the quality of the sound and in the end you might as well listen to the music. It sounds good enough to me. I MD tons of stuff off the radio. I use it all the time in my music for

THE DURUTTI COLUR SOMEONE ELSE'S PARTY



Ballad of a thin man... since appearing in 24 Hour Party People, Vini Reilly is unlikely to let success go to his waistline.



# party in town

rough mixes, backing tracks and stuff. I especially like radio quality and use the MD recordings on my eight-track or to make sound loops on the computer as backing tracks. I also use MD for archiving stuff off my old falling apart cassettes and for Bollywood soundtracks which I tend to get in bulk but only have about half a dozen tracks worth keeping. MD is just so easy to compile and use, and it's portable too. A great format.

#### If you were to choose a couple of albums from your catalogue to re-release on SACD or DVD-Audio, which would they be?

The Guitar And Other Machines and Vini *Reilly* from the late 1980s as they were engineered by Stephen Street who is an engineer par excellence. He's just so good with sound, particularly the vocal samples on Vini Reilly.

Over the last five years you've slowly become independent since your break with Tony Wilson and Factory Records. Yet you've still produced good albums like Rebellion (Artful, 2001) and The Return Of The Sporadic Recordings (Kookydisc, 2002). And now you've come up with Someone Else's Party, a melancholic dedication to your mother who died during its making.

It's taken me a long time to get over that. When Factory was sold to London Records, Tony sort of lost the plot. There were a lot of taxes and stuff, unpaid bills etc. I eventually lost my home but in terms of the music I was working in bits and pieces. I bought an eight-track portastudio for £400 and made Rebellion with that. I met this guy called Laurie Laptop who had equipment in his cellar and he did some loops and samples which we made into rhythm tracks. Then I put them onto eight-track and did Someone Else's Party with them. The 'bass drum' on that is me hitting a book near a mike. The 'hi-hat' is me rustling a piece of paper through an effects unit. The bass is an old bass xylophone.

#### If you were asked to put a piece of music on the best hi-fi system ever built, what would it be?

Tomorrow Never Knows by the Beatles. The rhythm track on its own is just bizarre. It's mad, it's fantastic and it's transcendent all at the same time. It's like an LSD trip in sound for three magical minutes. It's wild and altogether beautiful.

#### Who's your standout favourite musician of all time?

Jimi Hendrix, the Einstein of the guitar.

What do you listen to music on and what's your sound system of choice? I listen to music on a small Bose system in my girlfriend's kitchen through two tiny speakers and a subwoofer in a pot cupboard! While my favourite system of all time is a Sony portable DAT player through a pair of Sennheiser DT-990s. DAT is the very best sound ever and when I'm in the studio I use it to listen to mixes. I remember listening to Vini Reilly in the studio on DAT through a pair of Beyer headphones in 1989 and it sounded exactly as I made it. You can't get better than DAT. Nothing else, including CD, comes near. www.fullfill.co.uk www.thedurutticolumn.com

### Durutti Highlights



THE RETURN OF THE DURUTTI COLUMN Vini's 'anarchic gesture' debut was bathed in tranquillity. Sketch For Summer is pure hazy psychedelia.



LC Vini's second album has some of the best-sounding guitar playing on disc. Sketch For Dawn and Never Known and are aural heaven



VINI REILLY Reilly at his most sophisticated with Stephen Street at the controls. Brilliant use of vocal samples and multi-lavered quitar parts.

*"Tony mixed the album in a mobile studio in Tokyo at 3am. But he didn't know how to use a mixing desk..."* 



# Marantz DH9300 music server £2,509 Opus multi-room kit £4,500 four zones as tested, installation not included

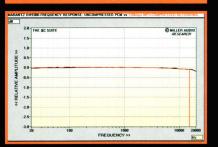
Piping music stored on hard disk around your house could certainly solve your CD storage problems. But will it sound good enough?

If the long-awaited convergence between audio, home entertainment and PC technology is still looking for fertile ground, then products like Marantz's DH9300 music server and the Opus multi-room distribution system may well represent the green shoots of one possible future. Up until recently, mass media storage typically involved large and cumbersome multi-CD playback systems, the jukeboxes of the digital age. Delivering

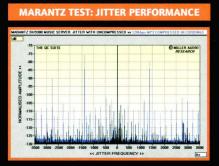
uncompressed audio from an embedded PC hard drive (HDD) clearly represents a more compact solution, but only when this solution is integrated into an existing multi-room package does it realise its full potential.

Opus Technologies had already signed up with Marantz to distribute its products in the US and Europe. So, when Marantz announced the development of its HDD server, the idea to provide a direct link to Opus's Text Interface was bom. Together, Marantz's £2,509 music server with its ability to deliver four independent stereo channels and the £1,645 Opus MCU500 Master Control Unit with its capacity to control four separate zones (or rooms) plus four additional 'sub-zones', make for a compelling package (though you'll need to factor in amps, speakers, keypads, wiring and fitting, which in a four-zone set-up could add a further £3,000 plus). Both products use new technologies to solve the

#### MARANTZ TEST: FREQUENCY RESPONSE

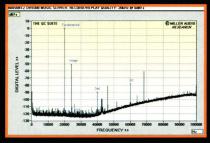


While recording with increased compression (red trace) does not significantly increase noise or distortion, it does progressively limit the available high-frequency response.

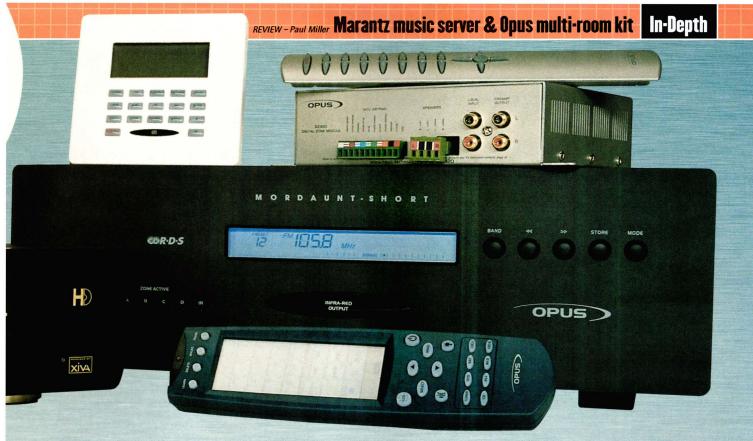


Jitter is low enough at 450psec with uncompressed recordings (black trace) regardless of whether one or four outputs are driven. However, digital jitter does increase to a debilitating 8,000psec with compressed recordings.

#### MARANTZ TEST: RECORD/ REPLAY



This plot shows the 2nd and 3rd harmonic distortions associated with a recorded 20kHz signal. Below average digital filtering leaves an obvious stopband image, but it's the 'grassy' looking noise that may have the biggest impact.



problems of piping high-quality audio around the home, and rely on a system-wide synergy to exceed the sum of each manufacturer's parts.

#### MARANTZ DH9300 MUSIC SERVER

Because data can be pulled off an HDD at far higher rates than is actually required for CDquality audio, a single HDD can furnish multiple stereo outputs with independent volume control and musical selection. Marantz's DH9300 server offers four such audio outputs driven from a single 80Gb drive, sufficient to hold 115 hours of uncompressed CD audio (increasing to 517, 860 and 1,290 hours with 320kbps, 192kbps and 128kbps compressed data rates, respectively). The zone 1 output is available as either S/PDIF digital or analogue while the other three zones are serviced in analogue form only.

It's possible to make HDD recordings via the server's analogue and digital inputs, but most users will rip directly from CD using the built-in drive at up to 3x normal speed. Once a disc is loaded, the record process is managed either by

the 'action' and 'navigation' buttons on the player itself or, preferably, by viewing the onscreen display on a video screen via one of its various S-Type, composite and VGA video outputs. Before recording begins, it's possible to select or omit individual tracks from the CD and define the recording mode – more compression equals longer record times but reduced quality.

If you really need to store 100+ CDs for instant access, then the 320kbps record mode is the best option. Increased compression does not significantly affect audible noise or harmonic distortion but very high frequencies are lost and causes a significant increase in digital jitter – a particularly insidious form of distortion. Uncompressed recording yields the best sonic results and there's no deterioration in performance with all four outputs driven simultaneously, even with different material.

Once selected tracks are recorded, the DH9300 can connect to the Gracenote CDDB Music Recognition Service via its 56k internal modem or Ethernet port to download album and track title information plus artist name and genre for the disc. If you leave the DH9300 unconnected or abort the internet connection process, then you can choose to manually annotate the pre-numbered tracks and album titles. This is pretty vital if you then want to browse your collection by name, artist or genre from the on-screen 'library' where it's also possible to create and edit personalised playlists.



#### MARANTZ MENUS: SETTINGS



The Settings Menu allows you to set up or defer the DH9300's internet account, register the product on Marantz's customer site and define important system information.

#### **MARANTZ MENUS: RECORDING QUALITY**



The recording quality option on the Settings Menu brings you here, where one of four bit rates may be selected. The higher the compression, the lower the bit rate and the more CDs that can be stored.

#### **MARANTZ MENUS: CD LIBRARY**



The Library page allows you to view and select from your recordings by album title, artist or genre, for example. Personalised playlists can also be created and edited from this page.

# *"An Opus solution can put some single-room systems to shame, while offering much greater convenience."*

#### OPUS TECHNOLOGIES MULTI-ROOM SOLUTION

The £1,645 MCU500 is the hub of Opus's multi-room system, with inputs for five separate audio sources plus a built-in RDS tuner and four independently configurable zone outlets that travel into the house via Opus's BTC1 cable. In addition, each zone can have a 'local' source such as PlayStation in one bedroom, a DVD player in another and a PC in the study. An MCU500 can cater for four main rooms, each with an associated sub-zone, if required. This brings the room tally to eight with the option to increase this by cascading multiple MCU500s.

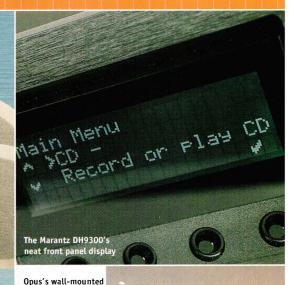
Each room or zone requires its own £212 WCU500 keypad that's typically wall-mounted into UK or US J-style back boxes. These elegant keypads include a back-lit LC status display and buttons with matching illumination and, of course, can be supplied in a variety of colours (including white, black, brass and chrome effects) to suit your décor.

These keypads communicate with the MCU500 through the BTC1 cabling and are either addressed manually or via Opus's own £71 SRC500 system remote or £141 LRC500 learning remote with its touch-screen interface. Separate AV, CD, DVD or satellite sources, for example, that are connected to the MCU500 can then be controlled from room to room, skipping tracks, selecting radio stations and adjusting volume levels. Each keypad has a built-in clock (that can be updated via the MCU500's FM tuner), alarm and timer plus a menu system that gives access to bass, treble, balance, loudness and normal or 'wide' stereo modes for each zone.

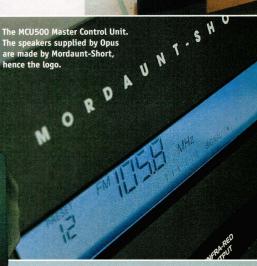
Commands from non-Opus remote controls can also be received by a WCU500 and duplicated in the master room containing the MCU500. In this way, it's possible to control a Sky Plus box, for example, in rooms with a satellite feed but that are not equipped with Sky's optional remote repeater. Audio from the selected source is routed from the MCU500 via the screened BTC1 cable, as a balanced line-level signal. Not only does this provide far greater immunity to noise and reduced distortion over non-balanced audio connections, but it's vastly superior to multi-room systems hooked up at speaker level using reams of bell wire.

Opus has designed its own pseudo-digital power amplifiers (based on Tripath's Class T technology) that run so cool they can be slotted into ceiling voids next to the in-wall or in-ceiling loudspeakers. This is where Opus's own BTC1 cable comes into its own, because it also provides a 24-volt DC supply to feed these 20-watt DZM20 (Digital Zone Module) amps. The fact that you are not required to run additional 240-volt mains feeds to these amplifiers means installation is both less complex and less hazardous and brings the prospect of DIY-installation to a potentially huge audience. This idea might not appeal to anyone creaming off the lucrative home installation market, but it adds tremendous appeal to the average enthusiast with more sense than money.

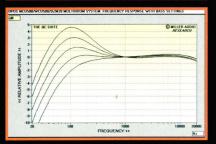
Opus has even teamed up with home automation specialists, Lutron, to offer a hybrid WCU500 keypad that combines automated lighting, among other options, alongside multi-room audio. This hybrid application can be driven from a single LRC500 remote handset. Other accessories include higher power 50-watt and 100-watt amplifiers, an interface unit for connection with third-party controllers (such as Crestron AMX) plus a video switching unit to facilitate a house-wide AV system.







#### OPUS TEST: FREQUENCY RESPONSE



This is the overall frequency response of a line-level source (like the DH9300) connected through the Opus MCU500 controller and WCU500 keypad, driving a DZM20 amp to 1W/80hm. Bass character may be tailored to suit in 2dB increments.

#### **OPUS TEST: DISTORTION**

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OPUS



With the same room-to-room connection, this graph shows how distortion, while relatively high through low bass and high treble frequencies, achieves a moderate 0.05% or less through the important midrange.

Mordaunt-Short's in-ceiling speakers in situ.



## Marantz music server & Opus multi-room kit In-Depth

#### SYSTEM PERFORMANCE

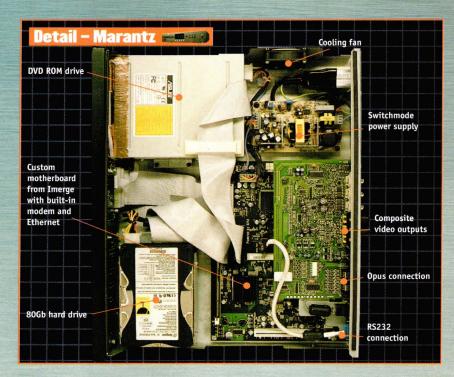
While the DH9300 is fitted with an RS232 port for connection to third-party controllers using Imerge's XiVA-Link protocol and remote sockets tied to each of the four output zones, it also carries a pair of very specific RJ45 Opus Text Output sockets. These link zones 1-4 on the DH9300 with what are, by default, the AV1, AV2, CD and DVD inputs on the Opus MCU500 master controller. An electrical 'IR link' and conventional audio connections for the four independent source channels is all that's required for control of the DH9300 from any room equipped with an Opus WCU500 wallmounted keypad. Responses from the DH9300 are relayed back to the target WCU500 as track, album and genre text information stored in the library.

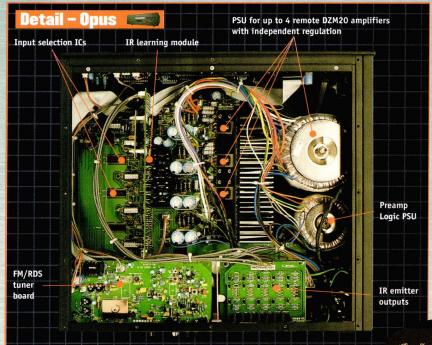
Naturally, it's possible to access the DH9300 via Opus's own remote control and the WCU500 situated in different zones or rooms. Even greater access is provided by one of Marantz's optional RC5200 or RC9200 remotes, which can effectively download the DH9300's library information into their core. Selections can then be made from the touch-screen

remote which are then forwarded through the Opus system. Opus provides matching OS165CC in-ceiling speakers from Mordaunt-Short at just £100 per pair, which are custom designed to get the best from the DZM20. The

sound of the system is remarkably good, with a midrange clarity, freedom from vocal sibilance and treble extension that's typically free of beaming effects and other 'hot spots' within the room. Naturally, the air volume within the ceiling void, presence of insulation (such as rock wool, for example), the positioning of the speakers and structure of the ceiling all have a role to play in achieving the best sound, particularly as regards bass extension. Under ideal conditions, a multi-room Opus solution can put the sound of some conventional single-room systems to shame, all the while offering a much higher degree of convenience and visual subtlety.

The true benefit of Marantz's DH9300 is only realised in conjunction with the Opus system. It's all a matter of context. Quite frankly, nobody is likely to consider the purchase of a multi-zone server like the DH9300, or the Linn Kivor Index reviewed last month, *unless* it's part of a complete multi-room solution. Reviews of these servers as the primary source of a 'high-end' twochannel audio system are quite wide of the mark because £2,500 will also buy you a top-end DVD/SACD player, including models from Marantz! And in a head-to-head against that sort of competition, the DH9300 with its robust sound, albeit one lacking in some low-level purity, quickly waves the white flag.





On the other hand, in a multi-room application, the DH9300 beats the audiophile player hands down for its sheer versatility. After all, if you decide you want to listen to the Red Hot Chilie Peppers in the kitchen while little Johnny has Kylie in his bedroom and your other half is relaxing with Tom Jones in the bath (!), then a multi-zone server really is the only answer. As a combination, the punchy quality of the DH9300 brings the Opus system to life, delivering a clean, clear and dynamic sound at high volume without audible stress. At lower levels, the music remains detailed but undemanding and helps create the perfect atmosphere for a dinner party, for example, whether or not you chose to invite an audiophile.

#### VERDICT

By entering the market a little later than others, the Opus multi-room system benefits from having addressed some 'oversights', the selfpowered amplification and superior balanced audio feeds being two examples. This comprehensive package offers exceptional value and looks destined to bring multi-room entertainment to a far wider audience. Marantz's compatible DH9300 server is not inexpensive, but represents the icing on this altogether superior cake. ( Marantz 01753 680 868 ) www.opus-technologies.co.uk

XIVA

#### **REVIEWS – Jason Kennedy**

# **PRE/POWER AMPLIFIERS**

If you're serious about listening, two boxes are often better than one



he two-box stereo amplifier is being forced to evolve – it's under attack from all sides. On one hand, integrated stereo amps are getting bigger and more sophisticated with serious power outputs and plenty of features. On the other, multichannel AV amps are getting cleverer and more music friendly. Today's stereo pre/power amp has to offer something more than these often cheaper alternatives.

The message seems to be getting through because all of the combinations in this group have a good range of features, remote control and, most importantly, sound quality which sets them apart. There doesn't seem to be any getting away from the fact that preamps sound better when they are not sharing box space with the high voltages required of power amps. With their own space, preamps can be laid out for minimum noise and thus maximum resolution. Some brands go so far as to remove the power supply (Bryston, Naim) entirely and site it outside to keep things as electrically quiet as possible.

Power amps fight the same battle – noise – but with ever-increasing power and thus load tolerance. In this group we have a brace of 70-watters, a medium weight 120-watter and a backbreaking 300-watter. Power isn't quality, it's control and if you like bass you need control.

XLR socketry is on the rise and can be found on three of these pre/power amps. But it doesn't indicate balanced operation per se – in fact only the Bryston is fully balanced and thus will necessarily benefit from their use. With the Primare and Exposure the quality of interconnect cable will be of greater impact than the termination. Two of the preamps in this group feature a unity gain input. This is a nod to multichannel integration and bypasses most of the preamp allowing the power amp to be used to drive the front left and right channels. So you can have unadulterated stereo when you choose to and combine the amp with three others when you want to listen in surround.

For the dedicated music lover a stereo pre/power amp is still the only route to audio nirvana. They give you more energy and resolution than the alternatives and increase the power of the music to enthral. No-one that knows their audiophile onions would use anything else.

#### EQUIPMENT USED

SOURCE COMPONENTS SME Model 20A turntable/arm, van den Hul Grasshopper GLAIII cartridge Tom Evans Audio Design The Groove phono stage Acoustic Precision Eikos CD player LOUDSPEAKERS Living Voice Avatar OBX-R **B&W CDM9 NT** (plus Townshend Maximum Supertweeters) CABLES Townshend Isolda, Living Voice Potato Wire and Chord Signature **STANDS AND SUPPORTS** 

Townshend Seismic Stands

#### **MUSIC USED**

Eminem The Marshall Mathers LP Cornelius Point Various Artists Late Junction #1 Keith Jarrett Eyes Of The Heart Missy Elliott Under Construction Glenn Gould Beethoven Bagatelles Op33 & Op126 EST Strange Place For Snow



Group Test Pre/power amplifiers £2,400-£4,000



# £1,650/£2,350 © 0870 4441044 Www.bryston.ca BRYSTON BP25/4BSST

This powerful combo from Canada delivers bags of musical detail and bass that's deeply gripping

The heavyweights, in more ways than one, of this group are Bryston's stalwart BP25 preamp and one of its new SST power amplifiers, the meaty 4BSST.

The BP25's ultra slimline casework is enabled by the outboard nature of its power supply – you have to follow the umbilical to locate a genuine on/off switch on this unit. It's equipped with a heavyweight and highly simplified remote handset which does volume, mute and phase. Phase, or polarity, inversion is a hot topic in North America where its audibility or otherwise has been known to consume many a column inch. It's less of an issue over here, which is probably healthy – the more you consider the minutia the less you hear the music!

The 4BSST power amp is one of a new breed of SST designs from Bryston, with increased power, reduced distortion and doubled power supply capacitance compared to the previous ST range. The 4BSST is a middleweight in the range but still kicks out 300 watts, providing you can find the power switch. We had to resort to the manual, such is the subtlety of the membrane switch that forms the front panel badge! Build quality with both units is extremely high – it has to be if a 20-year guarantee is going to be supported for customers like the BBC.

This, the most expensive combination in our group, turned in the most transparent and substantial performance. It seems that you can't beat watts if bass weight and control are the goal, but power alone by no

#### VERDICT SOUND SOUND FEATURES BUILD SOUID S

Extremely transparent and startlingly quiet high-power combo in which the 4BSST power amp is the star. You'll listen louder and longer with these amps simply because you can. CHECKLIST

#### REMOTE CONTROL / PROCESSOR BYPASS / PHONO INPUT / LINE INPUTS 7 TAPE/ PROCESSOR LOOPS 1 POWER OUT 300W/CH

means equates with quality. In that respect the Brystons are unusual. The first thing that hits you (by its absence) is the quietness of the background – noise levels are seemingly non existent despite the vast power on tap. This means that all the fine detail, all the low level effects and background samples can be heard clearly. The more I listened to Missy Elliott's Under Construction with this combo the more I appreciated the work that went into it. You can hear details that most good amps hint at but rarely reveal to the full.

Tonally the pairing is a shade on the 'dry' side. There isn't quite the fluidity of, say, the Exposures, but there is more detail and if that turns you on you'll love the Brystons. Imaging likewise is not quite in the very front league – there's plenty of depth and resolution of reverb is fine, but you don't get maximum precision. The preamp appears to be the limiting factor here. Team the 4BSST up with the Exposure XXIII for instance and things snap into focus with superb depth and height resolution.

What you get in abundance is bass. Deep, powerful, gripping and subtle, you'll be shocked at some of the low notes that are lurking on your discs. Check out Goldfrapp's *Paper Bag* or the Peace Orchestra and feel the power. If you've got 'difficult' loudspeakers or you like to play loud, this is the mutt's nuts.

But this is clean, sophisticated power. There's none of the edginess that used to be associated with big

#### **KEY FEATURES**







CONTROLS: Solid and dependable switching controls echo the high build quality of the Bryston duo. The volume pot is silky-smooth and is the only function aside from mute and phase switching that can be controlled by the heavy-machined

allov remote.

CONNECTIONS: Bryston's slimline preamp means lots of socketry packed into a small space, to include both balanced and two pairs of single-ended outputs. There are also balanced inputs on the preamp, a connection type popular in Bryston's native Canada. Seven single ended inputs also nestle with a pair of tape loops.

amps, and neither are the Brystons slow. They may not have the tempo of the Naim combo but you get a tremendous sense of precision. More telling is the variation between recording styles they reveal – it's not just musical styles that should vary from disc to disc, and an amp that shows as much is a more accurate and revealing device. The Brystons are certainly that.

## Pre/power amplifiers £2,400-£4,000 Group Test



# £1,395/£1,395 @ 01273 423877 @ www.exposurehifi.com **EXPOSURE XXIII/XXVIII**

A fluid and engaging performance from a new amp pairing with a touch of 'the valves' about it

ith this latest pre/power amp combo Exposure is harking back to its early days, when all of its components had frankly confusing Greek numeral names. Whether this is a wise marketing move remains to be seen but it's nothing if not distinctive.

The XXIII preamplifier is a sleek lump of aluminium with nicely illuminated controls and full remote control via a lightweight system handset. Those knobs are motorised so switching inputs results in a sexy twist from the listen selector and a saucy flashing red light! The third knob is a record selector which can be switched off altogether, and that has to be a good thing.

The XXIII offers a good range of line inputs and the option to add an MM or MC phono stage. Output to the power amp is via phono or XLR socketry that's matched on the oh-sosimilarly-numbered XXVIII power amp. An interconnect cable terminated in XLR plugs is supplied with the amp, but unlike most XLR connections this is not a balanced cable, nor are either of these amps

The XXVIII is a relatively manoeuvrable device (11 kg) that claims to deliver 70 watts per channel courtesy of a dual mono construction with bi-polar output transistors. Features include non-invasive protection from overload and separate PCBs for each channel. We managed to invoke that protection twice during the test and learned that it takes a good few minutes before the amp will power up again.

#### VERDICT SOUND $\star \star \star \star \star$ FEATURES $\star \star \star \star \star$ BUILD \* \* \* \* \* VALUE $\star \star \star \star \star$

Highly natural and dynamic amplifier that manages to offer valvelike fluidity and energy via its bipolar transistors. If you're looking of the best of both worlds, here's a solution.

#### CHECKLIST

REMOTE CONTROL PROCESSOR BYPASS X PHONO INPUT OPT LINE INPUTS TAPE/PROCESSOR 100PS POWEROUT 70W/CH

amplifier that encourages 'dead air', in fact it's addictively entertaining. There's something of the 'valve sound' about its fluid and natural midrange, and the results are highly engaging particularly, as it transpired, with the Living Voice pair of test-reference speakers. Tonally this is a particularly gratifying amplifier, highly convincing with instruments and voices - the number of times "great voice" appeared in the listening notes started to look silly.

And you'll be champing at the bit for

it to do so. This is not the sort of

This is achieved largely by the excellent sense of dynamics produced by the Exposures, so you can hear all the little variations in level within the music but don't miss out on the big swings either. Bass isn't as bonecrunching as with the bigger power amps and imaging isn't in the moneyno-object league, but you do get a natural sense of perspective and real spatial variation between recordings.

The Keith Jarrett LP comes across with incautious amounts of joy, the cymbal work coming to life with genuine sparkle and light while the rest of the band drive the tune along beautifully. This pairing has a musical transparency and lightness of touch that places it a nose in front of the gathered competition on the sheer enjoyment front. It's even more fluid than Jeff Beck, and he used to be pretty good ..

What these amps do that is so unusual is to sonically combine the power delivery of transistors with the

#### **KEY FEATURES**









**CONTROLS:** Big motorised knobs give a great feel when switching between input selections and adjusting volume. Knob three's record select functions can be switched off, which is worth doing, Red lights are a refreshing change from the usual crop, adding amp appeal.

**CONNECTIONS:** There are five line inputs gracing the rear of the preamp, along with a tape loop and XLR outputs. Although the amp is not balanced, the duo com supplied with an XLR terminated interconnect for you to suck and see.

valve-like qualities of dynamics and tonal realism, resulting in an engaging and natural sound with great musical cohesion. In the past, designers have attempted to do this with hybrid designs or by using valve preamps with 'tranny' power amps, but these are usually more expensive than most of us can afford. The XXIII/XXVIII pairing is both engaging and exceedingly transparent - a significant achievement at the price.



£1.375/£1,345 🕿 01722 332266 @ www.naim-audio.com **NAIM NAC202/NAP200** 

This latest pre/power updates the 'Naim sound' by mixing the old rhythmic powers with added audiophile refinement

ate last year, Naim - which might lay claim to being the biggest British brand in high-end audio electronics - took the unusual step of replacing the majority of its product line with the so-called Classic range. As you might imagine, the echoes of this momentous occasion can still be heard in the farthest corners of the Flat Farth!

The NAC202/NAP200 are relatively modest examples of the Naim amp creed and sit one up from the base model in each case. They replace the not-so-ancient NAC102 and firmly established NAP180 with a pair of more smartly attired cases whose rear ends are distinctly Naim-esque - there aren't many other brands that are so keen on DIN socketry and unusual power supply (PSU) configurations. The NAC202 preamp cannot be used on its own as it depends on a power amp such as the NAP200 (or NAP150) or a separate power supply to sustain it.

The NAC202 is microprocessor driven and its remote control can be used to configure the various inputs offered. There are no input names on the remote, just numbers, but practice helps you remember which is which, and the illumination of the selected input on the unit itself helps you navigate. A radical departure for Naim is the inclusion of not one, but two, RCA phono socket inputs, which means that non-Naim sources can be hooked up without the need for DIN plugequipped leads. Also of use is an AV bypass input, which allows for the easy integration of this pre/power into a multichannel system.

#### VERDICT SOUND \*\*\* FEATURES $\times$ $\times$ $\times$ $\times$ BUILD $\star$ $\star$ $\star$ $\star$ VALUE $\star \star \star \star \star$

This combo may be more sophisticated than its forehears in both build and features, but 21st Century Naim still has that fleet-footed sound that draws you into the music and keeps you listening

CHECKLIST REMOTE CONTROL PROCESSOR BYPASS PHONO INPUT X LINE INPUTS TAPE/PROCESSOR LOOPS POWER OUT 70W/CH

The NAP202 power amp is a 70watts-per-channel design which claims to be stable into any load, the only caveat being that you have to use 3.5 metres or more of NACA5 speaker cable to ensure that stability. The cable is not supplied with the amplifier but the fixed spacing plugs are, as is the umbilical that powers the preamp and carries the signal between them. Getting the best out of a Naim amp

requires a little more patience than usual - you have to use the brand's cables, learn its idiosyncrasies of set-up and you have to wait ... a lot. Even after several hours this combination still sounded distinctly hard through the midband and only time seems to smooth things out and let them shine. Twenty-four hours is the minimum, but a week is preferable. After a couple of days however, things started to sound interesting. The amps' signature - great timing - makes itself clear in the way that you are always aware of the rhythm. Then comes the sense of immediacy that some call speed - musical transients have remarkable attack.

They certainly have a more sophisticated sound than typical Naims of old. What used to be considered airy fairy factors like imaging have clearly improved, and the balance is no longer so aggressive, in fact it's palpably more civilised. That's not to say that the folks of Salisbury have abandoned their 'timing is king' theme, just that they've added some of the finer audiophile capabilities to their products' already considerable armoury.











**CONTROLS:** Due to Naim's microprocessordriven control, you can configure the remote to the inputs, although the remote is only numbered for this purpose. Of all the amps in this group the Naims require the most acclimatisation, but are undoubtedly clean, neat and minimalist.

**CONNECTIONS:** At last Naim has included RCA phono inputs allowing partnering with non-Naim sources without the need for a DIN-to-phono lead. A panel of further DIN connections show the roots of Naim's guirky sonic preference for alternative interfaces.

Tonally there's a subtle preference for the upper bass - you get a warmth that isn't usually there - and imaging is still not quite in the front league. But the coherence of presentation is extremely engaging, and you are drawn into the music such that issues of presentation and balance are unimportant. Naim amps may still have a distinctive character but their ability to reveal the fundamental qualities of the music cannot be underestimated. 回



£1,200/£1,200 @ 01423 359054 @ www.primare.nu PRIMARE PRE30/A30.2

A beautifully built combo from the Swedish hi-fi maestros sporting a strong feature set and an equally solid sound

proud of the body of the amp, Primares are beautifully built devices and this latest pre/power adds genuine sophistication to the bill.

The fully balanced PRE30 makes at least two concessions to the demands of the growing install market with data ports in its back side and a fivevolt trigger output so that it can remotely turn on the A30.2 power amp (albeit not being so well matched with 12V triggered kit from the US). From the well-hidden nature of the on/off switch on each unit (under the left-hand side of the fascia) you get the impression that they are happier left on.

The front panel has a couple of unusual buttons alongside the neat numerical volume display. These are a level button for adjusting input sensitivity and a surround button for integration into a multichannel set-up. The latter bypasses the volume control and allows the pre and its power amp to act as two channels in the system so that stereo playback is not compromised.

The A30.2 is the power amp incarnation of the A30.1 integrated. A dual mono design, it weighs a hefty 15.5kg and is specced to deliver 120 watts a side. Like the PRE30 it has both RCA phono and XLR connectors, the latter taking advantage of its fully balanced operation when in bridged (monoblock) mode. This being the only stereo Primare power amp, the only way to buy a bigger Primare is to double them up for staggering amounts of power. The build quality on both units is also exemplary.

Pumping out the tunes, the Primare pair has an assurance and confidence that is highly seductive - you get the impression that nothing can phase them. Power is distinctly on the agenda and bass is always deep and solid, underpinning the music and helping to create very strong, three dimensional imaging. While the balance is a touch on the dark side, the Primares put in the most convincing performance when it comes to reproducing an instrument or voice in free space. The imaging is superb, which suggests that the pairing is doing a lot of things right.

Low-level resolution is excellent too, at times perhaps a mixed blessing - it would have been nicer to have heard less surface noise from the Lambchop LP but you can't apply transparency to music alone, more's the pity. Tonally the sound is rich, if a little lacking in sparkle, though the drums on Keith Jarrett's Eyes Of The Heart sound realistically 'live' and you're presented with a strong sense of the size of the venue. Perspectives are likewise very convincing, the Andras Schiff piano sitting precisely behind the speakers and 'klanging' away in its inimitable and eventually wearing style!

The Primares get livelier as volume level increases. They seem to prefer playing loud but sound detailed and musical at normal levels too, factors which should make them easy to match with all but the most laid-back of loudspeakers. Their eminently clean



Beautifully built with great selection of features and serious power delivery, this is a hard pairing to criticise but some may prefer a more lively balance. CHECKLIST

REMOTE CONTROL / PROCESSOR BYPASS / PHONO INPUT / LINE INPUTS 6 TAPE/ PROCESSOR 1 POWER OUT 120W/CH **KEY FEATURES** 







**CONTROLS:** Primare's digital volume display is unique in the test and the front panel is bang up to date, boasting a level button for input sensitivity adjustment and a volume bypass switch for multichannel integration. The remote pictured above costs an extra £300, although a more conventional plastic item is supplied.

CONNECTIONS: A data port at the rear is an unusual sight on a stereo preamp, but points to the future of audio in the home. Combined with the more conventional RCA inputs (six) and single tape loop the Primare offers a flexible interface to AV connectivity for both now and the future.

and smooth sound balances John Surman's lyrical horn playing with Dave Holland's no less expressive double bass beautifully on Anouar Brahem's *Thimar* disc.

Overall, this Swedish duo delivers a mix of strong build and features that's very difficult to beat at the price, with a sound that's only a semiquaver behind the best. A sound all-round bet whichever way you slice it.

# CONCLUSIONS

Depending on budget, all four of these hand-picked partnerships may be worthy of your short list

orry. No really, we must apologise for not making the job of choosing a pre/power amp much easier. The problem is that in a small, select bunch like this there are no duffers - they're all great amps in their own way.

The Bryston BP25 preamp doesn't have a unity gain input (useful for multichannel) but it has a lot of others and takes up the least amount of rack space. The 4BSST

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## COPLAND CDA822 £1,598 Reviewed on p62 of this issue,

Copland's latest CD player is a smooth and life-like performer. SPEAKERS

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### **HINTS AND TIPS**

Eeave it on. Don't turn off your amps if you can help it, but if energy use is an issue, switch off the power amp - they warm up more quickly.

Bi-wire. Most speakers allow for two runs of cable between them and the amp, and utilising this can improve the sound.

🕀 Isolate. The more you can do to stop energy getting to your amps the better they will sound. There's a lot to be said for not putting systems between speakers for this very reason.

Use the tape monitor input for your main source if you don't need it for a recorder, as they often sound better.

Clean up the mains with a dedicated spur from the consumer unit and/or proprietary RF-busting mains leads.

power amp on the other hand is a physical brute. As a combination they deliver transparency beyond the call, and if the sound is not quite as romantic as some, Bryston would ask whether you want to hear the colour of the recording or of the equipment.

The Naim combo takes an age to warm up and lives in its own paradigm as far as connections and cables are concerned. This may or

may not explain its remarkable communicative capabilities, but it could go some way to saving you from the agonies of cable upgrades every time a 'better' interconnect or speaker cable comes along

Primare's pairing proved a subtle beast, persuasive in an understated way, quietly letting the music do its stuff. This, combined with extremely well-finished casework and extensive facilities makes it hard to

resist - confident and clean in execution and sound, this combo is no less strong on soul.

If you have an integrated amp and wonder what one of these pairings will bring you, think life, energy, power and scale. You'll hear more of the music and less of the system - and you can save yourself a bunch of software purchases because your old stuff will sound new again! 🔘

## **STAR PERFORMER**

## EXPOSURE XXIII/XXVIII

Silly names, lovely amps. Not the fanciest casework around but cleanly executed and capable of delivering a sound that can fairly be described as inspiring. The key to this combo's success is the fine handling of dynamics - the ability to differentiate between individual notes in terms of level and tonal colour. It's a hard effect to describe in detail but the general feeling is an increase in energy and life. If, like me, you want an amp that combines the qualities of valves and transistors this is one of the best examples around, and it doesn't cost a fortune. Some of the competition may have deeper bass or better imaging, but if it's more realistic music at a sensible price you're after, try these.





## PRE/POWER AMPLIFIERS AT A GLANCE

| Make        | Bryston   | Exposure  | Naim   | Primare  |
|-------------|---|---|--|--|
| Model       | BP25/4BSST  | XXIII/XXVIII  | NAC202/NAP200  | PRE30/A30.2  |
| Price       | £1,650/£2,350   | £1,395/£1,395   | £1,375/£1,345  | £1,200/£1,200  |
| Sound       |   | ***   |  | ★★★★   |
| Features    |   |   |  |  |
| Build       |   |   | ****   |  |
| Value       |   | $\star$   |  |  |
| Conclusions | Very transparent,<br>high-power combo –<br>you'll listen louder<br>and longer because<br>you can. | Highly natural and<br>dynamic amplifier<br>that offers the<br>fluidity and energy of<br>valves via transistors. | More sophisticated<br>than its forebears<br>with a fleet-footed<br>sound that draws<br>you into the music. | Beautifully built<br>with great selection<br>of features and<br>serious power<br>delivery. |

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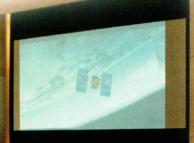
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CED



# **NULTICHANNEL SPEAKERS**

Multichannel sound now means more than just home cinema. But can you buy a package that does music and movies equally well for less than £1,500?

This magazine has looked at multichannel speaker systems in the past, but this seems like a particularly good time. Multichannel listening seems to be coming of age. Previously, it was driven exclusively by home cinema, while music listening was more or less exclusively the domain of high fidelity in stereo. But the barriers are breaking down fast, and for many reasons, not least the availability of multichannel SACD and DVD-Audio music discs.

But there are other reasons. Almost from nowhere, DVD-Video music titles are beginning to make an impression - Diana Krall's Live In Paris has become a show favourite in very short order - even though such discs use nothing more exotic than DTS or Dolby Digital sound (the Diana Krall recording uses both). Recordings of this type cannot hope to rival conventional non-data-reduced material, but there has been improvement in the technical standards of such recordings recently, and the performance of surround sound decoders, as well as multichannel amplifiers, has improved practically beyond recognition. And let's not forget the place of surround

sound formats like Dolby Pro Logic II and DTS Neo:6, which are capable of generating very credible surround sound mixes from stereo and Dolby Surround sources.

So the desire for multichannel speaker systems is no flash in the pan. It reflects a fundamental change in the way that many of us consume a portion of our music, and there is no realistic prospect of the clock being turned back. The problem is that many are unwilling or unable to accommodate five or six large speakers. This is the reason for the rapid rise in popularity of tiny sub/sat systems using satellites that typically can sit on the palm of the hand, often coupled to subwoofers little bigger than a shoebox.

If you are restricted to these, there are some very well engineered examples that will give a lot of pleasure. But they are always compromised. To give one example, subwoofers only work properly when they're restricted to the very lowest frequencies, under around 50Hz in our experience, and this simply cannot be achieved with miniature packages. To believe otherwise is tantamount to placing faith in horoscopes. In this test we concentrate on the affordable end of the market for full size packages that can and do deliver real music, over two channels or five, and without the compromises that are part of the deal with miniature speaker systems.

## EQUIPMENT USED SOURCE COMPONENT

Sony DVP-NS900V DVD-V/SACD player

Pioneer VSA-AX10 integrated AV amp Sherbourn PT-7000 preamp/processor and 7/2100 power amp CABLES

Nordost Valhalla speaker cables TAG McLaren interconnects & digilink

## DISCS USED

Iván Fisher (cond), Budapest Festival Orchestra *Dvorak Slavonic Dances* Robert Spano, Atlanta Symphony Orch *Vaughan Williams A Sea Symphony* Anne Sophie Mutter & Lambert Orkis *Beethoven Spring And Kreutzer Sonatas* **CD** 

Mary Coughlan Love For Sale Tracy Chapman Tracy Chapman DVD-VIDEO

Music: Diana Krall Live In Paris Movie: Monsters Inc Movie: The Fellowship Of The Ring





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## **B&W 300**

DM309 main £330, LCR3 centre £140, DM303 surround £180, ASW300 subwoofer £250

espite being the UK's leading volume loudspeaker manufacturer, B&W has tended to steer clear of the lowest stratum of the market. Even with this system, the most affordable that B&W makes, pricing is a full £270 more than its opposite number from KEF (see page 44). With the exception of the subwoofer and some drive units, the 300 series is built here in the UK.

Although there are clear concessions to price, the 300 series system is notable for its sound (no pun intended) engineering - the speakers are heavy and well damped. Finishes, a choice of maple or black ash vinyl, are almost good enough to pass as wood veneers at first glance (if the maple of the test sample is representative). The enclosures are well damped for the price, and the baffles are finished in a neutral grey, with a dimpled surface echoing the treatment of the deeply flared Flowports, where the dimples perform the function of smoothing airflow and reducing turbulence and wind noise. The 300 series also boasts a simplified, internal version of the tapered

version of the tapered Tweeter Tube used to mop up back radiation from the tweeter dome in more rarefied B&W designs.

The passive speakers employ the same 26mm metal dome tweeter throughout, and customised variants of the generic 300 series woven glass fibre bass/midrange cone. The main DM309 is equipped with two such units, each separately vented at the rear. The smaller DM303, used here as a rear speaker though it leads a second life as a hi-fi compact, is essentially the top half of the DM309 in a smaller box. Each of these speakers is nominally eight ohms, but drop down to as low as three ohms in the case of the DM309. The subwoofer is a compact direct-radiating

design with a downwards facing Flowport, to help baffle the port noise that vented subs often generate. Sensitivity is in the upper medium 88-90dB range, depending on model.

The B&W system impressed from the outset for its full-scale bass, and its expressive, clear midband. The balance is not quite neutral - the upper bass sounds a tad over full, but this can be quite effectively controlled in practice by pulling the main speakers well clear of the back wall, and by using the supplied removable reticulated foam plugs in the port exits. There are some minor losses of treble presence and detail, but nothing significant, and the speakers appear easy to drive at low and high volumes alike, the physical stability of the various speakers helping the sound to remain clean and consistent at higher volumes. Taken together, it's a good. solid, grown-up performance.

The 300 package effectively straddles the worlds of multichannel audio, home cinema and stereo high fidelity. The



A well balanced altrounder, refined enough for stereo, consistent enough for multichannel music and with enough wherewithal to put the boot in with conviction with large scale film soundtracks.

CHECKLIST

BI-WIRABLE (MAIN) SPEAKER PORT REAR ADJUSTABLE CENTRE ORIENTATION REAL WOOD FINISH REAR SPEAKER TYPE DIRECT

## **KEY FEATURES**







DESIGN: Full-size floorstanding main speakers and large, rectangular enclosures help ensure this system isn't shy, despite the compact sub. Note dimpled Flowports to reduce port 'chuffing' noise (top).

**CONNECTION AND PLACEMENT OPTIONS:** 

While the main DM309s are bi-wirable (bottom), the other passive models are not. The subwoofer (middle) is equipped with speaker and line-level inputs, an autostandby feature and two EQ patterns. Siting the rear-ported DM309s clear of walls helps control the prominent upper bass.

> DM309 has a sufficiently extended bandwidth in its own right (40Hz, -6dB) to pass as a full bandwidth design for stereo listening without the subwoofer. The speaker balance is full and weighty, but very cleanly articulated, allowing bass lines to be followed with ease. It has a well-projected quality, and some mild unevenness in the higher frequency regions. Again though, it's not enough to make the system sound obviously coloured. The subwoofer adds considerably to bass extension, and even more to the sense of physical presence that works so well with big Hollywood production numbers. Overall voicing is more than consistent enough to allow seamless steering, and provide a consistently voiced soundstage with multichannel music. (



## £1,142 ☎ 01732 451938 ⊕ www.dynaudio.com

Audience 42 main and surround speakers £448 per pair, Audience 42C centre speaker £246

anish high-end brand Dynaudio is known for its drive units, but also manufactures its own complete, exactingly engineered loudspeakers of which the Audience is the bread and butter range. It is available in vinyl finishes with a slightly simpler enclosure construction (soon to be updated) and the wood veneered variants submitted for this test. The system covered here uses four entry-level Audience 42s and an Audience 42C centre speaker. Two matching subwoofers are available in the Audience range, either of which would have pushed the price over our specified £1,500 price limit. A further option is the shallow enclosure wall-mount 42W, designed specifically for rear-channel duties.

The enclosures are solid, well damped and have first-class finishes. The real interest however is in the design of the drivers. The bass units have large (75mm) voice coils, which provide a number of pluses and minuses. One of the key advantages is enhanced power handling, always useful in a small speaker where sensitivity is necessarily low. Disadvantages include a faster mechanical high frequency roll-off, and this is addressed here with the slightly larger than average soft dome tweeter which crosses over at an ultralow 1.8kHz, which also allows much wider dispersion in the mid-treble. The centre speaker is a front-vented variant of the main speaker, with a single bass unit - the designer may have calculated that a single large voice coil

driver could handle all the power necessary. With 86dB sensitivity and a four ohmrated impedance, this is a fairly power-hungry system, though in actual fact the load is not not as tough as the manufacturer's four-ohm figure suggestions. However, relatively low powered amplification (eg below 40 or 50 watts per channel) should still be avoided.

The Audience package has a very particular musical style, even

leaving the issue of bass to one side but let's deal with that first. This test was run both with and without a Mission m5as, in the absence of one of the two matching Dynaudio subwoofers. Without a sub, the bass is lightweight by the standards of the other test systems, but less so than one might expect. In fact, the bass is well balanced and almost unfeasibly full, and with music you might never notice the deficit. It covers the usual 50Hz (ish) bass line in typical pop/dance music without breaking a sweat, and only organ or full orchestral fetishists will notice the shortfall - and of course videophiles, who will want the extra muscle for the special effects. The point is that bass quality, defined by tunefulness, timing, and 'punch', are first-rate, and depth is only modestly lacking even with the absence of a subwoofer. At the opposite end of the spectrum, the treble is clean, detailed and if not bright exactly, certainly emphatic.

But it is neither of the frequency extremes that define the Audience 42 system. It is the midband. Although perhaps not the absolute sweetest or purest in its class, the Dynaudio midband has two qualities that set it apart – accurate tonality and surprisingly bold dynamics from such a

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magazine



Here's a package with definite strengths – compact, discrete and musical, with good imaging and dynamics. Identical speakers front and rear are a bonus for muttichannel music, though further outlay on a subwoofer would be beneficial for home cinema. Perhaps not the best value package here, but in many ways the most capable musically.

## CHECKLIST

BI-WIRABLE (MAIN) X SPEAKER VENT 4 ADJUSTABLE CENTRE ORIENTATION 4 REAL WOOD FINISH 4 REAR SPEAKER TYPE DIRECT



**KEY FEATURES** 





DESIGN: Finishes – which include extra cost options in addition to natural maple and cherry – are truly excellent, and the non-veneered grey baffles have a certain 'techie' charm (top).

## CONNECTION AND PLACEMENT OPTIONS:

Dynaudio is not a believer in bi-wiring so all speakers here are single-wired (middle). The outer four speakers have flared ports at the back (bottom) and should be used away from room boundaries, but the centre speaker is front-vented, which makes it easier to position in cramped surroundings.

compact enclosure. Only the lack of deep bass prevents the system

sounding as overtly dynamic as bigger systems. Imagery is wide, focused and stays put even when listening from off-axis, and this helps the cause of multichannel music, which is naturally expansive yet well anchored. (



£630 ☎ 01622 672261 ⊕ www.kef.com

**KEF CRESTA** 

*Cresta 30 main £200, Cresta 20c centre £100, Cresta 10 surround £130, PSW 1000 subwoofer £200* 

he man who doles out the technical information at KEF was blunt. When asked to yield up the secrets of the new Cresta range, he patiently explained that it was just as it appeared to be, no special technology, just straightforward designs which do what it says on the tin. If there is a secret of any sort, it is that the speakers are built in China which keeps costs way down. No surprise there - KEF has long been Chinese-owned, though there is UK input. The speakers are voiced in the UK, and the drive units are designed here too, by the team responsible for other KEF models up to and including the high-end Reference series.

The Cresta passives use the same 25mm silk dome tweeter throughout, and the front and rears the same 130mm bass/mid units in an inverted configuration. The centre speaker uses two of the smaller 100mm bass/mid units of similar design. The subwoofer is very compact, and is equipped with

a downwards facing driver and twin ports, which helps reduce the audibility of port noise. Enclosures are lightweight and vinyl covered, and the quality of the finish is best described as utilitarian, but at this price, who's complaining?

The passive speakers are rear vented, and should be used a little way from walls to allow the ports to breathe. Sensitivity figures are universally high – 90dB from an eight ohm nominal impedance – and this gives credence to the perception on test that even low-powered amplifiers should be able to do the business.

The tonal balance of the KEF package is completely at odds with the B&W 300 system, its nearest neighbour in this group. The Cresta's treble is prominent but well controlled, even quite sweet in a way that eludes many low-cost tweeters. But this comparative mellowness isn't matched further down the frequency range. The detailed quality through the treble is mirrored in a lean though crisply defined midband, and the impression of detail is matched by the system's lively, almost eager quality, and its surprisingly well-formed dynamics - as long as replay levels are kept somewhere outside the 'very loud' range where the system begins to sound untidy and ultimately congested. The Cresta system attacks transients with real panache, and releases notes with equal alacrity. What you might miss in this system, however, is some of the sense of body to the sound. The balance is on the thin side, and lacking in architectural cues, though coloration artefacts are fairly low.

The subwoofer is not the most impressive component in the system. Although the enclosure is reasonably tight and rattle-free, the depth of bass it produces is unimpressive, and low



This package has its sonic shortcomings, especially when compared to speaker systems a little further up the price scale. Yet, with its emphasis on clarity and intelligibility, the Cresta system offers a considerable amount for a very modest outlay.

BI-WIRABLE (MAIN) SPEAKER VENT REAR ADJUSTABLE CENTRE ORIENTATION REAL WOOD FINISH REAR SPEAKER TYPE DIRECT

## **KEY FEATURES**







DESIGN: The Cresta 10 is essentially a sawn-off version of the Cresta 30. What you can't see on the page is the lightweight and rather lively nature of the enclosures. The inverted driver configuration (top) allows a more even bass, but the low tweeter siting isn't good for higher seating positions.

#### **CONNECTION AND PLACEMENT OPTIONS:**

Bi-wire terminals are fitted all-round (middle), but rear ports preclude siting up against a wall. The subwoofer's downwardfacing driver and port (bottom) take much of the variability out of positioning.

> pass filtering is obviously deficient. Significant amounts of midrange information leak from the subwoofer, and this makes it difficult to achieve a clean blend with the rest of the system.

This is not necessarily a terminal problem with home cinema material. Indeed, the slightly overcooked quality of the bass keeps film soundtracks like Monsters Inc bouncing along rather nicely, while the general clarity at higher frequencies makes dialogue very intelligible. But there is little here to excite the audiophile in two or fivechannel use, and a little more outlay will achieve notably better hi-fi results. The subwoofer is of questionable quality, but without it the system sounds lightweight. 🖲



£1,450 ☎ 01480 423700 ⊕ www.mission.co.uk

*m53 main £550, m5c centre £200, m5ds rear £200, m5as subwoofer £500* 

ith the Mission m5 system, we're moving decisively upmarket from the KEF and B&W packages, while retaining their general format - a full six-piece system that includes a subwoofer. If you think the other systems are big enough to cause domestic discord, you ain't seen nothin' yet. The m53 main speaker is a large floorstander, nearly a metre tall and 360mm deep, which weighs in at 19kg. The subwoofer is also something of a beast, but the centre speaker is sensibly proportioned, and there's some real relief from the m5ds surround speaker. It's a subtly shaped wall-hugging series of angles and planes, finished in light grey so as not to draw attention to itself - a surprisingly deft finishing touch to an otherwise full-on system.

The moulded cloth-covered surround speaker aside, the m5 series speaker enclosures are heavily built, well damped and braced, and finished in top-class real beech veneers (rosewood and graphite black are alternatives). The bass/mid driver cones use a new composite material based on a sandwich of Aramid and pulp fibres. married to 25mm microfibre dome tweeters. Sensitivity figures are modest, though system impedance is unproblematic in each case. Two such tweeters. and two similar but smaller bass/mid drivers are fitted to the m5ds surrounds, one on each of the two angled faces of the speaker, wired in phase and generating a wide spread of sound.

The other key element of the main and centre speakers are the full-size mouldings that cover the baffles – these provide a low diffraction environment and help facilitate the attractively narrow front of the m53. Not all observers have been happy with the expanses of plastic, but there are undeniable acoustic benefits and it seems to us to work visually, at least with the beech of the test system.

Sonically, the system as a whole displays both gravitas and refinement, a combination that works well with music and leaves a powerful impression with video soundtracks. It's particularly suited to heavyweight amplification with strong control - the test-reference Pioneer VSA-AX10i turned out to suit the system really well, yet it was transparent enough to expose a touch of glare in the Sherbourn amp combo (associated with the processor rather than the power amp). In any case it prefers open, clean electronics, and it doesn't object to a touch of excess treble. The basic balance slightly favours the bass and lower midband, but there is no loss of control, and nothing in the bass that could be described as lairy or over the top. The slightly laid-back quality of the system makes a change from the pointed quality of some alternatives, but don't mistake this for



Mission's m5 speakers have split reviewers visually and sonically, but as a complete 5.1 system they offer great value. The mix of weight and refinement works well across disparate music and movie sources – this package does it all and does it well, though the rears are more suited to home cinema than multichannel music.

## CHECKLIST BI-WIRABLE (MAIN)

SPEAKER VENT REAR ADJUSTABLE CENTRE ORIENTATION X REAL WOOD FINISH X REAR SPEAKER TYPE BI-POLE









DESIGN: Say what you like about the aesthetics, the smooth baffle mouldings are an object lesson in low diffraction enclosure design (top). The narrow front also helps deliver wide dispersion sound as well as reducing the visual footprint.

CONNECTION AND PLACEMENT OPTIONS: The three bi-wirable front speakers are rearvented (middle) and need space to breathe. But many will find the discrete wallmountable rears (bottom) a welcome solution to the impracticalities of multi-speaker surround.

> lack of definition or dynamism. This is a forceful sounding package when it needs to be. Even without the subwoofer the bass is full and deep, but also clean and tuneful, and for listening to music the sub may be deemed redundant.

> The front three speakers are closely voice matched, and they deliver wide, spacious yet extremely well focused imagery. But the rear speakers are slightly at odds with the rest of the system. They work unobtrusively well in a home cinema context, but tend to clamp down on explicit rear-channel images, which can leave surround music recordings like the Vaughan Williams A Sea Symphony sounding slightly flat. 📵



# CONCLUSIONS

## Choosing a surround package is often about priorities. What's more important - music or movies?

oudspeakers – and this extends to speaker packages like these – have individual plus and minus points, but beyond this they also have something else. Let's call it personality. Take the KEF for example. Its presentation is slightly coarse-edged at times, and is rendered closer to uncouth at high volume levels, especially when its subwoofer is pressed into serious action. The B&W is more refined and a better all-rounder, and the

### **TRY THEM WITH THESE**

AV AMPLIFIERS AND RECEIVERS HARMAN KARDON AVR 5550 £850 A meaty AV amp that operates well with both music and movies, with an impressive roster of facilities to boot. Separate power transformers on the front channels aid stereo performance.

DENON AVR-3803 £900 Sets a high standard at the price, both for sound quality and flexibility, including full video standards conversion for simple system wiring.

PIONEER VSA-AX101 £3,000 Auto set-up makes this a user-friendly choice with a good, clean sound. iLink compatibility provides extra performance potential.

## DVD PLAYERS

PIONEER DV-757A1 £800 iLink-equipped universal DVD-Audio/SACD player performs out of its price class, especially when used with the matching VSA-AX10i amplifier.

DENON DVD-3800 £1,000 Superbly engineered DVD-Audio player with top-class progressive scan output.

ARCAM DIVA DV88 PLUS £1,000 Arcam's refined DVD-Video player comes of age with a DVD-Audio upgrade option to DV-89 standards.

#### HINTS AND TIPS

 Floorstanding speakers should have carpet-piercing spikes.
 Try to use the same speaker cable throughout. If funds are limited, give priority the the main front and centre speakers.

• Use bi-wiring where available – but remember that single wiring with a good cable is better than bi-wiring with a poor one.

 If you are not bi-wiring speakers with bi-wire inputs, use links made from speaker cable to bridge the inputs rather than the supplied links.
 The centre speaker will work better on a shelf above or below the TV or video display, rather than directly on top of the TV itself.

The key rule for a sub is to site it well away from the listening position ideally in the plane of the main pair. Mission even more so, albeit at a still higher price. Indeed, it's the Mission system the receives a Best Buy because of its fine mix of all-round talents – it's good with music and excellent with home cinema, a combination that's surprisingly difficult to achieve at the price. Material value is high too, though you may wish to swap the rear speakers for something more conventional if multichannel music is important. The Dynaudio

system, finally, is a thoroughbred, though clearly more at home with music than home cinema, at least in the subwoofer-free form tested. It could easily be grown into a full home cinema affair by adding the matching subwoofer, but at a price.

The essential point is that not one of these systems has all the answers for all potential uses. Only the Mission system for example has a true home cinema surround speaker, one that provides wide dispersion and which won't stick out like rabbit's ears from the side wall – but this advantage turns out to work against it in a multichannel music context. It's moot whether the shallow box Audience 42W would have had similar effects on the Dynaudio system, but the key point is that there is no one system here that does *everything* well. What's required for home cinema and to reproduce music is not quite the same thing.

## **STAR PERFORMER**

## DYNAUDIO AUDIENCE

In a departure from the norm, our 'Star Performer' here is not the product with the Best Buy badge. The Mission m5 system may deliver the best value for money across a range of performance parameters for multipurpose surround use, but it's the Dynaudio package that proves the thoroughbred when it comes to traditional hi-fi virtues. Material value might lack something in comparison, and for home cinema at least you'll want to add a subwoofer, but if music is your top priority its punchy finesse is hard to beat.





## MULTICHANNEL SPEAKER SYSTEMS AT A GLANCE

| Make       | B&W  | Dynaudio  | KEF  | Mission   |
|------------|--|---|--|---|
| Model      | 300 system   | Audience system   | Cresta system  | m5 system   |
| Price      | £900   | £1,142  | £630   | £1,450  |
| Music      |  |   | XXXXXX   | ****  |
| Movies     |  |   |  |   |
| Build      |  |   |  |   |
| Value      |  |   |  |   |
| Conclusion | Well-balanced, well<br>presented system<br>which does well in all<br>areas, making it a<br>good budget choice<br>where music and<br>movies are equally<br>important. | Bold, articulate<br>system makes most<br>sense with music, but<br>has excellent growth<br>potential, for example<br>by adding a<br>subwoofer. | Lean and clean at<br>low volumes, the<br>Cresta system<br>loosens under<br>pressure, and one<br>too many corners<br>have been cut with<br>the subwoofer. | Warm and lucid, this<br>is an engaging<br>multichannel<br>system that's good<br>with music and<br>excellent for home<br>cinema. |



## "HI-FI BARGAINS OF COLOSSAL PROPORTIONS" - HI-FI CHOICE MAGAZINE



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rom the science point of view, the interesting thing about cable is that after over 20 years of increasing acceptance that the right cables can really make a system sing, there is no very convincing theory of exactly what it is that cables bring to system performance. It's easy to prove they have an effect on frequency response of a system, but in all practical cases it's a very small effect, which in isolation one would not expect to be audible. In any case, the subjective differences between cables don't seem to be of a kind that relates to frequency response changes. Often, listeners find that cables affect not just the tonality of a system but its detail resolution and stereo image precision.

If you're going to send electrical signals down a wire, there are basically three physical configurations you can use. Two conductors are needed, of course, to complete a 'round trip' for the electrons, the simplest and most familiar arrangement being two identical conductors, made of solid or stranded metal insulated in plastic, side by side – 'figure-8' cable. Or you can use a 'coaxial' arrangement where one conductor is surrounded by another tubular one. Most interconnects use this configuration. A third type is 'Litz' wire where several separate conductors for each 'leg' are twisted together.

#### VARIETY

Variations on these themes are possible. For instance in figure-8, the conductor size, shape and spacing can be varied – extreme examples are DNM speaker cable, where conductors 0.6mm in diameter are spaced apart by about 25mm, and Electrofluidics/Goertz/Townshend flat cable, where solid ribbon conductors are maintained a fraction of a mm apart. A screen can be used over the conductors, and they can be twisted together – neither of these makes much difference to how the cable 'looks' to a signal passing along it but both can reduce interference pickup.

Any kinds of conductor and insulator can be used – commercial cables mostly use copper conductors but silver, gold, aluminium, nickel, mercury and carbon fibre have all been tried, while insulation tends to rely on PVC (cheap) or polythene, PTFE (Teflon), polyester and a few other plastics. All these things have been found by various researchers to make a difference.

Lots of factors have been invoked to 'explain' cables. In essence, any cable has four dominant

electrical characteristics: series inductance and resistance, and shunt capacitance and conductance. The first two oppose the flow of current in the wires, the second two allow current to flow between the wires. Resistance serves no useful purpose and should be minimised, while shunt conductance should be maximised. But the relationship between inductance and capacitance is interesting. At first sight one wants them both low, but they 'see-saw', one increasing as the other is reduced. At some optimal balance point, they have the least effect on the signal passing.

## INTERFERENCE

In radio-frequency terms, one speaks about a cable's 'characteristic impedance', which is the impedance that 'matches' to the cable and allows frequency-independent signal transfer – this applies in digital cables. At audio frequencies it doesn't strictly apply but a 'matched' cable still gives the lowest frequency-response change – though a large margin for error exists before serious treble droop occurs.

Various other factors come into play. 'Skin effect', often quoted as a source of trouble, is the increase in resistance in a cable with

## **CABLE CONSTRUCTION**

Below are illustrations of six commonly used methods of hi-fi cable construction. Each can be (and has been) used for both



The simplest form of cable, with two identical conductors of solid or stranded copper. It is easy to make and use and gives moderate inductance and capacitance, such as to present no problems to amps. There's no screening, but twisting the cores together helps reject interference without significantly affecting the cable's basic properties. Example on test: Black Rhodium S300 speaker cable



Squash a figure-8 sideways and you end up with two flat ribbons of conductor, face to face. The large adjacent surface area and small spacing gives very high capacitance and low inductance, making for flattest frequency response with speaker cables but upsetting a few amplifiers. Examples on test: Electrofuidcs speaker cable, Townshend speaker cable and interconnect interconnects and speaker cables, though coaxial speaker cables in particular are rare. Coaxial construction is commonly used for



Stretch a figure-8 sideways and capacitance decreases, while inductance increases. Interference pickup is worst with this kind of cable, but its electrical properties make it well suited to interconnect duty and many swear by the characteristic sound of such cables (typically 'fast and light') with speakers too. *Example on test: DNM TBB75 interconnect* 



This variant on the spaced pair looks like a flat pair at first but has the conductors edge-to-edge rather than face-to-face. Popularised by Nordost and others, this construction typically sounds not wholly dissimilar to a spaced pair but also lends itself well to under-carpet laying. Example on test: TCI Anaconda speaker coble

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increasing frequency – in practice it's such a small effect as to be very hard to measure. 'Contact rectification' between strands has been cited as a weakness of stranded cables, though no-one has explained exactly how this would come into play and there's no measured support for it. Pickup of interference, at frequencies 'from DC to daylight', can be a very real problem, with both inputs and outputs susceptible to upset by unwanted signals. Even microphony can be an issue in cables carrying very low-level signals from phono cartridges.

With care, interference and microphony can be pretty much ruled out, and significant differences still exist between cables. I have personally carried out some quite sensitive tests on many different cables over the years, and have read every article and 'white paper' I can find, from the highly technical to the vaguely hand-waving. None of these sheds much light on why cables sound so different.

### DISTORTION

Potentially, the real problem is the kinds of distortion a cable can cause. As mentioned above, it's easy to show small frequency response and phase differences between cables, and changing pretty much any detail of construction can alter those. But though there's little doubt that we can be pretty sensitive to such changes, their effects don't usually include the significant changes in texture and detail that so often seem to go with cable swapping. Such changes normally imply that there is 'nonlinear distortion' going on, where the output of a component or system contains frequencies other than those that went in (the sort of distortion that amplifiers produce).

We've tested for this by many different means, with realistic set-ups including audio amps and source components so that if the changes are actually due to the effects that the cables have on other components, as has been plausibly suggested, they will still show up. To date we have not uncovered any evidence of changes in distortion spectrum due to cable changes.

Ironically, the changes wrought by digital cables are rather easier to explain. The digital signal switches rapidly between two voltage levels, and those transitions can be effectively slowed down by a poor or 'mismatched' cable. In that case, the timing accuracy of the signal arriving at the receiver is reduced and jitter results. If this jitter gets through to the audio

Every audiophile knows that cables affect a system's sound, but the science of the process is more difficult to nail

> output (and it very often does) the sound will be affected. This led us to investigate the possibility that audio-frequency signals in analogue cables are affected in like manner, though theory suggests no significant effect. And the theory seems to be right...

Few audiophiles doubt that cables are important – the differences are there to be heard – but proving why seems harder than one might expect, a fair head-scratcher by any standards. That won't concern you unless you've a taste for obscure intellectual puzzles, and certainly shouldn't prevent you trying out a few cables if only to see whether you can hear the ascribed differences yourself. Have fun – it's really quite harmless!

## AUDIO CABLES TEST

On the following pages you'll find reviews of a carefully selected crop of top-quality interconnects (analogue and digital) and speaker cables, representing all the basic forms described above and covering a range of prices. Each cable was auditioned with a variety of music and hi-fi components, including products from Rotel, Marantz, EAR and ATC. Comparisons with long-term references ensure consistency with *HFC* cables reviews over several years.

interconnects, including the digital variety – the exception being cables that transmit an optical signal rather than an electrical one.



Litz cables in general have several individually-insulated conductors, which may be solid-core or stranded, twisted or woven together. This gives higher capacitance and lower inductance than fig-8 and also provides good screening against interference. Particularly well suited to loudspeaker cable duty. Example on test: Kimber 8PR speaker cable



The classic design for unbalanced interconnects, providing moderate capacitance and good screening. A common variant is the 'screened pair', where the screen carries no signal current. Coaxial cables are capable of good results, though 'giveaway' cables like this, made with very cheap materials, can be terrible! *Examples on test: van den Hul The Well analogue interconnect; Supra Trico Digital interconnect* 

## **Capacitance versus inductance**



One of the key aims is to find an ideal balance between capacitance and inductance. The two share an inverse relationship – most cables trade one against the other so that inductance multiplied by capacitance is pretty much constant (per metre) for all cable types. There are no clear answers – e.g. high capacitance with low inductance tends to bring about the flattest frequency response for speaker cables, but can upset some amplifiers.

## 

or most of their long life DNM's thin, 'open-plan' cables have relied on commercial phono plugs, but the recent arrival of the Eichmann 'bullet plug' has proved complementary - as a company spokesman commented, pretty much the plug DNM might have designed. Instead of the usual circular earth contact, the plug uses a plastic ring and a single metal point contact, maintaining the wide conductor spacing of the cable to the last possible mm. Because this cable is not screened it may pick up interference, though experience suggests this is seldom an audible

problem in practice.

Neither was there much problem with the sound. Just occasionally the bass seemed to become a little woofy and overblown, while conversely it could recede a touch if the treble became particularly busy. That apart, however, there's a very distinctive clarity of presentation about this cable which one can really appreciate in good recordings, where stereo imaging and tonality of voices particularly are beautifully served. Detail is not always quite as good as the best in the group, but then the price of this cable is quite modest.



## **£242** (1 m pair) **★★★★★★★★** Russ Andrews 0800 373467 **(\*)** www.kimber.com **KIMBER SILVER STREAK ANALOGUE INTERCONNECT**

imber's interconnects use a construction generally similar to their speaker cables, though with a single, stranded, conductor for 'hot' and two such for earth. The absence of screening is even less of an issue than with DNM, given the close proximity of the conductors and the way they're twisted together. The plugs fitted are quite modest-looking but use good quality materials including Kimber's proprietary 'Ultraplate' to enhance conductivity.

In the absence of direct comparisons it's a little hard to be sure, but this is perhaps the best of Kimber's sensibly-

priced interconnects we've heard (the range includes some very silly-money ones too, which are admittedly very tasty). It's got just the knack of balancing attack, bass extension and control, which makes it a natural for those who like their music big. But it's good with smaller-scale stuff too, making the most of well-recorded solo voices and instruments. And in-between those two extremes, it handles dynamic variations with aplomb, building cleanly and effortlessly to nicely detailed climaxes. Imaging is precise over a broad spread and there's no hint of coloration. A very fine cable indeed.



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## £99 (1 m pair) ™™™™ ™ Townshend 020 8979 2155 @ www.townshendaudio.com TOWNSHEND AUDIO DCT100 ANALOGUE INTERCONNECT

his relatively budget-priced interconnect from Townshend offers the basic construction of the more expensive 'Isolda' but economises mainly on the insulation used. Instead of individual PTFE sleeves for the conductors, thin-walled PVC is featured, Townshend pointing out that the practice of using thin copper ribbon which contacts the insulator only along its edges reduces the effects of the insulation on the end result measurements bear this out to an extent, though dielectric loss is still fairly high. The use of cryogenically treated copper (claimed to improve conduction in some way) is unusual in

a cable at this price. The cable is symmetric and unscreened but once again showed no interference pick-up problems.

Unusual construction here accompanies unusual sound. There's masses of detail, that's for sure, but on occasion a little refinement seems to be sacrificed in its honour – in extreme cases the sound becomes just a touch harsh. Stereo imaging is pretty good, but most areas are very well served, with nicely neutral tonal balance, lots of ambient cues and excellent speed of attack on percussive sounds. An interesting alternative to the usual suspects at this price.

Interconnect cables

HI-FICHOI

nH

**Test Feature** 

## **£49** (0.8m pair) ★★★★★★ <sup>(2)</sup> Tannoy 01236 420199 @ www.vandenhul.com **VAN DEN HUL THE WELL** ANALOGUE INTERCONNECT

When vdH introduced the first carbon-fibre hybrid cables they were far from cheap. But the trickle-down effect is obviously well understood in Holland and this very modestly-priced cable features the company's trademark mixture of silver-plated copper and 'Linear Structured Carbon', double screen and all. Low loss insulation, a soft outer jacket and vdH's own very nice phono pluqs fill out the picture.

And not for the first time, van den Hul proves that it can make a low cost cable perform way out of its class. Not quite at the level of the best that money can buy, perhaps – there's a hint of hollowness to the bass sometimes (very subtle coloration) and although the balance is for the most part excellent there's a touch of bass thinning evident when textures become complex.

But for the rest there's little but praise. Imaging is solid, believable and deep, while detail is plentiful and gracefully presented. Solo voices retain their full individual character, and the gradual build-up to a large climax is handled with great confidence. The very natural decay of delicate percussion is noteworthy too.

## **£40** (1m single) ★★★★★★ @ Glaive 01622 664070 @ www.supracables.co.uk **SUPRA TRICO DIGITAL – COAXIAL**

Supra makes no particularly outlandish claims for this cable, which is a good old-fashioned high-quality coaxial suitable for digital audio and video use. Stranded copper down the centre is insulated with foamed polythene and screen with tape and braid, the whole assembly retaining a fair degree of flexibility despite its large diameter. Supra's own phono plugs are fitted, which despite appearances aren't locking types, though they're so grippy they almost might as well be!

Defining the sound of digital cables is notoriously tricky since it depends

significantly on the DAC involved - the perfect DAC shows complete indifference to cables and some just about manage that. But most benefit to some degree, and in such cases a cable like this is just the job. By comparison with established references, this one demonstrated as good a tonal balance as any and typically just a shade more detail than most. In particular, its image depth is really very fine indeed, clearly raising the standard expected of a cheap 'n' cheerful DAC. With very clean treble and bass which manages both subjective speed and real weight, the sound is admirable all round.

## £100 (1.5m single) TCI 07710 196949 @ www.true-colours.com

t's rare indeed to find an optical lead with Toslink connectors which uses glass fibre. Most use plastic, which is capable of good performance and for which the transmitters and receivers were designed. Class has the edge, though, and is used in all high-speed and long-haul applications. Whether it still shows an advantage given the notoriously only-just-goodenough performance of the transmit and receive modules universally used remains to be seen...

It's a shame only a standard 1.5m length is available, as this would surely be the cable of choice for very long (room-to-room) connections. TCI uses good quality spring-loaded connectors on each end.

In the end, the sound of this cable is not as good as a reasonable coaxial digital and the Supra reviewed above, for instance, leaves it standing. But that's not the point: sometimes one has no choice and in the circumstances it's worth looking for the best optical digital cable available. If that's the case then this may just be that item. Compared with typical optical interconnects it has slightly – but noticeably – better performance all round, with a clear improvement in detail and spaciousness. Within its parameters a notable success.

## 

s Black Rhodium cables go, this one is fairly conventional. Where other cables from the company use seemingly bizarre conductors, this one has silver-plated copper – quite a lot of it, making for low resistance. Insulation is Black Rhodium's favourite, silicone rubber, which has many useful qualities in an audio cable including good flexibility, which ensures that this cable handles well despite its bulk.

Overall, sound is good in all areas though perhaps not truly outstanding in any. That said, the general tightness and precision of the system with S300 in place was welcome. At no time did

the bass seem to be in danger of getting out of control, for instance, and that's not always true of cables which, like this one, manage to plumb some serious depths. In orchestral music the midrange sometimes erred on the side of dryness, the control turning into very slight constriction. But with rock'n'roll this cable really sang, its bass extension utilised to the utmost and that precision being the perfect complement to a good recording, bringing out quality drumming and guitar solos alike with gusto. One of Black Rhodium's best midrangers. 回

**HI-FICHOIC** 

**HI-FICHOICE** 

## **£45/m** (inc. termination) **EXERCISE MONOLITH 20/20** SPEAKER CABLE

his flat cable conceals nothing from the eye: it's quite simply two flat strips of solid copper. insulated with thin plastic and placed face-to-face. This ensures that capacitance is high and inductance low, making for the smallest possible change in frequency response due to the cable. 'Normal' cables don't make much difference either, mind - we're talking difference of a few tenths of a dB, typically. The drawback is that some amps expect to see the relatively high inductance of a conventional cable and will go horribly pear-shaped and start oscillating (sometimes to the point of

self-destruction). Contact Electrofluidics and ask for advice if in doubt. Assuming the amp is happy, the sound from this cable is frankly just about as good as it gets. Bass goes on forever but is very well controlled, midrange is neutral and fantastically detailed, while treble is open and sweet. A handful of other cables we've tried can broadly equal this one, though arguably none can beat it outright, unless your tastes simply run to something else. All the same, this wire ought to be heard for its revelatory insights.

## **£126** (3m terminated pair) ★★★★★ 2 Russ Andrews 0800 373467 ⊕ www.kimber.com **KIMBER 8PR SPEAKER CABLE**

imber's familiar formula - several separately insulated conductors woven together, here stretches to eight conductors per leg. Resistance is low as a result, and the geometry also makes for quite high capacitance and low inductance. As with the Electrofluidics cable, a caveat is in order, though here the less extreme capacitance will only upset the very twitchiest of amps. It's possible to buy this cable simply cut from the roll and stripped, but normally it is supplied terminated with good quality banana plugs and as with all Kimber speaker cables is noted for its excellent reliability and practicality.

And as for the sound, it's in the upper reaches. Actually this particular cable is a potential embarrassment for Kimber, achieving as it does a level of sound which runs several of the company's more expensive cables worryingly close. Its only drawback is a slightly flabby bass, with extension that somewhat outruns the control available, but otherwise there is much to praise, with very fine detail and particularly striking command of wide dynamics. Image depth is very good and percussion notably clean and detailed, both strong points at this price.

**HI-FICHOIC** 

## **£300** (1 m terminated pair) ► ★ ★ ★ Townshend 020 8979 2155 ⊕ www.townshendaudio.com **TOWNSHEND ISOLDA DCT** SPEAKER CABLE

istorically, this started life as a dead ringer for Electrofluidics Monolith 20/20 (and both take after Goertz from US based Alphacore). But Townshend took the point about upsetting amplifiers seriously enough to investigate possible cures. Perhaps surprisingly, a cunning combination of passive components at each end of the cable was found to stabilise the problem amplifiers completely without significantly affecting the sound. That apart, characteristics are not quite the same as Monolith (capacitance slightly higher, Townshend's 'Deep Cryogenic Treatment' on the conductors), so

comparisons are interesting. Indeed, as with Monolith, treble is quite effortless and midrange rich in textural, timbral and spatial information. Differences arise in the bass, where Isolda seems at first less full. However, when something happens in a recording that's really low, such as a big bass drum, the result comes straight out of the speakers at you. In effect, this makes Monolith sound slightly overblown. Or is this one slightly recessed in the next-tobottom octave? There's no definitive answer to that, but this is certainly a damn fine cable. 🔘

## £12/m (unterminated) TCI 07710 196949 @ www.true-colours.com TRUE COLOURS INDUSTRIES ANACONDA SPEAKER CABLE

his fairly simple flat cable offers a formula that's served a few manufacturers well: two pairs of generous (2.5mm<sup>2</sup>) conductors laid side-by-side in a configuration that allows easy bi or single-wiring. Silverplated copper and 'Superthane' low-loss insulation give good electrical characteristics and the flat layout is reasonably friendly for neat layouts, though it's a bit stiff.

Tried in both bi-wire and simple paralleled connection, this Anaconda had some useful sonic characteristics. It has what one might call a 'fast' sound, with plenty of attack on percussive sounds, plucked strings etc, but also a slight lack of weight. How that affects you will depend on how bassy your speakers are, but slightly more worrying is the way in which resolution of detail depends on signal level and complexity. Like other cables we've heard, there's excellent detail on simple recordings voice and quitar or solo piano for instance. However, big orchestral moments, a hundred choristers giving it their all or the climax of a drum solo can leave it gasping and the listener frustrated as sonic cues seem to slip away. A mixed blessing then, better tonally than texturally.



## **£18/m** (unterminated) **XXX X C** Tannoy 01236 420199 **(** www.vandenhul.com **VAN DEN HUL THE WIND SPEAKER CABLE**

ormally a 'cable' is two conductors fixed to each other in some way. The Wind, by contrast, is supplied as individual conductors which can be arranged as you wish. At one extreme, they can be twisted or glued together to form a conventional fig-8 type, but there's nothing to stop the user running them round opposite sides of the room, which will result in very different electrical characteristics. Plenty of scope for experimenting then! Inside vdH's own 'Hulliflex' insulation are hybrid conductors, silver-plated copper (a lot of it, nearly 5mm<sup>2</sup>) surrounded by carbon strands.

Best results were obtained with wires

twisted together, this giving best detail and refinement. The sound seems to have a touch of coloration by comparison with the rest of the group, and a hint of extra warmth in the upper bass/low midrange. That apart, tonality is generally neutral with bass extended but ever so slightly indistinct. In fact there seems to be persistent veiling across the range, even on occasion (with naturally brash sounds like trumpet, for example) turning into harshness. Imaging, dynamics and acoustic ambience are all well served, but this is not vdH's finest. 🔳

# **Double Diamond**

Audio Note's new TT2 turntable uses twice as many motors as the basic TT1, but does this mean it delivers twice the pleasure?

irst, some history. Back in the days when tube amplifiers were something that your granddad used to use and CD was the all-conquering format threatening to kill off our beloved vinyl, there was a turntable called the Voyd. This had three huge motors that drove an acrylic platter much like the one you see here. It became the preferred turntable of valve amp enthusiast and Audio Innovations MD Peter Qvortrup, but the cost of all those motors and the accompanying outsize power supply required to run them smoothly meant that the Voyd left a gaping void in your bank balance. Which gave rise to the creation of a smaller deck built on the same suspended subchassis principles but using two rather than three motors. This was called the Valdi. Both decks disappeared when Voyd owner Guy Adams got himself a 'proper job' with IBM and many's the time that the loss of these great turntables has been lamented.

Peter Qvortrup in the meantime started Audio Note UK to push the valve amp market to new heights and continue his quest for world domination. In the process he bought the rights to the Voyd turntable designs. He also bought up the remaining stocks of Systemdek turntables when that brand fell foul of the rise and rise of digital audio. The Systemdek IIX became the Audio Note TT1, and now a slightly beefed-up version of that design

## VERDICT Audio Note TT2 turntable £799 Arm 2 tonearm £349 IQ3 cartridge £349

 Great dynamics and high-resolution sound; high-quality wiring and easy set-up.
 Unimpressive look

and finish; subtle speed inaccuracy.

## CONCLUSION An intriguing

An intriguing variation on the multi-motor theme that delivers both grunt and finesse with remarkable ease. A slicker finish and finer tolerances would make it a giant-slayer.

## KEY FEATURES

Twin high-torque motors

Twin drive belts

- Spring suspension
- Audio Note silver

arm cable

Acrylic platter

#### WHY TWO MOTORS?

The rationale behind using high-torque motors is the need for rotational stability – this is paramount if the stylus is to be able to 'read' the groove accurately. There are two ways you can do this, the most popular being to use a platter which has fairly high mass for its inherent rotational inertia, the other is to use a powerful motor to drive a lightweight platter.

The theory behind lightweight platters is that they have less potential to store energy which 'could' add to the resonance of the vinyl itself, though they are also claimed to drain energy from the vinyl. The reason for two (or even three) rather than one high-torque motor is balance – with a single motor, a suspended subchassis

a suspended subcrassis turntable will try to turn with the motor, but as it can't, it twists instead. The two motors counterbalance one another to avoid this. has been combined with the layout used in the Valdi to produce the TT2.

The TT2 is a £799 turntable that is available with the Audio Note Arm Two for an extra £349. This is the classic Rega RB300 arm rewired with a very fine variant of Audio Note's famous silver cable called AN-AI inside the arm, with AN-V wire linking from arm to phono stage. The latter may also be purchased

as a separate interconnect that costs considerably more than the difference in price between a standard RB300 and the ARM Two, which makes it look like a bargain. Fitted to the end of this arm for our review is an Audio Note IQ3 moving magnet cartridge. This is a variant on the Goldring 1000 design with its Pocan body, but in this guise it features a titanium cantilever and AN type 2 tip.

Like the arm, it costs £349 The TT2 itself is fully suspended on springs that can be adjusted from the plinth top with an Allen key - a neat design. The platter is acrylic, which is used because it is said to be a good impedance match with vinyl, the idea being that the platter drains energy away from the LP into the subchassis. No mat or clamp is supplied or recommended. The platter fits on a nylon sub-platter that is driven by twin motors, each with its own belt. This is where the TT2 is different - there aren't many decks with two separate belts. The motors are pretty chunky affairs that were selected for maximum torque (see box).

The subchassis is made of extruded aluminium hung on three springs to support the MDF armboard at one end and the bearing at the other. The enclosing chassis is also MDF and from it sprouts a lone mains cable – there's no external power supply or even a mini mains transformer outside the box.

#### PERFORMANCE

The original Systemdek IIX was a great deck, a fundamentally good design on which to base the TT1. The TT2 takes the same principles but changes the drive element in an attempt to get more power out of the vinyl. It's been a long time since we had a IIX at *HFC* Towers, so it's impossible to say how this differs but it does seem to have plenty of drive – possibly too much as the deck seemed to run a tiny bit fast. This wasn't always apparent, but certain familiar LPs brought it to light. It gives the AN2 a genuine sense of speed in more ways than one, but will hopefully be ironed out for production models. This, unfortunately, was a rather hastily built sample, so much so that we had to realign the cartridge. But niggles aside it proved entertaining and well resolved.

The twin motors seem to confer some of the stability found with heavier platters - a calm, relaxed basis on which to extract tiny fluctuations in the groove wall. The first groove to feel the IQ3's tip was Keith Jarrett's Eyes Of The Heart, a live concert in a reverberant hall. The TT2 captures both the spirit and energy of the music, while revealing the size and ambience of the room. It is an extremely natural sounding turntable inasmuch as the midrange is tonally rich and vivid. The highs are clean and extended and bass is nimble and kicks butt, but the midrange is its clear strength. The drums on this LP make the most of this, thrashing out what must be the loudest brush-driven solo on record.

Cornelius's excellent *Point* LP likewise delivered its energy with this deck, the juicy bass lines and high-speed transients being handled with considerable lightness of touch. The impression that you are hearing very little of the turntable is strong, with cymbal crashes and the occasional thrash metal workouts fairly buzzing with energy. It's good at digging out atmosphere as well, especially with acoustic recordings, where the nature of reverb is less predictable.

Some types of music work better than others. The Prodigy's manic *Outta Space* sounded surprisingly restrained while John McLaughlin's work on the live Mahavishnu album, *Between Nothingness And Eternity* was really scorching, despite the rather compressed and murky nature of the recording.

One good sign is the way you are made

aware of the vintage and style of each recording. Whether it be Brendel or Beefheart, the degree to which compression has been used and the overall tonal range and balance gives the game away. This is what a record player should do - it should be revealing of all aspects of the vinyl slab you place upon it. This deck is particularly keen on the energy levels but is no less transparent to the high frequency extension or the quality of image, not to mention the creative energy that went into the music, which it delivers in abundance. 🕿 Audio Note 01273 220511 www.audionote.co.uk

- -

## ALSO CONSIDER

MICHELL GYRO SE £1,058 The front runner in this price range – if it's high-quality engineering and impressive sound you're after, this is the benchmark.

NOTTINCHAM ANALOGUE SPACEDECK £890 Heavyweight platter and solid construction make this a strong contender with excellent dynamics and tuff bass.

PRO-JECT RPM 9 £1,000 An engaging deck with an essentially neutral sound. Comes with a carbon fibre weave arm. *"The twin motors confer some of the stability of heavier platters – a relaxed basis on which to extract tiny fluctuations in the groove wall."* 





# **Small 'n' Neat**

Neat's original big Ultimatum set the agenda, and now this pretty little standmount offers something similar at a third of the price

est known for the splendid little Petite loudspeaker, Neat Acoustics has spent the past year or so busily reinventing itself with the distinctly more upmarket Ultimatum series. In HFC 226 we reviewed the top MF9 model, and while that 1.5m-tall, nine-driver floorstander is a very impressive performer, it's also necessarily costly (£8,500) and bulky.

Since then Neat has added three more Ultimata – the MF7 and MF5 floorstanders, plus this beautifully neat and compact little MFS standmount. In its basic version, with a choice of six real-wood veneers, it costs just under £2,995 per pair. Three special highgloss finish variations are also available, at an extra £450

The attractive £495/pair matching stands have grey tri-laminate tops and slate base plates, held apart by four silver-coloured metal tubes filled with mass-loading damping. These certainly make an impressively stable fist of the supporting role.

The MFS is definitely one of the most expensive standmounts to come our way, but it's also one of the most complex and substantial, weighing a considerable 15kg and featuring no fewer than five drive units in each enclosure - four visible, and an extra one hidden inside.

The real-wood veneers decorate the sides and back, adding a welcome touch of domesticity, while the matt charcoal front and top panels on which four of the drivers are mounted keep things looking a little severe - with or without the optional 'stocking mask' grille.

The enclosure feels incredibly solid. It's fashioned from birch plywood, and actually consists of two separate cavities, which will necessarily provide extra internal bracing, plus a rear panel port. Furthermore, the 45mm-thick drivermounting front and top panels use 'sandwich' construction with a polyethylene membrane 'filling' to provide some deliberate and controlled damping and decoupling.

The speaker is unusually deep but attractively slim, with a front panel only slightly larger than that required to

### VERDICT Neat Ultimatum MFS loudspeaker £2,995 (per pair) (stands £495)

A brilliant musical communicator, this standmount sounds much bigger than it looks, delivering a wonderfully spacious and informative sonic performance. A little bright and has a touch of mid nasality - needs to be used with top quality ancillaries.

### ONCLUSION

Sounds wonderfully spacious and much bigger than it looks. Very informative if a tad bright with a touch of nasality **KEY FEATURES** 

## Six 'standard' real

wood veneers, plus three high gloss. Five drive units --

four visible, plus one inside for isobaric bass loading

Front and top panels use 'sandwich' construction with a polyethylene membrane 'filling' for damping

C EMIT-type supertweeters, with flat diaphragms made from 25mm plastic discs printed with a conductive voice coil.

C Twin terminal pairs are primarily intended for bi-amping, and feed a minimalist threeelement type crossover network with air-cored inductors and polypropylene film and foil capacitors.

Size: (WxHxD): 22x38x37cm

mount the two 'prime' drive units. These are both set slightly back into the front panel, presumably to keep the main driver's cone excursion well clear of the grille, and the side edges are scalloped away either side of the tweeter to spread and smooth out the edge diffraction effects.

Five drive units or not, this is essentially a two-way design. The front panel houses the latest version of Neat's familiar high-class 165mm main driver, now with a metal 'bullet' polepiece extension, which undertakes bass and midrange duties before handing over to a top-class Focal tweeter.

The top surface provides accommodation to a pair of EMIT-type super-tweeters, which use flat diaphragms made from 25mm plastic discs printed with a conductive voice coil. And inside the enclosure there's a partition fitted with another bass driver, so that the two are operating in acoustic series - usually referred to as isobaric loading.

The latter has a least two bonuses. Such an arrangement doubles both the moving mass and the magnetic 'shove', but without increasing the cone area, which has essentially the same result as doubling the effective volume of the enclosure. A second advantage is that an extra internal cone doubles up the ability to inhibit the internal standing waves from escaping as coloration.

The crossover network is a minimalist three-element type (plus resistors), with air-cored inductors and polypropylene film and foil capacitors. Twin terminal pairs are provided, more in order to permit bi-amping than bi-wiring.

### PERFORMANCE

It wasn't possible to compare the MFS directly with the MF9, but the first impression was certainly that this small

"It doesn't give much away to its much larger brother. Indeed, it seems outrageous that a speaker this small should sound so inordinately large."

### LAB MEASUREMENTS

In-room measurements made it abundantly clear that this speaker is best sited well away from walls, if mid-bass excess is to be avoided. The port here is tuned to around 38Hz, which undoubtedly contributes to the impressive low-bass extension (-6dB at 25Hz), and while the total alignment is a shade heavy around 40-50Hz, it's actually very good for a speaker of this type.

Sensitivity registers a very comfortable 88dB/W, which sits well alongside the combination of the well extended bass and a relatively straightforward amplifier load, the latter staving above four ohms throughout. The overall response trend is a little lean through the lower midband, and somewhat uneven in the upper mid. 1kHz-2kHz, but still holds within pretty tight limits across the band. The super-tweeters are mainly active above 10kHz.

Direct comparison to the MF9's findings show that the much larger and more costly floorstander has more or less the same sensitivity, but is clearly superior in terms of overall smoothness, and also shows improved evenness and extension through the bass regions.

Ultimatum wasn't giving a great deal away to its much larger brother. Indeed, it seems slightly outrageous that a speaker this small should sound so inordinately large.

That's probably a function of three different factors. First there's the isobaric loading, which in turn means that the speaker behaves as if it's larger than is actually the case. Secondly there's no doubt the low port tuning frequency (see box) contributes to the fine bass extension. But the most important reason is more likely to be in the superbly wide dynamic range and seemingly complete freedom from unwanted 'box' effects, which brings uncommon clarity to the low-frequency regions.



## the AUDIO CONSULTANTS

## SOPHISTICATED SYSTEMS • ELEGANT SOUNDS

### 1. Avalon Arcus

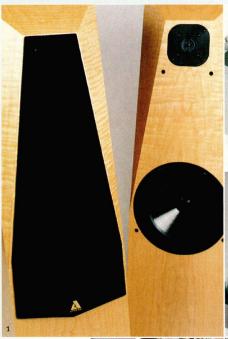
This speaker has all the characteristics that make the Avalon sound special. Transparency, resolution, a big soundstage, precise imaging and, most importantly, a natural tonal balance. £7800

## 2. Pathos Logos amplifier

The new integrated from this excellent company. High quality sound for its price with good looks as a bonus. Teams well with Triangle and Opera loudspeakers. £2500

## 3. Living Voice loudspeakers

The new improved version of the Avatars is now with us with the sonic improvements bringing these popular speakers into an even higher league. Auditorium £1700, Avatar £2700, OBX-R £4000





4. Shanling CD - T100 player The amazing, highly flexible CD player with valve output and upsampling. Superb sound and certainly makes a statement with its appearance. £1650



5. Resolution Audio Opus 21 CD player This player now has the improved, quiet drive and the resulting uplift in sound quality has been astonishing. Tremendous value at £2850

6. conrad-johnson MV6oSE stereo amplifier An uprated version of the new classic amplifier. Reminicent of the Premier 11; very holographic, very musical, with a natural presentation. £3000 7. EAR/Yoshino 890 stereo amplifier A variant on one of our most popular amplifiers but using KT90 valves to produce 70 wpc in triode. Superb sound at £2550

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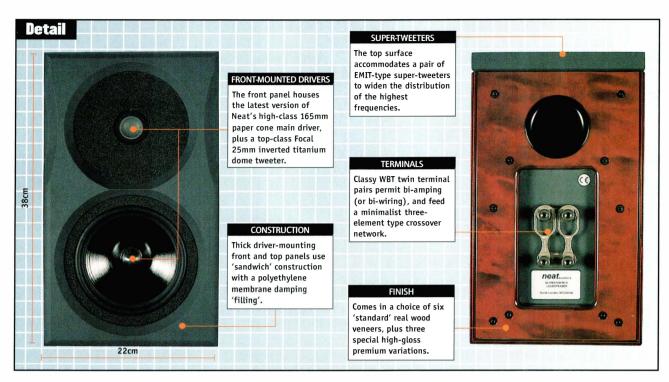
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Part exchange welcome. Ex-demonstration and previously owned equipment listed on our website.



## Neat Ultimatum MFS loudspeaker Statements





If the impressive sense of scale is the first thing you notice here, the second is this speaker's splendid freedom from boxy effects. With the MFS you get to hear the drive units, but not the enclosure - or for that matter the crossover network. There's a directness about its communication skills which is totally convincing, thoroughly seductive, and also ruthlessly revealing.

Few speakers are more explicit in the way they delineate the distinctions between our various sources, or show up differences between rival components or accessories. That's crucial, since a speaker which highlights the differences between components is also a speaker which will lay bare the arguments, intentions and subtleties of even the most complex music.

I'm no great fan of modern classical music, but found myself both transfixed and then drawn into a Radio 3 broadcast of Susan Malkki conducting the BBC



Scottish Symphony Orchestra in Anders Hillborg's Celestial Mechanics. This strange and ethereal work showed exquisite tonality, and the spaciousness of the image stretching between, around and behind the speakers, without a trace of boxiness, was quite superb.

At the opposite extreme of the musical spectrum, the Beastie Boys' Hallo Nasty is a highly complex multi-layered hip hop mix, and once again the MFS's made it very easy to hear what was going on, and how the tracks had been put together.

Winding the volume up doesn't seem to perturb the bass in the slightest, and touching the enclosure reveals that any vibration here is very well suppressed. The sound remains satisfyingly weighty, clean and agile, and pretty well aligned too provided the speakers are kept clear of walls. The midband could be smoother, and does add a touch of pinched nasality to voices, while the top end is sweet and smooth, if a little stronger than average.

In the final analysis, this is a very revealing speaker indeed. It takes no prisoners, and so ought to be used with top class ancillaries. And while it might not match the headroom and smoothness of its bigger MF9 brother, the MFS is a superb loudspeaker in its own right, whose compact dimensions involve very little compromise and which offers its own very real performance benefits. Neat Acoustics 01833 631021 www.neat.co.uk



Twin EMIT-type super-tweeters are mounted in the top of the cabinets.

## ALSO CONSIDER

ATC SCM 20 SL £2,051 Great dynamic grip and bass to die for, this close-to-wall standmount loses out a little in transparency

#### **B&W SIGNATURE 805 £2,500**

Wonderful transparency, agility and splendid low-level resolution, but could have more muscle and slam.

#### PMC AML1 £3,700

Sparkling active-drive standmount with built-in Bryston power amps and serious attitude. Very dynamic but can be aggressive

#### WILSON BENESCH DISCOVERY £5,500

Serious multi-driver system with built-in stand, innovative enclosure and bags of loudness capability and headroom



*"It's incredibly rare to hear such a small amp sound so big or exert such immaculate, iron-fisted control over every speaker it was used with."* 





# **Muscle peach**

AVI has suddenly found style, but that's perhaps the least remarkable thing about its small but seriously powerful new integrated amp

VI's new £1,399 Laboratory Series integrated amp - first fruit of a 'next generation' range pitched squarely in the affordable high-end sector and developed over 18 months is a sexy brute by the Stroud-based company's traditionally dour standards. And quite stunningly solid by any standards. AVI talks about Swiss watches and German cameras but, from the outside at least, think dark matter slab (12.8 kilos) with contrasting bead-blasted aluminium knobs and buttons in a Mark Levinson stylee.

The extremely rigid milled aluminium chassis and thick sheet steel lid conform to the usual half-width AVI norm, but eased out a couple of inches by the flanking heat sinks which are substantial (and sharp) enough to shred a side of beef. They're obviously effective because the casing has few vents yet is never more than tepid to the touch, even when the amp is working hard.

This is unlikely to be often, even if you plan to partner it with excessively inefficient speakers. Maybe the first thing to say about the AVI Laboratory Series Integrated Amplifier Type S21 MI, if I can make it to the end of the sentence, is that its dense mass does have meaning. It packs huge wallop for such a bijou nugget of a design. Power into eight ohms is rated at a 'conservative' 200 watts a side, rising to 325 watts into four ohms and 480 watts into two ohms (for five seconds at least, until the protection circuitry kicks in). And, in the instruction manual, peak current delivery is compared to that of an arc welder Awkward speaker loads hold no fear.

#### WHAT'S NEXT IN THE LAB SERIES?

AVI is working hard to roll out the rest of the Laboratory Series range before the end of the year. The CD player and 200W/channel stereo power amp are due at the start of June with the new 500W monoblocks following as soon as AVI can 'fit them in'. The Lab Series preamp is scheduled for Sept/Oct release with the tuner and DAC making it to dealers before Christmas.

AVI sees the Pro-Nine Plus as the ideal entry-level speaker for the new range, but work has begun on a new range of complementary speakers. The first model will be a floorstanding three-way design with the stated aim of generating more bass, clarity and dynamic range while retaining the PNP's stereo precision.

## VERDICT AVI Lab Series Integrated Amplifier Type S21 MI £1,399

C Exceptional power and grip for its size gives a physical vet highly resolved and engaging style of music making, with terrific dynamic range and excellent bass performance. • Very little of note at

the price. Lacks last degree of refinement compared to much more expensive designs.

## OCONCLUSION

Not just the bestsounding AVI product ever but also an outan-out audiophile bargain, Comfortably holds its own with high-end heavy hitters, boasting comparable power and sonic ability. **KEY FEATURES** 

Compact size, heavy-duty build Output power. 200W/channel (8ohm) O Huge peak current delivery Six line-level inputs plus pre out, tape out phono stage available at extra cost

is largely responsible for the Lab Series integrated's existence. The new amp is effectively a refinement of the souped-up monoblock-based designs it uses to evaluate its own speakers. In broad terms, the job description requires very low distortion, a wide dynamic range and immunity to speaker effects. Apart from an extremely muscular power supply, AVI cites its use of high-performance bi-polar output devices (with a 50mHz power bandwidth) as an important departure from the norm, reckoning that although difficult to use, they're more musical than Mosfets. The compact dimensions (320x90x375mm) are important, too, in cutting down the length of PCB tracks.

In fact, AVI says speaker development

Operationally, the AVI's as simple as pie and a big improvement on previous designs. For the safety of your speakers, start-up defaults to 'mute' before you select one of the six inputs (phono stage optional). The big volume knob, a first for AVI, is a joy to use if you happen to be on your feet. Otherwise, a dab of the plasticky but easy to use remote's volume button will give you a half-dB click either way.

## PERFORMANCE

Resolving power, according to AVI's literature, is an issue here so we chose a CD front end - Densen Beat 400-XS and Chord DAC64 - packing scintillating detail and subtlety. For speakers we swapped between AVI's own Pro-Nine Plus (AVI, perhaps unsurprisingly, is a strong advocate of keeping it all in the family), PMC's even smaller DB1 and Monitor Audio's much broader bandwidth, floorstanding Gold Reference 20s - all revealing designs.

AVI's preamp/monoblock system from which the LSi is developed is a wonderfully undemonstrative piece of kit, a little dry in tonal balance but beguilingly coherent, natural and powerful with bags of headroom, great timing and fine dynamic freedom. The Lab Series integrated is similarly well grounded but, on the simplest level, sounds cleaner and faster yet still weightier and more finely textured. No

need to labour the point. Whatever was slipped in the Densen's tray - from James Taylor, to Larry Carlton to Prince the LSi came across as the larger, more lucid, more effortlessly expressive and dynamic amp. The good news is it's over a grand cheaper.

Two things emerged from this initial session. First, it's incredibly rare to hear such a small amp sound so big or exert such immaculate, iron-fisted control over every speaker it was used with. And second, it was clear it would take a much more expensive reference to get the measure of the AVI. Fortunately, the amp in general use in my own system, Chord's CPM 2600 (albeit more than twice the price of the AVI), is just that.

The comparison was fascinating. The Chord sounded sharper, airier and more finely etched than the LSi with a greater overall sense of refinement, even when using the AVI speakers. But that was far from conclusive. Time and again the Chord seemed a tad lean and undernourished after the LSi, especially with the smaller speakers.

It depends what you value most, of course, but for much of the time the AVI managed to pull off the feat of making music appear more physical and palpable without giving away much to the Chord in soundstage dimensionality or, indeed, pure resolving power. As a final challenge, it even managed to drive a pair of £20,000 JBL K2s to windowrattling levels in a very large room without difficulty. The grip and drive of this little AVI is quite extraordinary. 🕿 AVI 01453 752656 @ www.avihifi.com

### ALSO CONSIDER

#### ATC SIA2-150 £2,375

With its battleship build and awesome firepower this is the transistor that's closest to the AVI in character

#### CHORD CPM 2600 £3,600

Strong contender in the 'ultimate integrated' stakes, the Chord is tops for transparency, speed and detail but can sometimes sound a little lean

#### PRIMARE A30.1 £1,500

Closest to the AVI in price, this is a well-built 100-watter with an elegant and sophisticated sound to match its looks

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# **Cool for cats**

Copland's latest has Scandinavian cool written all over it, but does the sound echo the look?

opland is revitalising its small but perfectly formed range of electronics one piece at a time. A few months back we tried its rather impressive six-channel CVA306 tube preamp and matching CVA535 power amp. Now we've managed to secure the a sample of the brand's latest and only current CD player, the CDA822, featuring the same laser-cut nameplate.

The smooth, cool Scan-design exterior is almost the antithesis of the complexity inside the box. Copland has gone to considerable lengths to keep the circuitry inside this player as noise-free as possible. This process starts with the power supply, which is based on twin transformers – one for the control circuitry, display and loading drawer, the other dedicated to the audio signal. Coupled input filters are used to reduce noise and followed by a 15-volt power supply for the triple-regulated analogue output, with separate filters used for left and right channels.

The DSP (digital signal processor) uses a high-stability master clock and sample rate converter which upsamples the CD's 16-bit/44.1kHz bitstream to 24-bit/ 176.4kHz prior to digital-to-analogue conversion. This process has the effect of removing jitter before the dual differential Analogue Devices DAC turns the signal into something that resembles music. It's used in dual differential mode as a further ploy to eliminate noise in the output. As noise is essentially the bane of digital audio this is clearly a positive contribution to road safety.

The next stage is analogue signal processing, which uses only localised feedback and a discrete double differential current-to-voltage converter. In effect this means that a separate circuit is used for the positive and negative output of the DAC, a technique that is claimed to result in higher resolution at the analogue output.

In practical terms the CDA822 is very straightforward – basic switching on the front and both balanced and singleended outputs around the back. Things get more complex when you pick up the system remote, however. This has a plethora of functions (by two-channel standards at least) and no colour coding, so you might end up searching for the play button for the first few weeks. Still, if you have (or end up buying) Copland amps it will prove a lot more practical.



• Excellent imaging, natural tone, fantastic bass and an emotionally coherent delivery.

• Timing could be snappier, remote could be more ergonomic.

## 

This well built and carefully thought out player delivers most of the goods all of the time and if you go for the more sophisticated musical forms it's superb value.

## KEY FEATURES

 Analog Devices (AD1853) DAC
 XLR balanced analogue outputs
 RCA phono analogue outputs
 RCA phono coaxial

digital output
 Wired remote control socketry

System remote

Sample rate conversion to 24bit/176.4khz

Four time display options plus defeat The front panel permits selection between four alternative timing displays, or you can defeat that element altogether and go for the stealth approach – less practical perhaps, but it pays small sonic dividends.

### PERFORMANCE

All this attention to detail inside the player does seem to pay off where it counts - in the sound that comes out. The CDA822 is an extremely smooth and relaxed operator - it deals with everything you throw at it with ease, such is the shortage of distortion in its output. This can often result in a player with a seeming lack of energy or drive, and there have been plenty of machines in the past that have been apparently grain free yet have proved to be dynamically challenged when it came to delivering the goods. Fortunately, the Copland doesn't fall into that camp. Give it a disc with get up and go in its pits and the sound will do the same (for the most part - see below for more).

There will be some who yearn for a more in-yer-face, pacey sound and there are players out there which will serve them better, but if you want to rely on the software for your musical energy rather than added injection from the player this Copland proves rewarding. For some reason the first disc that revealed as much was by a Scandinavian band, the Esbjorn Svenson Trio, whose subtle but dynamic jazz vibes positively ignited with this player. It seems to like drums and percussion in general, picking out these elements in a subtle but distinct

## CALCULATED CONVERSION

A sample rate converter is a circuit that converts from one clock domain to another. The sample rate converter in the CDA822 can function asynchronously, which means that the input need not to be synchronised with the output. It uses sophisticated signal processing (64 tap FIR filter) to remove jitter, reducing it to -55dB at 100Hz, and -100dB at 1KHz. However, in the CDA822 the input is synchronous because it comes from the same precision reference clock.



**HI-FICHOIC** 

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"The CDA822 is an extremely smooth and relaxed operator – it deals with everything you throw at it with ease, such is the shortage of distortion in its output."

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COPLAND

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## Copland CDA822 CD player

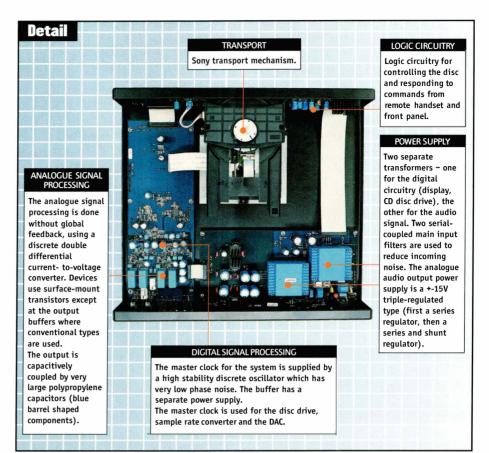
## **Statements**

fashion. You can still hear what the lead instrument is doing (in this case piano) but it's hard to ignore the brush-on-snare work at the tune's rhythmic core. It's not a beat driven sound though, as you might get with a Creek or a Naim. The melody is always easy to follow, but you do notice timing variations – Ali Farka Toure's *Niafunke* contains lovely, lilting rhythms that aren't always apparent, but the Copland is clearly at home with this sort of stuff and you get to enjoy the easy yet powerful sound to the full.

Its other distinct strength is an excellent sense of three-dimensional stereo. Voices and instruments recorded in naturally ambient surroundings have tremendous physical presence and solidity. This is an area where CD used to fall short of vinyl every time, but here is an example of the original digital medium's full potential, with Ali Farka Toure's grain store providing some superb natural reverb for handclaps and voices on the aforementioned disc.

Frank Zappa's orchestral favourite The Yellow Shark likewise expands backwards from the speakers in the Copland's care. The slightly overblown recording of the kettle drum produces deep, round bass notes that reveal the scale of the venue, while the stringed instruments fill out the 'air' in the room. Bass is tight, deep and natural - Dave Holland's double bass on Thimar is reproduced with texture and colour while John Surman's horn soars over the top. Players like the Acoustic Precision Eikos bring more life to a disc like this but are unable to compete with the depth of soundstage, and the Eikos is pretty good at soundstaging.

Eminem's evergreen *Marshall Mathers LP* didn't fare so well, the Copland not quite delivering the kick that some topnotch players extract from the disc, but the bass is nonetheless well handled. Missy Elliott's *Under Construction* likewise didn't have the snap that it can, yet you hear plenty of what's going on. Ultimately this is because timing is a shade on the relaxed side, something that isn't a problem with a lot of discs



but if you have a taste for contemporary rock or dance it might be an issue.

Tonally it's exceptionally good. Instruments and voices are finely shaded, which makes them sound more real and live, this being backed up by a precise sense of stereo imaging which varies as often as the tracks do. And don't forget the luxurious bass and shiny but not glaring top-end – this is a very natural and well-resolved player that gets an awful lot of the important things right,

"Voices and instruments recorded in naturally ambient surroundings have tremendous physical presence and solidity." 

## ALSO CONSIDER

CLASSÉ CDP-10 £1,599 Another very fluid and natural player that gets close the mark in more ways than one.

PRIMARE D30.2 £1,499 Superb high-resolution player gives a strong taste of musical structure and physicality.

### GAMUT CD1R £2,350

If the budget will stretch a bit further this has a natural 3D sound that marries precision with emotional communication.





# **Magnum FM**

*This defiantly analogue FM-only tuner follows a classic pattern and style, but is it still relevant in the 21st Century?* 

t's not often that a reviewer has the luxury of living with a component for an extended period, but this particular FM tuner is my own personal property. So what persuaded me to shell out two grand plus on something as old-fashioned as an FM tuner? In essence, I wanted a tuner that sounded as good as my ageing Naim NATO1, yet which also had the very useful luxury of remote control.

That might not sound like a particularly stringent requirement, but in practice remote operation came in at around the same time as the digital synthesis tuner technology that made it much easier to implement remote control. Digital synthesis tuners (not to be confused with DAB, Digital Audio Broadcast tuners) are also much less costly to implement than the analogue variety, so it's very rare indeed to find an analogue tuner with remote control.

However, there are many – including yours truly, as well as the folks at Magnum Dynalab – who reckon that analogue FM tuners simply sound better than their digital FM equivalents (certainly Naim's current digital NAT05 lacks the delicate transparency of its more costly analogue NAT01 predecessor). The upshot is that a



Does it really make sense to spend serious money on a top-quality FM tuner today? Some argue that FM is a moribund technology since DAB digital radio offers many more stations, while others point out that the widespread use of heavy dynamic range compression by broadcasters is hardly 'hi-fi'.

Both arguments have some validity, but it's a mistake to confuse quantity (of stations) with quality. If the main BBC network stations like Radios 3 and 4 appeal, and a decent aerial is viable, analogue FM will give superior sound quality, with considerably greater transparency and delicacy. Furthermore, any attempt to 'switch off' FM in favour of DAB during the next decade would, in this writer's opinion, be political suicide.



REVIEW - Paul Messenger Magnum Dynalab MD102 FM tuner

**Statements** 



remote control analogue tuner is bound to be dramatically more expensive than its digital equivalent.

Priced at £2,200 for 'hands-on' operation or £2,500 with the optional £300 remote. I first encountered the MD102 in the wake of reviewing its junior MD100 brother. I'd liked the latter enough to want to try the next one up the ladder, which offers a number of extra sonic and RF refinements.

The only concession to modernity here lies in a digital display of the tuned frequency. There's no attempt to decode or display Radiotext, for example, but there's still a very healthy collection of 'traditional' features, some more obvious than others.

The five-stage analogue front end, for instance, is a hidden, very rare, yet very important ingredient in achieving a superior end result, combining very good sensitivity and selectivity, for those who like to search out weak and distant stations. It also has separate boards for RF and audio, the latter using oxygenfree copper wiring in the signal path.

Much more obvious are the two large illuminated 'swinging needle' meters, which look nice, are easy to read, and display signal strength, centre-tune and multipath effects. Various switches, mostly of the toggle variety, select mono or stereo, interstation muting and a choice of two aerial inputs (both on Ftype sockets used for satellite receivers). Wide/narrow selectivity offers the chance to get the best sound with strong stations or lets you dig out weak ones, while both balanced and unbalanced outputs are available.

Whereas the hands-on version tunes in traditionally via the large flywheel knob on the right, the remote implementation is decidedly quirky, but effective enough nonetheless. The front

### VERDICT Magnum Dynalab MD102 FM tuner £2,200

(remote £300 extra) Superbly delicate and transparent analogue sound quality, fine sensitivity and selectivity, plus remote control

operation. Makes radio fun! Remote scanning sounds disturbingly clunky (but it works!), and pre-set memories

are very volatile. CONCLUSION Unique combination of

analogue tuning and remote convenience delivers superbly delicate and transparent sound that makes radio a joy. Clunky remote though. KEY FEATURES

Remote control or hands-on operation option

Five storable remote pre-sets plus up/down scan

C Tuneable five-stage analogue front end

Balanced or unbalanced outputs

Wide/narrow IF

bandwidth (selectivity) setting

Oxygen-free wiring in the audio path

Dual antenna inputs

Large analogue meters for centre-tune. multipath and signal strenath

"You don't buy a tuner like this for slick ergonomics. Its raison d'etre is its ability to deliver a very superior sound quality from radio signals."

panel power switch is left 'off' and the unit switched on at the rear, and powered up via the chunky and quite hefty little metal handset.

The seven handset buttons provide five pre-sets plus up/down tuning. The tuner scans with a rather unnerving mechanical clatter, but does offer the very fine gradations that are necessary for best results with an analogue front end. It works adequately enough, although the remote isn't the most responsive in the world, and pre-set storage doesn't survive even brief power interruptions

#### PERFORMANCE

But you don't buy a tuner like this for slick ergonomics. The MD102's raison d'etre lies in its ability to deliver a very superior sound quality from radio signals, and that it definitely achieves. The MD100 is itself a redoubtable tuner, but the 102 is instantly and obviously superior in its delicacy, transparency and subtle detailing, especially at high frequencies, which sound both cleaner and more extended.

The quality of BBC radio remains one of the better reasons for living in the UK, and the sheer existence of Radios 3 and 4 is more than reason enough to make a substantial investment in a top quality FM tuner well worthwhile.

The 102 really comes into its own when dealing with live classical music, and was specifically purchased with the

annual summer Proms season very much in mind. But it has also provided a remarkably clear and open window onto many new and very stimulating musical experiences. Radio 3's late evening Late Junction programme with its very eclectic mix of music has become a firm favourite, while the tuner is equally impressive when it comes to handling speech on Radio 4

If you just want radio as a background source, this tuner probably isn't the best choice. But if you value audio broadcasts highly it will do a superb job of extracting the most that the medium has to offer. Digital DAB radio might offer more stations, but a high-class analogue FM tuner will deliver the best sound quality from the major network stations. The MD102 simply makes radio more communicative and informative and far more interesting than TV, but perhaps that's not too difficult... 🖲 2 Audiofreaks 0208 948 4153 www.magnumdynalab.com

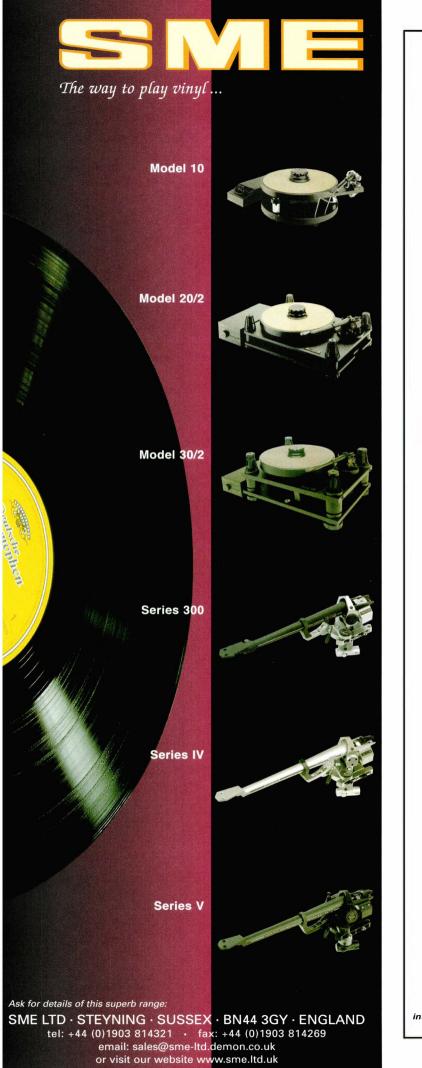
## ALSO CONSIDER

**CREEK T43 £399** This quality made-in-UK tuner has medium and long wave AM alongside FM. A classy sound at a very attractive price

#### NAD \$400 £600

A very fine FM-only tuner that delivers a distinctly superior all-round performance at a very realistic price

TAG MCLAREN T32R + DAB £2,200 Classy hi-fi at its best, combining high-quality DAB, FM and AM in one slick package



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 Arms: Rega 300/600/900; SME Series IV and V; Kuzma Stogi; Triplanar. Cartridges: VanDenHul Grasshopper and Colibri; Kuzma KC Ref; EMT; Reson Reca and Elite; Cartridge Man Musicmaker; Benz-Micro including

Ruby Open Air; Kondo Io J. Amplifiers: Border Patrol; Canary; Sugden; Art Audio; Monarchy; Western Electric; Icon; Tom Evans Audio Designs; SJS. CD Players: Wadia; Sugden; Primare; Resolution. Louspeakers: Living Voice; Vitavox; Lowther. Cables and Tables by Living Voice.

| Sale of Part Exchange and Ex-dem Items                            | Sale  | New    |
|---|-------|--------|
| SME Model 20 / 2 - 5 years old                                    | £1500 | £3658  |
| Dynaudio Confidence 3 - Rosewood - perfect, boxed - giveaway      | £2300 | £4800  |
| Horning Agathon - 98dB 2 way horn - Mahogany                      | £1500 | £3800  |
| Mirage 890i - fine condition - giveaway                           | £200  |        |
| Art Audio Symphony - 300B SE 10 watts integrated - full chrome    | £2250 | £4000  |
| Art Audio Vinyl 1 - moving magnet phono stage - chrome - fabulous | £1100 | £1550  |
| Art Audio VP1 - line pre-amp - chrome                             | £1000 | £2000  |
| Art Audio Concerto - 6550 line integrated                         | £1200 | £2650  |
| Art Audio VP1 special - line pre-amp - full of Hovlands           | £1150 | £2250  |
| Canary Audio CA 301 - 300B - 22 big watts - very good             | £3400 | £5400  |
| Canary Audio CA 303 - 300B monos - 22 lovely watts - better       | £5400 | £7400  |
| Canary Audio CA 309 - 300B parallel p.p 45 mad watts - superb     | £9500 | £13500 |
| Canary Audio CA 601 - line pre-amp - very, very good              | £1900 | £2750  |
| Canary Audio CA 300 - single ended monos - valve rect 8 watts     | £2000 | £3500  |
| Nottingham Analogue Hyperspace - turntable - 2/3 years old        | £1000 | £1700  |
| Nottingham Analogue Space - tonearm                               | £250  | £450   |
| Nottingham Analogue Mentor - tonearm                              | £390  | £800   |
| Jamo Concert 8 - loudspeakers - 21/2 years old - spotless         | £800  | £1365  |
| Townsend Seismic - speaker stands - for bookshelf speakers        | £450  | £695   |
| Tube Technology MAC - mm and mc phono - nearly new                | £700  | £1400  |
| Audio Innovations L2 - line pre-amp                               | £350  | £750   |
| Audio Innovations Series 1000 - silver circuit - 50 watts class A | £1100 | £2500  |
| Audio Research SPLS2(B) - line pre-amp                            | £1250 |        |
| Alchemist Forsetti ADP 15A - integrated amp                       | £700  | £1400  |
| Alchemist Forsetti ADP 20A - stereo power amp                     | £700  | £1400  |
| AudioNote Soro - phono integrated - serviced - new valves         | £700  | £1900  |
| Sonus Faber Guarneri  | £3000 |        |
| Unison Research Feather One - line pre-amp                        | £450  | £800   |
| Clear Audio Master Reference - turntable with Master TQI arm.     |       |        |
| 2 years old - Incredible. Go on, be crazy! A snip at only         | £8000 | £13000 |
| Audio Research LS2 B - line pre                                   | £1250 |        |
| Pro Ac Tablette - Cherry - cute - perfect                         | £300  |        |
| Meridian 502 - pre-amp - 4 years - techy - spotless               | £700  | £1385  |
| Meridian 557 - power - 4 years - techy powerhouse lump - spotless | £800  | £1525  |
| Voyd Standard - turntable - Black - perfect - collectable joy     | £1500 |        |
| Sugden Masterclass - CD player - very nearly new                  | £2000 | £2500  |
|   |       |        |





## Auditorium Avatar

Hi-Fi Plus Editor's Choice Hi-Fi Plus Product of the Year Hi-Fi Choice Editor's Choice

"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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You probably remember the A400. There's a good chance you even owned one. It sold in enormous numbers, accounting for 13 per cent of the total amplifier market and 25.000 sales in its first 18

months, and for some years it was the best selling amp in the UK. Though not a radical design, it quickly became a benchmark, but its real importance was the way in which it turned around the juggernaut of mass market hi-fi design in favour of more stripped down, sound quality-focused designs.

As often with such products, there was a single force behind it. His name: Doug Randal, then Pioneer's product manager. He didn't design it, but he was responsible for convincing the Japanese parent company that such an amp could be sold in the UK in commercially viable numbers where other countries were not interested in taking it at all. If he had been wrong, it would probably have meant the precipitate end of a promising career.

What kind of product was the A400? At the time, the market was split two ways between expensive audiophile designs with almost no features and quite low output power. The other kind generally had higher output ratings, and were invariably equipped with a mass of added features – tone and loudness controls, speaker switching, filters, flashing lights – the whole caboodle, and they almost invariably worked straight from the box. The A400, launched in 1990 at £240, was an affordable 40-watt integrated conceived as a design with the minimalist features that would deliver the performance of a specialist amplifier, with the economies of scale and the manufacturing quality only available from a company of Pioneer's stature.

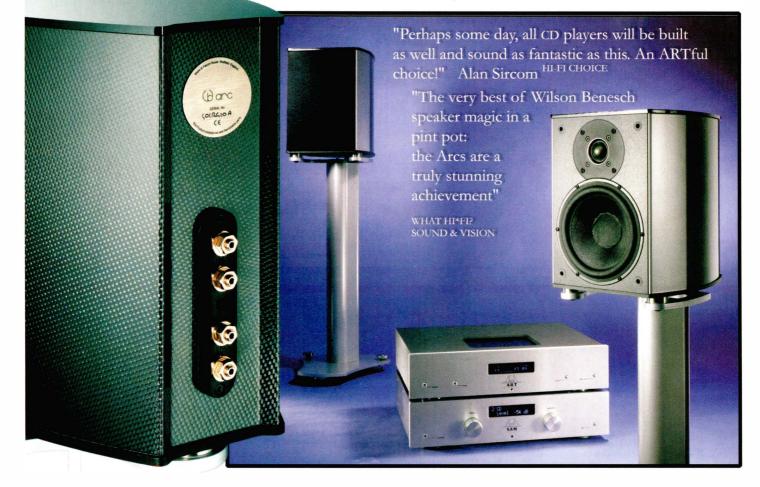
It's a fact that many of Pioneer's engineers were keen audiophiles, with no lack of good ideas about what a quality-sounding amplifier should be like, though it had probably never occurred to them to design an inexpensive audiophile amplifier. But the European market was then dominated by the Germans, whose priorities were completely different. It took considerable pressure before the engineers got their way over the bean counters, and it

## "The A400 was no ravishing beauty, but it certainly has the right equipment under the skin, and it knew exactly how to rock and roll."

was this pressure that Doug was able to apply, over a period. Prototypes and engineers crossed between the UK and Japan, with final tweaking done famously by Japanese engineers on Doug's living room table. Eventually Pioneer decided to set up a dedicated production line for the UK-specific A400. Much later, after it became established as a best-seller in the UK, it was taken up by some Pioneer distributors in other countries.

With its bent steel case and sombre black finish, the A400 was no ravishing beauty. But it certainly has the right equipment under the skin, and it knew exactly how to rock and roll. There was no true preamplifier section except for the MM/MC phono section, just a 10k volume control pot which fed signals straight to the power amp. Facilities were limited to source selection and balance adjust, using the split friction-coupled volume control.

There were some significant variants on the A400 theme, including a turbo-charged version from Tom Evans, the A400 GTE , which featured a DC-coupled output with wider bandwidth and greater detail. This model apparently sold in substantial numbers. The A400 was also partnered by a smaller version of the same amplifier known as the A300, which never achieved anything like the same success. But after a few years, when the output devices used in both designs ceased production, the amplifiers had to be redesigned and relaunched. To maintain the family identity, they looked very similar, and acquired an X suffix to the original product names – the A300X and A400X. This time the smaller model was more extensively updated than the A400X, and proved much more popular. Eventually though the line faded away, its thunder stolen by others. **()** *Alvin Gold*  call 0114 2852656 or e mail info@wilson-benesch.com for more information



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From July 1967 to the end of August 1968, Jimi Hendrix poured every ounce of his creativity into this masterpiece. Molten lava guitar solos, coruscating blues workouts, infectious soul ballads,

funk, interplanetary jazz rock, ambient sound painting and far-out pop were all spread across a double album which was America's answer to *Sgt Pepper*, a state-of-the-art sonic experience which hit the top of the US charts in October 1968 and put Hendrix at the pinnacle of sixties rock innovation.

The sheer breadth of Hendrix's ideas would have been buried under hapless English four-track but with Gary Kellgren and Eddie Kramer at The Record Plant in New York, Hendrix at last had access to 12-track recording. He wanted a 3D sound stage and used every sonic idea - backwards taped guitar solos, speeded-up/slowed-down guitar parts, flanging, phasing, wahwah pedals and panpotting to get the heavenly colours and sound distortions on Electric Ladyland. Musically it's a catalogue of both past and future musics - Hendrix bisected musical history so perfectly here that it still sounds contemporary. Everywhere on Ladyland you can hear Hendrix outdo himself his falsetto vocal harmonies on the Curtis Mayfield-tributed title track are beauteous heaven in sound. Crosstown Traffic had the sound of a kazoo made from Hendrix's own comb and has become an advertising staple. Voodoo Chile is a template for virtually all modern blues jams and Come On Pt1 is a textbook example of how to create three perfect R'n'B guitar solos. Gypsy Eves is pure funk/dance and Burning Of The Midnight Lamp is an perfect example of Jimi's 'underwater wah-wah' guitar style it was also Hendrix's favourite single. And that's just record one.

Yet from the start *Ladyland* was jinxed. The famous naked ladies UK cover (dreamed up by Track Records' Kit Lambert and Chris Stamp) was done without Hendrix's consent – he intended Linda McCartney pics of the group in Central Park to grace the cover. So two different sleeves were issued – the nude girls in

## "Molten lava guitar, blues workouts, soul ballads, funk, interplanetary jazz rock, ambient sound painting and far-out pop were all spread across America's answer to Sgt Pepper."

the UK and a colourful group photo in the US, shown above. (Note: in subsequent CD re-issues the original US cover was reversed so that the group shot is on the back and a single fuzzed head-shot of Hendrix is the cover.) In the UK, Track had the silly idea of bringing out the album as two separate LPs – Vols 1 & 2 with indifferent artwork in 1968 and 1973. When the CD era arrived Polydor issued *Electric Ladyland* in a horrible double CD box with nude cover and the wrong track sequencing.

Things started to improve with the first single disc (Reprise 6307-2, 1990) which featured digital remastering by Joe Gastwirt using Sonic Solutions even though the outside cover says AAD. Then the sound was incredible but overtaken by the 1993 Polygram reissue (847 233-2) which boosted the frequencies but got the timings wrong on Moon, Turn The Tides. When the Hendrix family regained control of the catalogue they, with the help of John McDermott, tracked down the original flat master tapes (previous discs were cut from equalised-forvinyl tapes or as in early Polydor CDs, second, third or fourth generation copies of EQed master tapes!). Though Joe Gastwirt refutes this, the current CD edition (MCD 11600, 1997) was brilliantly remastered by George Marino and Eddie Kramer at Sterling Sound in New York. The detail and magnificent dynamic range, not forgetting its massive sound platform, finally delivers the awesome masterpiece that Hendrix created in 1968 through your speakers in every nuance of its glory. Mark Prendergast

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Operating a modern audio system through some sort of on-screen display is becoming the norm these days, and certainly so if you have a multichannel setup. As such, whether your main interest is home cinema, multichannel hi-fi or a

hybrid of the two, it's difficult to ignore the concept of 'speaker configuration'. Your multichannel system will typically be dealing with some five or six channels of audio – front, centre and surround channels plus a subwoofer channel.

With DVD-Audio, the five main channels can be sampled at anything up to 96kHz with 24bit resolution, each offering a bandwidth (response) more than twice that of CD. Compressed audio channels, including Dolby and dts, are typically encoded at 48kHz with a response of some 20kHz. The so-called '0.1' or LFE channel contains bass effects *below* 120Hz that are designed to reinforce the low frequency impact of the main channels. At this point, it's important not to confuse the LFE channel, which is encoded on the DVD, with the subwoofer output of either the DVD player or AV amplifier.

In practice, you *can* get a subwoofer signal from your player or amplifier even when there's no LFE channel encoded on the disc. Many DVD-A music releases include 5.0 rather than 5.1 channel content, for example. Conversely, just because an LFE channel is present, this does not mean you need a subwoofer to deliver its message. As a matter of historical reference, the signal in the LFE channel is mastered by the recording engineers to pitch-in some + 10dB extra bass than can be achieved by any one of the front or centre channels alone. If you have a full-range system, including large front and centre speakers, then the LFE channel can increase the overall bass level by a substantial +6dB.

Speaker configuration, the key page on those on-screen displays, deals with those real-life situations where you do not have a subwoofer and five large main speakers. The idea is to filter-off and divert potentially excessive bass signals to those speakers best equipped to handle them. For example, if your home cinema or multichannel audio system includes floorstanding stereo speakers with compact centre and surround boxes, then you'll set the speaker configuration menu to Front (large), Centre (small) and Rear (small). Bass signals that would otherwise be destined for full-sized centre and surround speakers will now be re-directed to the front channels. If the subwoofer channel is enabled then the bass will be re-directed there.

This 're-direction' is known as Bass Management and, at its most dramatic, may shift all the bass from five main satellite speakers, plus the LFE, channel onto a single subwoofer feed. If you have no sub and small centre and surround speakers, then all LFE, centre and surround bass signals will be superimposed on the full-range front speakers. It's easy to envisage how an otherwise capable, full range speaker or subwoofer could be overwhelmed by the addition of some much extra, re-directed bass. Expect the unexpected, because different manufacturer's AV amplifiers execute their bass management in different and often proprietary fashions.

Re-directing LFE and centre channel bass may cause an increase in front speaker bass of just +3dB with one amp but +10dB with another. These changes in the level and phase of the re-directed bass can produce big changes in the sound of the system and rarely for the better. As a result, comparing the sound of one amp with another can be complex and misleading, even when both have exactly the same configuration settings.

So, while there's a case to be argued for re-directing the bass effects on movie soundtracks, it's less easy to justify bass management in a multichannel *music* system. After all, we have been using small 'bookshelf' speakers quite successfully with 'full-range' CD sources for 20 years now without the bass/mid cones popping out of their enclosures. My advice? Give bass management the benefit of the doubt in movie applications, but set all your speakers to 'Large' and the subwoofer 'On' - regardless of their stature – before enjoying multichannel DVD-Audio. *Paul Miller* 





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# BUYER'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.

## **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.

## 0&A

#### WHAT'S A DAC?

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

#### WHY HAVE SEPARATE TRANSPORTS & DACS?

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

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

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

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

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

### WHAT IS OVERSAMPLING/UPSAMPLING?

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

## TOP BUYS



### NAD C451i £330

Dynamic, tonally varied and confident sound combines with class-leading detail resolution. Excellent value and highly entertaining.



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.

# CD PLAYERS BUYER'S BIBLE

|           |                                       |        | Group test best buy 🔄 group test recommended 🚾 Editor's Choice ≥ New Gear Review                                    |                 |                 |           | SPECIFICATIONS   |         |                  |                  |                 |              |
|-----------|---------------------------------------|--------|---|-----------------|-----------------|-----------|------------------|---------|------------------|------------------|-----------------|--------------|
|           | D PLA                                 |        |   | SACD COMPATIBLE | ELEC DIG OUTPUT | OPT DIG C | CD-RW COMPATIBLE | 0       | BAL ANALOGUE OUT | HEADPHONE SOCKET | VARIABLE OUTPUT | ISSUE NUMBER |
| STATUS PF |                                       |        | comments  | ATIBLI          | UTPU            | OUTPUT    | PATIBLI          | CD TEXT | JE OU            | OCKE             | UTPU            | UMBEF        |
| UP TO £1  |                                       | L      | COMMILIARD  | 111             | -               | -         | m                |         |                  | -                |                 | 20           |
|           | rcam CD92                             | 900    | High-resolution player needs a touch of spit and polish to be completely convincing                                 |                 |                 | 0         |                  |         |                  |                  |                 | 212          |
| C         | ambridge Audio D500 SE                | 200    | A really lively sounding player with good detail but just a hint of dryness   |                 | ۲               | ۲         |                  |         |                  |                  |                 | 217          |
| в С       | yrus CD7                              | 800    | New Cyrus player has strong all-round attributes to match its good looks  |                 | ۲               |           |                  |         |                  |                  |                 | 212          |
| R E       | xposure 2010                          | 600    | Undistinguished in the final analysis, but the 2010 nevertheless is a return to form for this famous marque         |                 | ۲               | ۲         | •                | 0       |                  |                  |                 | 23           |
| B Li      | inn Genki                             | 995    | Explicit, rather bright-sounding player with strong multiroom appeal  |                 |                 |           |                  |         |                  |                  | •               | 212          |
| 88 N      | Marantz CD6000 OSE LE                 | 300    | Detailed, well rounded, at home in any musical context a real bargain   |                 | ۲               | •         |                  | ۲       |                  |                  | ۲               | 217          |
| BB N      | larantz CD6000 KI Sig                 | 500    | Impressive mid-market player is an unusually accomplished all-rounder, and is also well built                       |                 | ۲               | •         | ۰                | •       |                  | ۲                | 0               | 231          |
| 1 N       | larantz CD-17 Mkll                    | 800    | Sophisticated player with a short but attractive feature set, and a new-found bounce in its step                    |                 | ۲               | •         |                  | ۲       | ۲                | ۲                |                 | 206          |
| 😢 N       | AD C541i                              | 330    | High-octane player has the occasional rough edge, but is remarkable value for money                                 |                 | ۲               | ۲         | ۲                |         |                  |                  |                 | 23           |
| R R       | otel RCD-02                           | 375    | Against some strong competition in the same price area, the new Rotel generally holds up well                       |                 | ۲               |           | ۲                |         |                  |                  |                 | 23           |
| R R       | otel RCD-1070                         | 495    | Technically sound and well equipped, this player lacks a little excitement but shows excellent precision            |                 | ۲               |           |                  |         |                  |                  |                 | 226          |
| ABOVE £1  | ,000                                  |        |   |                 |                 |           |                  | -       |                  |                  |                 |              |
| R A       | rcam FMJ CD23T                        | 1,200  | Refined FMJ series player now boasts CD-RW and CD Text compatibility  |                 | ۰               | ۲         | ۲                |         |                  |                  |                 | 226          |
| EC AI     | udionet 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!  |                 | ۲               |           | ۲                |         |                  |                  |                 | 231          |
| C         | lassé CDP-10                          | 1,599  | Very natural yet capable of revealing the finest of details in a coherent and engaging manner                       |                 | ۲               |           | ۲                |         | ۰                |                  |                 | 238          |
| B         | xposure XXII                          | 1,175  | Natural sounding player, great with voices and acoustic instruments and makes for engaging listening                |                 | ۲               | ۲         | ۲                |         |                  |                  |                 | 238          |
| EC Ga     | amut CD1R                             | 2,350  | Natural, precise and impressively 3D sound that marries precision with emotional communication                      |                 | ۲               |           | ۲                |         | ۲                |                  |                 | 240          |
| EC Kr     | rell KPS 25sc                         | 24,998 | One of the finest CD players available, this is also a state of the art preamplifier with Cast interface technology |                 | ۲               | ۲         | ۲                |         | ۲                |                  | ۲               | 236          |
| R M       | larantz CD17 Mkll Kl Sig              | 1,200  | Fabulously built player adds musical integrity to an already impressive basic model (the CD17 Mk II)                |                 | •               | ۰         |                  |         |                  |                  |                 | 226          |
| EC M      | lark Levinson No390S                  | 6,495  | Superbly built and comprehensively equipped with genuinely high-resolution sound                                    |                 | ۲               | ۲         | ۲                |         |                  |                  | 0               | 231          |
| 88 M      | leridian 507                          | 1,195  | Unusually precise and considered performer that sounds as different as the discs you stick in the drawer            |                 | ۰               | ۲         | ۲                |         |                  |                  |                 | 238          |
| EC M      | lusical Fidelity CD-PRE <sup>24</sup> | 2,000  | Substantial player incorporates upsampling and extensive analogue and digital preamplification facilities           |                 | ۰               | ۲         |                  |         |                  |                  | 0               | 229          |
| EC M      | lusical Fidelity Tri-Vista            | 4,000  | Limited edition stereo-only SACD/CD player that is simply the best player MF has ever made                          | 0               | ۲               | ۲         | ۲                | ۲       |                  |                  |                 | 237          |
| 8 N       | AD S500i                              | 1,200  | A beautifully built machine that treads the fine line between precision and musicality with aplomb                  |                 | ۲               | ۲         | ۲                |         | ۲                |                  |                 | 238          |
| Na        | aim Audio CD5                         | 1,150  | Recommended subject to audition - a dynamic machine, yet some physical minuses                                      |                 |                 |           |                  |         |                  |                  |                 | 212          |
| EC Na     | aim CDX2                              | 2,650  | Fine quality one-box CD player, but its best feature is upgradeability via outboard XPS supply                      |                 |                 |           | ۲                |         |                  |                  |                 | 238          |
| 😬 Pr      | rimare D30.2                          | 1,499  | Superb high-resolution player gives a strong taste of musical structure and physicality                             |                 | ۲               |           |                  |         | ۲                |                  |                 | 226          |
| EC So     | ony SCD-XA333ES                       | 1,200  | High-end multichannel SACD player is excellent with CD, impressive in surround                                      |                 |                 | ۲         |                  | •       |                  |                  |                 | 224          |
| EC So     | ony SCD-XA777ES                       | 2,300  | Superb multichannel player that set the benchmark for the format at its launch                                      | ۲               | ۲               | ۲         |                  | ۲       | 0                |                  |                 | 223          |
| EC TE     | AC 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               | ۲               | ۲         |                  | ۲       | ۲                |                  |                 | 239          |
| EC W      | adia 301                              | 3,650  | Insightful player with digital preamp options and good onboard volume control. Try it direct for maximum effect     |                 | 0               | ۲         |                  |         | ۲                |                  | 0               | 228          |

SPECSIVEY SACD COMPATIBLE Plays high-resolution SACD discs in two and multichannel modes. 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.

BEST BUY HIFICHOICE magazne do chinya do chinya do chinya do chinya

#### 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.

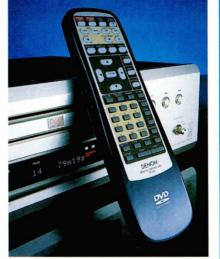


Naim CDX2 £2,650 A superb player that mixes rhythm and timing with precision and poise. Add the £2,300 XPS power supply (pictured) to make one of the best CD players in the world.

## **DVD PLAYERS** Disc players for audio and video

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

The great advantage of DVD, apart from being the first digital video format for the home, is that it offers discrete multi-channel sound. In the case of plain DVD video discs, this music is encoded in either the Dolby Digital or DTS format, both of which use 'lossy' compression to fit 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 benefits that the format specialises in.

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

## DVD-AUDIO

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.

## 0.2.0

#### 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?**

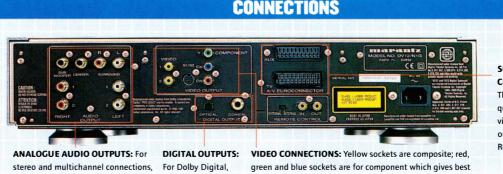
The best connection is component video closely followed by RGB Scart, which is clearly superior to S-video and the basic composite video option.

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

Only if you want to hear the benefits of surround sound. DVD players can be used with stereo amps to great effect, but you won't be able to decode the Dolby Digital and DTS soundtracks on movies.

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

Not unless you have a progressive scan/NTSC compatible monitor or TV - as vet there is no PAL version.



use these for best results with DVD-Audio, SACD and CD.

DTS and PCM audio bitstreams. results, while the black multipin socket is S-video, which sits qualitatively between the two.

#### SCART

CONNECTIONS: These are a goodquality option for video, especially ones that output RGB

H

## Our favourite 🔄 group test best bly 🔄 group test recommended 📧 editor's choice ≥ new gear review **NVN DI AYFRS**

| Aud   | oNideo disc players  |        |   |                 |                 |        | OPT DIG OL | ADPHONE SC | ISSUE NUMBER |
|-------|----------------------|--------|---|-----------------|-----------------|--------|------------|------------|--------------|
|       | PRODUCT              | £      | COMMENTS  | VD-A COMPATIBLE | SACD COMPATIBLE | OUTPUT | OUTPUT     | SOCKET     | MBER         |
| UP TO | £1,000               |        |   | 113             |                 |        |            |            |              |
| 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      | ۲          |            | 238          |
| R     | Cyrus DVD 7+         | 1,000  | Typical Cyrus style - open, vivid and bouncy sound, with moderate picture quality to match                                    |                 |                 |        |            |            | 237          |
| 88    | Denon DVD-2800 Mkll  | 750    | Excellent Silicon Graphics processing, a wide range of features and sharp pricing make this a winner                          |                 |                 | ۲      | ۲          |            | 237          |
| 88    | Denon DVD-3800       | 1,000  | High and progressive DVD-Video player with good CD and DVD-Audio capabilities, priced below its station                       | ۲               |                 |        | ۲          |            | 234          |
| 8     | Pioneer DV-656A      | 400    | Astonishing value for money, although not great hi-fi, this player comes alarmingly close to the heavyweight competition      | ۲               | ۲               | ۲      | ۲          |            | 240          |
| 89    | Pioneer DV-757Ai     | 800    | State of the art universal player with iLink digital interface provides performance stretch currently unavailable to others   | ۰               | •               | ۲      | ۰          |            | 240          |
| BB    | Pioneer DV-656A      | 400    | 'Universal' SACD/DVD-Audio/Video player does everything moderately well or better, and is an excellent buy                    | ۲               | ۲               | ۲      | ۲          | ۲          | 234          |
| R     | Primare V25          | 1,000  | Bold pictures on screen are matched to easy, likeable sound quality and a huge range of outputs                               | ۲               |                 | •      | 0          |            | 237          |
| 88    | Sony DVP-NS905V      | 400    | DVD-Video and SACD is a distinctly superior package, with above average performance   | ۲               |                 | ۲      |            | ۲          | 234          |
| ABOVE | £1.000               |        |   |                 | 8               |        |            |            |              |
| >     | Cyrus DVD8           | 1,200  | An impressive step up from the DVD7+, which includes component video outputs  |                 |                 | ۰      | ۰          |            | 238          |
| EC    | Denon DVD-A1         | 2,500  | A convincing case for the DVD-A format, battleship construction combined with sonic and visual finesse                        |                 |                 | ۲      |            |            | 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                        | ۲               |                 | •      | 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                               |                 |                 |        |            |            | 218          |
| EC    | Meridian 800         | 10,805 | The ultimate in DVD replay, modular construction, buffered ROM drive, upsampling and high-res digital outputs                 | •               |                 | •      |            | 0          | 230          |
| R     | 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   |                 |                 |        | ۲          |            | 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 |                 |                 |        | •          |            | 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               | ۲               | ۲      | 0          |            | 232          |

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





Marantz DV-12S1 £2.500



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



A superb DVD-Audio/Video player - great with DVDs and unusually fine with CDs too.

### Pioneer DV-757Ai £800

Pioneer's latest 'universal' disc player - strong with CD, SACD, DVD-V and DVD-A alike.



# BUYER'S BIBLE VINYL

**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.

## **TURNTABLE SET-UP**

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

## TOP BUYS



**Rega** P3 £298 Latest version of a hi-fi classic is a very capable deck for a very modest price, with very little serious competition from other makes. A great turntable for the money and a very safe buy.



Audio Note 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.



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.



Avid Volvere Sequel £3,500 A beautifully made turntable that delivers a high-end vinyl experience without costing the earth. Neutral, even-handed, detailed and frankly spellbinding.

# VINYL BUYER'S BIBLE

SPECIFICATIONS

SPECIFICATIONS

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| Bec | UKN I A                      |       | les les   | S        | SUSP SUBCHASSIS | SWITCHABLE<br>SPEED CHANGE | SUPPLIED WITH ARM | SUPPLIED WITH CART | ISSUE NUMBER |
|-----|------------------------------|-------|---|----------|-----------------|----------------------------|-------------------|--------------------|--------------|
|     | PRODUCT                      | 3     | COMMENTS  | SPEEDS   | ASSIS           | ANGE                       | ARM               | CART               | MBER         |
| 88  | Audio Note TT1/ARM1          | 594   | Simple and unpretentious, it delivers a real taste of true high-end performance at an affordable price          | 33/45    | •               | •                          | ۲                 |                    | 203          |
| EC  | Avid Volvere Sequel          | 3,500 | Heavyweight turntable that will deliver more of what's in a vinyl groove than most of the competition           | 33/45    | 0               | •                          |                   |                    | 229          |
| EC  | 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    | •               | 0                          |                   |                    | 194          |
| R   | Bluenote Bellavista/Borghese | 1,594 | Charming in appearance and sound if not particularly practical. Start your love affair with vinyl here          | 33/45    |                 |                            |                   | opt                | 239          |
| R   | Clearaudio Champion Level 2  | 1,955 | Neutral balance, great looks, but only so-so detail. Benefits greatly from isolation                            | 33/45    |                 |                            | 0                 | 0                  | 223          |
| R   | Linn LP12 Basik              | 1,100 | Trails the full LP12 significantly, but pace, rhythm, timing etc are still top rank                             | 33       | •               |                            | 0                 |                    | 103          |
| 88  | Michell Gyro SE              | 1,058 | New DC motor-equipped Gyro offers great looks and even better sound. Price includes RB300 arm                   | 33/45    | ۰               |                            | •                 |                    | 239          |
| EC  | 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    |                 |                            | ۲                 |                    | 236          |
| R   | Pro-Ject RPM 9               | 1,000 | Capable deck with some unusual features. Highly engaging sound with an essentially neutral character            | 33/45    |                 |                            | ۲                 | opt                | 239          |
| 88  | Rega P2                      | 198   | Updated Planar 2: just as much fun as ever and now even better value as the competition falls away              | 33/45    |                 |                            | ۲                 |                    | 214          |
| R   | Rega P3                      | 298   | Updated Planar 3, building on the strengths of the P2 with added subtlety and detail                            | 33/45    |                 |                            | ۲                 |                    | 214          |
| В   | Rega P25                     | 619   | The contemporary aesthetic wins admiration, the sonic assurance turns it into your own personal music shrine    | 33/45    |                 |                            | ۲                 | opt                | 239          |
| EC  | Rega P9                      | 2,248 | Exceptionally elegant hi-tech player with complex outboard supply, ceramic platter and wonderful RB1000 tonearm | 33/45    |                 | 0                          | 0                 |                    | 228          |
| EC  | SME Model 10A                | 3,411 | Elegant and extremely capable design with Series V/309 hybrid arm, superbly built                               | 33/45    | ۲               | 0                          | ۲                 |                    | 195          |
| EC  | SME Model 20.2A              | 5,274 | Beautifully built, extremely neutral damped and suspended deck with superb sound. Inc V arm                     | 33/45/78 | ۲               | ۲                          | ۲                 |                    | 186          |
| EC  | Well Tempered Reference      | 5,500 | Superb mechanical stability and unflappability result in clean, clear reproduction                              | 33/45    | ۲               | ۲                          | ۲                 |                    | 205          |

# Our favourite PHONO CARTRIDGES

| MM and MC cartridge        | es   |  | -  |    | E STYLUS | NUMBER |
|----------------------------|------|--|----|----|----------|--------|
| PRODUCT                    | £    | COMMENTS   | MM | MC | SU       | æ      |
| Audio Technica AT110E      | 29   | Excellent performance for the price, with little more than some mild coloration and a touch of hardness at high levels | •  |    | 0        | 214    |
| Clearaudio Aurum Beta S    | 270  | Clear improvement over cheaper Alpha, and good sound all round by any standards  | ۲  |    |          | 223    |
| Clearaudio Sigma           | 580  | A nimble and revealing cartridge that is more at home in lower mass arms   |    | *  |          | 235    |
| Goldring Elite             | 250  | A remarkably subtle and persuasive design that should tempt anyone   |    | ۵  |          | 235    |
| Grado Prestige Black       | 40   | Offers admirable detail and treble extension, with good bass and ambience too  | ۲  |    |          | 214    |
| Grado Prestige Gold        | 110  | Produces rich, open and expansive music with the minimum of fuss   | 0  |    | 0        | 235    |
| Lyra Helikon               | 1095 | 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                           | -  |    | •        | 192    |
| Reson Etile                | 485  | Plenty of life and detail, and refined with it   |    | ۲  |          | 223    |
| Sumiko Blue Point Special  | 250  | A no-nonsense performer with engaging musical properties – one of the best around for less than $\$300$                |    | ۲  |          | 192    |
| Van den Hul MC One Special | 699  | A gorgeous cartridge that's worth the price every time you hear a familiar track in a whole new light                  |    | 0  |          | 235    |

# Our favourite PHONO STAGES

| Phono stages               |       |   | IONO INPUTS | HONO INPUTS | ADJ. GAIN | . IMPEDANCE | SUE NUMBEF |
|----------------------------|-------|---|-------------|-------------|-----------|-------------|------------|
| PRODUCT                    | £     | E COMMENTS  |             | SI          | ź         | R           | R          |
| Creek OBH-8SE              | 160   | Neutral, relaxed and involving sound from this neat little unit   | ۲           |             |           |             | 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           | ٠           | •         | ٠           | 234        |
| Pass Labs XOno             | 2,995 | Not absolutely neutral, but the overall result is so beguiling it's hard to resist  | •           | 0           |           | •           | 201        |
| Pro-Ject Phono Box         | 40    | Moving-coil compatibility is a dubious extra in a way, but MM performance is acceptable at this giveaway price                | 0           | •           |           |             | 201        |
| 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   |             | ٩           |           |             | 223        |
| 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 |             | ۲           |           |             | 201        |
| Trichord Dino/Dino+        | 498   | Relaxed yet resolute with very good image depth and natural balance, not to mention great flexibility                         | 0           | ۰           | ۲         | 0           | 234        |

TURNIABLE SPECES 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 beit 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

MC P

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| HITACHI                         | PHILIPS  | FRONT PR   | OJECTORS   | SR6200  |
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| C28WF540N                       | 32DW9625   | PJ-LC2001  | CSMART   | 1.3-1/  |
| C32WF540N                       | 28DW6577   | Statistics and statistics of the statistics of t | and the second   | DVD PLAYERS   |
| JVC                             | 32DW6577   | PANASONIC  | YAMAHA   | DV3100  |
| AV-24WT5                        | 28DW6557   | PT-AE100E  | DPX-1  | DV4200  |
| AV-24W15<br>AV28CT1             | 32DW6557<br>32PW9586   |  | TOOLUDA  | DV6200  |
| AV32S2GR                        | 32PW9576/05E   | SELECO   | TOSHIBA  | DV7010  |
| AV32P10                         | 32PW9595   | HT200  | MT3 MT7  | DV4100 OSE  |
| AV28T25                         | 32PW9596   | HT250  | SONY   | DV-12S1   |
| AV32T25                         | 32PW9594   | HT300  | VPL-VW11HT   | AMPLIFIERS  |
| AV28R25                         | 32PW9607   | *Full range of<br>Screens available  | VPL-HS1  | PM-14MKII   |
| AV32R25<br>AV28X25              | 32PW9527   |  |  | AV9000  |
| AV32X25                         | 32PW9617   |  |  | MM9000  |
|                                 | 32PW6826   |  | neer   | MA6100  |
| LOEWE                           | 28PW6816   | AUTHORISE  | D DEALER   | PM4200<br>PM7000  |
| ACCONDA 9381 ZW                 | 32PW6515   | Pioneer VSA-AX10   | Proneer VSX-D810   | PM8000  |
| PLANUS 4781 ZP<br>XELOS 5381 ZW | 32PW9526   |  | TOX-DOTO   | PM8200  |
| VITROS 6381 ZW                  | 32PW6006   | AND DESCRIPTION OF   | And a local distance of the local distance o | PM6010 OSE  |
|                                 | 28PW6006   |  | and the second second  | CD PLAYERS  |
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| TX-36PB50                       |  | THX ULTRA 2  | DTS-ES 6x100w  | CD4000  |
| TX-32PB50                       | Panasonic TX-32PL10  |  | DOLBY DIGITAL - EX COMP  | CD5000<br>CD6000  |
| TX-28PB50                       |  |  | ਭ 01204 861861   | CC3000  |
| TX-36PL30                       | -SOUND & VISION-   | 5 01204 001001   | 3 01204 001001   | CD6000 OSE LE   |
| TX-32PH40                       | 450UND & VISION+   | AV AMP/RECEIVER  | MULTIPLAY CD   | CD6000 KI   |
| TX-32PL10<br>TX-28PL10          | -  | UCH For  | DD 51007   | DR6000  |
| TX-32PL4                        |  | <u>VSA-E07</u><br>M-10X  | PD-F1007<br>PD-F1009   | DR6050  |
| TX-28PL4                        |  | VSX D810   |  | SA-12S1   |
| TX-32PL1                        | 2  | VSX D710   | CD RECORDER  | TAPES & TUNER   |
| TX-32DK2                        |  | VSX D510<br>VSX C300   | PDR-W839   | SD4050  |
| TX-28DK2                        | E 01004 9(19(1   | V3A U300   | PDR-609  |   |
| TX-24DX1                        | <b>8 01204 861861</b>  |  |  |   |



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|-------------------------|---------------------------|---------------------------------------|--------------------|--|--|--|
| AMPS AV                 | RECEIVERS/AMPS            | SONY STRDB1080                        | ٧L                 | / <b>C</b>   | JVC XV   | ANS PHILIPS  |
| TA-FB940                | STR-DE875                 | 1 0                                   | XV-I               |  |  | DVD1010  |
| TA-FA777ES              | STR-DE870                 |                                       | XV-S               | 302  |  | Q50  |
| <u>TA-E1</u>            | STR-DB1070<br>STR-VA555ES | · · · · · · · · · · · · · · · · · · · | XV-3<br>XV-S       |  | Pit  | Q40  |
| TA-N1<br>TA-FE230       | STR-DE375                 | 6X100W                                | XV-5/              |  | DVD-R CD   | DVD870P  |
| TA-FE370                | STR-DE475                 | <b>CALL 01204 861861</b>              | XV-E               |  | SVCD CD-R/RW MP3   | DVD910SA   |
| TA-FE570                | TAP 9000ES                | S CALL 01204 001001                   | TOSI               | HIBA   | E CALL 01204 8618  | 61 DVD962SA<br>DVD763SA                                |
| TA-FB740                | TAE 9000ES                | SPEAKERS                              | SD12               | and the second   | SONY   | DVD723   |
|                         | TAN 9000                  | SS-M9ED                               | SD2:               |  | DVP-NS300  | DVD623   |
| MINI DISC               | CD PLAYERS                | SS-AL5MK2<br>SS-LA500EA               | SD5<br>SD52        |  | DVP-NS400  |  |
| MDS-JE330               | CDP-M305<br>CDP-XE270     | SS-MF400H                             | SD42               |  | DVP-NS305  | - Pioneer  |
| MDS-JE470               | CDP-XE370                 | SS-MB200H                             | SD90               |  | DVP-NS405  | DV444  |
| MDS-JE770<br>MDS-JB940  | CDP-M305                  | SA-VE705                              | SD95               | OUE  | DVP-NS700  | DV545<br>DV646A  |
| MDS-JA333ES             | CDP-XE270                 | SA-VE815                              | Pana               | sonic  | DVP-NS900  | DV646A   |
| MDS-JA555ES             | CDP-XE370                 | SACD                                  | DVD-RA             | CONTRACTOR OF THE OWNER  | DVP-FX1<br>DVP-CX860   | PDV-20   |
| MXD-D40                 | CDP-XE570<br>CDP-XB740E   | SCDI                                  | DVD-XV             |  | DVP-02860<br>DVP-9000ES  | PDV-LC20   |
| MXD-D5C                 | CDP-XB930E                | SCD-XE 670<br>SCD-XE 770              | DVD-RV             |  |  | HITAOUI  |
| MDS-PC3                 | CDP-CX235                 | SCD-XE //0<br>SCD-XA333ES             | DVD-LA             |  | ACRAM  | HITACHI  |
| MDS-550                 | CDP-CX450                 | SCD-XA777ES                           | DVD-LV0<br>DVD-PV4 |  | DIVA88   | DVP315<br>DVP325                                       |
|                         | CDP-CE375                 | SCD-555ES                             | DVD-PV4            | TULDS  |  |  |
|                         |                           |                                       |                    |  |  |  |
|                         | TEAC                      |                                       |                    |  | VOTE   | 11.0   |
| AUTHORISED DEALER       | AUTHORISED DE             |                                       | DVI                | U S  | YSTE   | . M S  |
| DSP-AZ1                 | TEAC A-H                  |                                       | RECORDERS          | JVC  | HM-VDR10   | Pioneer  |
|                         |                           |                                       | IVC                |  |  | NS-DV77  |
| 151 B                   | .00.0.6                   |                                       |                    | -  |  | NS-DV88  |
|                         | -                         | and a second                          | 1-VDR10            |  | A state of the sta | CONTY  |
| DPL2 Dts-Es             | FULL SYSTEM CONSISTS OF:  |                                       | R-XV10             | DVD-R CD-  |  | SONY   |
| Dd-Ex 6x130w+2x45w      | T-H300 R-H300             | PD-H300C Pana                         | asonic             |  |  | DAV-S400   |
| g NOW 01204 861861      | <b>NOW 01204 8</b>        | 61861 DI                              | VIR-E30            | g CALL   | 01204 861861   | DAV-S500   |
| AV AMPS/RECEIVER        |                           | NV                                    | -VHD1BS            | DV   | D SYSTEMS  | DAV-S550<br>DAV-S800                                   |
| RX-V730RDS              | TEAC MC                   | -X1                                   |                    | H  | TACHI  | DAV-5880   |
| RX-V630RDS              |                           | Pic                                   | oneer              |  | HTK160   |  |
| RX-530RDS<br>RX-430RDS  |                           | DV                                    | R-7000             |  | JVC  | SONY DAV-S800  |
| RX-430RDS<br>RX-V420RDS | Astra                     |                                       |                    |  | TH-V70R  |  |
|                         | CD-TUNER - AMP            | PH                                    | ILIPS              |  | TH-A5R   | 50w x5+100w<br>SUB SPEAKERS                            |
| REMOTE CONTROLS         | AM/FM RDS RADIO           | DV                                    | DR1000             |  | TH-A9R   | REAR SPEAKERS  |
| RAV-2000                | <b>B</b> NOW 01204 8      | 61861 DV                              | DR980              |  | TH-A10R  |  |
| SUBWOOFERS              | THO                       | DV                                    | DR985              | NOS DE CONSTRUCTION DE CONSTRUCTURA DE CONSTRU | nasonic  |  |
| YST-SW005               | TEAC                      |                                       | DR1000             |  | SC-DT300   | The second second                                      |
|                         | AG-H550<br>DV-H550        |                                       |                    | and the second se  | SC-DT100<br>SC-HT70  | CALL 01204 861861                                      |
| CINEMA PACKAGES         | A-H500                    |                                       |                    |  |  |  |
| HTiB 45                 | T-H500                    | UZT I                                 | NOY                | TANA   |  |  |
| HTiB 60                 | R-H500                    |                                       | ED DEALER          | TANNO  | DY. SPEAKERS   | ARCAM  |
| HTiB 65                 | PD-H500                   | REVOLUTION                            | -AV PACKAGE        | R1   | R2 R3  | AUTHORISED DEALER                                      |
| DVX-S100<br>VS-10       | AG-H500<br>MD-H500        |                                       | PATTACIAUL         | MX1  | MX2 MX3  | ARCAM DIVA AVR 100                                     |
| DVX-S80                 | RW-H500                   | - 62                                  | 0                  | MX4  | RC MXC   |  |
|                         | L-5500                    | i i i i i i i i i i i i i i i i i i i | 0                  | MXR  | MXSUB  |  |
| CD RECIEVER             | AGH-350                   |                                       |                    | IIIZALA  | MAGOD  | 4 0. iiii 171111 () 1 ()                               |
| TSX-20<br>TSX-15        | DV-H350                   |                                       | 0.0                | D  | SERIES   | ■ AVAILABLE IN BLACK & SILVER<br>■ DTS ■ DOLBY DIGITAL |
|                         | A-H300                    |                                       |                    | CATURN   |  | <b>01204 861861</b>                                    |
| TSX-10                  | AG-H300<br>T-H300         | 01204                                 | 861861             | SATURN   | the second s   |  |
| DVU/Z2 0DD0             | R-H300                    | MX-AV F                               | PACKAGE            | SATURN   | State of the second   | ARCAM  |
| RXV730RDS               | PD-H300                   |                                       |                    | SATURN   |  | DIVA A65<br>DIVA A75                                   |
|                         | PD-303                    | Ö                                     | 0                  | SATURN   |  | DIVA A85   |
|                         | MD-H300<br>RW-H300        |                                       |                    | D500   | D700 D750  | DIVA AR100<br>DIVA CD 72                               |
|                         | L-\$300U                  |                                       |                    | EYRIS 1  | EYRIS 2  | DIVA CD 72<br>DIVA CD 92                               |
|                         | L-\$303U                  | <u> </u>                              | 0.0                | EYRIS 3  | EYRIS C  | DIVA P-75  |
| CALL 01204 861861       |                           |                                       |                    | EYRIS RF   | C-SUB15  | DIVA P-85<br>DIVA PT-51                                |
|                         |                           | 01204                                 | 861861             |  |  | BINATION   |

# **RADIO TUNERS**

FM and DAB hi-fi separates

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

### DAB or FM?

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

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

area. It can also provide higher sound quality if reception conditions are favourable. Absolute sound quality judgements are 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.



**Denon** TU260L II £130 The benchmark for all other budget tuners, with great sound and plenty of features.



NAD S400 £600 A nicely judged performer that maximises the potential of FM broadcasting.



**Pure** DRX-701ES £250 This 'budget' DAB model can meet much more expensive alternatives head-on.



Highly professional implementation of DAB technology makes this one of the best options on the digital tuner market.

SPECIFICATIO

WAVEBAN

REMOTE CONTR

ROT. TUNING KA

ISSUE NUME

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|--------|---------------------|--------|--|
| T      | UNER                | S      |  |
| FM     | & DAB HI-FI SEP     | ARATES | 5  |
| STATUS | PRODUCT             | £      | COMMENTS   |
| FM TU  | NERS                |        |  |
| R      | Cambridge T500      | 180    | Very capable tuner suited to good and less good reception conditions             |

| STATUS       | PRODUCT              | £     | COMMENTS   | DS         | SL | DS | P    | Ŧ    | OB | Ŧ   |
|--------------|----------------------|-------|--|------------|----|----|------|------|----|-----|
| <b>FM TU</b> | INERS                | 12/13 |  |            |    |    |      | -    |    |     |
| R            | Cambridge T500       | 180   | Very capable tuner suited to good and less good reception conditions   | FM,M,L     | 64 |    |      | ۲    | 0  | 193 |
| ŕł.          | Creek T43            | 399   | Quality UK-made tuner offering classy sound in all areas at a very fair price                                  | FM,M,L     | 64 |    | ۲    | ۲    | 0  | 193 |
| R            | Cyrus FM7.5          | 400   | Beautifully made and presented, with sound that's a small but worthwhile advance over budget models            | FM         | 7  |    |      | ۲    | •  | 211 |
| 98           | 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 | ۰  |      |      | ۲  | 193 |
| 88           | Harman Kardon TU940  | 180   | Good sound and particularly good signal recovery under tricky reception conditions                             | FM, M      | 30 | ۰  |      | ۲    | ۵  | 221 |
| 96           | Marantz ST6000       | 180   | Another budget killer from Marantz, with sound well above its class and useful features                        | FM, M, L   | 90 |    |      | ۰    |    | 211 |
| 8            | Myryad T-30          | 400   | Attractive product that produces attractive sounds too: capable of very musical performance with a good aerial | FM         | 29 |    | ۲    | ٢    |    | 193 |
| 88           | NAD S400             | 600   | One of the best around - bass and treble are both well extended and detail is excellent                        | FM         | 30 | 0  | ۲    | ۲    |    | 230 |
| 38           | Primare T21          | 600   | Identical to NAD S400 and likewise a very fine tuner   | FM         | 30 | ۲  |      | ۲    |    | 230 |
| R            | Sony ST-SE570        | 130   | Good, honest, budget tuner - loads of features, just a trifle bland  | FM, M, L   | 30 | ۲  |      | ۲    | ۲  | 221 |
| DAB TU       | INERS                |       |  |            |    |    | 1538 | 3.34 |    |     |
| R            | Arcam DT-81          | 650   | A very smart and polished DAB performer  | DAB        | 16 |    | 0    | •    | ٠  | 221 |
| >            | Pure DRX-701ES       | 250   | An excellent introduction to DAB, fine value, simple to use and feature loaded                                 | DAB        | 99 |    | 0    | ۰    | ۰  | 234 |
| R            | Pure DRX-601ESM      | 330   | Cheap, small and capable, but with major tonal variations from neutral which confuse the issue                 | DAB        | 90 |    | ۲    | ٠    | ۲  | 230 |
| 96           | Pure DRX-601E        | 300   | Cheapest DAB separate available at the time of review - concedes little if anything to more expensive models   | DAB        | 9  |    |      |      | ۲  | 211 |
| ÷4           | 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 | ۲  | •    | •    | ۲  | 230 |

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

# DIGITAL AUDIO RECORDERS

CD, MiniDisc and hard drive recorders



### MiniDisc

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

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

### **Recordable CD**

With recordable CD you have a choice of two disc types: CD-R discs are the cheapest, but you can only record once; and CD-RW discs are a little more costly, but you can 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 drive) recorders can store whole music collections if you use a compression format such as MP3. HDD recorders are taking over from multidisc CD changers as sound servers in multiroom installations, where their ability to play more than one piece of music at a time is a great boon. HDD also offers impressive editing facilities on a par with MD, and they can also record from CD (or to CD-R/RW) at high speed.

At present, sound quality isn't the driving force behind the format – flexibility and storage capacity being bigger issues – and a plain CD-R/RW machine will outperform an HDD recorder in fidelity terms. TOP BUYS HILIOS CDR802 £300 Multidisc recorder that's slick and accomplished, albeit with a slightly flaky build.

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



**Sony** MDS-JE480 £130 Entry-level MD recorder that does exactly what it says on the tin, at a bargain price.



Yamaha CDR-HD1300 £600 Inpressive implementation of hard drive technology for home audio applications.

ELEC

# Our favourite GROUP TEST BEST BUY GROUP TEST RECOMMENDED COLORS CHOICE NEW GEAR REVIEW

### CD-R/RW. MD and HD recorders

| CD-I   | R/RW, MD and HD   | ) recor  | rders  | R     | CITY | OUTPUTS | OUTPUTS | NUMBER |
|--------|-------------------|----------|--|-------|------|---------|---------|--------|
| STATUS | PRODUCT           | £        | COMMENTS   | DECKS | 68   | SLID    | UTS     | BER    |
| CD-R/I | IW RECORDERS      |          |  |       |      |         |         |        |
| R      | Denon CDR-1000    | 400      | A respectable player and recorder, though some midband congestion was noted when recording                                       | 1     |      | •       | ۲       | 218    |
| 88     | Marantz DR6000    | 400      | No frills, but in its fundamentals this is one of the finest CD recorders on the market  | 1     |      | ۲       | •       | 233    |
| R      | Marantz DR-17     | 1,500    | Highly recommended, but with a jitter problem that, resolved, would improve sound quality  | 1     |      | 0       | ۲       | 205    |
| 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     |      | ۲       | ۲       | 233    |
| 88     | Philips CDR951    | 380      | An improvement on previous models, it delivers the musical goods in some style   | 1     |      | 0       | ۲       | 20     |
| R      | Philips CDR785    | 350      | Ragged play quality, but a good record performance from this well-equipped, well-priced CD-R/RW deck                             | 1     |      | 0       | ۲       | 218    |
| 88     | Pioneer PDR-609   | 280      | Classy single-deck CD-R/RW burner is also a good, if characterful, player  | 1     |      | ۲       | 0       | 218    |
| R      | Pioneer PDR-W839  | 350      | Good-quality twin CD burner makes recordings that can be hard to distinguish from the original. Good value too                   | 1     |      | ۲       | •       | 218    |
| >      | Sony RCD-W3       | 250      | Superb Sony build and ease of use complement great recording ability and amiable CD playback                                     | 2     |      | 0       |         | 238    |
| MD RE  | CORDERS           |          |  |       |      |         |         |        |
| R      | Pioneer MJ-D508   | 200      | Well equipped, but musically sleep-inducing player that receives its Recommendation owing to the price                           | 1     |      |         | ۲       | 205    |
| R      | Sony MDS-JE480    | 130      | Straightforward and effective, but the three real killer features are price, price and price                                     | 1     |      | ۲       |         | 233    |
| HDD RE | CORDERS           | Section. |  |       |      |         |         |        |
|        | Yamaha CDR-HD1300 | 600      | CD-R/RW and hard drive in one - a flexible beast, one of the best of its ilk thus far though just short of formal recommendation | 2     | 80   | 0       | ٢       | 237    |

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

# Sevenoaks sound & vision



## Sevenoaks Sound & Vision stocks a wide range of DVD players, amplifiers, speakers, plasma monitors, 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 2400. Subject to status.

## **B&W** Bowers & Wilkins



Combining cutting-edge technology with contemporary styling, the VM1 delivers the kind of uncoloured clarity and crispness of sound for which B&W is famous. Place it anywhere using the speaker's optional tall stand or its wall bracket and it looks the part from any angle. Magnetically-shielded, this multi-application speaker can occupy all five positions in a home cinema system, including the centre channel, when laid horizontally or mounted on its supplied foot on a television, but is equally at home within a two-channel hi-fi system.

Recently, when partnered with the AS1 Subwoofer, the combination received top honours in a What Hi-Fi? Sound and Vision supertest (February 2003).

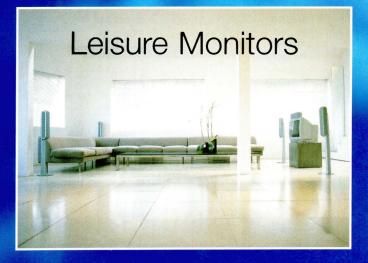


## **Custom Installation**

Are you are 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.





British company Cyrus has been developing high performance hi-fi systems for nearly 20 years, winning numerous accolades and awards along the way. The latest range of hand finished products offer stunning performance, build quality and upgradeablity.

The new 'entry-level' Cyrus 6 amplifier shows how the range has evolved. Awarded five stars by What Hi-Fi? Sound and Vision magazine (February 2003), the 6 delivers 40w/p/c, has six line-level inputs, a tape loop, remote control and a headphone socket. In addition, it can be upgraded to the full specification of its bigger brother, the Cyrus 8 which, according to Hi-Fi Choice (January 2003), "effectively puts a pre/power combo in the same box and is up there with the very best below £1000".

## **48 Outlets Nationwide**

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Please refer to Page 7 for full address and telephone number details.

## www.sevenoakssoundandvision.co.uk experience more

## **PRO-JECT**

Michell Gyro SE/BB300

£1049.95

## **Turntables & Tuners**

| Arcam DiVA T61 Tuner                 | £199.95  |
|--------------------------------------|----------|
| Cyrus FM X Tuner                     | £499.95  |
| Denon TU260L MKII Tuner              | £99.95   |
| Marantz ST4000 Tuner                 | £109.95  |
| Michell Gyro SE/RB300 Turntable      | £1049.95 |
| Michell TecnoDec Turntable           | £599.95  |
| Project Debut Phono SB Turntable     | £169.95  |
| Project Debut II Turntable (Colours) | £134.95  |
| Project RPM4 Turntable               | £349.95  |
| Pure Evoke 1 DAB Radio               | £99.95   |
| Sony ST-D777ES FM/DAB Tuner          | £499.95  |
| Pure DRX-701ES DAB Tuner             | £229.95  |
|                                      |          |



Up to £150

## **Debut II** Turntable (Black) £119.95

"The original Debut turntable romped away with a Product of the Year Award in 1999, and the MKII version continues the extremely good work. It's a simple affair, that's easy to set up, but don't let the price fool you - it sounds a whole lot more expensive than that.

£349.95

This is a fine turntable, and it clearly reveals the benefits of listening to vinyl, with a rich and detailed soundstage, and a good dynamic response

It's available in six funky colours, so you should find one to suit your decor, and at just a smidge over £100, you can have no excuse not to keep that old vinyl collection in employment for a good few years yet."



Selected outlets are Project Turntable Centres. Colour Options are available at additional cost

RA-02 Amplifier

**STARTER SYSTEM** 

### marantz<sup>®</sup>

CD4000 (Black) CD Player PM4200 (Black) Amplifier

> חסואוחח m71i Speakers





TOP BRAND NAMES AT A BARGAIN PRICE!

## ROTEL

RA-02 Amplifier "The amp has a fast, detailed and yet satisfyingly full presentation. That allows it to make a fine job of the beats of Groove Armada's

RCD-02 CD Player £379.95

Goodbye Century set without losing sight of the fine details of the mix, and also husking out Marianne Faithfull's deliciously smutty vocals on Kissing Time with real relish. Add in decent levels of

**Best Buy** 2002 £251-£500

equipment - and the convenience of remote control, and we reckon Rotel has a winner on its hands."

\*\*\*\* August 2002





"The original Aegis Ones were great speakers, to the extent that they were category winners in our 1998 awards. Since then a host of new models have raised the standards in the sub-£200 category, and the Aegis Ones soon went from stunner to also ran. AE's response to that is an EVO version.



The Aegis Ones genes are clearly evident. The original's refinement and bass weight are preserved and backed up

with better openness and more free-flowing dynamic ability. The speakers would have delivered a cool and calm version of Pink's Missundaztood set they'd be enjoyable, but would lack a little drive and excitement. The new speakers, however, address those limitations... Add



authority and good stereo imaging to the list of plus points and it comes as no surprise to find these speakers at home

with classical, too. Indeed, running through our test room's extensive CD library we couldn't find a

genre that these AE's weren't happy playing." ■ ★★★★★ July 2002

KEF Q1 • £249.95

Please Note: Some products may not be available at all outlets Advertisement valid until at least 9th May 2003, E&OE selection in-store - Not in conjunction with any other offer.



experience more



£369.95

£449.95

| CD Playe         |
|------------------|
| Arcam DiVA CD62T |
| Arcam DiVA CD72T |
| Arcam DiVA CD82T |
|                  |

| Arcam DiVA CD82T                    | £599.95  |
|-------------------------------------|----------|
| Arcam FMJ CD23T                     | £999.95  |
| Cyrus CD6                           | £599.95  |
| Cyrus CD7                           | £799.95  |
| Cyrus CD8                           | £999.95  |
| Denon DCD485                        |          |
| Linn Genki                          | £994.95  |
| Linn Ikemi                          | £1949.95 |
| Marantz CD4000                      | £89.95   |
| Marantz CD6000Ki Signature          | £369.95  |
| Meridian 507                        | £1194.95 |
| Musical Fidelity A308 <sup>ca</sup> | £1999.95 |
| Musical Fidelity Tri-Vista SACD     | £3994.95 |
| Quad 99 CD-P                        | £999.95  |
| Roksan Caspian                      | £994.95  |
| Rotel RCD1070                       | £494.95  |
| Sony CDPXE570                       | £99.95   |

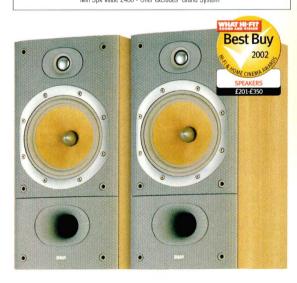


## **Amplifier** Selection

| Arcam DiVA A65 Plus Amplifier            | £369.95  |
|--|----------|
| Arcam DiVA A75 Plus Amplifier            | £469.95  |
| Arcam DiVA A85 Plus Amplifier            | £799.95  |
| Arcam FMJ A32 Amplifier                  | £1149.95 |
| Cyrus 6 Amplifier                        | £599.95  |
| Cyrus 8 Amplifier                        | £799.95  |
| Denon PMA355 Amplifier                   | £179.95  |
| Harman Kardon HK670                      | £299.95  |
| Linn Kolector Pre Amplifier              | £494.95  |
| Linn LK85 Power Amplifier                | £494.95  |
| Marantz PM4200 Amplifier                 | £139.95  |
| Musical Fidelity A3.2 Pre Amplifier      | £999.95  |
| Musical Fidelity A3.2 Power Amplifier    | £999.95  |
| Musical Fidelity A308 Amplifier          | £1999.95 |
| Musical Fidelity Tri-Vista 300 Amplifier | £3994.95 |
| Quad 99 Power Amplifier                  | £549.95  |
| Roksan Caspian Amplifier                 | £894.95  |
| Rotel RA-01 Amplifier                    | £249.95  |
|  |          |

## Claim £200 Off the Speakers\* of your choice

When purchased together with any Arcam CD & Arcam Amplifier combination Min Spk Value £400 - Offer excludes 'Grand System'





## ARCAM GRAND SYSTEM £999.95 Save £190

**CD72T** CD Player A75 Plus Amplifier T61 RDS Tuner List Price £1189 • Arcam Grand System not available in conjunction with any other offer

**Claim Free** m71i **Speakers** Worth £129



## **B&W** Bowers & Wilkins DM602S3 Speakers £299.95

Speaker Cable\* worth £50 with ALL Speakers over £280

"But the B&W 602 S3 are our winners. They're big and not particularly beautiful, yet if it were our money they're what we would buy. 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. Give them sufficient space to breathe, then sit back and enjoy the music." \*\*\*\* Supertest Winner August 2002

B&W CDM NT Series • Prices start from £749.95



attention to sonic detail pays off. Digital outputs are provided on electrical and optical feed, but most people will use the

analogue out, and these sound very good indeed. As usual the tuner is subject to the signal quality off-air, but when it's fed from a high-quality outdoor aerial and a good signal it's capable of a crisp, powerful and detailed presentation. Even more populist music stations like Radio 6 benefit from the mix of a neutral balance and fine weight, while speech is also neutral and easy to follow... If you want a quality home tuner for digital radio, you need look no further." ★★★★★ October 2002

**pricing** DOUCY We always try to ensure our prices are highly competitive. In the event you can find the same products and excellent service at a lower price, please bring it to our store managers' attention.



## Claim £150 Off the Speakers\* of your choice

When purchased together with any Cyrus CD & Cyrus Amplifier combination. Min Spk Value £300



## CD8 CD Player £999.95 8 Integrated Amplifier £799.95

Claim £100 Off the Speakers\* of your choice

When purchased together with any Roksan CD & Roksan Amplifier combination. Min Spk Value £200

ROKSAN

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.

Joining the new Cyrus 8 amplifier is the stunning new high performance, upgradeable CD player, the CD8. Other new models in the 8 series include the AV8 digital AV processor and a new disc player, DVD8, featuring specially tuned video and 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." 👘 🔀 🗮 📩 📩 January 2003



**Best Buy** 

£501-£799

2007

## ROKSAN Kandy KA1 MKIII Amplifier £544.95

"When we last reviewed Roksan's Kandy integrated amp in February it fought off serious competition to come top in a Supertest. This is its replacement, the MkIII. Internal changes include an uprated power supply for the preamp section and identical mono modules for the left and right power amp sections. Roksan also THI-FI?

claims 50 percent lower distortion on line-level inputs and a whopping 150 percent less on the phono input. The rated power output is an impressive 120 watts per channel into 8 ohms, and this amp has a confident, muscular way with music that bears this out. But don't be fooled into thinking this amp is raw but unrefined. With Van Morrison's Down the Road the Kandy has the guts to render the performance

exciting and dynamic, but also the guile to deliver subtle details

The upgraded Kandy MkIII is an excellent

amp; the MkII version was impressive, but MkIII is a stunner. It betters all the amps here in the timing department, and has a wonderfully robust character that works well with all types of music. It manages to retain the good points of the Mkll while adding extra resolution and subtlety. All the amps here have a place in the market. It's just that at £550 the Kandy really does set the pace." The second secon



HI-FI?

Product

2002

ad 11L

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Also Availabl Musical Fidelity Tri-Vista 300

Amplifier • £3994.95

Free Speaker Cable\* worth £50 with ALL Speakers over £280 11L Speakers £379.95

"Quad is best known for its superlative electrostatic designs, which start at £3500. So any £379 pair of speakers that carries the company's name has to be going some to avoid tarnishing the family reputation. The first surprise is that the

11Ls come in real-wood veneers covered with piano-gloss lacquer. This type of finish is almost unheard of at the £1000 mark, let alone at this price. Has anything been sacrificed for such a luxury finish? Here's the second surprise: apparently not.

DUAL

The final surprise? Well, saving the best for the last, the sound quality of the 11Ls is phenomenally good. These are small speakers at just

> 33cm tall, but the scale and authority of their performance is terrific. The laws of physics dictate



If you're in the market for a pair of top quality standmounters these Quads are a must listen. Quite simply, they're good enough to scare the competition big time." ★★★★★ August 2002



Acoustic Energy AE1 MKIII



| Acoustic Energy Aegis Evo Three | £349.95  |
|---------------------------------|----------|
| Acoustic Energy AE1 MKIII from  |          |
| B&W CDM 1NT                     |          |
| B&W CDM 7NT                     | £1249.95 |
| B&W DM303                       |          |
| B&W DM601 S3                    | £249.95  |
| Cyrus CLS70 (Black)             |          |
| KEF Q1                          | £249.95  |
| KEF Q3                          | £399.95  |
| KEF XQ1                         | £999.95  |
| Linn Katan (Maple)              | £634.95  |
| Linn Ninka (Maple)              | £894.95  |
| Mission 780SE                   | £349.95  |
| Mission 782SE                   | £899.95  |
| Mission m74i                    | £299.95  |
| Monitor Audio Bronze B2         | £199.95  |
| Monitor Audio Silver S1         | £299.95  |
| Monitor Audio Gold Reference 10 | £799.95  |
| Monitor Audio Gold Reference 20 | £1499.95 |
| Quad 22L                        | £895.95  |
| Ruark Epilogue II               | £344.95  |
| Ruark Etude                     | £649.95  |
| Wharfedale Pacific EVO 30       | £649.95  |

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oage Toul

## experience **more**





## MUSICAL FIDELITY A3.2 Series

# A3.2 CD Player £999.95 A3.2 Amplifier £979.95

Replacing the **WHAT HI-FI? SOUND AND VISION** Award Winning A3 CD and Amplifier, the new A3.2 models have been further refined and re-styled. The A3.2 CD Player now incorporates the same DAC, filter assembly and control mechanism as the highly-acclaimed Nu-Vista CD Player. The A3.2 Amplifier draws on experience gained through the development of the Nu-Vista M3 amplifier and as such has inherited many of its qualities, producing a sense of ease and flexibility that is normally only associated with far more expensive designs.

## Claim £250 Off the Speakers\* of your choice

When purchased together with any MF CD & MF Amplifier combination. Min Spk Value \$500







## MONITOR AUDIO Silver S6 Speakers £599.95

Free Speaker Cable\* worth £70 with ALL Speakers over £500 British loudspeaker manufacturer Monitor Audio has introduced a replacement series for its acclaimed and award winning Silver Series speakers. "The aim has been to offer real advances in performance and

value", says technical director Dean Hartley. " New models include the S1 and S2 standmounters, the S6, S8 and S10 floorstanders.

"With a close-miked track such as James Taylor's Line 'Em Up from SACD they really deliver the character of the singer's voice and they're just as expressive with the cultured rhythms of Groove Armada's latest outing, having just the right mix of rhythmic control and fluidity... But amazingly the best is yet to come; these are simply beautiful speakers for classical music, once a few days' thrashing has tamed their initial rawness. With the latest release of Holst's *The Planets* on DVD-Audio, they thunder out *Mars* with true conviction.



These are rather magical speakers, with a poise and grace that belies their ability to turn on the power when required. Pair them with a good CD player and suitably accomplished amp, and you won't go far wrong."

## Pioneer PDR609 CD-RW Recorder £199.95

"While it looks simple, the Pioneer has an impressive array of features, including the handy double-speed disc finalization and CD-Text compatibility. Internally, the PDR609 is a big step up from the Award-winning PDR-509 it replaced: the DAC is now a 24-bit/96kHz number, aided and abetted by Pioneer's Legato Link conversion technology, and it has 24-bit A-to-D conversion, which is ideal for copying your vinyl onto CD. If this is your plan, you'll appreciate that the Pioneer makes it easy to create first-rate copies from any source, helped by the manual recording-level controls. It was hard to tell our copy of Jim White's *No Such Place* from the original.

While the Pioneer's replay quality can't match the Marantz, it costs £120 less, which would buy you a lot of blank discs. If you've already got a dedicated CD player, we'd go with this recorder."

## **Recorder** Selection

6 0 0

Also Available

Marantz DR6000

CD Recorder • £279.95

| Harman Kardon CD-R30 CD-RW   | £499.95 |
|------------------------------|---------|
| Marantz DR6000 CD-RW         | £279.95 |
| Sony RCDW3 CD-RW             | £219.95 |
| Yamaha KX393 Cassette Deck   | £119.95 |
| Yamaha KX580SE Cassette Deck | £199.95 |
| Yamaha CDR-HD1300 CD-RW,     | £499.95 |
|                              |         |



**pricing** point we always try to ensure our prices are highly competitive. In the event you can find the same products and excellent service at a lower price, please bring it to our store managers' attention.





## AE1 MkIII Speakers Prices From £1699.95

Best remembered for introducing innovative metal cone driver technology, the original AE1 was met with much critical acclaim and has since become a classic among hi-fi enthusiasts.

Introduced in the late 1980s, the AE1 was originally designed to satisfy the needs of the professional audio sector where it quickly gained a reputation among studio engineers and recording artists world-wide. However, audiophiles soon discovered its transparent and accurate sound, and so the hi-fi market rapidly became the focus of attention.

During the mid 1990s a Series II version was developed introducing relatively small-scale revisions and enhancements. The new MKIII model, however, is the borne out of an intensive R&D programme, it completely re-appraises the design and technology and brings significant performance improvements in all areas. The result is an ultra-compact, two-way speaker of exceptional quality. Sensitivity is 87db/w/m and impedance 8 ohms. The custom-built tweeter uses a 32mm ring-dome radiator and a doped-fabric diaphragm, while the mid/bass driver has a 120mm magnesium die-cast chasis with a ceramic coated alloy cone. Frequency range is from 38Hz to 30kHz. Standard finish is black ash, with cherry, maple and piano black finishes available at extra cost.



## KGMcLaren AV30R AV Processor £1799.95 100x5R Power Amplifier £2994.95

TAG McLaren's AV30R AV Processor is aimed at the home cinema enthusiast who is concerned with keeping up-to-date with the latest surround formats. When partnered with TAG's 100x5R Power Amplifier it makes an exceptional combination

According to What Hi-Fi? Sound and Vision magazine in their October 2002 issue: "In use, the AV30R connected to TAG's 100x5R power amp, is superb. True, it can't quite match the clarity and power of the latest-specification TAG flagship, the AV32Rbp-192, but by any AV standard this is a very high-end piece of kit, with excellent impact and fine detail across a range of movie soundtracks from Once Upon A Time In America to the explosive actionfests. Channel steering is immaculate, and the sense of a soundfield wrapped around you - even in 5.1-channel mode - entrancing, with spine-tingling rearchannel effects. The fine Pro Logic II implementation serves music as well as it does non-discrete AV soundtracks, and with an SACD machine hooked up via the 5.1 channel inputs, the lack of coloration and sheer bass oomph is extraordinary."





**Claim Free** Tivoli Model One Radio worth £99





Strata III Subwoofer (Wood) £799.95 Subwoofer £499.95

REL is an audiophile company who take great pride in designing and building their highly acclaimed subwoofers. Because of their total commitment to performance, REL sometimes adopt unusual solutions to otherwise straight-forward problems.

"The aggression of Rage Against The Machine's Take The Power Back is near-tangible, the midrange a spitting, spiteful companion for the tight, deep, air-agitating bassline. As for the more deft creations of Chick Corea, the REL's articulate nature serves subtly to underpin basslines, rather than swamp them. The



adaptability makes the Strata III a highly recommended subwoofer - it's a very versatile, musical piece of kit, and it doesn't cost the earth." \*\*\*\*\* July 1999

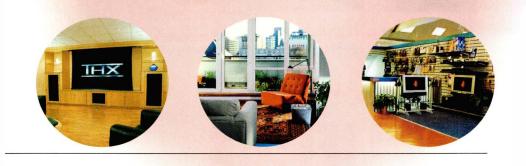
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## outlets nationwide

Aberdeen 491 Union Street 01224 587070 Bedford 29-31 St Peters Street 01234 272779 Birmingham Arch 12, Livery Street 0121 233 2977 Brighton 57 Western Road, Hove 01273 733338 Bristol 92b White Ladies Road, Clifton 0117 974 3727 Cambridge 17 Burleigh Street 01223 304770 Cardiff 104-106 Albany Road 029 2047 2899 Cheltenham 14 Pitville 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 MOVED Leeds 62 North Street 0113 245 2775 Open Sunday Leicester 10 Loseby Lane 0116 253 6567 Lincoln 20-22 Corporation Street 01522 527397 Liverpool 16 Lord Street 0151 707 8417 Maidstone 96 Week Street 01622 686366 Open Sunday Manchester 69 High Street, City Centre 0161 831 7969 Newcastle 19 Newgate Street 0191 221 2320 Norwich 29-29a St Giles Street 01603 767605 Nottingham 597-599 Mansfield Road 0115 911 2121 Oxford 41 St Clements Street 01865 241773 Peterborough 36-38 Park Road 01733 897697 Open Sunday Plymouth 107 Cornwall Street 01752 226011 NEW Poole Latimer House, 44-46 High Street 01202 671677 Preston 40-41 Lune Street 01772 825777 Open Sunday Reading 3-4 Kings Walk Shopping Centre 0118 959 7768 Sevenoaks 109-113 London Road 01732 459555 Sheffield 635 Queens Road, Heeley 0114 255 5861 Open Sunday NEW Solihull 149-151 Stratford Road 0121 733 3727 Southampton 33 London Road 023 8033 7770 Swansea 24 Mansel Street 01792 465777 Open Sunday NEW Swindon 8-9 Commercial Road 01793 610992 Tunbridge Wells 28-30 St Johns Road 01892 531543 Witham (Essex) 1 The Grove Centre 01376 501733 NEW Wolverhampton Burdett House, 29-30 Cleveland St. 01902 312225

## within the M25

 Bromley 39a East Street 020 8290 1988

 Chelsea 403 Kings Road 020 7352 9466

 Croydon 369-373 London Road 020 8665 1203 Open Sunday

 Epsom 12 Upper High Street 01372 720720 Open Sunday

 Holborn 144-148 Grays Inn Road 020 7837 7540

 Kingston 43 Fife Road 020 8547 0717 Open Sunday

 Southgate 79-81 Chase Side 020 8886 2777

 Swiss Cottage 21 Northways Parade, Finchley Rd 020 7722 9777 Open Sunday

 Watford 478 St Albans Road 01923 213533 Open Sunday

Please call to verify hours of business. Contact our outlets via E-Mail outlet@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 DVD Players to 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 now open

We are delighted to announce that we have opened new stores in the following locations. **Poole** 01202 671677 • **Solihull** 0121 733 3727 • **Swindon** 01793 610992 and **Wolverhampton** 01902 312225. Also, our **Leeds** store has re-located to larger premises.

## custom installation

Sevenoaks Sound & Vision's Custom Installation Service enables the integration of a home cinema or hi-fi system into your home as neatly and seamlessly as possible. All electronics can be hidden away, speakers discreetly mounted either in the wall or ceiling and the complete system operated via remote control.





Our installation experts are fully trained to the highest standards in all areas and provide a prompt, reliable and professional service. Whether you're looking for a multi-room system, a dedicated home cinema installation with a retractable screen and built-in speakers or an integrated control or lighting system, Sevenoaks Sound & Vision has a diverse range of products available to cater for all your requirements.

## sevenoaks online

The Sevenoaks Sound & Vision website has news and information on the Sevenoaks group and its 48 outlets nationwide. The website is designed to provide you with answers to the questions you may have when buying new equipment.

There are regularly updated stock clearance lists with hundreds of products on offer and detailed pages to help you locate your nearest outlet.

For impartial advice and information, just click on sevenoakssound and vision.co.uk

## stock clearance

With 48 outlets nationwide, the Sevenoaks Sound & Vision group stock and display a wide range of products. As individual models and product ranges are changed or superseded, the preceding models are made available at a reduced price, for clearance. Visit our Website for an up-to-date list of the clearance stock, listed by outlet, within the Sevenoaks Sound and Vision group.

## 0% finance option<sup>+</sup>

Spread the cost of buying, 0% finance option is available on the vast majority of products we stock. <sup>†</sup>Written details on request. Licensed credit brokers, Minimum balance £400. Subject to status.

## 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

# BUYER'S BIBLE STEREO AMPS

# STEREO AMPLIFIERS

Amplifiers come in two basic forms: integrated and preamplifier (pre) plus power amp combinations. Integrated simply means that both pre and power sections are in one box. There are definite advantages to separating the low level, delicate signals in the preamp from the radiations of a power amp, so the more ambitious designs come in two or more cases. In some cases, each channel has its own power amp called a monoblock.

Amplifiers use two basic technologies: transistors or valves. Transistors are popular because of their practical and technical advantages, but valves – aka tubes – live on owing to aspects of sound quality that 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.

## HOME CINEMA STEREO

Stereo amps can be used in home cinema set-ups as well. You don't get the surround and centre channels, but well set-up stereo speakers do a remarkably good job of creating atmosphere for movies. Stereo amps tend to be better at reproducing music as they don't have the (electrical) noiseinducing digital processing of AV amps. AV amps cost three to four times as much as stereo models of a similar quality.



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.

## Q&A

#### SHOULD I LEAVE MY AMP ON ALL THE TIME FOR BEST RESULTS?

All audio electronics perform better when they are warmed up, and this is particularly the case when it comes to amplifiers. If there's no way that you can leave it on all the time, make an effort to switch it on at least 20 minutes before listening.

#### WHAT IS BI-WIRING AND BI-AMPING?

Bi-wiring is when you run separate cables to the treble and bass/mid terminals on the speaker. In most instances, this improves sound quality so long as identical cables are used. Bi-amping is using two stereo amps to drive one pair of speakers, using one amp to drive the treble and the other for the bass/mid sections of the speakers.

### WHY DO VALVE AMPS HAVE SO LITTLE POWER?

Valve amps are inherently low powered in absolute terms – at least when you compare them to their transistor-based cousins. But when partnered with high-sensitivity loudspeakers, they are quite capable of producing perfectly adequate head-banging levels.

## TOP BUYS



RA-02 £349 A terrific budget integrated from Rotel's latest line-up. Offers pace, guts and finesse, wrapped up in a prettier package than one might traditionally expect from the marque.



Primare 120 £750 This revised version of Primare's A20 MkII sounds significantly more engaging, with genuine punch and rhythm coursing through its circuits. A real musical maestro



A85/P85 £1,330 Bi-amp combo featuring Arcam's £800 integrated and matching power amp. The resulting sound is both robust and finely detailed across myryad music types.



This very classy pre/power combo from the Canadian high-enders is blessed with a particularly natural, open and no-nonsense sound.

## Our favourite 🖃 group test best buy 🕒 group test recommended 📴 editor's choice D new gear review **STEREO AMPLIFIERS**

| 2      | IEKE                           | U     | AMPLIFIEKS  |             | Р           | REMOTE CONTROL | HEADPHONE SOCKET | POWER OUTPUT (W) | ISS          |
|--------|--------------------------------|-------|---|-------------|-------------|----------------|------------------|------------------|--------------|
| Inte   | grated amplifiers              |       |   | LINE INPUTS | PHONO INPUT | E CON          | ONE SC           | OUTPL            | ISSUE NUMBER |
| STATUS | PRODUCT                        | £     | COMMENTS  | PUTS        | NPUT        | TROL           | CKET             | T (M)            | MBER         |
| UP TO  | £1,000                         |       |   |             |             |                |                  | ale a de         | 13           |
| 38     | Arcam DiVA A65 Plus            | 370   | Highly articulate and fluent, offers unusual insight for its price  | 5           | ۲           | ۲              | 0                | 40               | 232          |
| 38     | Arcam DiVA A75 Plus            | 470   | Quick, lively and well-presented amplifier, bass is sharper and more tuneful than its predecessor                               | 5           | •           | 0              | ۲                | 50               | 224          |
| 88     | Arcam DiVA A85                 | 800   | Powerful, engaging amplifier with extensive non-intrusive features, and strong upgrade potential                                | 7           |             | ۲              | ۲                | 85               | 239          |
| 2      | Cyrus 6                        | 600   | This entry-level Cyrus offers all the subtlety and much of the power of the 8   | 5           |             | ۲              | ۲                | 40               | 240          |
| H      | Cyrus 8                        | 800   | Superb at low to medium volumes, and a clear improvement on its predecessor, but deteriorates at high power levels              | 7           |             | ۲              | •                | 70               | 239          |
| 88     | Denon PMA-255UK                | 140   | Great beer-budget buy, with everything necessary for basic but decent high-fidelity operation                                   | 5           |             |                |                  | 30               | 208          |
| R      | Exposure 2010                  | 599   | Neatly turned-out amplifier with mainstream appeal, but a bit on the bland side   | 6           |             | ۲              |                  | 50               | 214          |
| it.    | Marantz PM8200                 | 599   | Warm, solid and likeable sound, with the occasional flash of steel when under pressure  | 5           |             |                | ۲                | 60               | 224          |
| Б      | Myryad Z140                    | 450   | Slimline beauty with genuine integrity and coherence, if relatively limited power   | 5           | •           | •              | ۲                | 50               | 232          |
| ji     | NAD C320BEE                    | 220   | Spirited and enthusiastic amp with slight bass hump and a sound that will suit relaxed speakers                                 | 7           |             | •              | •                | 50               | 232          |
| 88     | NAD C370                       | 450   | Flexible, ultra high-power integrated amplifier delivers a real punch, but is not without finesse                               | 6           |             |                | ۲                | 120              | 217          |
| ß      | 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           |             | ۲              |                  | 30               | 214          |
| R      | Primare A10                    | 500   | Beautifully made, smooth and easy sounding, and though not overtly detailed it is well organised musically                      | 6           | -           | ۲              |                  | 50               | 208          |
| 88     | Primare I20                    | 750   | An amplifier with attitude: punchy fast and secure sounding, with excellent build quality for the money                         | 4           |             | •              |                  | 70               | 239          |
| В      | Roksan Kandy KA-1              | 475   | Power with control, barely compromised by a small degree of dryness   | 6           |             | 0              | ۲                | 120              | 205          |
| R      | Roksan Caspian Mkll            | 895   | An excellent all-rounder, with an articulate, assured delivery and excellent drive capability with a wide range of loudspeakers | 6           |             |                |                  | 70               | 239          |
|        | Rotel RA-01                    | 250   | Take a Best Buy amplifier and rip out the remote control to save £100. No wonder we love it!                                    | 4           | •           |                | 0                | 40               | 237          |
| 88     | Rotel RA-02                    | 349   | Agile and capable slimline design with an engaging sound that draws you into the music  | 4           | ۲           | •              | ۲                | 40               | 232          |
| 88     | Sugden A21a                    | 899   | This single-ended, Class A transistor amp has exquisite resolving ability and presence - an authentic classic                   | 5           |             |                |                  | 25               | 224          |
| ABOVI  | £1,000                         |       |   |             |             |                |                  | See.             |              |
| 58     | Arcam FMJ A32                  | 1,150 | Remarkably flexible and well-featured, with excellent sound quality for the price   | 7           | ۲           | ۲              | 0                | 100              | 228          |
| 88     | ATC SIA2-150                   | 2,375 | Starkly revealing powerhouse that eats most integrateds for breakfast   | 5           |             | ۲              |                  | 150              | 228          |
| R      | Canary Audio CA-608            | 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          |
| EC     | Karan KA-i180                  | 3,900 | Lean, sharp and articulate, this impressively constructed heavyweight is almost up there with the audiophile pre/power elite    | 4           |             | ۲              |                  | 180              | 236          |
| B      | Marantz PM-14 MkII KI          | 2,000 | Highly sophisticated and well equipped, with a refined and relaxed sound quality that's hard to resist                          | 7           | ۲           | ۲              | ۲                | 100              | 228          |
| EC     | Musical Fidelity Tri-Vista 300 | 3,999 | If you audition one, you will want to be one of the handful of Tri-Vista owners   | 5           | ۲           | •              | •                | 350              | 239          |
| 88     | Primare A30.1                  | 1,500 | Smooth, detailed singing quality, elegant appearance and healthy power yield  | 6           |             | 0              |                  | 100              | 214          |
| Ĥ      | T+A PA 1520 R                  | 2,400 | Powerful, punchy amp that has many positive qualities, but sometimes seems to try too hard                                      | 8           | opt         |                |                  | 260              | 230          |

## Our favourite 🖾 group test best buy 🔄 group test recommended 📧 editor's choice 🎽 new gear review

|       |                             |        |   |              | POWER AMPLHER   |             |             |                |                 |              |
|-------|-----------------------------|--------|---|--------------|-----------------|-------------|-------------|----------------|-----------------|--------------|
| Pre/  | Prover amplifiers           | A      | <b>MPLIFIERS</b>  | PREAMPLIFIER | POWER AMPLIFIEF | LINE INPUTS | PHONO INPUT | REMOTE CONTROL | POWER OUTPUT (W | ISSUE NUMBER |
| UP TO | £2,000                      |        |   | 20           | ~               | 0,          |             | 23/24          |                 | ~            |
| 83    | Arcam A85/P85               | 1,330  | Integrated/power amp combo won't suit all systems, but delivers classic A85 virtues plus extra gravitas and range | 0            | ۲               | 7           |             | ۲              | 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    | ۲            | •               | 7           | •           | •              | 100             | 227          |
| EC    | ATC CA2                     | 750    | Stripped-down version of ATC's range topper delivers considerable transparency and bandwidth, Excellent value     | •            |                 | 5           |             | •              |                 | 221          |
| 88    | Creek P43R/A43              | 900    | Great value, with a particularly impressive way with dynamics   | ۲            | 0               | 6           |             | •              | 140             | 212          |
| 32    | Croft Vitali/Series 5C      | 2,000  | Oddball retro style and ergonomics, but truly magical voice coherence and projection, great transparency          | •            | ۲               | 3           | •           |                | 30              | 216          |
| R     | Cyrus aCA7.5/Smart Power    | 1,250  | Great for classical, jazz, and existing Cyrus owners  | ۲            | •               | 7           |             |                | 60              | 212          |
| £.    | Densen Beat 200/300         | 1,985  | Classy jet black cast boxes pack plenty of punch with good total musical coherence (remote £300 extra)            | •            | ۲               | 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                    | ۲            | 0               | 4           | •           | ۲              | 250             | 231          |
| ji.   | NAD Silver Series S100/S200 | 2,000  | Beautifully built kit that sounds as good as it looks, with heaps of power  | ۲            | 0               | 7           |             |                | 200             | 200          |
| EC    | Naim NAC112/NAP150          | 1,425  | Clean, clever simplicity, plus a very well-balanced sound that's much sweeter than earlier Naims                  | •            | ۲               | 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       | ۲            | •               | 6           |             |                | 10              | 216          |
| ABOVE | £2,000                      |        |   | NE E         |                 |             |             |                |                 |              |
| 5     | 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 MkI/VT100 MkII)                        | ۲            | 0               | 6           | 0           | 0              | 100             | 216          |

SPECS KCY 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.

PECIFICATIONS

## 

| Pre/   | power amplifiers                 |        |  | PREAMPLIFIER | VER AMPLIFIER | LINE INF | PHONO II | OTE CONTROL | R OUTPUT | SSUE NUMBER |
|--------|----------------------------------|--------|--|--------------|---------------|----------|----------|-------------|----------|-------------|
| STATUS | PRODUCT                          | £      | COMMENTS   | FIER         | IFIER         | SIDe     | IPUT     | ROL         | N)       | IBER        |
| EC     | AVI S2000M                       | 2,398  | This preamp/monoblock pairing does most things very well and images better than most                                 | •            | •             | 5        |          | ۲           | 150      | 221         |
| EC     | Border Patrol P20                | 6,750  | Muscular 300B P-P design with fluidity and dynamics to match the best  |              | •             |          |          |             | 20       | 231         |
| 88     | Bryston BP-20/4B-ST              | 3,375  | Quick, articulate and powerful, this is an excellent all-round amp which controls difficult loudspeakers superbly    | •            | •             | 8        |          |             | 250      | 230         |
| EC     | Classé CP-35/CA-101              | 2,797  | Very classy Canadian pre/power combo with a natural, open and no-nonsense sound                                      | •            | •             | 4        |          | ٠           | 100      | 237         |
| 68     | Electrocompaniet EC4.7/120DMB    | 3,448  | Bulky Norwegian combo has wonderful transparency, wide dynamic range and fine musical tension                        | •            | •             | 6        |          | •           | 120      | 216         |
| 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   |              | •             |          |          |             | 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 | •            |               | 4        |          | •           |          | 238         |
| EC     | Linn Klimax Twin                 | 6,000  | Super-slim stereo power amp uses advanced switch-mode power supplies to fast, engaging effect                        |              | •             |          |          |             | 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 | •            | •             | 6        |          | •           | 125      | 195         |
| EC     | Naim NAP500                      | 10,995 | Wonderful neutrality, bandwidth and dynamic range, plus Naim's traditional leading-edge definition                   |              | •             |          |          |             | 140      | 208         |
| EC     | Naim NAC552                      | 11,750 | Extremely expensive preamp, but still solid value. Magnificent sound with fine flexibility and convenience           | •            |               | 6        |          | ٠           |          | 233         |
| R      | Primare A30.1/A30.2              | 2,700  | Powerful, smooth, though slightly uneven with some speakers, but excellent control and separation in others          | •            | •             | 6        |          | ٠           | 100      | 225         |
| EC     | Steinhart DVP 2XR/Fidelio 102 DD | 7,440  | Brilliantly musical, making even difficult material enjoyable, but gets hot and has ergonomic foibles                | •            | •             | 7        | •        | •           | 100      | 236         |
| R      | TAG McLaren DPA32R/250MR         | 4,940  | In a class of its own for extendibility and it's tremendously subtle, though it can sound constrained dynamically    | •            | ٥             | 6        |          | •           | 250      | 230         |

## **AVAMPLIFIERS** Surround sound amps for music and movies

The multichannel, surround sound or AV amplifier is a popular option, thanks to the success of the DVD player and home cinema. Now you can buy five channels or more of amplification for the price of two. Now that multichannel music is also on the agenda, there's a lot to be said for a good AV amp or receiver (an amp with a radio tuner built in).

So if you fancy hearing what DVD-Audio, SACD or even music DVD-Video can do, then check out a multichannel amp and speaker set-up – they're stunning with movies and none too shabby with music.

AV amps are usually designed primarily for movies and come with digital processing for the various soundtrack formats – Dolby Pro-Logic (analogue), Dolby Digital and DTS, which offer discrete surround sound in 5.1 and 7.1 channel formats. More ambitious designs also offer THX post processing, designed to emulate the sound of the mixing theatre at home.

Processing in AV amps is needed because the surround formats on DVD-Vs are compressed, limiting their high-fidelity

potential. This is why new formats SACD and DVD-A, which don't use 'lossy' compression, were created for music.

All this processing power can take its toll on analogue formats. The best multichannel amps for music are often the simplest, but any that offer a complete bypass option with six-channel input are suitable. It's also worth looking at real power – five or seven channels of amplification are not easy to produce with a feeble power supply, and the cheaper amps in particular often fail to live up to the claims.

## **Q&A**

POWE

#### **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.

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

## **HI-FI MEETS SURROUND SOUND**

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



#### **Pioneer** VSX-D2011 £900 A feature-packed receiver, and a great sounding one to boot. Only Denon's new AVR-3803 currently competes at the price.



Marantz SR9200 £2,000 Few AV receivers manage to sound as musical as this one. A top all-rounder and an excellent multichannel solution.



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.



AV8/P7 £5,498 A fantastic achievement from this respected UK brand – an AV processor and seven-channel power amp par excellence.

SPECIFICATIONS

5-CHANN

# Our favourite Group test best buy in group test recommended ed editor's choice in new gear review **AVAMPLIFIERS**

| Mul    | tichannel amplifiers    |       | d AVR100 with Dolby Pro-Logic II and some bass management. Great for stereo, a bit bass-light for mulfichannel packed 7.1 channel AV receiver which needs a lot of studying but does everything well packed with superb spatial processing, combined with powerful, though slightly opaque overall audio quality mp with genuine high-res hi-fi credentials. Includes a ground-breaking 'wide bandwidth' digital audio link rade to the AVR 5500 comes with features that are actually of some use to the audiophile and a meaty sound to boot I, cool-running UK-customised THX receiver with spacious, relaxed sound quality with music and movies alike e home cinema amp that sounds more powerful than its specs imply, and competes with specialist stereo amps ding sonic performance for the price and a remarkable features list to boot nannel tour de force with automatic speaker set up and eq, excellent with music, movies and DVD-A/SACD receiver with special power amp (£2,499). An excellent fusion of stereo and surround sound -beak 5.1 channel processor (£2,999) and seven-channel power amp (£2,499). An excellent fusion of stereo and surround sound -beak 5.1 channel processor that will integrate into an existing hi-fi system with ease Cyrus sound translated to a multichannel audio from a novelty into a genuine advance for the high fidelity art d and listenable processor that will integrate into an existing hi-fi system with ease Surround processor with flexible modular construction, marvellous versatility to drive any speaker configuration mee-box, five-channel AV amplifier. Great with movies and beats most multichannel amps hands down with music y credible multichannel system from Naim is idiosyncratic but offers excellent basic sound with mose spatial steering warm solid sound and high detail resolution, and some great gadgets surround processor with flexible modular construction, marvellous versatility to drive any speaker configuration mee-box, five-channel AV amplifier. Great with movies and beats most multichannel amps hands down with | RECE | LINE INPUTS | 1 COMPATIBLE | EL POWER | SSUE NUMBER |
|--------|-------------------------|-------|---|------|-------------|--------------|----------|-------------|
| STATUS | PRODUCT                 | £     | COMMENTS  | NER  | SID         | BLE          | (M)      | BER         |
| INTE   | GRATED AV AMPS          |       |   |      |             |              |          |             |
| £1     | Arcam AVR200            | 800   | Upgraded AVR100 with Dolby Pro-Logic II and some bass management. Great for stereo, a bit bass-light for multichannel   | ۰    | 6           |              | 70       | 229         |
| $\geq$ | Denon AVR-3803          | 899   | Feature packed 7.1 channel AV receiver which needs a lot of studying but does everything well   | ۲    | 11          | ۲            | 110      | 239         |
| R      | Denon AVC-A11SR         | 1,800 | Feature-packed with superb spatial processing, combined with powerful, though slightly opaque overall audio quality   |      | 11          | 0            | ۲        | 235         |
| EC     | Denon AVC-A1SR          | 3,000 | An AV amp with genuine high-res hi-fi credentials. Includes a ground-breaking 'wide bandwidth' digital audio link   |      | 8           | 0            | 170      | 232         |
| >      | 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           | •            | 85       | 240         |
| BB     | Marantz SR9200          | 2,000 | Powerful, cool-running UK-customised THX receiver with spacious, relaxed sound quality with music and movies alike  | 0    | 9           | •            | 0        | 235         |
| 88     | NAD T761                | 650   | First-rate home cinema amp that sounds more powerful than its specs imply, and competes with specialist stereo amps   | •    | 9           |              | 80       | 223         |
| >      | Pioneer VSX-D2011       | 900   | Outstanding sonic performance for the price and a remarkable features list to boot  |      | 10          | •            | 140      | 235         |
| 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           |              | 150      | 229         |
| 10     | Sony VA-777ES           | 1,500 | Smart circuitry gives this model unusual precision and transparency, and it is a fine all-rounder   |      | 9           |              | 100      | 210         |
| AV PR  | OCESSORS AND POWER AMPS |       |   | 150  |             |              |          |             |
| EC     | 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         |
| EC     | Bryston SP1/9B THX      | 7,100 | Stripped-back 5.1 channel processor/amp combo reaches genuine audiophile heights  |      | 6           | opt          | 120      | 219         |
| EC     | Copland CVA306/CVA535   | 3,748 | Tube analogue six-channel pre transforms multichannel audio from a novelty into a genuine advance for the high fidelity art   |      | 5           |              | 125      | 236         |
| >      | Cyrus AV8               | 1,100 | A refined and listenable processor that will integrate into an existing hi-fi system with ease  |      | 9           |              |          | 235         |
| R      | Cyrus AV8/3x Smartpower | 2,900 | Classic Cyrus sound translated to a multichannel arena, limited features and power, but civilised sound   |      | 3           |              | 105      | 238         |
| 88     | 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          | ۰            | 60       | 238         |
| EC     | Meridian 861            | 9,833 | Powerful surround processor with flexible modular construction, marvellous versatility to drive any speaker configuration   |      | 6           | ۲            |          | 230         |
| R      | Myryad MDP500/MA240/360 | 3,799 | Superb three-box, five-channel AV amplifier. Great with movies and beats most multichannel amps hands down with music   |      | 9           | opt          | 120      | 215         |
| R      | 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           | ۲            | 50       | 238         |
| 68     | Primare SP31.7/A30.5    | 4,200 | Great all-round system which brings the qualities of good stereo high fidelity to a multichannel world  |      | 5           | •            | 120      | 238         |
| R      | Roksan DSP/5ch amp/VSU  | 2,440 | Clean, powerful stereo expanded seamlessly, if without distinction, to 5.1 channels   |      | 4           |              | 80       | 210         |
| EC     | TAG McLaren AV32R EX    | 2,994 | Flexible AV processor, unusually good with music. Excellent for multichannel system in standard or seven-channel 'EX' form  |      | 6           | 0            |          | 215         |
|        |                         |       |   |      |             |              |          |             |

SPECS XEY 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.

nd Fantastic range of u nit is fitted with a 10A mains R.F.I. filter with earthline choke a ains-borne transients, switching surges, R.F. interference, interm TYPE NO. NO. OF SOCKETS OVERALL LENGTH PRICE £83.72 el Ma HF 4 4 446mm nt Fu ¥ RFI 10A Mains Filter & Surge Supp HF 6 557mm £92.47 Earth Stud HF 8 670mm £98.70 2m x 1.5mm Screened Cable Call 020 890 5 Entertainment – Power VERDICT OLS TEL: 0



THIN DOA

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#### Krell FPB400cx/700cx

The Full Power Balanced X Series Stereo Amplifiers offer the greatest performance possible from a stereo amplifier. All X Series amplifiers share the same circuit topology, from the 300 Watt Full Power Balanced mid-level FPB 400cx at 400 Watts, to the awesome 700 300c Watt I the most powerful stereo amplifier ever offered by Krell. plifiers have much in common, there are also some int reasons for investing in the additional power. Each amplifier es a massive power supply, doubling in size with each step. When the powering eases from 300 Watts to 400 Watts and 700 Watts, the er supplies increase from 2000 Watts to 4000 Watts to 8000 Watts. ectively. More power delivers more authority on the low end, greater e through the critical midrange frequencies, and effortless highs. In short, with every significant increase in power, there is a palpable increase in the believability of the sonic presentation. We are pleased to announce that Midland Audio X-Change is the exclusive Krell dealer for the Midlands, and will be hosting a Kre evening within the next few months. To hear how good these really are - call John Roberts for an appointment

#### Krell KPS 28c

The KPS 28c Compact Disc Player reveals the ful compact disc format. The KPS 28c is noted for i finest musical details-many listeners boast of collections "for the first time" upon introducin systems. CAST, Krell's proprietary current along with Current Mode, Class A, and d power supply, featuring several stages er the Krell Current Tunnel preamplifier. The assis is finished to complement the Full Pow fiers right down to the elegant convex cent nined d remote control, hand finished and la

#### Krell KCT Preamplifie

The Krell Current Tunnel (KCT) CAST stereo preamplifier holds the distinction of being the finest sounding, most technologically advanced, and most system friendly stereo preamplifier ever designed by Krell. It derives its name from the way the signal is routed from its input to its output. The signal is brought into the KCT in the current domain from a CAST source such as the Krell KPS 28c Compact Disc Player. The signal stays in the current domain as it travels through the KCT, protected from extraneous noise and unwanted signal interference as if it were in a tunnel. Using CAST technology and power supply regulation that is a KCT is able to deliver a usable bandwidth that extends to 1.5 MHz. The result is seamless, transparent musical reproduction of even the most dynamically demanding sources. Ease of operation is also accounted for in equal measure with features that include dual-zone operation, with independent volume controls, Theatre Throughput for integration into home theatre systems, and RS-232 controls for whole house automation. The KCT is a stereo preamplifier that delivers the ultimate stere operformance today and the opportunity for continued growth into the future.

# Midland Audio X-change MAX

#### Sonus Faber Cremona Auditor

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#### Verity Audio Tamino II

Building on the worldwide success of its prestigious products, Verity Audio is pleased to introduce a new high-quality loudspeaker – The Tamino. It sets new standards of sonic excellence at a sensible price of £3999.

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loudspeakers an enviable notoriety.

The Tamino definitely answers a growing need for a system that offers a fine musical experience to more music lovers while being a luxury piece of furniture Book now to hear this amazing loudspeaker.





#### Bel Canto eVo2/4

The Bel Canto eVo2 represents the true potential of modern digital amplification — providing a transparent and musical path to the original performance for stereo and multi-channel systems. The eVos present a naturally sweet and extended sound quality that transcends older amplifier technologies in both efficiency and sonic quality. With the advent of new and emerging digital technologies, this is an amplifier design whose time has truly come. Guided by the musicality of Bel Canto design, the eVos mark a remarkable step forward in digital stereo amplification. www.midlandaudiox-change.co.uk call John Roberts Tel 01562 822236 181 Franche Rd • Kidderminster • Worcs • DY11 5AD e-mail sales@midlandaudiox-change.co.uk Fax 01562 750246 Mobile 07721 605966

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# HI-FICHOICE BUYER'S BIBLE STEREO SPEAKERS

# **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



### **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

POWER

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.

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 quidelines rather than rules.

## 0.&.A

#### **IF SPEAKERS ARE RATED AT 75 WATTS, DOES THAT MEAN** I NEED A 75 WATT AMP?

No, see the box on power for the full story.

#### **WHICH SPEAKERS ARE BEST** FOR SMALL ROOMS?

Those designed to work close to the wall will be smoother in confined spaces. Speakers that have relatively dry, tight bass will also sound better.

#### WHICH SPEAKERS ARE BEST FOR BIG ROOMS?

Big, efficient, easy-to-drive designs are more likely to be able to fill a room better than compact models.

#### **DOINEED TO BUY CENTRE** AND SURROUND CHANNELS FROM THE SAME BRAND AS **MY STEREO SPEAKERS?**

Yes, assuming that you're wanting to create a homogenous surround sound experience, where voices don't change when they move from one channel to another.

# STEREO SPEAKERS BUYER'S BIBLE

## TOP BUYS



Audience 42 £400 It might be expensive for a vinyl-covered miniature, but it's an aristocrat among the breed, and we'd be surprised if there's a better small speaker around for the price.



**Castle** Conway 3 £930 A great success with its lovely real wood finish and beautifully balanced sound, along with fine dynamics and transients. A kingly sub-£1,000 floorstander.



PMC FB1 £1,410 A well-built floorstander that delivers the goods sonically, with the sort of subtlety and delicacy that's likely to have strong audiophile appeal.



Signature 805 £2,250 You won't get this degree of resolution out of a wider bandwidth speaker at anywhere near the price, and most of your music will sound considerably better through them.

|        |                             |     | GROUP TEST BEST BUY 🔲 GROUP TEST RECOMMENDED 📧 EDITOR'S CHOICE 🖻 NEW GEAR REVIEW                                     |                 | SP           | ECIF          | ICATI          | ONS        |               | 2.635        |
|--------|-----------------------------|-----|--|-----------------|--------------|---------------|----------------|------------|---------------|--------------|
| 5      | IEKE                        |     | SPEAKERS   | SIZE            | FLOO         | EAS           | BASS           | В          | CLOS          | ISSI         |
| Ste    | reo speakers                |     |  | Size W,H,D (CM) | FLOORSTANDER | EASE OF DRIVE | BASS FROM (HZ) | FREE SPACE | CLOSE TO WALL | ISSUE NUMBER |
| STATUS | PRODUCT                     | £   | COMMENTS   | (CM)            | DER          | ORIVE         | (HZ)           | ACE        | ALL           | ABER         |
| UP TO  | D£1,000                     |     |  |                 |              |               |                |            |               |              |
| BB     | Acoustic Energy Aegis Evo 1 | 180 | An unusually classy and sophisticated performer for the price; laid-back sound and good looks too                    | 19,36,24        |              | A             | 30             | ٢          |               | 226          |
| R      | AR S20                      | 150 | Might not have the most dynamic sound around, but it's an honest and effective musical communicator                  | 20,37,28        |              | Α             | 28             | •          |               | 215          |
|        | ATC SCM12                   | 999 | Transparent, engaging and quick - a revealing, high-fidelity performer that's not afraid to bare all                 | 22,39,25        |              | Α             | 62             | •          |               | 237          |
| R      | Audio Note AZ One           | 449 | Delivers music with great gusto and enthusiasm, but also more than its fair share of coloration                      | 23,83,29        | ۲            | Α             | 30             |            | ۲             | 215          |
| R      | AVI Biggatron Red Spot      | 599 | Good bass coherence and timing, but the lean and decidedly forward balance won't be to every taste                   | 19.5,37,30      |              | Α             | 30             |            | •             | 211          |
| 88     | 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             |            | ۲             | 226          |
| 88     | 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        |              | Α             | 25             | •          |               | 234          |
| >      | B&W DM309                   | 330 | All the grace and punch of the smaller DM303 - a suberb floorstander for the money                                   | 20,91,30        | Ø            | Α             | 60             | 0          |               | 235          |
| 88     | B&W DM603 S3                | 600 | Excellent all-rounder, smooth for its price with fine bass and mid, though top might be more refined                 | 20,91,29        | •            | A-            | 25             | ۲          |               | 231          |
| R      | B&W CDM-1NT                 | 750 | An uncommonly stylish and sonically self-effacing standmount that should be very easy to live with                   | 22,40,29        |              | A             | 30             | •          |               | 208          |
| R      | Blueroom Minipod            | 249 | Wonderfully blobular styling aside, it's hard not to fall for the Minipod's openness, expression and detail          | 18,34,17        |              | Α             | 50             |            | •             | 225          |
| E,     | Castle Durham 3             | 399 | A very attractive near-miniature wallmount with a lively and communicative disposition - lots of fun                 | 19,37,22        | •            | Α             | 45             | •          |               | 227          |
| 88     | 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        | ۲            | A+            | 30             | 0          |               | 237          |
| ß      | 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        | ۲            | Α             | 25             |            | ۲             | 27           |
| BB     | Dynaudio Audience 42        | 400 | An aristocrat of the vinyl-covered miniature breed. A terrific small speaker for the price                           | 17,29,24        |              | Α             | 40             | •          |               | 215          |
| 75     | Dynaudio Audience 62        | 729 | Pricey but cute vinyl floorstander that is a class act sonically - lightweight, but clean and dextrous               | 20,86,26        | •            | A             | 30             | •          |               | 231          |
| R      | 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        |              | Α             | 40             | 0          |               | 231          |
| R      | Energy Connoisseur C-5      | 600 | Has a marvellously even and neutral overall balance, if a little too laid-back with restrained dynamic expression    | 20,95,37        | •            | A+            | 23             | •          |               | 240          |
| 68     | Epos M12                    | 499 | Retains the beguiling midband coherence that made the ES12 such a favourite. A genuine class act                     | 20,38,26        |              | A             | 40             | •          |               | 215          |
| 88     | Infinity Alpha 30           | 300 | Some sharpness and nasality, but fine musical literacy plus a good measure of dynamic expression                     | 22,86,29        | ۲            | Α             | 30             |            | 6             | 215          |
| В      | Jamo E 850                  | 400 | A tad bright perhaps, but a cleverly conceived and good-looking speaker at a very reasonable price                   | 18,87,34        | •            | A-            | 30             | •          |               | 224          |
| BB     | JMLab Chorus 715            | 529 | A fine all-rounder, this compact floorstander is lively and well balanced with good dynamic drive and grip           | 20,94,28        | •            | A-            | 22             |            |               | 227          |
| R      | JMlab Cobalt 816            | 899 | A little lean, cool and bright, but has righteous dynamic expression and lively communication skills                 | 22,99,29        | •            | Α             | 22             | •          |               | 224          |
| 8      | KEF Q1                      | 250 | Stylish if slightly small-sounding stand-mount with fine midband coherence; works well close to a wall               | 22,35,30        |              | A             | 30             |            | •             | 234          |
| R      | Mission m71                 | 129 | Neat-looking and very discreet-sounding at a very nice price; experiment for best placement                          | 17,29,28        |              | A             | 40             |            | •             | 226          |
| BB     | Mission m73                 | 199 | Good-looking floorstander. Dynamics are a little limp, but it has a good overall balance. Excellent value for money  | 20,88,31        | •            | A             | 25             | •          |               | 215          |
| >      | Mission m51                 | 300 | Distinctive and dynamic - not the last world in subtlety but enjoyable with both music and video sources             | 21,32,34        |              | A+            | 58             |            | 0             | 228          |
| ≥      | Monitor Audio B2            | 200 | A lively and entertaining speaker with tight controlled bass and pronounced midband                                  | 18.5,35,25      |              | A             | 42             |            | •             | 238          |
|        | Monitor Audio Silver S1     | 300 | Super-quick sonics thanks to the C-CAM metalised drivers. Resolution and speed – a great value box                   | 18,30,24        |              | A             | 45             |            | •             | 236          |
| R      | Monitor Audio Silver S8     | 800 | A thoroughly impressive all-rounder, notable for its wide dynamic range, excellent imaging and fine neutrality       | 19,90,27        | •            | A             | 20             | •          |               | 237          |
|        | Mordaunt Short MS914        | 300 | An even and open loudspeaker that is both detailed and precise. A budget gem   | 21,90,27        | •            | A             | 50             | •          |               | 234          |
| 8      | Neat Petite III             | 845 | The treble is peaky, but this is still one of the most coherent and communicative miniatures around                  | 20,31,20        |              | A             | 30             | _          | •             | 211          |
| B      | Opera SP-1                  | 525 | A strong case for serious hi-fi with curves. Sound is clear, crisp and detailed                                      | 16,29,23        |              |               | 50             |            |               | 225          |

SPECSIVEY 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

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# STEREO SPEAKERS BUYER'S BIBLE

## 

| Ster  | eo speakers               | £      |  | SIZE W,H,D (CM | FLOORSTANDER | EASE OF DRIVE | BASS FROM (HZ) | FREE SPACE | CLOSE TO WALL | ISSUE NUMBER |
|-------|---------------------------|--------|--|----------------|--------------|---------------|----------------|------------|---------------|--------------|
| BB    | 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       | 20           | A             | 50             |            | 0             | 240          |
| 88    | PMC TB2                   | 700    | A worthy successor to the TB1, which sets a high standard in its size/type for neutrality and transparency         | 20,41,31       |              | A             | 30             | 0          |               | 211          |
| 16    | Sonus Faber Concerto Home |        | Looks good and sounds better. Great midband communication skills, well aligned for close-to-wall siting            | 24,36,34       |              | A             | 40             |            | •             | 233          |
| B     | Spendor S3                | 600    | Beautifully voiced, unboxy, lacks some dynamic and loudness capabilities. Best suited to small rooms               | 17,31,21       |              | A-            | 30             |            | 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       |              | A+            | 50             |            | 0             | 240          |
| 98    | Tannoy Mercury mX3-M      | 229    | Beautifully balanced and voiced, with low coloration and good transparency, but could be more dynamic              | 19,87,25       | 0            | A+            |                | •          |               | 234          |
| R     | Tannoy Eyris 1            | 600    | Pricey but very cute wallmount miniature; oddball, but has marvellous midband subtlety and delicacy                | 17, 35, 26     |              | A+            |                |            |               | 227          |
| R     | Tannoy Eyris 2            | 999    | This super-slim and cutely different-looking floorstander is very communicative, despite weak treble               | 17,91,26       | 0            | A             | 20             | •          |               | 23           |
| 88    | Triangle Antal XS         | 875    | Ugly duckling has a rather tasty sound, with plenty of vigour and excitement                                       | 22,108,30      | 0            | A-            | 40             | •          |               | 219          |
| ABOVE | £1,000                    |        |  |                | 1            |               |                |            |               |              |
| EC    | ATC Active 20             | 2,538  | 30k + 300W equals resolution and bass that most amp/speaker combinations dream about - a bargain                   | 56,28,36       |              | ACT           | 45             |            |               | 240          |
| 8     | Arcaydis Concept 2        | 1,199  | Solid oak floorstander is a little lazy sounding, but is well balanced and smooth with modest coloration           | 19,90,26       | 0            | A-            | 25             | •          |               | 211          |
| 8     | 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          |
| EC    | ATC SCM10A                | 1,269  | Stylish, active powerhouses with plenty of subtlety when required (balanced connection only)                       | 23,39,31       |              | A             | 45             | •          |               | 22           |
| 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       |              | A             | 38             | 0          |               | 218          |
| R     | Audio Note AN-E/D         | 1,520  | This classic large standmount might have throwback aesthetics, but it delivers an exceptional all-round sound      | 36,79,28       |              | A+            | 20             |            |               | 204          |
| R     | Audio Note AN-J/SPe       | 1,675  | Retro styling, but a vigorous and dynamic performer that creates fine musical tension                              | 33,59,25       |              | A             | 38             | 0          |               | 219          |
| ß     | B&W Nautilus 805          | 1,400  | A small-sounding loudspeaker dynamically, but very stylish, clean and 'unboxy', delivering loads of detail         | 24,42,31       |              | A             | 28             | •          |               | 199          |
| 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      | 0            | A-            | 34             | ۲          |               | 183          |
| R     | B&W Nautilus 801          | 8,500  | The 801 is a magnificent loudspeaker in nearly every respect, but it is one that likes to play loud                | 52,111,69      |              | A-            | 34             |            |               | 186          |
| EC    | B&W Nautilus 800          | 11,000 | Unequivocal challenge for world domination. One of the most revealing speakers around                              | 45,120,65      |              | A-            | <20            | •          |               | 231          |
| EC    | B&W Signature 805         | 2,250  | Staggering transparency and resolution for the money, one of the best standmounts money can buy                    | 24,42,34       |              | A-            | 42             | •          |               | 232          |
| R     | 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            | A-            | 40             | 0          |               | 204          |
| 88    | Castle Harlech S2         | 1,000  | Improved Harlech is slightly aggressive, but lots of fun, and very good-looking too                                | 20,96,33       | 0            | A             | 50             | •          |               | 219          |
| R     | Castle Howard S3          | 1,350  | A solid all-rounder with uniquely spacious imaging, bit pricey compared to some though                             | 21, 99, 32     | 0            | A+            | 38             | ٠          |               | 229          |
| в     | 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      | •            | А             | 41             |            | 0             | 225          |
| R     | Dali Evidence 870         | 1,249  | A real heavyweight, sonically and physically, and good for movies as well as music                                 | 25,106,36      | 0            | A-            | 20             | 0          |               | 204          |
| BB    | Dynaudio Audience 82      | 1,460  | Bulky, with vinyl finish, but offers exceptional neutrality, bass extension, power handling and loudness potential | 22,106,36      | ۲            | А             | 30             | 0          |               | 229          |
| R     | Dynaudio Contour 1.3 Mkll | 1,198  | Outstanding performer among compact standmounts; neutral, with fine punch and dynamic range                        | 20,38,29       |              | A-            | 45             | 0          |               | 219          |
| R     | Excel 202A                | 1,795  | Very pro-styling, a compact active monitor in the BBC tradition - neutral, unboxy and laid back                    | 15,21.5,36     |              | act           | 25             | 0          |               | 214          |
| R     | Harbeth Super HL5         | 1,699  | Looks old-fashioned, but classic monitor combines authority and transparency with good neutrality                  | 33,64,31       |              | А             | 30             | 0          |               | 233          |
| 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             | •          |               | 233          |
| EC    | JBL Ti-2K                 | 1,250  | Solid standmount with boat-tail rear end and highly detailed, spacious sound alongside weighty bass                | 42,28,42       |              | A             | 45             | •          |               | 230          |
| BB    | JMlab Cobalt 826          | 1,279  | Big three-way French floorstander is lively, informative and mostly neutral, if a tad bright                       | 22,103,34      | 0            | A-            | 35             | •          |               | 219          |
| EC    | JMlab Micro Utopia        | 3,349  | Superb top-of-the-line standmount with magnificent powers of analysis and communication; no deep bass              | 26,43,41       |              | A-            | 50             | •          |               | 220          |
| В     | Linn Katan Aktiv/LK140    | 2,325  | Too small to have much grunt or loudness, but bright top is very sweet, clean and detailed                         | 17,34,23       |              | act           | 40             |            | ۲             | 214          |
| EC    | Living Voice Auditorium   | 1,700  | New improved version even better than before. Beautifully natural and expressive - a real universal soldier        | 22,97,28       | ۲            | A+            | 35             | ۲          |               | 239          |
| EC    | Living Voice Avatar       | 2,700  | Dynamic and highly resolved, yet physically discreet design with a relaxed balance                                 | 22,104,27      | 0            | A+            | 40             | 0          |               | 218          |
| EC    | Living Voice Avatar OBX-R | 4,000  | Discreet, but extremely fine design with external crossover and an affinity with great amps and sources            | 22,104,27      | 0            | A+            | 45             | 0          |               | 196          |



SPECIFICATIONS

## 

| Stereo speakers           |                          |        | SIZE W.H.D (CM)  | FLOORSTANDER | EASE OF DRIVE | BASS FROM (HZ) | FREE SPACE | CLOSE TO WALL | ISSUE NUMBER |     |
|---------------------------|--------------------------|--------|--|--------------|---------------|----------------|------------|---------------|--------------|-----|
| STATUS PRODUCT £ COMMENTS |                          |        | (CM)   | DER          | RIVE          | (HZ)           | ACE        | ALL           | BER          |     |
| 88                        | Meridian M33             | 1,560  | Compact active wallmount packs remarkable dynamic vigour into a very discreet package                                | 15,38,22     |               | act            | 45         |               | ۲            | 214 |
| R                         | Naim Allae               | 1,990  | Chunky little floorstander has a 'cold' overall balance, but remarkable powers of musical analysis                   | 24,94,28     | 0             | Α              | 40         | ۲             |              | 229 |
| 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         | ۲             |              | 200 |
| EC                        | Naim SL-2                | 4,995  | Delivers magnificent musical analysis and communication skills in a notably discrete physical package                | 28,103,33    | ۲             | A-             | 20         |               | ۲            | 232 |
| EC                        | Neat Ultimatum MF9       | 8,500  | Superb musical communicator with splendidly deep and agile bass and fine open neutrality                             | 22,150,40    | ٩             | A-             | 20         | ۲             |              | 226 |
| R                         | 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             |              | 199 |
| 88                        | PMC FB1                  | 1,410  | Has the lively coherence of a simple two-way, alongside impressive bass weight and extension                         | 20,105,31    | ۲             | Α              | 20         | 0             |              | 204 |
| R                         | PMC AML1                 | 3,700  | Sparkling active Pro monitor with serious attitude, 'in yer face' balance and great dynamics                         | 20,40,32     |               | Α              | 25         | ۲             |              | 214 |
| 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         | ۲             |              | 237 |
| 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             |              | 221 |
| R                         | 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         |               |              | 229 |
| В                         | Ruark CL20               | 1,650  | This punchy rock'n'roller has plenty of drive and enthusiasm, but can sound aggressive                               | 23,93,34     | ۲             | Α              | 38         | ۲             |              | 219 |
| 88                        | Snell E.5 Mk2            | 1,520  | Large floorstander has serious deep bass extension, and also a delicate midband with low coloration                  | 22,109,30    |               | A              | 20         | ۲             |              | 211 |
| R                         | Spendor SP2/3e           | 1,295  | Large standmount is polite to a fault, but has beautiful 'hear-through' transparency - a genuine classic             | 28,55,33     |               | A+             | 50         | ۲             |              | 219 |
| R                         | Spendor S8               | 1,700  | Classic midband neutrality and transparency, the S8 has great subtlety and fine bass grunt too                       | 23,92,32     | •             | A+             | 40         |               | •            | 229 |
| EC                        | Spendor S9               | 2,500  | Meaty three-way with superb bass and explicit mid - one for detail fans  | 24,99.8,38   | ٠             | A+             | 37         | •             |              | 223 |
| EC                        | TAG McLaren F1           | 17,995 | Oddball aesthetics with accurate, unflappable, controlled and consistent sonic neutrality                            | 40,127,48    |               | A-             | 25         | ۲             |              | 202 |
| EC                        | Tannoy Dimension TD8     | 4,000  | This stylish speaker is a splendid all-rounder, with fine dynamics, precise imaging and minimal coloration           | 30.5,85.5,3  | ) 🜒           | A-             | 25         | 0             |              | 240 |
| EC                        | Tannoy Dimension TD10    | 5,000  | Extremely competent and rhythmic speaker, a futureproof supertweeter and detail to die for                           | 35,101,37    | ۲             | A-             | 38         | ۲             |              | 215 |
| EC                        | Tannoy Dimension TD12    | 6,500  | Art Deco-inspired style, plus magnificent headroom and genuine monitoring neutrality - a tour de force               | 42,126,41    | ۲             | A-             | 23         | ۲             |              | 225 |
| R                         | T+A Talis TLS3           | 1,799  | Super-slim and beautifully engineered metal towers deliver marvellous musical results with superb imaging            | 15,130,17    | ۲             | Α              | 30         | •             |              | 225 |
| R                         | Vandersteen 2Ce Sig      | 1,990  | Very superior midband neutrality, impressive freedom from boxiness and splendid stereophony. A classic               | 41, 109, 26  | ۲             | A-             | 30         |               | •            | 229 |
| EC                        | Veritas H3               | 6,000  | Loads of fun with wonderful dynamic and temporal integrity from horn-loaded Lowther drivers                          | 30,110,47    | ۲             | A+             | 50         |               | ۲            | 191 |
| R                         | Vienna Acoustics Mozart  | 1,500  | Gorgeous slimline floorstander sounds very laid back, but also very charming and musical                             | 17,97,30     | ۲             | A-             | 25         | ۲             |              | 199 |
| R                         | Waterfall Victoria       | 1,500  | Glass enclosures go with any decor. The Victorias make music in a confident and involving way                        | 21,100,21    | ۲             | Α              | 45         | 0             |              | 225 |
| 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    | ۲             | A-             | 20         | ۲             |              | 234 |
| EC                        | Wilson benesch Discovery | 5,500  | Innovative three-way with built-in stand, combines great subtlety with weight and headroom                           | 23,47,38     | ø             | A-             | 45         | 0             |              | 212 |

# 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

### 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. 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.

### 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.

## AV SPEAKERS BUYER'S BIBLE

### **TOP BUYS**



600 S3 package £750 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.



JMlab Cobalt package £1,797 There's no avoiding this package's fine underlying sound quality – both stereo and multichannel are reproduced with aplomb.



Mirage Omni 2 £2,650 Dark tonality but superb imagery makes this an excellent all-round choice for music and movies alike.

N

SPECIFICATION

SPECIFICATION

SIZE

BASS

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## Our favourite GROUP TEST BEST BUY GROUP TEST RECOMMENDED C EDITOR'S CHOICE NEW GEAR REVIEW

|     | AV SPEARER PAGRAGES            |       |  |          |                  |      | FREE SPA | CLOSE TO WALL | ISSUE NUMBER |
|-----|--------------------------------|-------|--|----------|------------------|------|----------|---------------|--------------|
|     | PRODUCT                        | £     | COMMENTS   | OF DRIVE | MBER OF SPEAKERS | (HZ) | CE.      | F             |              |
| 68  | Acoustic Energy Aegis          | 650   | High-value package with deep bass and smooth neutrality  | A+       | 5                | 22   | 0        |               | 198          |
| 88  | B&W 600 S3 package             | 900   | Unquestionably delivers the sonic goods. High-quality drivers in standmount enclosures (uses 602 S3s at the front) | A-       | 5                | 22   | 0        |               | 224          |
| R   | Castle CAV Sterling            | 1,250 | Lovely real wood veneers. Sound has fine dynamic drive and expression, but can sound a little hard                 | A        | 5                | 28   |          | ۲             | 224          |
| 88  | JBL Xti-series                 | 980   | Hexagonal boxes all round, this package has decent authority and all-round tension                                 | Α        | 5                | 40   |          | •             | 210          |
| 6   | JMLab Cobalt                   | 1,797 | A little lean and bright, but with righteous dynamic expression and lively communication skills                    | Α        | 5                | 22   |          |               | 224          |
| E.  | JMIab Electra system           | 3,017 | Bold, solid system, tremendous consistency and easy to expand with an added subwoofer                              | Α        | 5                | 50   | ۲        |               | 232          |
| 88  | KEF Q AV7                      | 1,300 | With latest Uni-Q refinements, this system is astonishingly accomplished and amazing value                         | A+       | 5                | 35   | ۲        |               | 232          |
| R   | Mirage Omni 2                  | 2,650 | Dark tonality, but superb imagery makes this an excellent all-round choice   | A        | 5                | 30   | 0        |               | 232          |
| R   | 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   |          | ۵             | 210          |
| R   | PMC FB1/TB2                    | 2,485 | Classy, if bulky and pricey, package has good transparency, coherence and weight                                   | Α        | 5                | 20   |          | ۲             | 210          |
| R   | 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   |          | ۲             | 210          |
| ii. | Spendor S-Series               | 1,650 | Ultra-tinies lack some dynamic and loudness capabilities, but beautiful voicing and freedom from boxiness          | Α        | 5                | 30   |          | ۲             | 224          |
| HH  | Tannoy mXAV4                   | 500   | Lacks some grunt, but smooth and refined with seamless surround coherence. Excellent value                         | Α        | 5                | 20   |          | 0             | 210          |
| в   | Wharfedale Pacific             | 700   | Plenty of speaker package for the money. Balance is somewhat wayward, but unquestionably entertaining              | A-       | 5                | 25   | ۲        |               | 224          |

SPECSIXEY 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).

### 

| Bass           | Bass speakers               |       |   |            | POWER | FROM | IE NUMBER |
|----------------|-----------------------------|-------|---|------------|-------|------|-----------|
| STATUS         | PRODUCT                     | £     | COMMENTS  | (CM)       | 3     | (HZ) | ÊR        |
| В              | 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       |
| в              | 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       |
| R.             | 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       |
| R              | 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       |
| E <sub>b</sub> | Titan Saturn                | 800   | Very bulky sub has curious styling, but decent filtering gives good weight and headroom   | 72x48x72   | 200   | 20   | 239       |

SPECS KEY SIZE WXHXD (CM) Width, height and depth of one cabinet in centimetres. POWER (W) How many watts the onboard amplifier of active models delivers. BASS FROM How low the sub goes, the smaller the number the deeper the bass.



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## HEADPHONES BUYER'S BIBLE

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 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.

Getting the best from your cans

# 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

# Our favourite **HEADPHONES**

3.5MM ELECTROSTATIO CIRCUMAURAL JACK ADAPTOR ISSUE NUMBER SUPRA-AURA CLOSED BACK OPEN BACI WEIGHT (g) Stereo headphones PRODUC" COMMENTS AKG K44 20 219 Lively, enjoyable and remarkably detailed; a bargain 190 6 AKG K100 36 Leather-clad groover with bags of power and clarity, for a respectable asking price 0 0 190 205 AKG K270 Studio 129 Pro oriented design which is very transparent and great with acoustic material ٩ 0 270 230 Audio Technica ATH-D40fs 105 Detailed and involving sound with a professional 'studio' quality appeal -250 194 63 Beyerdynamic DT931 240 150 Nimble, well resolved and extremely comfortable, this is a cracking pair of cans 0 295 🔘 -Grado SR60 For sheer musical enjoyment these are hard to beat. Retro styling may not be to everyone's taste 90 -200 @ 194 Grado SB80 110 Not perhaps as neutral as some but they communicate well and that's the point of the exercise -200 🔘 230 Philips HP890 70 A remarkably sophisticated and very comfortable headphone 66 dis. 330 219 Sennheiser HD590 160 Assured and confident player with very low coloration and great comfort --270 205 Sony MDR-CD480 40 0 Generally neutral and nicely detailed - comfortable too -250 219 Technics RP-F800 50 Comfortable budget model that sounds sublime with great dynamics 63 160 205 Stax System II 400 Luxury option at its price, but the sound delivery is five-star quality all the way 0 0 295 205

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



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**CONNECTIONS** (A division of Connection 90' Travel Ltd.)

## CABLES

### Wires to hook your system together

Hi-fi cables come in two varieties:  $\ge$ 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

## **Our favourite**

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.

|   |         |   |          | S          | PECI   | FICATI | DNS                |                     |
|---|---------|---|----------|------------|--------|--------|--------------------|---------------------|
| CABLES                                  |         | cables  | STRANDED | SOLID CORE | COPPER | SIL    | DIGITAL CABLE TYPE | <b>ISSUE NUMBER</b> |
| PRODUCT                                 | £       | COMMENTS  | DED      | ORE        | PER    | SILVER | NPE                | BER                 |
| ANALOGVE INTERCONNECTS                  |         |   |          |            |        |        |                    |                     |
| Acoustic Research Master                | 50      | Decent performance all round and good interference rejection  |          |            | •      |        |                    | 224                 |
| Cable Talk Advanced 3                   | 35      | Good sound and great detail, but a slight brashness in the treble   | 0        |            | 0      |        |                    | 21                  |
| Chord Calypso                           | 30      | Informative, clear sound at a decent price  | ٠        |            | •      |        |                    | 21                  |
| Ecosse The Composer                     | 30      | A high degree of realism and delicacy, and a fantastic price (0.8m)                                       | ۲        |            | ۰      |        |                    | 21                  |
| Ecosse Reference Diva                   | 100     | Very good performance in all areas, with particularly fine, tuneful, bass (0.8m)                          | 0        |            | ۲      |        |                    | 224                 |
| xos Gamma Audition II                   | 30      | Detailed and neutral, with just a hint of pleasant mellowness   | ۲        |            | ٩      |        |                    | 21                  |
| Monster Interlink 400 Mk2               | 70      | Really lively and enjoyable sound   | 0        |            | ۲      |        |                    | 224                 |
| Profigold PGA4201                       | 5       | No pretensions, but sound is perfectly listenable with fair detail and extension                          | 0        |            | 0      |        |                    | 211                 |
| Prowire VHQ                             | 10      | This crisp cable lacks a little refinement, but it's great for the price                                  | ۲        |            | 0      |        |                    | 21                  |
| QED Qunex 1                             | 20      | Well balanced and easily rivals more expensive cables   | 0        |            | 0      |        |                    | 21                  |
| Fownshend Isolda DCT                    | 300     | Unusual construction and cryogenically treated too: whatever the reason, a remarkably capable wire        |          | 0          | ۲      |        |                    | 23                  |
| van den Hul The Bay C5                  | 45      | Terrific detail, nice balance - a great cable   | 0        |            |        |        |                    | 22                  |
| an den Hul D102 Mk III                  | 79      | Hybrid conductors (carbon and copper) and intelligent construction give strong bass and excellent detail  | 0        |            | •      |        |                    | 23                  |
| /ivanco Prowire SHQ                     | 30      | Good performance all round, with just a hint of bass congestion. Very good value                          | 0        |            | •      |        |                    | 22                  |
| DIGITAL INTERCONNECTS                   |         |   |          |            |        |        |                    | -320                |
| Audioquest Digital One                  | 35      | A neutral and capable cable that adds little or no character to the sound                                 |          |            | 0      |        | E                  | 20                  |
| QED Qunex P75                           | 25      | A superbly capable interconnect that's highly detailed and well balanced                                  |          |            | 0      |        | Е                  | 20                  |
| QED Qunex SR75                          | 50      | Lots of bass and good clear midrange and treble at a sensible price                                       |          |            | 0      |        | E                  | 23                  |
| Ross OP004                              | 20      | Sounds much like most other Toslink leads: slightly lacking detail, but good value                        |          |            |        |        | 0                  | 20                  |
| van den Hul Optocoupler Mkli            | 49      | Noticeably has the edge over other optical leads, but still second best to electrical types               |          |            |        |        | 0                  | 23                  |
| SPEAKER CABLOS PRICE PER METRE          |         |   |          |            |        | 1143   | 1994               |                     |
| Black Rhodium Aero Space S130x2         | 20      | Bi-wire cable with great kick in the bass, though the treble can sound dry and recessed                   |          |            | •      |        |                    | 22                  |
| cosse Reference MS2.3                   | 23      | Favours excitement over refinement: can be slightly bass-shy, but plenty of life                          | ۲        |            | 0      |        |                    | 22                  |
| Electrofluidics Monolith 2020           | 45      | Excellent bass extension and very fine performance elsewhere - one of the best cables available all round |          | ٠          | 0      |        |                    | 20                  |
| xos Gamma 6003                          | 3       | A little midrange dryness, but bass is among the best at this price; strong and consistent                | 0        |            | 0      |        |                    | 203                 |
| Kimber 4PR                              | 5       | Considering the price, this cable's very slight dryness is forgivable when everything else is so right    | ٥        |            | 6      |        |                    | 19                  |
| Kimber 8VS                              | 18      | Beautifully full, open and transparent sound right across the board. Price for 1m terminated pair         |          |            | •      |        |                    | 22                  |
| Kimber 8TC                              | 39      | Very capable in all areas, particularly good at imaging and with firm bass. Price for 5m terminated pair  | ۲        |            | •      |        |                    | 20                  |
| QED Silver Anniversary                  | 5       | A few minor flaws, but overall performance is very assured for this price                                 |          |            |        |        |                    | 19                  |
| DED XT300                               | 10      | A natural and well controlled sounding cable that's cost effective for mid-priced systems                 |          | 0          | ۲      |        |                    | 23                  |
| QED Profile Silver 12                   | 15      | Very slightly laid back, but good tone and detail - wears its achievements lightly                        |          |            | 0      |        |                    | 21                  |
|   |         | Good in all areas, with rich bass and just a touch of treble roughness                                    |          |            |        |        |                    | 20                  |
| Supra Ply 3.4/S                         | 8       | GOOD IT all aleas, with her bass and just a touch of treble roughness                                     | 1027     |            |        |        |                    |                     |
| Supra Ply 3.4/S<br>Fara Labs Prism Nexa | 8<br>10 | Slight tonal softness affects both bass and treble, but the overall sound is very listenable              |          |            | 0      |        |                    | 21                  |
|   |         |   |          | 0          |        |        |                    |                     |

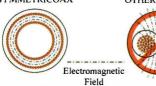
SPECS KEY STRANDED Cable has a number of (usually) twisted strands to conduct the signal. SOLID CORE Cable has one or more individually insulated strands to conduct the signal COPPER Material used to form the conducting element of the cable. SILVER Alternative material used to form the conducting element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

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# **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 stand mount 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.

NUMBE

TOP P

### **Our favourite** EQUIPMENT SUPPORTS

| Equipment supports                |       |  | HEIGHT | ATE SIZE (C | WELDED | R OF SHELVES | SHELF TN | SUE NUMBER |
|-----------------------------------|-------|--|--------|-------------|--------|--------------|----------|------------|
| PRODUCT                           | £     | COMMENTS   | 3      | (CM)        | ē      | ÆS           | TYPE     | Ĥ          |
| Aavik Furniture A4                | 350   | Good sound and stylish Scandinavian looks at an affordable price   | 80.5   | 47          |        | 4            | MDF      | 193        |
| Atacama Equinox                   | 280   | Stable, modular design with style. Excellent bass transients and a fresh design concept                  | 81     | 50,50       | 0      | 4            | Glass    | 217        |
| 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        |
| 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          | ۲      | 4            | Glass    | 206        |
| Naim Fraim                        | 1,825 | Pricey but very classy looking and sounding, with modular flexibility                                    | 96     | 45,34       |        | 5            | Glass    | 232        |
| Quadraspire Q4                    | 280   | Simple, but modestly effective and very attractive   | 52     | 49          |        | 4            | MDF      | 206        |
| 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 System  | 988   | Attractive modular system made of very light Torlyte: a touch of added warmth is its only vice           | 68     | 54,49       |        | 4            | Torlyte  | 240        |
| Sound Organisation Z560           | 195   | Excellent value rack, five shelves too! Well balanced and under 200 quid!                                | 92     | 50,40       |        | 5            | Glass    | 217        |
| 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        |
| Townshend Seismic Sink Stand Mkll | 1,140 | multi-shelf air-suspension support which isolates like few others. Recommended                           | 92     | 58, 45      |        | 5            | MDF      | 240        |

# Our favourite

| SPEAK                           |     | { SIANUS  |          | TOP PLATE |          |        | NUMBER  | ISSUE  |
|---------------------------------|-----|---|----------|-----------|----------|--------|---------|--------|
| Speaker stands                  |     |   | HEIGHT   | SIZE (    | FILLABLE | WELDED | OF LEGS | NUMBER |
| PRODUCT                         | £   | COMMENTS  | H        | (CM)      | Ē        | B      | GS      | \$     |
| Atacama Nexus 6                 | 60  | An excellent all-round performer and a genuine hi-fi bargain  | 60,50    | 14.5,18   | ۲        |        | 3       | 202    |
| Cyrus CLS50 Stand               | 200 | Unusual combination of style and performance, and a definite contender in the right environment                     | 64       | 17,19     |          |        | 1       | 220    |
| Custom Design R/S300 Mkll       | 100 | A solid stand improving on the original, with better focus and detail   | 61,56,51 | 16.5,18   | ٥        |        | 2       | 202    |
| hne Cableway                    | 399 | Looks great, sounds great, so start saving! Clean and sweet, and neutrality is exceptional with orchestral material | 63       | 17,20     | ۲        |        | 1       | 220    |
| Kudos S50                       | 115 | Formidable bass with real authority, and a wide dynamic range across a broad bandwidth                              | 61       | 15, 20    | ٥        |        | 1       | 220    |
| Partington ANSA 60              | 90  | Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent                                     | 62       | 18,15     | 0        |        | 4       | 232    |
| Partington Dreadnought          | 100 | Fully welded high-class engineering gives a very clean, open sound at a sharp price                                 | 61       | 17,15     | •        | ۲      | 5       | 220    |
| Partington Dreadnought Ultimate | 299 | Super heavyweight stand that is an open window to the speaker placed on it  | 63       | 21,24     | 0        |        | 1       | 202    |
| Sound Organisation Z522         | 95  | Very hefty build for the price helps to deliver a solid sound with good authority and drive                         | 60       | 16        | 0        |        | 4       | 220    |
| Townshend Seismic Sink          | 499 | Unique inflatable plinth that works wonders with decent floorstanders, as well as standmounted speakers             | 4        | 38,48     |          |        | 0       | 202    |

EQUIPMENT SUPPORTS SPECS KEY HEIGHT Of complete stand. TOP PLATE SIZE (CM) Width by depth of the supporting platform(s). Single figures indicate a square platform WELDED As opposed to bolt-together construction. NUMBER OF SHELVES To put your kit on (different configurations are often available). SHELF TYPE Material that shelves are made of

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SPEAKER STANDS SPECES KEY HEIGHT Of each stand, not including spikes. TOP PLATE SIZE (CM) Width by depth of platform. Single figures indicate a square platform. Speakers generally overhang top plates.



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## TECHNICAL & DESCRIPTIVE TERMS BUYER'S BIBLE

## GLOSSARY

#### **TECHNICAL TERMS**

5.1-CHANNEL AUDIO Six discrete channels, typically front left and right, centre, surround left and right, and LFE (Low Frequency Effects) for a subwoofer. BALANCE Most loudspeakers have a characteristic frequency balance resulting from emphasising parts of the audio range and/or de-emphasising others. BASS The lowest three octaves of the audio band - hence 'low bass' refers to the bottom octave (20-40Hz); 'mid-bass' the middle octave (40-80Hz): and 'upper bass' the 80-160Hz octave

BI-AMP (sometimes tri-amp) Loudspeakers equipped with separate access terminals to each drive unit can be driven by separate (matching) power amplifiers for each driver. BI-WIRE (sometimes tri-wire)

Loudspeakers with separate access terminals to each driver can be driven by separate cable runs between the amp and each driver

CD-R Recordable CD that cannot be erased, though discs that have not been completely filled can have tracks added until the disc is finalised.

CD-RW Re-writable or re-recordable CD incompatible with older CD players CLASS A The operation of an amplifying stage or device in which current always flows, as opposed to Class B where some of the devices are effectively turned off some of the time Class A tends to have the advantage of offering lower distortion while Class B tends to generate less heat.

CLASS AB Most practical amps operate in Class A for the first fraction of a watt and Class B thereafter.

CLIPPING An amplifier's output waveform is 'clipped' if the volume is advanced too far and no more 'volts' are available to sustain ever-increasing power levels. Distortion increases dramatically at this point.

CLOCK Any electronic oscillator that is used to generate a timing reference signal. Used to synchronise the data being taken from a disc.

CROSSOVER A simple electrical network which divides the full bandwidth signal received from the power amplifier, apportioning appropriate parts of the spectrum to the various drive units. DAB (digital audio broadcasting). Digital radio using frequencies in the band 217.5 - 230MHz. Broadcasters use varying degrees of compression and offer a broad range of programming. DAC or Digital-to-Analogue Converter The stage in any digital component at which incoming digital data is used to reconstruct a recognisable analogue (music) waveform

#### DOLBY DIGITAL DD (AC3)

A compressed digital audio format that typically contains five or more entirely discrete channels, eg 7,1 EX where side and rear channels are used.

DOLBY PRO-LOGIC. DPL Forerunner to DD that 'steers' information to the front L/R, centre and mono surround

channels via an analogue matrix. DRIVE UNIT/DRIVER A transducer which converts electrical energy into

acoustic energy, eg bass driver, tweeter. DSD (direct stream digital) The coding format used for SACD offers a frequency response of over 100kHz and a dynamic range over 120dB, it has over four times the data capacity of CD.

DSP or Digital Signal Processor. Integrated circuit that handles the decoding of digital audio streams. In 5.1 processors it separates the left from right

and front from rear while managing the various bass options. DTS or Digital Theatre Sound Competitor to Dolby Digital with a reduced 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 laver 3) Lossy compression format for digital audio that drastically reduces data content in order to squeeze music through internet connections or allow hundreds of CDs to be stored on a hard disc

#### OUTPUT IMPEDANCE A measure of

resistance to alternating current, a source with low output impedance (below 100 ohms) helps ensure compatibility with most amplifiers, even with long interconnect cables.

PCM (pulse code modulation) The digital coding system for analogue waveforms used for CD and DVD. Quality is limited by the oversample and bit rates used - CD is 44.1kHz/16-bit while DVD-A is canable of 192kHz/24-bit

PRESENCE BAND Critical section of the audio band at the point where midrange and treble meet.

**OUANTISATION NOISE** A form of distortion or noise resulting from errors in the description of the musical signal by the

digital code. SACD (super audio CD) was launched in 1999 and is a Sony/Philips format based

on DSD coding that offers high resolution stereo and multichannel sound from hybrid discs that can also be played on ordinary CD drives.

SAMPLE RATE The rate at which the musical waveform is sliced up into discrete chunks. For CD this is 44.1kHz or once every 0.023msec. DVD will also support 48kHz and 96kHz

SENSITIVITY The relative loudness that a speaker generates for a specific voltage input. Expressed in decibels per watt (dB/W).

THX Standards system for home cinema set-ups which includes amplifier nower and speaker dispersion characteristics. THX Ultra is more stringent than THX Select.

TOSLINK The proprietary name given by Toshiba to the optical fibre signal transmission system it invented for consumer applications.

TRANSISTOR/MOSFET The two main types of power semiconductor used in solid state amplifier output stages TREBLE High frequencies, the top end of the audio band, ie above 3kHz. TWEETER Treble driver

TWO/THREE-WAY Loudspeaker crossovers split the signal into two or three frequency bands, a two-way speaker can have more than two drive units

WATTS (per channel) The watt is the unit of electrical power and the WPC rating is the maximum average undistorted power that an amp can deliver to a typical speaker. However, speaker sensitivity variations can make more difference than amplifier output.

#### **DESCRIPTIVE TERMS**

AGGRESSIVE Forward and bright sonic character AMBIENCE The impression of an

acoustical space, such as the performing hall in which a recording was made.

ANALYTICAL Highly detailed. ARTICULATE Intelligibility of voice(s) and instruments and the interactions between them.

ATTACK The leading edge of a note and the ability of a system to reproduce the attack transients in music.

BALANCE Essentially tonal balance, the degree to which one aspect of the sonic spectrum is emphasised above the rest. Also channel balance, the relative level of the left and right stereo channels

**BODY** Fullness of sound with particular emphasis on upper bass Opposite of thin.

BOXY The sound of a loudspeaker with audible cabinet resonances. BRIGHT A sound that emphasises the upper midrange/lower treble.

DARK A tonal balance that tilts downwards with increasing frequency. Opposite of bright.

DECAY The fadeout of a note, it follows the attack.

**DEFINITION** (or resolution) The ability of a component to reveal the subtle information that is fundamental to high fidelity sound.

DEPTH (of image) The perception of music being reproduced behind the loudspeakers and inhabiting a reproduction of the acoustic space of the original recording.

**DETAIL** The most delicate elements of the original sound and those which are the first to disappear with lesser equipment.

DRY A sound that is devoid of 'juice', which usually comes across as 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 valve amps.

FAST Good reproduction of rapid transients which increase the sense of realism and 'snap'

FOCUS A strong, precise sense of image projection.

FORWARD(NESS) Similar to an aggressive sound, a sense of the image being projected in front of the speakers and of music being forced upon the listener. **GRAINY** A slightly raw, exposed

sound which lacks finesse GRIP A sense of control and sturdiness in the bass. **GRUNT** See arip. HARD Uncomfortable, forward, aggressive sound with a metallic tinge

HARSH Grating, abrasive, IMAGING (steren) The sense that a voice or instrument is in a particular place in the room.

JUICY Sound that has joie de vivre. energy and life.

LOW-LEVEL DETAIL The quietest sounds in a recording.

MUSICAL or musicality. A sense of cohesion and subjective 'rightness' in the sound.

NATURALNESS Realism **OPAOUE** Unclear, lacking

**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

midrange

rather than hear

transient response can deliver the

SPEED A fast system with good pace gives the impression of being right on the money in its timing.

STURDY Solid, powerful, robust sound.

THICK A lack of articulation and clarity in the bass.

THIN Bass light.

TIMBRE The tonal character of an instrument.

TIMING A sense of precision in tempo. See speed and pace.

TRANSIENT The leading edge of a percussive sound. Good transient response makes the sound as a whole more live and realistic.

TRANSPARENCY, transparent. A hear-through quality that is akin to clarity and reveals all aspects of detail. TWEAK To tune a system or

component in an attempt to get the best performance from it.

TWEAKER Someone who enjoys this process

VEILED Loss of detail due to limited transparency.

WARM A fullness in the lower midrange/upper bass.

WEIGHT A sense of substance and underpinning produced by deep, controlled bass.

transparency. and treble.

or voice occupying a place in the listening room

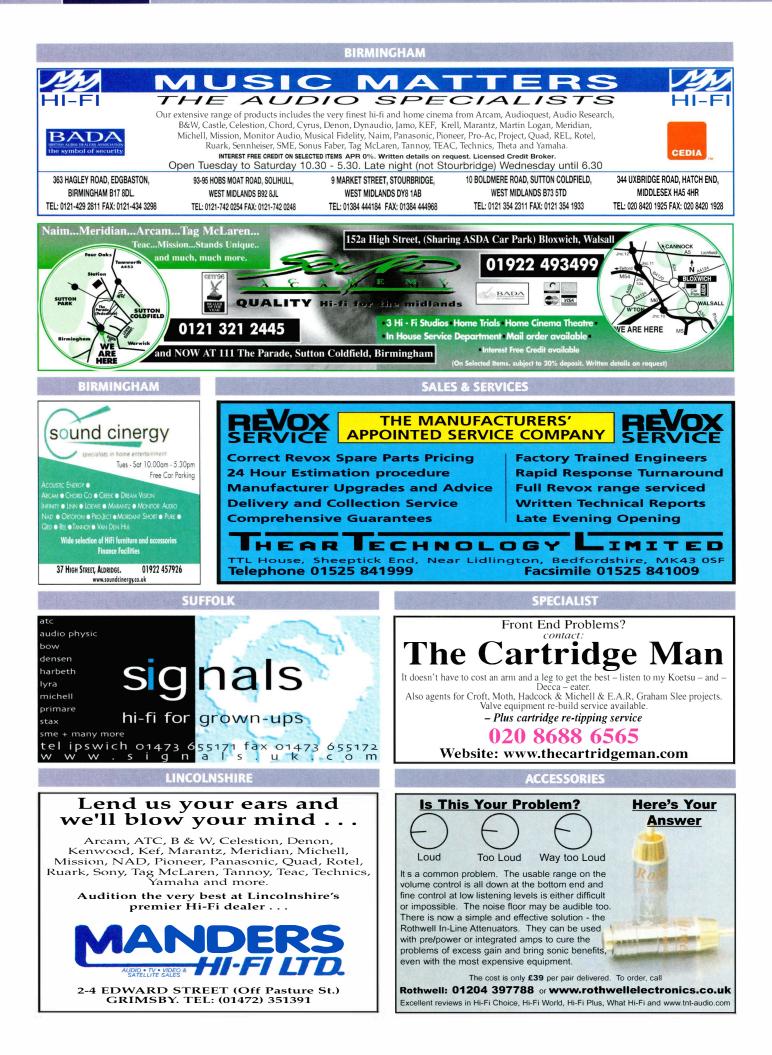
PRESENCE RANGE The upper

SEISMIC Very low bass that you feel

SIBILANCE An emphasis of the 'S' sound, often heard on radio.

SNAP A system with good speed and

immediacy or 'snap' of live instruments.



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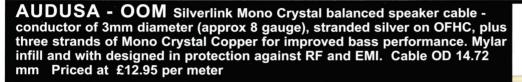
+ Singers accentuation and accents become blatantly obvious + Random background noise/crossover distortion disappears, creating an inky black silence, so you can hear quiet notes, breathing noise, artificial reverberation, etc + more powerful bass slam than most transistor amplifiers and most Single Ended amplifiers + 40 watts (EL34)

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GNLM 05/04 and GNLM 05/2.5 (CSA 2.5) Cable with FERRITE TECHNOLOGY - A polymer material mixed with a considerable quantity of homogeneously fine high quality ferrite powder.is extruded around the copper conductors. As a ferromagnetic material, it will go through hysteresis loops when-



AUDUSA - Eupen GNLM 05/2.5 (CSA

2.5) shown with Marinco IEC 320



ever it is under influence of an alternating magnetic field. Consecutively magnetizing and demagnetizing the material will

cause considerable losses of high frequency energy. This ener-

gy is absorbed in the ferrite grains and converted into heat. This effect is more or less proportional to the field frequency; high frequencies will be strongly attenuated, because their energy will be absorbed by the ferrite powder. The GNLM cables which in addition to the above described ferrite technology is further protected with a foil shield and a drain wire and **specifically** manufactured for High End audio use. Said by some to be the most neutral sounding mains cable on the market



GNLM 05/2.5 (CSA2.5) £48 for 1.0m.£58 for 1.5m. £68 for 2.0m, Off the reel £30 for 1st meter, £20 per m thereafter. GNLM 05/04 £58 for 1m. £68 for 1.5m, £78 for 2.0m Also off the reel

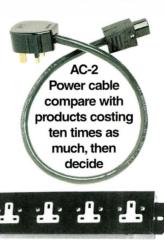
Both GNLM cables available for export

Fitted with IEC (Martin Kayser) and MK Tough Cable can be supplied fitted to our all steel 4, 6 and 8 way distribution blocks. We can rewire the distribution blocks with Eupen cable as an extra cost option. Refer to our web site for details.

AUDUSA - Eupen and LAT AC-2 mains cable available with 16 amp IEC (for certain models of amps by Krell, MF, Levinson etc), Marinco 320 IEC, Figure of eight, Bulgin, USA Hubble, European Schuko, Australian, Swiss, Danish, and Neutrik plugs. SILVER SILVER SILVER - Upgrade the cable with silver plated contacts on IEC and and MK plug for an extra £6. IEC's and MK plugs with silver plated contacts available seperately at £6, £8 and £9 Why Silver plated contacts? Simple, silver is THE BEST conductor of electricity.

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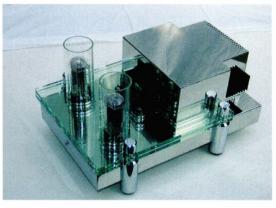
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We now have a Shanling System on permanent demonstration, connected to our Zingali Speakers - the system has to be heard to be believed!

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|---|-------|-------|---|--------------|---------------|
| Naim 3.5 CD Player  | £1300 | £595  | Selection of unused GE NOS tubes for PM 211SE   | £370         | £200          |
| Mint, 2-years young, at a crazy bargain price   |       |       | Loudspeakers  |              |               |
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| <b>chrome/gold</b><br>(ExD) as new, marvellous bargain  |       |       | <b>Sonus Faber Grand Piano Home</b> 12 months old.  | £1699        | £1250         |
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| Mark Levinson No. 335, 250 wpc (s/h,mint)   | £8495 | £4750 |   |              |               |
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List No 83

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valves

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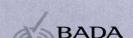
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## NEXT Month





Ferguson Hill horns will transform any living room

#### STATEMENTS

Welcome to the first class lounge, where the living is easy and the sounds are sweet. Next month's slinky temptresses include the Linn Akiva moving coil phono cartridge, Ferguson Hill's phenomenal transparent horn speakers and the latest valve based pre- and power amp from Unison Research.

#### PERMANENT WAVES

It's official: radio rocks! To celebrate the fact we are checking out the performance of full size DAB and FM tuners from the likes of Pure, Acoustic Solutions, Rega, Marantz, Rotel and Cambridge. We will also be lending an ear to portables from people like Perstel, Pure and Ministry that have brought DAB to the table top. By way of contrast, we have FM alternatives from Tivoli and Roberts among others. There's also an in-depth feature on radio, explaining which to buy and how to get the best from both FM and DAB flavours.

#### **GROUP TEST – SPEAKERS**

Half a dozen light-heavyweights battle it out for top spot in the critical £800 to £1,500 marketplace. We assess the new contenders from Monitor Audio, Focal JMLab, Spendor, Revolver, Mission and Triangle. May the best box(er) win.

#### IN-DEPTH

Our man in the white coat gets up to his elbows in a multichannel system to kill for. This £15,000 plus EAD system consists of DVDMaster 8000 Pro DVD-A/V player, Theatermaster 8000 Pro processor and 8300 multichannel power amp.

#### PLUS

The most up to date news, opinions that count and tests you can trust – only in *Hi-Fi Choice*.

Hi-Fi Choice 242 on sale 23 May

# **Crazy cables**

David Vivian sees more snakes than ladders in high-end cables

here are numerous sites on the web that will tell you how to make esoteric high-end speaker cables for pennies. Here's an excerpt from one user report: "...A note about the 'twisted four pairs'. When you braid them with the other two lengths of twisted three pairs, the four pair will be a few inches longer than the other two because the four pair is thicker. I wrapped the four pair around the two three pairs at the end to even the length. I just want to say to anyone contemplating building these cables that it took me 26 man-hours. The hardest part was braiding the 16 lengths of three twisted pairs and two lengths of four twisted pairs. Even then I did not get a single blister or feel any cramps in my fingers or hands."

Yeah, but your tongue is hanging out and you've gone cross-eyed. Probably a higher price to pay, long term, than a length of glistening hose from your local snake oil dealer. It's all too easy to miss the point about ludicrously expensive, high-end speaker cable. It isn't ludicrously expensive because it needs to be to do its job (you can save thousands if you're prepared to fork out for corrective eye surgery). No, it costs as much as it does – in some cases more than most people would spend on an entire 'highend' rig or a decent sports car – because it has the weight of mythology to support.

We're talking championship pseudo science, fringe-of-sanity metaphysics and imagery of the kind that seeks to put girthsome venomous snakes in a good light. This is more than mere engineering, more than the profligate use of precious metal and exotic materials, more than hi-fi. Really, really expensive speaker cable is the strangest, most mysterious product you can buy, and if you're not careful it could take over your hi-fi.

It's almost as if it can't be witnessed doing the same thing as a lesser cable – ie carrying the signal from the amplifier to the speaker. That's too easy. True-Colours Industries'



*"Really, really expensive speaker cable is the strangest, most mysterious product you can buy, and if you're not careful it could take over your hi-fi."* 

King Cobra speaker cable, for instance, is made using the finest aerospace materials and technology. Why? It doesn't say.

But TCI's passing nod to a sexier industry pales next to Monster Cable's command of trademark-registered gobbledegook. It says its flagship stereo speaker cable, "may well be the best cable ever made". Apparently it's because of its simplicity and similarity to the Golden Gate Bridge and Rockefeller Center. "They are as ageless and timeless today as when they were conceived. It is with this sense of the classic that Monster created Sigma Retro Gold". Its features include patented MicroFiber® insulation, a crosslinked polymer dielectric called PEX-2<sup>®</sup>, Super MultiTwist construction and 24k platinum/gold contact alloy spade connectors, Turbine® textured on one side. Still, that's nothing. Kimber's top cable,

from its Select range, uses Black Pearl silver conductors in an orthogonally braided geometry and has an X38R core to which conductors are held in a constrained matrix. You could not make this up.

Prize for the most 'out there' cable, has to go to Prana Wire's Cosmos Series which "takes things to the very limit of the possible". The explanation begins: "Envision the peaks and valleys of a waveform as a landscape. Picture those peaks and valleys obscured by haze at the peaks and low lying fog in the valleys. The haze and fog are subtle noise (noise you did not know existed)..." It even gets an endorsement of the designer's 12-year-old son, Jesse Cohen. After hearing the Cosmos for the first time, he's alleged to have said: "If music is religion then I just had an experience."

Me too, and I need to leave the room.



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