

Electra S





When Focal wanted to follow the success of the Electra Be range with a speaker line with similar attributes but at a substantially lower price, the challenge seemed at first very difficult.

After all, the Be has proved to be the perfect speaker for many music lovers - and altering a classic recipe does not always guarantee savoury results.

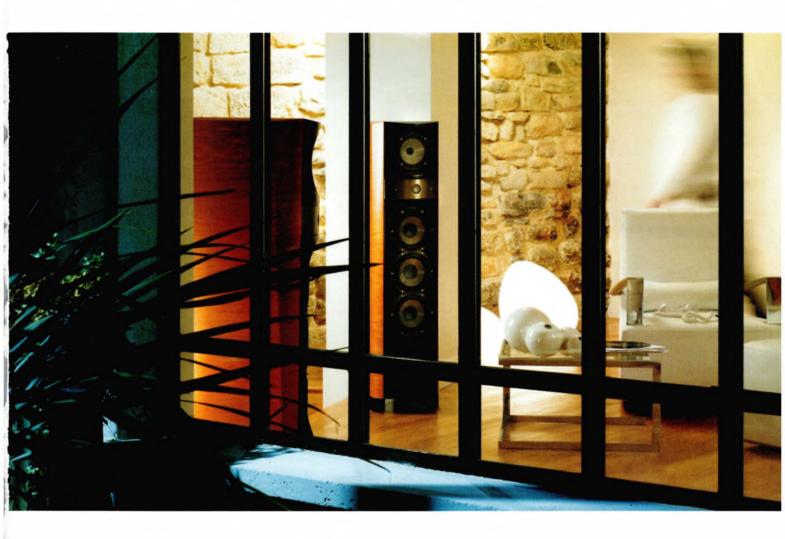
In the end, the answer proved very simple. Change very little.

A new tweeter; an AL/Mg alloy unit in place of the exotic beryllium dome. and a simpler finish choice of Classic (left) or Macassar Ebony.

And that's about it - apart from the smaller price tag of course.

Simple.

Electra Be



Accept no compromise....

Electra 1037 Be

" A phenomenal balance of musical virtues".......

"Somewhere in the design process, someone wound the fun control round towards its end-stop"......

"The results are astounding"............ Hi-Fi + July 2007

"The Focal Electra 1037Be offers superb measured performance.... That on-room response, one of the best i have encountered. Wow!"

"Transients were faster than sharp, approaching the ease, physicality and true speed that lets you know, even from down the block or round the corner, that you're hearing live music, not a recording".

Stereophile July 2007

Electra 1027 Be

- "A beautifully sweet and sparkling top end, suffused with the finest and most delicate detail".....
- "There's no shortage of deep bass weight or gravitas here"...

"It's a remarkable speaker for the money"...

Hi-Fi Choice Feb 2006 - Editor's choice award

Hi-Fi Choice July 2006 - Best buy

Hi-Fi Choice Sept 2006 – Component of the year < £5,000 HiFi Critic Dec 2006 – Speaker of choice < £6000





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April 2008

"... improved clarity, smoother highs and weightier bass. Stereo imaging becomes more expansive, and the equipment's presentation sounds cleaner and more precise"

PowerMax Plus™, What Hi-Fi? Sound and Vision, April 2008.



"Tweaks to such important areas as detail, bass extension and treble sweetness add up to a more appealing sound overall." Original PowerMax™ cable, Hi-Fi Choice, issue 288

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"This is one of the best value mains leads we've heard... We defy anyone not to notice the improvement in performance when you switch from a free cable to a PowerKord"

What Hi-Fi? Sound and Vision, May 2004

The Classic PowerKord™ with Wattgate™ 320i IEC £80 for 1m







Want to know more? To request your copy of our FREE catalogue which is packed with tips, advice and unique products designed to get the very best from your Hi-Fi or Home Cinema, and a free copy of our quarterly magazine Connected to Music and Movies, go to www.russandrews.com/catalogue or call us on 0845 345 1550

Solutions for better music & movies

Welcome to the issue ...

HI-FI CHOICE SEPTEMBER 2008 ISSUE 310

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



Hi-Fi Choice has just got back from Italy. To be precise, Paul Messenger, Alvin Gold and the Ed took 48 hours out of the schedule to indulge our passion for high-quality valve amps at the Unison Research factory in Treviso, just outside of Venice. Despite the oppressive heat wave, we managed to spend some quality time listening to Mahler and the

Rolling Stones on one of the finest valve-based systems money can buy. In fact, I'm thinking of remortgaging to finance the Reference pre/power amps and Opera Tebaldi speakers that were in the main demo room. If you're ever in the Nottingham area, this superb system can (and should) be heard at Mayflower Sounds.

We didn't come back empty-handed, either. We took the chance to borrow a Unico 100 integrated amplifier for review, the results of which can be seen in Jason Kennedy's review on page 62. This wonderful Italian amplifier is the only 'outsider' in our otherwise nationalistic review line-up this month. And what an issue! On page 42, Richard Black brings you the world's first review of the new Cyrus CD 8 SE CD player, a machine that boasts some very clever proprietary technology that gets deeper into the music than ever before.

Paul Messenger has discovered a new reference speaker this month, too. He was so impressed with the new Kudos Cardea C30 (on page 58) that his existing reference speakers (which cost more than twice that of the £5,250 C30) have gone back to the manufacturer to make way for the new towers. The significance of this event is not to be taken lightly; for Paul to swop his main speakers is a big deal indeed and it's a credit to Derek Gilligan of Kudos for making such a fine specimen. It looks as if *Hi-Fi Choice's* forthcoming Awards Issue is going to be very interesting...



Dan George Editor

WHY WE'RE NO.1 FOR HI-FL.

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

Beautiful in-house photography, so you see the product in all its glory

Cherry picked kit – only—the most worthy components make it into Hi-Fi Choice

Comprehensive in-depth reviews – we give you the full story





THIS ISSUE'S EXPERT WRITERS AND REVIEWERS INCLUDE.



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

oudspeaker reviewer



With more than 40 years as an enthusiast under his beit, Jimmy is one of the country's best known hi-fi experts. His knowledge of system matching, hi-fi tweaking and record collecting is unmatched in the industry.



Richard is a professional musician, recording engineer and a highly knowledgeable hi-fi analyst to boot. He has a knack for writing about complicated subjects in a readable way—and he only writes for HFC.



Former editor of Hi-Fi Review magazine, Malcolm was one of the best known and most outspoken reviewers of the 1980s and 1990s. He currently edits hi-fi industry bible The British Audio Journal



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



really know what we think of a product —

ALAN SIRCOM
Alan began his
journalistic career in the
early 1990s. Now a
successful freelancer,
you too can benefit
from his extensive hi-fi
knowledge, from purist
two-channel stereo to
the latest multichannel
quar and beyond.



Jason previously edited HFC, but can now be found in the wilds of Sussex indulging himself with the very best hi-fi money can buy His own system is simply sensational and his love of music knows no bounds.



A highly experienced journalist, Dominic's sharp ears and retail experience are a valuable mix for HPC dach month, Dom dispenses priceless second hand buying advice that always comes in handy













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BUYER'S BIBLE

Ultimate guide to high-performance hi-fi and AV equipment, gathering together all our favourite products for you Your shortlist starts here...

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PRE-LOVED GEMS

Buy or sell your hi-fi in our special second-hand section...

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MULTITASKER

TEAC's DR-H300 DAB.

DVD/DAB Receiver - HDMI output with upscaling to 1080i and a USB input for MP3.

This **little box of magic** is a real multi-tasker! HDMI interface delivers superb digital quality pictures to your TV with matching sound quality. It also delivers music from almost any source: CD, DVD, Hybrid CD or DiVX Disc, MP3 files on a USB memory stick plus crystal clear DAB radio. Another winner from TEAC, it's all you'll ever need to go beyond your audio **and** visual expectations.

Don't just take our word for it:



"...it sounds better than everything else. And we're not talking 'slightly' here: we're talking 'lots'." Sept 2007 ★★★★



"Involving, weighty and detailed sound with CDs and radio; comprehensive specification." May 2007 ★★★★



"Unbeatable value for money. Quality." Oct 2007 ★★★★





The leaders in digital music



audiofile

⊗ NEWS

AUDIO RESEARCH CD5 .::

Legendary valve amp specialist launches new high-end disc spinner

Designed as both CD player and transport, Audio Research Corporation's new CD5 CD player is a resolutely two-channel, 16-bit device. The player, which replaces the well-received CD3 Mk II, can support normal 'Red Book' music CDs, CD-R/RW discs and hybrid SACDs, but it will not play back DVD-A, DVD-video or SACD-only discs. It's unclear whether the CD5 will accept MP3 or WMA files on CD-R. This uncompromising stance is all part of the package, though, because the CD5 is designed to do one thing only and do it brilliantly; play CDs.

The CD5 uses the hardcore Philips Pro2M laser mechanism, but builds upon its already butch strengths. The mech is mounted to a machined aluminum I-beam, using Audio Research's own proprietary mounting system and damping. This is designed to help reduce mechanical interference and jitter. That in its own right is impressive, but the I-beam itself is then bolted to a heavy, machined aluminum plate for even greater rigidity. New high-performance circuit board material and a new FET-based direct-coupled analogue output stage, with well-regulated supplies, are suggested to deliver better measured performance. In particular, Audio Research claims channel separation is improved from 92dB in the CD3 to 120dB for the CD5, while signal to

noise ratio has gone from 90 dB to 114 dB. The CD5 also pulls less from the mains supply than the CD3; drawing just 14 watts at idle compared to 26 watts for its predecessor.

The macho Audio Research look remains essentially unchanged, though. The large case is dimensionally identical to its predecessor and the intervening years have seen the player put on just 400g in weight. Aside from a dimmable display, the only external difference between the two players is the model number. The CD5 – again like its predecessor and like the top Reference CD7 model – features both balanced and single-ended audio outputs and both AES/EBU (XLR) and coaxial (BNC) digital audio links, making it admirably well featured.

Audio Research has not published the choice of DAC included in the CD5, but we can reliably assume it retains the same Crystal 24-bit DAC seen in both the predecessor and Reference CD7. This may help explain why those who have heard the new player feel it approaches the performance of ARC's leading CD spinner in many respects and is a significant improvement over the already very good CD3 Mk II. Expect a review in *Hi-Fi Choice* soon.

Price £4,600 Due now 2 020 8971 3909 ⊕ www.audioresearch.com





FROM THE VALLEYS - TO THE UNIVERSE...

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Fusion

www.fusionsv.co.uk

Oxford Audio Consultants

info@oxfordaudio.co.uk

Synergy AV Ltd.

Congleton, Cheshire CW12 TJR T: 01260-280017

Peterborough PE7 8DD T: 01733 344768 Tiverton, Devon EX16 6BL

Guildford Audio

Progressive Audio

progressiveaudio@blueyonder.co.uk rjf@btconnect.com

The Green Room

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Exeter Devon EX2 8RG T: 01392 425567

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Matt's HiFi - Salisbury

sales@mattshifi.co.uk

Wiltshire SP5 4HQ



NEWS

TIVOLI NETWORKS .::

Tivoli brings ground-breaking radio innovation to its class-leading sound

Tivoli Audio was hitherto best known for its table radios; easy to use products that supplied AM/FM and DAB without tying the listener down with the ephemera of radio airplay. Now, the company has done the same thing to the computer, thanks to its new innovative NetWorks radio system.

NetWorks taps into your wired or wi-fi home network and quickly turns your PC into a server. It allows you to access music stored on the PC, stream internet radio stations and play them through its single 90mm drive unit. It also sports a USB port to connect an MP3 player, has an optional DAB/FM tuner module and even comes with a digital clock and dual alarm function. Add a second NetWorks player in the house and you can stream two separate internet radio channels simultaneously. The player supports WMA, MP3 and RealAudio (Version 6) files and its software is fully upgradable should the need arise.

Tivoli also allows the user to search for internet radio stations from its own dedicated website, which includes a handy world map, so that you can know precisely when that LA breakfast show with live music will broadcast here in the UK. The company has even included what it

calls a 'SuperBuffer' in the NetWorks device, potentially minimising the number of drop-outs that can sometimes plague internet radio through less than robust broadband lines.

It's easy to dismiss this important source of music as 'computer audio', but this really misses the point of the NetWorks product. The unit acts as an easy to install 'hub' for your listening, allowing you to pull in radio stations that would otherwise be out of reach through conventional means. Want to tune-in to that Cape Cod radio station you remember from your US holiday? It can done. You want to know what's Number One in Jo'burg? It's just a spin on the dial away. Tivoli packages the whole world of internet radio, plus virtually any audio files on your computer, and makes them as easy to access as tuning from Radio One to Radio Five Live.

As ever, the Tivoli concept is extendable. A standalone NetWorks box can be upgraded by adding a second speaker (pictured) to make it stereo, a subwoofer for 2.1 channel sounds and even the Tivoli CD player to make a complete system grow from just the one box. Plus, of course, you can always add more units. Expect a review next issue.





audiofile

NFWS



CHORD ELECTRONICS CHORDETTE GEM

12 HI-FI CHOICE | september 2008

It's a sign of just how important Bluetooth has become that a company with audiophile credentials like Chord Electronics should develop the Chordette Gem. Designed to integrate with existing hi-fi systems, the Gem is a wi-fi device that allows you to stream music to a line-level stereo output. The Gem relies on the A2DP (Advanced



INFINITY CLASSIA

Replacing the company's Beta range, the new Classia loudspeakers from Infinity comprise six models, two of which are ideal for hi-fi applications. The C205 is a two-way standmount while the C336 is a three-way floorstander. Both feature Infinity's unique CMMD (ceramic on aluminium) drivers, a 25mm tweeter and a single 133mm bass driver on the C205, with the same tweeter, a 100mm midrange and three 165mm bass units on the larger C336. Centres, dipoles and two subs complete the range.

Price £TBA Due now **☎** 01707 278100 www.infinitysystems.com





AMPHION PRIO AND ARGON

Finland's most prodigious loudspeaker brand has announced a mid-priced model in its Prio range and another revised speaker to mark the company's 10th anniversary. The new Prio 510 standmount speaker sports a 25mm titanium tweeter, a 135mm Nomex bass driver and Amphion's waveguide. The new Argon2 Anniversary standmount draws from the company's Krypton project,

featuring an 'integrator' titanium dome tweeter and a 165mm aluminium bass cone, sourced from Norwegian driver expert SEAS. The standard Argon2 will run concurrently with the Anniversary model.

KRELL EVOLUTION 707

Having spent more than two years in development, Krell's new surround preamp/home cinema processor is the first to support HDMI 1.3 inputs. The 22.5kg Evolution 707 is claimed to deliver a level of performance in line with that of Krell's Evolution 2 flagship stereo preamplifier. Like the Evolution 2, the 8.4 channel 707 uses Krell's own CAST (Current Audio Signal Transmission) topology and also features balanced and single-ended inputs and outputs and a 16-bit balanced resistor ladder volume control.

Price £POA Due now ☎ 020 8971 3909 ⊕ www.krellonline.com





AYRE KX-R

Ayre we go again! Following in the footsteps of the company's K-1 preamplifier (still popular after 12 years), the new KX-R flagship preamp is a fully balanced, zero-feedback design. Innovative features include the company's Variable Gain Transimpedance (VGT) amplification circuit,

which eliminates the need for a conventional attenuator volume control and the 'fly-by-wire' control architecture. With four balanced and four single-ended inputs, the KX-R line preamp is said to be an ideal partner for the company's well-received MX-R monoblock amplifiers.



Soundbites

PERHAPS

recognising that hi-fi products are often hard to demonstrate in a busy, flat-

a busy, flatscreen filled Richer

Sounds shop these days, Cambridge Audio is now offering a 30-day money-back guarantee on all its 700 and 800 Series Azur products.

2 0845 900 1230

BLACK RHODIUM has a new HDMI cable, or two. The new Sapphire HDMI lead comes in two forms standard (good enough for today's HDMI 1.3a) and high-speed (futureproofed for HDMI 1.3b use). One metre Sapphires cost £40 and £75 respectively.

☎ 01332 342233

PURE digital has announced its most affordable DAB radio to date, the ONE Mini. A variant of the Pure ONE, this 16 preset player includes a

player includes a rechargeable battery option and comes in black or white for just £40.

2 0845 1489001

SYSTEM AUDIO has launched the TS1, a handy £40 stand the size of a teacup that sits underneath centre speakers. By twisting the aluminium TS1, it can angle your loudspeaker so that its tweeter is in the perfect listening plane.

№ 01727 865488

ORIGIN LIVE has announced a new performance mat, which is claimed to improve the

performance of all turntables. The 1.5mm thick mat is made from, well, we don't know, because that's confidential. The price isn't; the mat will cost £49.

2 02380 578877

RUSS ANDREWS

new Crystal 24 speaker cable uses a braided layout like Kimber 8TC, but as the name suggests, with 24 wires instead of 16. Hyperpure copper, Teflon coating



and WBT terminals abound. Prices from £525 for a 2.5m pair.

☎ 0845 3451550

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HAPPENINGS

⊘ Hi-Fi Diary

SEPTEMBER

CEDIA Expo 2008

Colorado Convention Centre,

Denver CO, USA

www.cedia.net/expo

(trade only)

18-21 Top Audio Video Show Atahotel Quark, Milan, Italy www.topaudio.it

19-21 London Sound & Vision Show Park Inn, Heathrow www.chestergroup.org

24-27 Hi-Fi Show 2008

Hotel Holiday Inn, São Paulo, Brazil

www.clubedoaudio.com.br

OCTOBER

3-5 High End 2008 Show
Ins Congress Hotel, Moscow, Russia
www.hifishow.ru

10-12 Rocky Mountain Audio Fest

Marriott Denver/Hyatt Regency Tech

Center, Denver CO, USA

www.audiofest.net

12 Audiojumble 2008
The Angel Leisure Centre,
Tonbridge, Kent
www.audiojumble.co.uk

31-02 Stuff Live/What Hi-Fi Show ExCeL London www.bestofstuff.co.uk

JANUARY/ FEBRUARY 2009

31-1 Smartlife North
Radisson Hotel
Manchester Airport
www.chestergroup.org

20-22 Sound & Vision: The Bristol Show Marriot City Centre Hotel Bristol BS1 3AD www.bristolshow.co.uk

Vinyl turns 60

The 60th anniversary of the first 33.1/3 rpm vinylite Long Player (LP) has recently been celebrated in June. Columbia Records fired the first salvo in the format war that was to eliminate the 78rpm Shellac disc on June 21st 1948. Vinyl's ability to offer significantly longer playing time on a record that was far more robust than Shellac, ensured that the older format's days were numbered. RCA initially decided to go its own way with 45rpm vinyl LPs in 1949, but ended up switching to 33.1/3 within a year.

On vinyl's 40th anniversary the New York Times wrote: "who can doubt that the LP's hegemony is over, already ceded to the compact disk?". Readers of *Hi-Fi Choice*...that's who!



Audio-only Blu-ray

Norwegian label 2L has released the first music-only Blu-ray disc in 'Divertimenti' by TrondheimSolistene. This album "of the finest and most technically challenging repertoire for string orchestra" is supplied on Blu-ray and SACD with stereo and 5.1 mixes on both discs. The Blu-ray disc features the 5.1 mix on four formats: DTS HD Master, Dolby True HD, Dolby Digital and 24bit/192kHz LPCM. The latter being the first example of a 192kHz multichannel recording to be made commercially available.



The recording was made in Norway and consists of pieces composed by Britten, Bartók, Bacewicz and Bjørklund. *HFC*'s Alvin Gold has a copy, too so keep an eye out for a review soon.

Radial revealed

Sussex-based loudspeaker maker Harbeth is sharing the secret of its exclusive Radial loudspeaker cone technology. The material, developed over ten man-year's by Harbeth's designer and MD Alan Shaw, is based on a formula which Harbeth claims makes it the only cone material developed specifically for audio purposes. Most plastic cones are polypropylene, but Radial's secret is that its polymers are kept separate so that sounds are not lost as heat from friction between the molecular chains. Shaw says that "Turning sound into heat is the worst possible scenario for a hi-fi listener, because you can't reverse the heat back into sound – it is lost forever." He adds, "You can compare conventional cones to jelly babies and Harbeth's Radial to a hard, boiled fruit drop. Fingers – or sound waves – easily bend jelly babies out of shape and take a long time to recover. Our Radial cone is much stiffer and doesn't lock-up sound waves as micro-heat – hence a cleaner more open sound in the finest details of the music."



US military fights ROHS

Vance Anderson, Chief of Microelectronics Activity for the US military has warned of reliability and longevity problems with the EU ROHS (restriction of hazardous substances) Directive. His concerns surround the reliability and longevity of lead-free circuits in military hardware, where failures can be literally life-threatening. The US has not passed ROHS-type regulations, but similar legislation is underway in the State of California and the far east, where most PCB construction is done.

According to Graham Jarrett at Arcam, the fact that audio electronics are not subject to the same environmental strains as those used by the military means that reliability has not suffered as a result of the change to ROHS compatibility. There were concerns at the beginning of the changeover that tin whiskers (little stalactites of tin

sticking out of lead free solder) would cause shorts, but this fear has proved to be unfounded. Jarrett goes so far as to say the "changeover will not impact on reliability"



gital audio rhyme

The oldest known digital recording has been discovered in the archives of the Computer Conservation Society. A 1951 recording of Baa Baa Black sheep and a truncated version of In the Mood were made by the BBC at Manchester University, where a Ferranti Mark 1 computer was used for recording. The Ferranti was the successor of the so-called Baby Machine which is regarded as the forerunner of modern computers. The



recording was found whilst preparations were being made for Digital 60 Day, the anniversary of the 'Baby' Small Scale Experimental Machine.

Picture reproduced with permission of the School of Computer Science, The University of Manchester.

Studio in jeopardy

The uniquely circular-shaped Capitol Records building in Hollywood, home to the Capitol Records studios, is threatened by a proposal for a new 16-storey building to be constructed across the street. There's concern that the underground car park of the

new building would be close enough to the subterranean studios in the Capitol Tower to affect their viability. Experts claim that the unique reverb of these studios would be ruined by the proximity of the new structure.

The studios were designed by quitar legend Les Paul to minimise noise and reverberation. The complex features eight echo chambers located underground, which can produce an echo-effect lasting up to five seconds.

The Capitol Records Building was designed by Welton Becket and constructed in 1956 as the world's first circular

office building. It's nicknamed 'the house that Nat built' because of the money that Capitol Records star Nat 'King' Cole made for the company. Its studios have been used by many artists over the years, including the legendary Frank Sinatra



KALLE HVIDT NIELSEN Job Title: CEO Company: Bang & Olufsen



Coming from the top job at test

instrument specialist Brüel and Kjær, dynamic Dane Kalle Hvidt Nielsen has recently taken up the role as Chief Executive Officer of Bang & Olufsen. Holding degrees in engineering and marketing, he's uniquely qualified to run one of hi-fi's most recognisable brands.

What first attracted you to Bang & Olufsen?

It's impossible to narrow my reasons down to one single element. But it's a great opportunity for me with my combined technological and commercial background to continue the expansion of Bang & Olufsen into and beyond the digital era. It's a fantastic company with a superb track record and very well positioned brand. Our key strengths are undoubtedly our exceptional quality and advanced technology, as well as our excellent and unrivalled design.

How important is product design in the B&O development process?

The Bang & Olufsen customer is very design conscious and often has a mental picture of the home-solution they require before they even step in-store. Our expert engineers offer both advice and solutions for any home and can work to fit a one-off system within most spaces. Our service is about bringing a personalised Bang & Olufsen 'experience' to the home; mixing and matching items to find the best combination for the individual and to provide a one-off solution.

What is the future of hi-fi in the home?

In my view, the term 'hi-fi' is used to describe good-quality audio products. I believe the trend is moving towards a total 'hi-fi' lifestyle, that integrates the highest-quality audio/video products into homes, cars, mobile phones etc.

As always, Bang & Olufsen is a step ahead of the game with this technology already available to our customers. However, the development and improvement to our technology is always at the forefront of our engineers' minds.

Can 'Generation iPod' be turned on to hi-fi?

Bang & Olufsen has always appealed to individuals that value elegant design and very high-quality products in their homes. This doesn't lend itself to a particular age or social group.

Will downloading kill the CD player?

Technology is constantly developing, improving and moving on from previously favoured mediums. Not only CDs but also DVDs will be affected by download and home integration.

Is online damaging traditional retailers?

Most customers like to 'experience' Bang & Olufsen before they invest in the products. Our stores, therefore, are designed to replicate what Bang & Olufsen can bring to the home environment and demonstrate the flexibility of the ranges.

audiofile .:

DISPATCHES



Broadcast power

Creating a cable-free zone

rothers (and the occasional sister), one halcyon day, we may be free of the ties that bind us, of the shackles which hamper our pursuit of happiness! Yes, I can see a time, not too far distant, when the unwary in hi-fi will never more trip over the hosepipe between the amp and loudspeakers, or yank their costly components off the rack by pulling on the wrong interconnect.

Perhaps I've just had a hard time of it as an 'audioista' (is that the trendy new moniker for an audiophile these days?). After all, I swap equipment into and out of my system more than the average listener, whether it be to test tweaks on an existing product or an entirely new piece of kit. Still, if I have one more near miss caused by the spaghetti which interlinks my assorted boxes, I may finally lose it, douse the whole lot in SunnyD and beat it to death with a fence post. There has to be a better way.

What I'm after here is not merely a bit of streaming between sources, amp(s) and speakers. No, what I crave is a fully wireless system in which power is beamed to the individual components with not a cable of any description in sight.

OK, as a lover of black disc, I have to admit I would find it hard to make the leap to a fully digital system which would have the ability to stream high-grade audio from source all the way through to active speakers, but I could probably live with it. If such a system does ever comes to pass, it might not be for a couple of years yet and just the idea of trying to get a relevant set of standards adopted or approved makes my head hurt, but at least it's a practical prospect. And please, no mention of media PCs – I want something that looks and feels like the real thing, as well as sounding like it



"...what I crave is a wireless system in which power is beamed to individual components with not a cable in sight."

Eminent scientist Nikolai Tesla was the first to demonstrate power transmission without cables, when he used tuned oscillators in both the transmitter and receiver to enhance the efficiency of wireless transference. That was back in 1891. In 2007, a team from MIT managed to transmit enough power by electromagnetic induction to light a 60-watt bulb at a distance of two metres. Their electromagnetic transmitter oscillates at a few tens of megahertz, as does the receiver, and when the two are brought close enough together, power flows from transmitter to receiver without cooking anything standing between them. This system and others which rely on forms of RF transmission, offer real hope to those whose audio life is being strangled by cables. Only one question, though: when can I buy it? Unless it's sitting on the shelves at less than the price of a mortgage by 2012, I may have a dead hi-fi and a strong smell of orange drink in my listening room.

Jon Marks has been happily addicted to hi-fi for 20 years, especially since becoming a member of the hi-fi press in the mid-1990s



On the mat

To accessorise or not to accessorise

don't use accessories as a rule; a reviewer's system doesn't require them because you need a reasonably level playing field for analytical purposes and a relatively straightforward system that can be dismantled and reassembled with ease. So while it's usually possible to hear the advantages of different types of feet or mains cable, it's best to assess them and then remove them. Mains cables, in particular, do not always produce the same results with different components and the end user is unlikely to have the same cable. So, as a rule, I use the one in the box

Having said that, I've discovered a device that is so easy to use and so effective that it might yet find a permanent place in the system. Well, maybe not the system, but more precisely the software. The Marigo mat is a disc 'stabiliser' that you place atop a CD, SACD or even DVD that helps the player to extract more information from the disc. The extent to which it does so is not always the same, however this green and black slightly perforated mat was recommended to me by speaker company PMC. The folks there had been sent one and found it to be worthwhile so thought of me.

My initial findings were that there was an improvement, but that it was only borderline as to whether it was worth the effort of putting it atop every disc played. That was until I used it in a system with PMC speakers where the difference was not in the least bit subtle, in fact it was dramatic in terms of the reduction of hash, extension in the bass and all-round focusing of the sound. This was apparent with PMC's EB1i and the OB1i, both three-way designs with a dome midrange. I also encountered a clear increase in low-level resolution with ATC speakers, which have a very similar midrange unit. The change with Bowers & Wilkins' 802Ds is less obvious, you can hear quiet details more obviously, but given the normally superb resolve of this speaker it's surprising that the difference is not more obvious.

It could be to do with the difference in dispersion characteristics of the two systems, the PMCs have a much more open sound that makes them more sensitive to the reflectivity of the room. My relatively unfurnished room needed extra damping to get the sort of balance I like with them, whereas the 802Ds have a smoother balance that works without exciting the room in the same way.

The Marigo Labs Signature 3-D Stabiliser (to give it its full name) costs a disconcerting \$200 (there is also a standard version for \$95) which is a lot of dough for a slim disc with a green side and a gold side (even if it does employs "carbon fiber and Kevlar with an embedded ultra-fine silver wire matrix"). It's one of those final tweak type products that delivers value in the right systems, but is beneficial to some extent in all hi-res set-ups so it gets my seal of approval

over 15 years ago, eventually rising to the position of Editor. He's currently indulging in his passion as a freelance hi-fi writer



HI-FI REVISITED

CYRUS ONE AMPLIFIER

OK, so people usually remember 1984 for the George Orwell book of the same name. Others may remember the birth of the Apple Macintosh, Band Aid, the Bhopal disaster, the Miners strike, the Brighton bombing and that Olympics when 'British' runner Zola Budd collided with Mary Decker. You may even think of 1984 as the year Katie Melua was born or the year Marvin Gaye died. But, if you want to keep your hi-fi cred points at stratospheric level, you must remember 1984 as the year the Cyrus One amplifier first rolled off the production lines.

The original Cyrus amplifier is notable for two things; it was the first amplifier of the digital age and it was housed in a distinctive case, forever nicknamed 'the singing shoebox'. Cyrus is now a standalone company, with a commanding reputation for its electronics; 24 years ago, the fledgling electronics brand was a part of the then-leader of the loudspeaker market Mission. The company wanted an amplifier that both highlighted the performance of Mission speakers and was more than able to embrace the new Compact Disc format. Because Mission's main market was entry-level purchases (in particular, students blowing their grant money on something to play their Echo and the Bunnymen, Frankie Goes To Hollywood and The Cure albums on).

A 25-watt line and phono design all on a single circuit board, the £150 amp was only fractionally more expensive than the budget king of the time, the NAD 3020. But the Cyrus One's half-size plastic case, minimalist approach (just three knobs and one power switch on the front panel) and almost geometric lines gave it instant mid-1980s appeal. That the case was available in goth black or moody cool grey was a bonus, too (if it had been released a few years later, when we were in the grip of *Miami Vice* fever, it might have been made in pastel pink).



"... the Cyrus One's half-size minimalist approach and geometric lines gave it instant mid-1980's appeal."

Of course, few people on Cyrus One budget could afford a CD player back in 1984; cheap players would follow the success of Dire Straits' *Brothers in Arms* CD a year later. Those who did hook a Cyrus One to an early low-priced player were in for a bright-sounding experience, too. Nevertheless, the Cyrus One was hugely successful in its own right and a typical entry level system of 1984 would comprise a Revolver turntable, Cyrus One amplifier and Mission 700 speakers. And it had a good phono stage that supported both MM and MC cartridges, which was rare for the money. Few other products got a look-in at the time.

A year later, Mission built on the success of the Cyrus One with a beefier version called – you guessed it – the Cyrus Two, with more power, more current delivery and a substantially improved phono stage. It also allowed the amplifier to be upgraded thanks to an innovative upgradable PSX power supply. CD players, preamps, power amps, tuners and the full gamut of electronics would follow, but it's all built upon the strong foundation of the original singing shoebox... the Cyrus One. HFC

Alan Sircom





Dome-laden

It's all a matter of size

he group test of mini-monitors I conducted on page 68 of this month's issue has made me uncomfortably aware of considerable inconsistency in the way our industry specifies the size of loudspeaker drive units.

Tweeters are not the problem. Nearly all have dome diaphragms, driven by voice coils attached to the edge of their domes and the diameter of the dome is accurately specified.

Although everyone in Europe now uses metric dimensions, it's amongst the bass/mid drivers where the inconsistencies appear. Acoustic Energy refers to the main driver of its AE1 Classic as a 90mm or a 110mm unit, whereas most of the others specify 135mm or 140mm units. Despite this wide variation, in actuality most of the drivers are very nearly the same size. So why the discrepancies?

It all depends on which actual diameter the manufacturer chooses to quote. All bar one of our group use drive units with cone diaphragms that are 90-100mm diameter. And since it's the cone that actually produces nearly all the sound output, there would seem to be a strong argument for using this dimension to define the drivers, as in Acoustic Energy's 90mm. However, an argument can also be made for the fact that the surround also adds to the total sound output, but its contribution is unpredictable and much less than its actual area, as the outer edge remains stationary and the rest may produce phase cancellation.

AE's quoted 110mm actually corresponds to the diameter of its cone and surround together. Because the surround here is convex, the actual hole inside the frame is, in actual fact, just 100mm across. In most cases the surround is concave, requiring a slightly larger inside frame diameter to avoid mechanical interference.

Whether one uses the cone-plus-surround or the internal frame diameter is probably



"It's clearly an example of 'mine's-bigger-thanyours' exaggeration, designed to impress those who base their decisions on spec sheets..."

irrelevant, as they usually coincide, but this measurement of driver size was widely used back in the 1970s, but seems to have fallen out of favour since then. For example, when KEF was a major supplier of raw drivers to all and sundry, its core bass/mid drivers were the B110 and the B200. The former was used in the BBC LS3/5a, referring to the diameter of cone-plus surround and that inside the frame. The actual cone diameter here again is just 90mm, but in today's parlance it would be called a 135mm unit.

Across our group, most are described as having 135-140mm main drivers. These figures usually seem to correspond to the distance between the fixing screws, which is purely a function of the design of the frame, and bears absolutely no relationship to the acoustic performance. It's clearly an example of unwarranted 'mine's-bigger-than-yours' exaggeration, designed to impress those who base decisions on spec sheets and believe (mistakenly in this case) that bigger is necessarily better. Isn't it time loudspeaker manufacturers showed a little less hyperbole and a little more honesty?

Poul Messenger is a former editor of Hi-Fi Choice and has been writing about his favourite hobby for nearly 30 years



Classical or Pop

The beauty of historic recordings

ust the other day, I read yet another article in some audiophile publication pointing out that a disproportionate number of the recordings regarded as 'great' were made in the 1950s and '60s, if not even earlier. My record collection, too, includes plenty of recordings I value highly from that period. But have we really lost the plot and the ability to make fine recordings?

Of course not. In every area of music, great recordings continue to appear – recordings that we can be sure will be sought-after 50 years from now, for their combination of musical inspiration and sonic excellence. All the same, the hit rate was almost certainly higher in decades long past and I believe there

are convincing reasons for this, reasons not necessarily directly connected to the general level of musical or engineering competence.

Funnily enough, these reasons are not the same in different musical genres. In the early 1900s, recordings of opera singers, pianists and violinists were becoming popular. But there were very few recording studios in the world and the discs were horribly expensive (up to one guinea for a three-minute recording, in the days when manual workers earned pennies per hour). Naturally, only the very top artists ever got to see the inside of a studio. By the 1950s, discs were much easier to make and cheaper to buy, but they were still nothing like as commonplace as CDs are today.

There was another important difference in those days: not all the standard classical repertoire had been recorded. Imagine an orchestral musician going to a recording session, knowing that he was going to be part of the first ever recording of, say, a Beethoven or Brahms symphony. Recording was still stupendously expensive, the equipment costing a king's ransom and from every side the whole process was regarded as something important, leading to an end product that was expected to stand the test of time. If everyone takes it that seriously and prepares accordingly, the results can be expected to be of a high standard. I've been part of recordings made with that attitude in recent years, but they are remarkable for their rarity.

Pop recordings made in the 1950s were often knocked out in a morning, from first runthrough to finished tape and the disc would likely be cut the next day. Today, months in the recording and more months in the mixing and mastering are routine. In this case, the opportunity to fiddle endlessly has resulted in 'art by committee' which history has proved is generally a recipe for disaster. The older way of working also weeded out the musicians whose standard was simply not good enough to get the finished article in the time available. Interestingly, the success of Toerag Studios (a retro outfit in terms of both engineering and workflow) proves that the old way of skinning that cat has a lot going for it!

Yes, those were in many ways the Golden Days, but the reasons are as much sociological and practical as technical.

Richard Black is a professional musician, recording engineer and a highly knowledgeable hi-fi analyst to boot. He writes about hi-fi exclusively for HFC



CLASSIC ALBUMS

DENNIS WILSON PACIFIC OCEAN BLUE

Dennis Wilson was arguably the only 'real' Beach Boy. While big brother Brian could barely swim, Dennis was an actual surfer, and it was at his suggestion that Brian started writing songs about the beach craze.

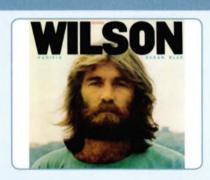
But musically, he didn't quite seem to have his mind on the job. He sang on all the Beach Boys records, of course, and played drums live (though they often used a replacement on the records). But by all accounts, he was the first out the door when he wasn't needed, being generally late for an appointment with a buxom beach beauty or a tequila bottle. His excesses would lead him into very murky waters indeed, like inviting ex-jailbird Charles Manson and his hippy harem into his house for extended drug-fuelled orgies.

But it was Dennis who recorded the first, and best, solo album by any Beach Boy. Pacific Ocean Blue came out in 1977, just as the band began to settle into their lengthy tenure as a heritage act and trading off their old hits.

Dennis had other ideas and songs – that he'd been pulling together in fits and starts since the beginning of the decade – began to take shape in 1976. No eye for the big picture, Dennis was a rough talent, full of ideas that simply poured forth when he had the chance. That chance was given him by future Beach Boys producer James Guercio, who encouraged him to get his ideas on tape.

In some ways it's a great sprawling mess of a record, leaping between intimate confessionals and huge imaginative sinfoniettas with strings, brass and all sorts of found instruments, like tuba, trombone, cello, marimba, glockenspiel, zither and even a bass harmonica. This soft rock monster couldn't have been made anywhere other than in mid-seventies California and it's up there with Fleetwood Mac's classic *Rumours* for scope, imagination and raw talent.

Dennis's voice might surprise those only familiar with the Beach Boys canon. Gruffer



"...being generally late for an appointment with a buxom beach beauty or a tequila bottle."

than the other Boys and sometimes positively ragged, what it lacks in harmonic range it more than makes up for with emotion.

There are only a few nods to overt Beach Boy-dom – the California Girls-style rhythm of What's Wrong, and the harmonies on River Song. Elsewhere, the parping RnB horns of Dreamer hint at a facility for laid-back funk and Thoughts Of You highlights Dennis's vocal stretched thinly over a simple piano accompaniment, hinting at the demons that would eventually consume him.

Pacific Ocean Blue turned out to be his swansong. Although he wrote and recorded another album, Bambu, it was never completed, as he descended into a drink and drugs hell of his own making. He died, ironically enough, by drowning after diving from his yacht in 1983 a few weeks after his 39th birthday.

Long deleted, the original album is now available as a Legacy Edition. And the cover photo says it all really. With his Old Testament prophet beard, lined face and thousand yard stare, he has the look of an old soul who's seen too much pain and sorrow. He was 33. HFC

Dave Oliver





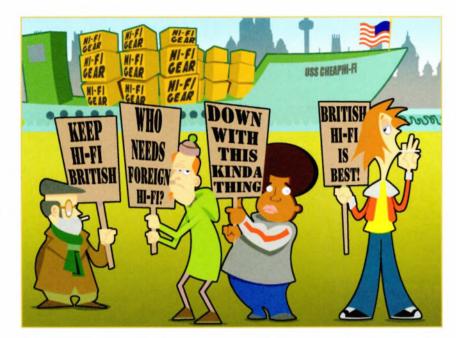
Best Buy

US hi-fi retailer shows its muscles

Ithough the hi-fi industry never makes headline news, certain issues do affect it. The state of the economy is a constant concern for both manufacturers and retailers, as are retail trends. Although very much on the fringe of 'real' hi-fi, there have been two recent announcements that could have some affect upon hi-fi retailing.

The first news to raise a few eyebrows within certain sections of the hi-fi industry is that the American Retail company, Best Buy, is to acquire a sizeable stake in The Carphone Warehouse. While this gives The Carphone Warehouse money in the kitty for telecomrelated takeovers, it also gives the American giant a retail platform within Europe. The plan is to open a number of electronic superstores in out of town developments.

Knowing the impact that the Walmart/ Asda collaboration had on rivals, certain hi-fi retailers have already taken a nervous look at Best Buy's website to see if there are product lines that may crossover. Perhaps, unsurprisingly, the good news for smaller retailers is that the premium hi-fi brands aren't represented - at least within the US. You won't find Linn, Quad, Krell, Naim, let alone NAD, Rotel or Marantz. Having said that, the likes of Sony, Pioneer, Denon and Harmon Kardon have a presence with electronics, whilst JBL, Klipsch and Polk are all represented on the speaker front. If the more specialist dealers needn't worry, why should the larger, more general UK hi-fi chains be concerned then? Well, the answer is that in the States, Best Buy has a reputation for providing the retail holy trinity. Not only are they highly competitive on price, but they are also well thought of in terms of staff product knowledge and customer service. For a large, out of town, box-shifting electrical retailer, these are novel concepts for the UK customer. Provided this level of knowledge and service is carried through to the UK, then all hi-fi retailers need to look closely at their



"Although it's generally assumed that American companies coming to the UK dominate, this isn't always the case."

performance, whether there's product crossover or not; once consumers have experienced genuinely excellent service and advice they're loathed to put up with anything less

One company that some have claimed to offer less is the UK electrical conglomerate, DSG. Perhaps it's no coincidence that DSG (Dixons Stores Group) has made the near simultaneous announcement that it is to close 77 of its 177 stores over the next five years, as their leases come to an end Admittedly, the actual 'real' hi-fi sold at Dixons stores these days is meagre to say the least, but the fact that they are still perceived as an audio/visual store by most of the population has some significance. I myself remember once buying a mid-range Sony cassette deck there and some speakers, too. While DSG blame web-based sale offers and the credit crunch, it can't be ignored that John Lewis's electrical sales have gone from strength to strength over the past few years. John Lewis, of course, has an excellent reputation for customer service.

One final thought. Although it's generally assumed that American companies coming to the UK dominate, this isn't always the case. UK culture and buying habits are subtly different from the US and Best Buy's success is not guaranteed. Most of the UK's existing hi-fi retailers have weathered many an

economic downturn and, had they not been finely honed, would already be closed. Like the British summer, the likely outcome is not easy to predict.

Dominic Todd began his hi-fi career in the retail business and has been a freelance hi-fi reviewer and columnist since 1993



Crap game

Classical or pop. Is there a difference?

ere is the column I've put off writing for as long as I've been involved in penning *Dispatches*, mainly because it's just too easy to caricature or misinterpret what I'm about to say. It starts with my long, but passionately held conviction that we generally end up with the hi-fi equipment we deserve. The principal is the same as with newspapers. If you're interested in salacious tittle-tattle,

then you'll end up with *the People* and if you have a political agenda with a right-wing bent, you're quite likely to end up reading *the Mail* – or on TV, watching *Fox News*.

If we listen to musical crap, the whole idea of quality hi-fi becomes meaningless. It doesn't really matter what equipment is used for listening. Crap is crap, and the unfortunate and inevitable conclusion is that a lot of the music we listen to is crap!

Now I am aware that this kind of blanket condemnation is hard to justify, but there's always been a dividing line between popular music and serious music and the attitude that being part of one group precluded you from being part of the other.

My personal preferences lie in the classical music arena (in this context, 'classical' was always seen as a synonym for 'serious'). Yet, I am by no means uncritical of classical music, despite its claims to high seriousness. Charlotte Whatsherface, that Welsh tenor, and even some Italians ones I could name have nothing to do with quality in my humble opinion and some of the showcases for classical music, Classic FM being the obvious example are a travesty, which I for one will only listen to in a dire emergency

But still there is the question of quality and there is something about a Mahler symphony, a Mozart piano concerto and a Schubert sonata that speaks to me in a much more meaningful way than so much of the tripe that's pedalled today as 'popular' music. There I've said it. As for distinguishing between the two cases, well this is the question to which I have no definitive answer, except my own gut feeling that music either has a real effect (with various shades of profoundness) or it leaves me cold, even angry. After a really good concert performance (leaving aside what good means in this context), I have a rush of elation, a buzz amounting to real excitement that simply doesn't come from the other sort

In short, in our value free society, I believe there is still such a thing as quality. And I still get this from Bob Dylan, the Beatles and the Rolling Stones, however antiquated you may consider their music to be. How can this be? Because the antiquity of an idea bears no relation whatever to its value. If Mozart, Beethoven and Schubert teach you nothing else, it should have taught you this much.

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



SERVO EVOLUTION

Our big story on page 42 is the Cyrus CD 8 SE CD player, where SE stands for 'Servo Evolution'.
Cyrus has done something unusual, unique even, in designing its own transport pretty much from the ground up.

At some level, audio electronics use bought-in sub-assemblies. Even if you design and make your own circuit boards and case parts, you don't make the capacitors, resistors and transistors, nor indeed the integrated circuits that feature in most home audio kit. Some quite well-thought-of amplifiers use integrated circuits that do by far, the largest part of the amplifying with minimal actual design input by the amp's maker. While CD players have, since the format's invention, relied heavily on transport and read head assemblies.

Most makers take the digital bitstream from the transport, reclock it, convert it to analogue and buffer it: job done. It works, it recovers the bits okay and the results can sound very good. But Cyrus claims that the improved read accuracy of its SE gives better sound.

First, there's no doubt that the process of reading data off a CD can be tweaked. The laser that shines on the disc and the optical pick-up that reads the result are both intrinsically analogue components and can be adjusted, as can the servo mechanism that keeps them in the right place and controls the disc's rotation. Tweak things one way and the system will be better at reading slightly damaged discs, but the definition of the signal read-back off perfectly good discs will be slightly compromised. Cyrus has designed its system to give the best possible definition from good discs. In practice, this means that there is minimal chance of a '1' being read as a 'O' and vice-versa and the hardware that makes decisions about whether to output 1 or 0 can function swiftly and unambiguously.

There is a lot of error protection built into CD because it was always obvious that the data



"There's no doubt that the process of reading data off a CD can be tweaked."

would in general always contain a proportion of errors – a good figure is an average of about one bit in a million, though replay is still possible with at least twenty times that error rate. The error protection can in normal cases (i.e. basically undamaged discs) recover the correct data 100 per cent, with certainty, so there is no quesswork going on.

But, it has been claimed many times that the process of correcting errors has knock-on effects further down the replay chain. Digital noise from the error-correction chips couples through the power supply and as internal electromagnetic interference increases both jitter in the digital data stream and noise in the analogue stages. This indeed is the basis of Cyrus's claims for the SE technology. Reading the data right first time and passing it with relatively low internal jitter on to the following stages, increases overall replay performance.

To some extent, this can be achieved by adjusting the settings within a standard CD mechanism, but there is no doubt that building the system to suit a particular application, with smaller and more basic sub-assemblies, gives more flexibility, adaptability and performance. HFC

Richard Black

exposure



New 3010S series:

Tighter bottom-end, livelier sound, more drive...same price

CD player £1200

- Brand-new "CD solution" custommade transport mechanism, servo units and control mechanisms
- Twin Burr-Brown PCM 1704 mono DACs and a discrete output stage
- Low jitter clock and a large toroidal transformer with separate windings for the transport mechanism and audio stages.

Integrated Amplifier £1000

- · Larger power supply
- 110 watts RMS (as compared to 100W for the previous model)
- 6 line inputs, bi-wiring and biamping compatible
- Option to fit a MC or MM phono cartridge
- Remote control

Power Amplifier £800

- · Larger power supply
- 110 watts RMS (as compared to 100W for the previous model)
- Capable of driving sophisticated speaker systems, in bi-amping mode or monoblock mode
- Clean and extended low frequency response



COMPETITION

WIN!

A Fatman iTube 452 valve amplifier and dock worth £1,500!

Newcomer Fatman is perhaps best known for introducing valve amplification to the iPod. Yet, it has recently introduced a nononsense £1,500 integrated amplifier for the more serious audiophile customer. The remarkable iTube 452 valve integrated amplifier with satellite docking station is one of the most striking pieces of design we've seen in years. The 45-watt per channel amplifier isn't just a foil for the Apple dock; it's a fully-fledged integrated design in its own right and features four line inputs and remote control. It sports five valves in the preamp stage and four power amplifier tubes and the superbly designed crescent-shaped chassis is as elegant to look at as it sounds. It's an auto-biasing circuit, so the valves will be as long-lasting as most solid-state components.

HOW TO ENTER:

For your chance to win, go online to: **www.futurecomps.co.uk/ fatman452** and follow the instructions, leaving your selected answer and your details where prompted.

OUESTION:

How many valves in the iTube 452's preamp stage...

A: Four B: Five C: Two

TERMS AND CONDITIONS

Answers must be received between 24 July 2008 and 20 August 2008. The prize winner will be selected at random from all correct entries received between the relevant dates and will receive a fatman iTube 452 amplifier and iPod dock free of charge. The winner will be notified within 28 days of the closing date and will be required to give details of a delivery address in the U.K. to which the amplifier should be sent. By taking part in a Competition, you agree to be bound by the Competition Rules, which are summarized below but can be viewed in full at axis win future entour/litture online/competition rules as a litture of the competition and any agency or similar) and, unless otherwise stated, are limited to one per household. The Company reserves the right in its sole discretion to substitute any prize with cash or a prize of comparable value. Unless otherwise stated, by an individual (not wa any agency or similar) and, unless otherwise stated, are limited to one per household. The Company reserves the right in its sole discretion to substitute any prize with cash or a prize of comparable value. Unless otherwise stated, by an individual into a prize of comparable value. Unless otherwise stated, and information in sopen to all Cell residents of 18 gayers and ower, except employees of future Publishing and any pagnity and of interest to a comparable value. Unless otherwise stated, and a present and information in connection with the Competition and for promotional purposes. All entries will become the property of the Company poon receipt and will not be returned. You warrant that the Competition entry is entirely your own work and not copied and information. Details of winners of the available on request within three months of the closing date if you are a winner, you may have you agree to provide additional and prize its conditional upon you complying with (amongst other things) the Competition Rules. You acknowledge and agree that neither the Company nor any associated third parties shall have any liability to





Understanding Chinese hi-fi



Industry insider Richard Stockley explodes some of the myths behind the growing Chinese hi-fi market

he rate of change and growth of the Chinese economy in the past decade has been nothing short of phenomenal. Development of the infrastructure and transport has kept pace with economic growth and China now has exemplary motorways and high-speed train systems. The country also boasts an agricultural set-up, that manages to feed its population of more than 1.3 billion people. Furthermore, China is now a net exporter of food products.

Yet the myth still persists in the West that products manufactured in China are of poor quality or, worse still, produced in factories reminiscent of Dickensian Britain (with working practices to match). In actual fact, nothing could be further from the truth. Factories in China are as good as and, in many cases, even better than factories across Europe and the USA.

Many factors have contributed to this development, but the most important is the Chinese work ethic. The indigenous population work very, very hard and are willing to travel long distances to seek employment. Guang Dong Province in Southern China is a good example. The language used to be Cantonese, but with so many workers migrating there the main language is now Mandarin (the most commonly spoken in China). It is not unusual, for example, for workers to travel more than a day by train to seek work.

The factories also house and feed their workers – workers who are now protected by labour laws that are similar to those in Europe. Every employee has a contract of employment with unfair dismissal rights, control over working hours, holiday entitlement and overtime rates. Young

people under 16 years of age cannot be employed. These newly introduced laws have

essential to the success of business. Furthermore, it has managed to keep pace

"The factories also house and feed their workers – workers who are now protected by labour laws similar to those in Europe."

teeth and any employer flouting them is likely to end up in court with a resulting fine.

JAPANESE KNOW-HOW

China has not lost sight of the fact that it remains a developing country and that there is much to do. The government, for example, has also sanctioned many strategies that have contributed to growth, typically the rapid development of the country's infrastructure –

with the demand of power requirements despite the speed of development.

The first countries to take advantage of Chinese manufacturing power were Hong Kong and Taiwan, due to their close proximity to China. They were closely followed by Japan, which set up model factories in China. It is an now an indisputable fact that something in your home will undoubtedly have been manufactured in China by one of the major



Above: Electronic equipment assembly line



Above: Printed circuit board testing

Japanese brands. Just check the back of the product and you'll probably spot the word China or PRC (Peoples Republic of China), as it is sometimes known

The Chinese learn very quickly and it took little time for them to model their factories on the Japanese style. As a consequence, there are many local Chinese-owned factories that can boast to be among the finest in the world – too numerous to mention, in fact. The Chinese were also very quick to realise the benefits of having their factories ISO (International

Controlled) and SME (Electronic – Surface Mount Equipment). More and more of these are being replaced with locally designed and built machines.

ON THE MOVE

One example of rapid factory development can be seen in the car industry, with Volkswagen being one of the first to invest in China. Some 15 years ago almost all cars were Volkswagen Jettas or Santanas and only a few imported cars were seen on the roads. And

"Chinese factories are generally a pleasure to work with. More importantly though, the people are always willing to listen."

Standards Organisation) approved and it is now hard to find a factory that is not certified. The factory natural selection process in China is very virulent and any factory that does not meet the standard is doomed to failure.

The Chinese have been quick to invest and countless numbers of factories are equipped with German and Japanese machine tools such as CNC (Computer Numerically



Above: Computer Numerically Controlled mill

they were likely to be owned by high-ranking government or military officials. Today the situation is very different and nearly all the Japanese, European and American car firms have invested manufacturing plants in China. Again the Chinese have been quick to react and there are now many local Chinese brands such as Geely, Chery and BYD that are sold locally at unbelievably low prices.

Chinese factories are generally a pleasure to work with. More importantly, though, the people are always willing to listen. They will sometimes go their own way, believing that they know best. But, if monitored correctly, they're able to do an excellent job. A lot can be learned from their willingness to introduce new ideas and processes, as they believe it will be in their interest to do so and guarantee long-term development.

SECOND OPINION...

'Made in Japan' or 'Made in Taiwan', etc. have long ceased to have the kind of stigma that was once associated with the electronics boom in the late 70s and early 80s, yet 'Made in China' still sends chills down the spines of most audiophiles.

However, almost every hi-fi company in the world now manufacturers in China and, even if they don't say so on the box, the circuit boards and/ or the components used will still originate from China. Our Quad ESL loudspeakers have been manufactured 100 per cent on our Chinese site for five years now and they're still widely regarded as among the best speakers on the planet. It is true that a strict quality procedure and detailed 'SOP' (Standard Operating Procedures) have to be in place but we, and many of our competitors, are fully BSI 9001 certified. Most importantly, the scale of the manufacturing is entirely different and for us, in particular, we buy raw materials such as wood and metal and make every single part of every single product all within our 1.5 million square feet manufacturing facility. This gives us complete control over the quality of each component and sub-assembly.

It's also important to bear in mind that this is a very highly-concentrated area of manufacturing. Although, this again is beginning to change with more and more manufacturers relocating to areas away from Shenzhen and Guangzhou, both to stimulate local economies and reduce the environmental impact of having such a densely populated region of manufacturing. Judge each product on its merits and don't for a moment think that these are anything less than the hardest working, friendliest people on the planet. David Patching, International Audio Group



[Feature] Understanding: Chinese hi-fi

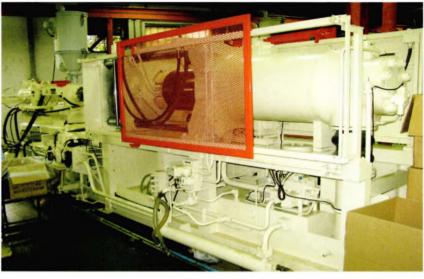
WORKERS PARADISE

As with many developing countries, corruption and brand copying remains a problem. And as Chinese culture is one of the oldest in the modern world, it understandably takes time to change the ethics of the people to meet world market demands. However, the Chinese government is now cracking down heavily on corruption and many senior officials have been imprisoned. As with everything in China, once the example is set, it very quickly filters down to the lowest level.

There's also a perception that Chinese citizens are a surly, unhappy and downtrodden race, whereas nothing could be further from the truth. If you visit the country and witness the Chinese at work, you'll see a happy friendly people that bend over backwards to please. And those who work in the factories are openly happy and full of life. From management level through to the factory worker, the Chinese are extremely loyal to you as a customer and will go out of their way to try to develop a partnership with companies who engage their services. It is rare that they would view any contract as anything other than the beginning of a long-term association.

HI-FI NIRVANA

Many hi-fi products are now manufactured in China, including a large majority of the big brand names – companies who've been forced to move their manufacturing off-shore to remain competitive in the market place. Rest assured, we'd all be paying more for our



Above: Plastic-injection mould machine

"Nearly all hi-fi products are now manufactured in China, including a large majority of the big brand names."



Above: Printed Circuit Board Visual Inspection

electronic products, if it wasn't for the quality factories that are now operating in China.

One important point worth noting is that China is no longer the 'cheap' place it is sometimes perceived to be. With the quality of the factories, the constantly improving conditions for staff, coupled with the escalating price of raw materials, it is only natural that costs of finished products have risen. What needs to be understood, though, is that the quality of product emerging from these modern facilities is exceptional.

If you find the words 'Engineered in the UK' or 'Designed in Japan' on any product you own (including your hi-fi) then you can guarantee that it has been designed for your particular market, but manufactured at a modern and approved facility in China. And for the consumer, that definitely makes it the best of both worlds! HFC

Richard Stockley

ABOUT RICHARD STOCKLEY

Visiting China on a regular basis to organise the Chinese production of UK-designed products, Richard was also responsible for managing the mechanical designs of products in the UK for more than 10 years. He has now established a permanent office in China to handle quality control and project management.



Above: High-precision measuring



















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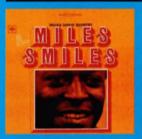
3HØICECUTS



This month's varied musical morsels

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

AUDIOPHILE VINYL



MILES DAVIS QUINTET

Columbia/Speakers Corner 180g vinyl Music: Miles' mid-sixties quintet was a serious, even hard-core affair featuring Wayne Shorter, Herbie Hancock, Ron album is intense, if not as challenging as later work. There are truly inspirational performances from all involved and superb tunes like Shorter's Footsteps. The and musical sets it apart from the crowd.
Sound: Only Miles gets the stereo which lets you hear plenty. JK





TOTO

CBS/Speakers Corner 180g vinyl Music: If you listened to the radio in the eighties then you'll know the hits on this monster selling album. Songs such as *Rosanna* and *Africa*, that epitomised AOR for an era. The musicianship is of the highest calibre unless you like really 'synthy' synths.

Sound: Heavily compressed and bass heavy, you'll need to turn the wick up





COMPACT DISC & VINYL



FITON IOHN

Tumbleweed Connection Del. Edition

Universal Music All too often these kind of expanded 'deluxe' reissues are gratuitous marketing exercises, but this set is an exception. Disc one is the original 1971 classic album and one of the most underestimated releases in John's vast canon. But it's disc two featuring 13 further tracks that's the revelation. Many of them are simple piano demos that subsequently made the album with a youthful Elt in thrilling troubadour mode.

Sound: Irrespective of the demo quality, there's an undeniable charm to hearing the songs 'in the raw'. NW







DANIEL LANOIS

Here Is What Is Red Floor Music: The U2/Bob Dylan/Peter Gabriel producer clearly loves swamp music, pedal-steel quitar, plaintive ballads and gutsy guitar rock in homage to his all-time hero Jimi Hendrix. There's plenty of that, as well as a heavenly piano performance from The Band's Garth Hudson on Lovechild. Sprinkled with juicy soundbites from Brian Eno, this soundtrack to the film of the same name is an absolute gem of a record in its own right. Sound: Lanois' layering techniques can make some parts of this album. sound muddy, but turn it up loud and the beauty comes tumbling forth. MP







FINLEY QUAYE

Best Of The Epic Years Epic Music: Although still strumming up a live storm now, Finley Quaye's golden years on record are almost certainly those between 1997 and 2004, when the jazzy, reggaetinged singer-songwriter first really broke through with a little help from the Epic label. There's a rhythm-pounding Ultra Stimulation and various cuts from his multiplatinum Maverick A Strike album. A solid reminder of just how epicQuay's Epic years really were Sound: Atmospherically wellrecorded with deep bass swoons sensitive vocals and plenty of 'living space'. PS







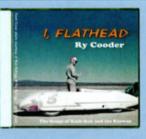
SIGUR ROS

Meo Suo... XL

Music: Or Meo Suo I Eyrum Vio Spilum Endalaust to give it its full name, which means With A Buzz In Our Ears We Play Endlessly (probably loses a little in translation). The trademark reverb is still very much in evidence on their sixth album, although most of these songs feature some rough live takes, giving the record an immediacy not always found in the Icelanders' beautiful, but often chilly soundscapes. Sound: One track with the London Sinfonietta and choir is a one-take extravaganza. If you can't play it loud, invest in some headphones, DO







RY COODER

I, Flathead Nonesuch

I, Flathead follows Chavez Rovine and My Name Is Buddy as the third album in a prolific American storytelling trilogy - and, under the guise of a fictional roadhouse band called Kash Buk and the Klowns, it's the most overtly rock'n'roll album he's made in 20 years. Evoking the bygone era of a lost America, it's all delivered in a rich story-telling voice that's a cross between Uncle Remus. Garrison Keillor and Dylan's radio hour persona. On I, Flathead Cooder emerges as a true American original to rival them all.

His most potent riffs since the Rolling Stones 'borrowed' his riff for Honky Tonk Women, his funkiest slide

quitar since Memo From Turner and the best jukebox tunes in town. NW

女女女会



Avishai Cohen Trio

THIS MONTH'S CLASSIC HI-FI TEST DISC "When they all sync as a trio the magic happens"

AVISHAI COHEN TRIO Gently Disturbed RazDaz

Music: Gently Disturbed came out earlier this year, but has already become a listening room staple. AC is a double bass player who earned his stripes with Chick Corea and Brad Mehldau among others, a very physical musician who clambers all over the instrument and produces a full-bodied

The clever, tricksy electronic

manipulation is still there, though subdued in favour of the songs, all contributing to something very close

to a pop soul masterpiece. DO

sound to match. Pianist Shai Maestro is young and highly talented, with playing inspired by Bach, while drummer Mark Guiliana provides understated rhythms punctuated by the occasional well-timed explosion. When they all sync as a trio the magic happens.

Sound: This may only be a CD but it has a solid, dynamic sound that puts the players in the room and lets you know exactly what's going on. It's a hi-fi disc proper, but with real music, too. JK





JAMIE LIDELL

IIM Warn Records

Jamie Lidell's last album Multiply saw him edge away from his avant garde electronic roots with some catchy tunes and a surprisingly confident, soulful voice. And it's the voice that carries JIM, with elements of Otis, Sly, Prince and yes, quite a lot of Stevie, but with enough grit to stay clear of the more saccharine elements of any of those artists' catalogues. Think of him as a less self-conscious British Beck, a voice from the underground working its way steadily into the mainstream and few clues as to which way he'll jump next

E ANDSNES

SCHUBERT



SCHUBERT LATE PIANO SONATAS

Leif Ove Andsnes EMI Classics 50999 5 16448 2 6 two-disc set

Music: Franz Schubert's three late piano sonatas (D958, D959, D960) along with D850 are included in this two-disc set. The final triptych before his untimely death at 31, were famously described as music for entrance to the gates of heaven by no less than Arthur Rubenstein. The music is exquisite, profound and encompasses many moods. Sound: Lief Ove Andsnes' musicianship is of the highest calibre, but if there is a criticism. it is that the performances are so accomplished they almost sound too easy. AC





BIZET CARMEN PRÉLUDE ET ENTRACTES

Marc Minkowski (cond) Musiciens du Louvre Grenoble Naive VS130 Music: This disc is a little like listening to Classic FM - enjoyable music, engagingly performed, if scarcely challenging. The disc comes with a booklet that includes detail about the performers and the music, particularly the reasons for the choices of tempi, original instrumentation and style Sound: The recording was made in Provence, which has associations with the music and with the orchestra, using relatively purist recording equipment. The result is a lively and naturalistic sound. with excellent scaling and



HIGH-QUALITY AUDIO

MILES DAVIS QUINTET

Cookin' With The ...

Fantasy/Analogue Productions

SACD (stereo hybrid plus mono CD)

Music: This mono recording is one of four albums made in one go by Miles' mid-fifties quintet when they decided to put their live set down in the studio. It features John Coltrane, Red Garland, Paul Chambers and Philly Joe Jones, a stellar line-up that played with a rare degree of intuition. Of the four tracks three reflect the album title while the opener, My Funny Valentine, finds Davis in unusually sentimental mood. Miles was

always cool, but back in the day he made a significantly more upbeat, almost happy sound.

Sound: By using tubes to master from the original analogue tapes, Analogue Productions has made a spectacular transfer that is only bettered by their 45rpm vinyl version. JK



ELEANOR MCEVOY

Love Must Be Tough Moscodisc

SACD (stereo/multichannel hybrid plus stereo CD) Music: A stranger to pigeonholing, eclectic Irish

troubadour continues to bounce around the styles that have influenced her, delving into country, rock, folk and pop with equal enthusiasm and ability. For her seventh album she brings her distinctive smoky tones to bear on a fistful of self-penned numbers, including a witty one with the Beautiful South's Dave Rotheray and a trawl through the back catalogues of a few old favourites, including Nick Lowe's I Knew The Bride (When She Used

To Rock 'n' Roll), Sly Stone's If You Want Me To Stay and a particularly successful interpretation of the Stones' Mother's Little Helper

Sound: Recorded at the living-room style Cauldron studios in Dublin, the sound is clear and precise and sometimes quite shockingly intimate. DO



OLIVIER MESSIAEN CHAMBER WORKS

Hebrides Ensemble

Linn Records CKD314

SACD (stereo/multi-channel hybrid plus stereo CD)

Music: This release includes some of Messiaen's best known chamber music, including the seminal Quatuor Pour La Fin Du Temps (Quartet For The End Of Time), which was written in a German prisoner of war camp for a rather bizarre combination of seven instruments basically those available at the time - in varying combinations to maintain some semblance of balance. The piece is undeniably a masterpiece, but like much of

Messiaen's output it has a mournful quality and is far from easy listening. Sound: This is an important release for Messiaen collectors, being recorded at St Mary's Church, Haddington and making extensive use of the technology available to Linn's engineers, including full multichannel SACD sound. AC





audiofile

SHOW REPORT

CEDIA 2008



The annual CEDIA show at London's ExCeL centre gives us a fascinating insight into the future of audio in the home and how sound is shaping up in 2008 says Alan Sircom.

he annual CEDIA Expo in mid-June is the high point in the UK custom installer calendar. With training sessions, certification exams and stands dedicated to cable labelling, lighting back-boxes and internet-enabled bath taps, a lot of the show is hardly inspiring for the hi-fi enthusiast. A lot of brand names appear in both hi-fi and CEDIA line-ups, but their product lines are very, very different. This means the two halls in London's ExCeL exhibition centre devoted to the CEDIA Expo are filled with names well-known to the hi-fi enthusiast - Denon, Marantz, KEF and Naim among them – but the products they promote are designed to sit out of sight in plant rooms and controlled by impressive touchscreens. If you dig deep enough though, there are nuggets of audiophile gold in them than remote-controlled hills

Air iPod Remote Control

Air is a \$99 program that works with the Apple iPhone or almost identical iPod Touch. It turns both into a remote control, whether as a standard Sky remote replacement or as an interface with Crestron and AMX controller systems. You can drive the screen with all the ease and controllability common to Apple iPhone apps,

use it to access your iTunes library wirelessly and can even control Lutron lighting systems and Kaleidescape video server systems. It can even speak to infra-red systems, thanks to the £100 Global Cachet Box which converts IP (internet protocol) to IR (infra-red; the Apple products lack infrared eyes). Alternatively, those who own a SpeakerCraft MZC server can now use their iPhone or iPod Touch to control their multiroom systems.

Priced from a cool £50,000, the new OV/E home entertainment pod encases the listener in sound and plastic. A full 5.1 sound system (including a pair of rear surrounds in the head rest and a subwoofer in the small of the back) plus a 26" LCD set and all the gaming you could imagine sit in the black, white, silver or (as yet

undecided) colour pod, while a 19" rack system holds the games console, Kaleidescape server, Harman Kardon DVD player and surround system and more. It also sports air conditioning, should your total immersion experience extend into the wee small hours. Although not for the claustrophobic, the OV/E has already sold to 1. The extremely versatile rappers, princes and Disney execs alike, despite not yet being available.

> UK server expert Imerge has announced a £2,500 MP1000 media player local client box, ideally designed to match the company's recentlylaunched MS5000 media server. The MP1000 is a local CD/DVD player that can work independently to the media server, or be used to upload content to the server itself. The system also allows multiple MP1000s to be used with a single MS5000. With an upscaled 1080p video output and custom designed Wolfson 24-bit Delta-Sigma DACs for the audio chain, all of which is controlled through a webbrowser interface, the XiVA-Link controllable MP1000 is more than just a dumb client box. The company's S3000 SoundServer has also been updated. The new fourth-generation box now comes with a customisable TV interface and is more iPod friendly.









The JBL Control series has long been the mainstay of generalpurpose loudspeakery. The company's new Control Now loudspeaker brings that concept full circle... literally. The quartered toroidal-shaped speaker is designed to fit into corners, between walls and ceilings or floors. In fact, it works virtually anywhere you need a loudspeaker, but without the need to bolt speakers into floors and ceilings. The design has a specially designed tweeter assembly for very wide dispersion, making it ideal for rear surround use. Naturally, for bigger rooms or outdoors settings, a quartet of speakers can be connected together to form a four-way audio doughnut. Available in indoor or weatherproof outdoor versions, the Control Now costs £149 per speaker for the interior and £179 each for the exterior models

Bower & Wilkins' popular CM Series got a bit of bling enhancement at CEDIA Expo. The CM1 standmount and CM7 floorstander speakers will be available in gloss piano black as of September. Currently, Bowers and Wilkins expects the glossy CM7 to retain the same £999 price tag as its standard livery cousins, but there may be a price premium on the gloss black CM1. So far, there's no news of whether the matching CM centre channel speaker will also be finished in a piano gloss livery. Sub-spotters may also notice an unidentified piano gloss subwoofer in the picture; currently the only sub for the CM range is the spherical PV1. This could suggest a CM Series subwoofer is expected soon. We will keep you informed...

Pioneer's elegant hi-fi side of the 'none more black' Kuro range has been bolstered by the new PDX-Z9. The all-in-one touch-sensitive system features an SACD player, 50-watt amplifier, AM/FM tuner and internet radio connections, with a 30 favourite station store. It also sports an allwhite organic electroluminescent display that was, er, pioneered by the company. The player is one of the first products in audio circles to feature DLNA (Digital Living Network Alliance) certification, meaning it can be integrated into a wired or wireless network with the minimum of fuss. Like the standalone SACD player and integrated amplifiers before it, the PDX-Z9 has been tuned and approved by Air Studios in London. The PDX-Z9 is expected to cost around £700.

Velodyne's new £595 MicroVee subwoofer features a single frontfiring anodised aluminium 165mm drive unit with two matching 165mm passive radiators pointing to the sides. The ribbed, extruded alloy casing is not just for show; it also acts as a heatsink. And that's just what the MicroVee needs, thanks to a 600-watt amplifier that will peak at a healthy 1.2kW! Essentially a scaled-down version of the company's popular SPL range, but without the advanced room correction software, the MicroVee is designed to be deep enough to keep home cinema enthusiasts happy, but also fast enough to keep audiophiles sweet, too. It certainly lives up to the Micro part of its name... it's a 230mm cube, yet the 9.1 kg black or white MicroVee delivers bass down to a healthy 38Hz.

"The two halls in London's ExCel exhibition centre devoted to the CEDIA Expo are filled with names well-known to the hi-fi enthusiast."

audiofile .:: SHOW REPORT

Monitor Audio's sub/sat Radius speaker range has proved very popular among home cinema types and space-limited audiophiles on a budget. The company has dropped some models from its range, but new additions include a belowthe-TV sound bar for home cinema enthusiasts. The new Radius HD loudspeaker range runs from £175 per pair for the Radius 45HD single driver satellites cubes, right up to £600 for the slim Radius 270HD floorstanders. Exact changes between the existing Radius and new HD range are not entirely clear at this time (save for minor decor differences to grilles and surrounds), but Monitor Audio hopes that some five years after the launch of the original Radius models - the new range will be as successful as the last.

NAD's Viso Two was announced several months ago (the unit alongside its multichannel Viso Five sibling - was first seen at this January's Las Vegas CES), but the CEDIA Expo was the first time we had a chance to handle one in the UK. The clever one-box, two-channel device includes a DVD/CD player (with virtual surround and 1080i upscaling, as well as support for DVD-Audio discs), DAB/AM/ FM tuners and a 50-watt per channel stereo amplifier. Running alongside the multichannel NAD Viso Five multichannel player, the Two is designed as a one-box audio/ video solution with a high degree of multiroom connectivity. Although primarily considered a home cinema product, we hope to be testing the NAD Viso Two - as an audio component - soon.





Harman Kardon had a wealth of new stereo and multichannel products on display at the CEDIA Expo. The new standard stereo models include the new £300 HD980 CD player with 32-bit DSP and 24-bit/176kHz oversampling, £250 TU980 DAB/FM tuner and £350 HK980 80-watt integrated amplifier. These all feature the company's distinctive new 'ultra black' finish with white glowing volume controls. The company also announced a new audio server, with built-in DVD player (but one which doesn't stream video). With a 250GB hard disk on board (roughly 2.500 albums in lossless compression), the four zone £1,800 DMC1000 can be driven by a video screen and will automatically populate that screen with all your album covers at the flick of an Ethernet cable. Sitting alongside the electronics was fellow Harman stablemate Infinity. The new Classia hi-fi speakers are covered in Highlights this month(see page 12), HFC

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audio consultants

FINE TWO CHANNEL AUDIO SYSTEMS





For further info about any of our products please visit our website www.audioconsultants.co.uk



- a Lyra Skala cartridge. For us, the best sounding Lyra cartridge. Very neutral in tone, a big soundstage and a smooth, musical sound. A radical different design to other Lyras utilising new materials that have reduced resonances and increased the speed of transients. £1849. Recently re-introduced, the popular Helikon at the reduced price of £995 superb value.
- b Whest Audio PS.30R phono stage.

The new phono stage to replace the already acclaimed PS.20 with significantly upgraded circuitry. A single chassis, full width design that now included a balanced circuit and six options for cartridge loading via internal switches. Exceptional imaging and detailed without being too clinical. An audition is highly recommended. £1599. We also have the whestTWO phono stage which has 90% of the performance of the PS.20 and offers excellent value at £650.



This weight may look like many others but the effect on sound is so different that it can be a shock to some. The special HRS polymer surface removes unwanted resonances so effectively that LPs sound more transparent, with much more focus and fine detail resolved; it is as if you have never heard the record before. Many of our vinyl enthusiasts say that, once they play their systems with this weight, they cannot listen to their LPs without it. Exceptional value at £132. Trial samples available.

d DaVinciAudio Labs Grandezza tone-arm.

One of the best and most neutral tone-arm we have heard. The use of Swiss ruby bearings and magnetic anti-skate results in one of the lowest friction arms on the market. This enables the cartridge used to track to its best abilities, extracting the finest details from the LP. Available in 9", 10" and 12" lengths. From £4000.



- e Ayre P-5xe phono pre-amplifier. This superb sounding phono stage is well established now but still offers great value. A layered sound stage, smooth tonal balance and a fully balanced circuit option. External switching offers different cartridge loadings and internal switching provides gain options. £1695.
- Nagra VPS phono pre-amplifier. The new phono stage from Nagra is finally here and superb it is too. Very transparent, very holographic and tonally correct. Most importantly for a valve based design, it is absolutely quiet. There are several cartridge loading and impedances options, via miniature plug-in boards, supplied with the unit. A second phono board, either MM or MC, can be retro-fitted easily. An internal switch allows the selection of two RIAA curves; one for 1950s produced LPs and one for 1970s onwards LPs. All in all, probably the best phono pre-amplifier we have heard, with the usual superb build quality that is associated with this company. From £3600.

Acustica Applicata > Accuphase > Aesthetix > Audio Physic > Ayre Acoustics > Benz-Micro > Cardas > DaVinciAudio Labs
Esoteric > Futureglass > Gamut > German Physiks > Grand Prix Audio > Harmonic Resolution Systems > Leben > Lyra
Mit Cables > MonoPulse > Nagra > Nordost > Nottingham Analogue > Opera > Pagode > Peak Consult > Quadraspire
Siltech > Sme Limited > Spectral Audio > Stax > System Audio > Thiel > Transfiguration > Velodyne > Whest Audio

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Located approximately 15 minutes drive from either M4/Junction 12 or M3/Junction 6 with free and easy parking outside the building.

We have a home evaluation scheme for those who might find this method more convenient.

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Demonstrations by appointment

Mondays to Saturdays 10:00 to 18:00. It is advisable to call us before visiting.

Part exchange welcome. Ex-demonstration and previously owned equipment listed on our website: www.audioconsultants.co.uk



"We would not hesitate to suggest the Sirius as an effective upgrade for any system" HI-FI CHOICE, JULY ISSUE 2008



Titan

development of unique proprietary technologies. Every product is designed and developed in the England and hand assembled in their factory in Hampshire.

IsoTek is committed to the creation of truly cutting edge designs through the

Only the finest quality components are used, and many of these are uniquely developed and built to 'MOD' specifications.

IsoTek has consistently established a class leading reputation, a fact that has been proved by numerous reviews throughout the world and over 21 industry awards.

For your free brochure, or to locate your nearest dealer please call Activ Distribution on 01635 291357.

Activ Distribution

TALKIN' LOUD

Last winter you ran an interesting series of articles about home listening at 'realistic' SPLs, which concluded, reasonably, that most people, most of the time, are either unable or unwilling to listen at SPLs of 100-plus decibels.

We all accept 'smaller-than-life' visual images on TV and, likewise, sonic images on the hi-fi. This, however, should have a profound effect on your reviewing technique but, no pressure, we are still waiting for the change.

There still seems to be an underlying assumption that equipment should be tested at full throttle, like car testers, who seem to be only interested in track performance, even when they are looking at a city car.

You do seem to be bound by some unwritten rule that says you can only make vague, elliptical hints about equipment being 'sleepy' at low levels, or 'untidy' at high levels.

Wouldn't it be nice if you could state out loud, in your reviews, that component X actually gives its best at lower SPLs, unlike component Y, which needs lots of juice? Would the manufacturers be terribly upset, and cut you off from new equipment?

Give it a try, and see what happens!

Jim McGing via email

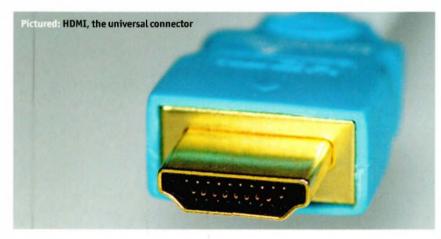
HFC Significantly, the reason why these terms seem vague is due to how good – not how bad – hi-fi really is these days. Most

"...the cables will appeal to music aficionados only."

systems are comfortable playing loud, soft and everywhere in between. A very few excel at low sound pressure levels, a small minority do well at particularly high levels, but the majority fall between these two points. Some place mild emphasis on working best at low or high levels and this is commented upon, often using the terms you describe. But to describe that mild preference in stronger terms would be doing the reader a disservice.

HDMI HAPPY

Thanks for highlighting the HDMI issue in July's Hi-Fi Choice (HFC 308). In our view, the technology and the cables are underutilised and are currently working below their full capacity as the hardware that they are connected to, are still playing catch-up. The musical properties of the cables will appeal to music aficionados only when and if high-end brands adopt it for use in their transports and preamps. In addition to uncompressed digital transmission, HDMI is offering more good news for consumers



LETTER OF THE MONTH

AGE IS NO BOUNDARY

As a silver wedding present last year, my wife bought me my first 'real' hi-fi system; we both went to a dealer and I picked out a Musical Fidelity CD and amp, coupled to a pair of little Monitor Audio floorstanders. I was ecstatic and my wife and I have found new enjoyment from our CDs.

That was just the start. In the last year, both my father and my eldest son have also bought proper hi-fi, partly due to listening to my system (and partly to shut me up, I guess). Their systems are very different, but we've all started buying more music than

ever. So I guess you are never too old (or too young) for hi-fi.

Alan Elliot via email

HFC The best hi-fi systems are highly infectious; if you are exposed to good hi-fi, you will want one for yourself and – if yours is good too, you just end up exposing more potential hi-fi owners. It's also a little known fact that for many hi-fi enthusiasts, the hi-fi is the cheapest part of the deal. Many of us spend far more on music than we ever will on the kit and the very best systems help to open up our tastes in music.



CHOICE MAIL Readers' letters

as it will provide a truly universal connection between digital hardware across the house and imitate the success of USB connections.

Reuben Klein Wireworld UK

HFC We have exactly the problem you describe, when it comes to testing HDMI; it's a connection of potentially massive benefit for the audiophile, yet currently remains a poor relation in audio connectivity. We hope that when Blu-ray Audio begins to appear, HDMI's potential will start to be discovered by the hi-fi community. Until then, sadly, it remains on the 'special interest' bench.

STAR WARS

I've been reading your excellent magazine for around two years now and appreciate the detail and lengths your team goes to in reviewing the various products. But I'm confused as to why you have changed your scoring system. You claim to be the UK's most rigorous hi-fi testers (something I'm not disputing) but now you round everything up with a five star score?? Why lose the percentages? It just seems a little odd.

Alan Cook Hertfordshire

HFC We noticed an alarming trend when using a percentage scale; buyers were shunning products that received a score in the high eighties and instead selecting products with absolute top marks, irrespective of whether or not that equipment worked in context. By adopting a more simplistic scoring rubric, products that are sonically first-rate but miss out on the top scores by virtue of a more minimalist approach (for example) still get a look-in.

VIVE LA DIFFERENCE

I recently had an interesting opportunity to hear two Cambridge Audio 840C CD players, both the same make and model. Why was it they sounded noticeably different? Similarly, two Nordost Shiva power cables (again same make and model) also produced great perceptible differences in sound quality. What's going on here?

Is it possible that subtle variations in build quality, such as solder connections; thickness and type of wire used and the materials used by component manufacturers can result in a 'sum of the parts' style effect on sound from one model to the next? If so, what of the poor consumer who forks out his monies for sonically sub-standard, yet still perfectly

"...anyone who 'likes' a valve amp should never review hi-fi for a living..."

saleable goods? With your greater testing experience at *Hi-Fi Choice*, is it really a lottery out there, or just my dodgy hearing?

Steve Gorlik W. Yorks

HFC It's possible you might have two products at the extremes of the specification; comparing a product that's slightly better than the norm against one that's slightly worse would highlight big differences in performance. However, the chances of finding two atypically good and two atypically bad products out of four seem remote in the extreme. Lots of things can influence the sound quality of a product, but possibly not things as subtle as the type of wire used in a specific component. For example, if you are comparing two identical CD players, is one new out of the box where the other has been played for a year or two. Or, has one player been constantly powered up where its rival hasn't been near a mains plug in a couple of weeks? Ask anyone who recently moved house; the process of boxing up, transporting and unpacking products can make them sound dreadful. Which is why we insist on warming up any products before critically listening to them. Finally, here's a useful tip from the old days about assessing kit; play the piece of music on product A, then repeat the first 20 seconds or so of the music on A before switching to B. This helps keep the intro of the music fresh in your mind when changing products.

DO YOU MEASURE UP?

Your recent test of valve amplifiers (Ultimate Group Test, HFC 305) showed up something interesting. Valve amplifiers clearly deliver terrible levels of measured distortion, but people don't care... they just lap up the sound, distortion and all. Even the best performing - and most expensive product in the test (the Copland CTA405) would struggle to live up to the measured distortion standards of a solid-state amplifier that cost less one tenth as much. I think you should use valve amps as a test of listener competency... anyone who 'likes' a valve amp should never review hi-fi for a living, because they prefer distortion to accuracy.

Name and address withheld

HFC There's distortion... and there's distortion! Most people will struggle to perceive relatively high levels of even-order distortion (broadly speaking, the sounds a valve amp produces) while tiny amounts of odd-order distortion (again broadly speaking, the distortion inherent to some solid-state systems) will make a system sound harsh. And yes, some prefer the softening, warm tones of a valve amp, often clear in the knowledge that it's not strictly accurate. Some also prefer the colorations inherent to box loudspeakers over electrostatic panels; should we get rid of them too?



Pictured: Controversial valve technology

COLD WAR CASSETTE

Some years ago I was recording on a Toshiba cassette deck, but was plagued with background interference. After getting the deck to record with no input, I found that the interference was a Russian station in English! A chap installing multi TV aerial systems required for TVs in an electrical retailer thought my interconnect cable was acting as an aerial and that I should cut it in half. This I did and that was it – no more Mother Russia in the background.

Although this happened many years ago now, it always makes me wonder if it could still happen again today?

Austin Hartnell Newcastle-upon-Tyne

HFC If anything, our more contended than ever airwaves are more – not less – likely to interfere with low-level signals on interconnects. Fortunately, many of the best cables are designed specifically to shield the signals from this potential problem. Interference can be hard to eliminate, though and we knew of one home cinema enthusiast who had to wrap all his cables in silver foil to keep radio stations out of his TV set. Of course, he did have the Wrotham transmitting station as a close neighbour...

Practical Hi-Fi

At Practical Hi-Fi we still get excited about new products coming out from our favourite manufacturers. We have an amazing collection of products in stock from specialist suppliers like PS Audio, Monitor Audio, B&W, Pure Sound, SUGDEN, Kef, Cyrus and many more.

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We love to get it right, and giving our customers the most from their equipment is what we are about. We specialise in home demonstrations, making sure that it sounds as good at home as it did in the shop.

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SPEAKER SWAP

I recently swapped the loudspeaker in my Fender Blues Junior guitar amp for a completely different design from a different brand (I switched from a Eminence/Fender blue back model to a Celestion Vintage 30) and upgraded the valves and the sonic improvement was marked. Why can't I do the same with my hi-fi?

Peter Prior via email

HFC Guitar amplifiers are designed to reproduce a frequency range with high treble or deep bass. This can comfortably be covered by a single 300mm drive unit. Loudspeakers in hi-fi have to cope with a wider frequency response and need to include a tweeter and often sub-bass drivers. And that requires a crossover network. If you try to replace speaker drivers with alternatives in a hi-fi loudspeaker, chances are you'll need to rework the crossover network, too.

Beefing up the valves is a more common upgrade, one that benefits both guitar and hi-fi amps alike. The stock valves can leave a lot to be desired, but remember that buying a really good set of new or 'NOS' (new old stock) valves can make a difference. Just remember to bias your valves if you can, because valves set too hot will live a short, overdriven life (good for creamy distortion in your Fender amp, but not so good for hi-fi), while those set too cool will never raise a smile in either camp.

ASK ALAN

Got a burning hi-fi question? Ask Alan...

Send your queries to:

Alan Sircom, Hi-Fi Choice, Future Publishing Ltd, 2 Balcombe Street, London NW1 6NW. Or email your queries to hifimail@futurenet.co.uk

GOOD TO BE BI?

Dear Alan,

My speakers have bi-wire terminals and I only have single-wired cables. What benefit would I get from bi-wired cables? Also, the links between the bi-wire terminals are just metal bars... are there better options available?

Kevin Winogrand via email

HFC Bi-wiring means taking two sets of cable connected together at the speaker terminals and hooking one set to the speaker's HF terminals and the second set to the LF sockets. If you have a three-way speaker, it's possible to tri-wire a system and so on, although tri-and quad-wired systems are a rarity. There are a number of theories as to why bi-wiring 'should' make a difference, the most commonly touted of which centres around back EMF (electromotive force) from the magnetic flux of the woofer undermining the midrange and high-frequency signals. The opposing view involves dismissing the 'back EMF' theory as complete and utter nonsense and saying the whole thing can be summed up by adding the word 'more' in between 'bi-' and '-wire'.

From a purely subjective standing, some people think bi-wiring makes a huge difference and others think it makes no difference whatsoever. We think this dichotomy in opinion might stem from the nature of the crossover network in the speaker itself; the crossovers in some speakers appear to more consistently benefit from bi-wiring, others don't. Unfortunately, because you haven't mentioned what kind of speakers you are thinking of bi-wiring, we can't even guess whether you will hear much of a benefit.

Same applies to those little bars connecting HF to HF and LF to LF. You could get a small set of jumper leads made from your existing speaker cables (black-belt cable experts can even make a set of bi-wire connection loops on the speaker end of your cables) and may hear a difference, or may be laughed at for trying to hear the sound of possibly 10cm of wire at the end of perhaps 500cm of the same wire.

NEW FOR OLD POLICY

Dear Alan,

I feel the need for a change! I have used the same system for many years – Arcam CD and amplifier, Royd loudspeakers – and would like something to bring me up-to-date. When I bought this system in the early 1990s, I spent about £1,000. How much would I need to spend to produce a system of similar quality today and what models can you recommend?

Tony Cheeseman via email

HFC It's hard to do like-for-like comparisons that span the decades. The dominance of Chinese manufacturing – and the lower prices that brings – means that your £1,000 can potentially bring you a far better set of products than you could have got in the early 1990s. However, this also means that if you wanted to replace your equipment with three extremely well-respected UK-designed, UK-built components, you'll end up spending a lot more.

In the first case, you could try Cambridge Audio's Azur 640C v2 player and 640A v2 integrated amplifier and a pair of Mordaunt Short Mezzo 1 speakers (giving you a good sounding system for around the £1,000 mark). On the other hand, you could go for Leema's Pulse and Stream combination coupled to a pair of Acoustic Energy AE1 Classics to deliver the best in British sound, for around £3,000. Or, of course, you could stay brand-loyal and go for Arcam; the new

WHY EXPENSIVE CABLES?

Dear Alan.

I am thinking of buying a pair of Townshend Isolda cables. I know *HFC* really likes this cable, but what's so good about it and would you recommend it instead of other cables?

Stefan Blomberg via email

HFC We like Isolda a lot, but wouldn't make a sweeping recommendation on any product without knowing what was in the rest of the system. What Isolda loudspeaker cables offer is a cable with characteristic impedance more in line with that of the loudspeaker itself. This makes the cable sound less intrusive than most, but low impedance means high capacitance and not every power amplifier in history is happy handling high capacitance cables (using this design with a 20-year

old Naim is not a good idea, for example).

The Isolda interconnect cable is designed to provide the least sonically damaging environment for the conductors; a design carefully produced to use air (arguably second only to the hard vacuum of space) as the main dielectric and without a shield unless called for. This gets close to listening to copper instead of listening to copper, its insulation, the braided shield and all the other components of the cable. Once again, though, we would hesitate to recommend this without some idea of what two products it's hooking together.

Your best bet is to seek out a dealer that stocks Townshend products and can demonstrate their benefits to you. Ideally, they will loan the cables to you for a short period. Faling that, contact Townshend to discuss your system and its cabling needs.

FMJ CD17 and FMJ A18 are untested as yet, but this £950 combination comes from very good stock. If you liked the sound of Royd of old, check out either Rega or Aurousal loudspeakers, which have some of the character of the older speakers.

OLD OR NEW CD PLAYER

Dear Alan,

I want to buy a CD player, with a budget of about £800. But what should I choose? The obvious candidate is the recently improved Naim CD5*i*, but others also tempt me, such as the new Cairn Tornado, with its SOFT board upgrade. Or maybe it's worth stretching my budget to the Leema Stream? I can't help thinking all those DACs must make a difference, if the Antilla is anything to go by.

However, its not just new players that interest me, as I could get a three-year-old CD (which would have cost over £2,000 new) less than half the new price. I have always enjoyed Marantz players, so the SA11-S1 could be just the job for me. But how far has the sound quality of new CD players come since that player was launched?

My current system comprises a Teac VRDS-10, NVA 50 passive preamp, Counterpoint hybrid valve/ MOSFET power amp and Dynaudio Audience 50s on heavy Atacama stands. The Dynaudios will be next on the upgrade list, but they are surprisingly neutral and revealing for their price, so I have chosen to upgrade the CD first. My listening preferences are varied, but more modern rock than classical.

Simon Blanchard via email

HFC The new vs. old debate is a popular one this month; not exactly unsurprising though, given the pace of CD player technology. Of the three new players you suggest and especially in the context

of your system, we'd plump for the Leema if you can stretch to it. Failing that, do your best to audition the Naim and the Cairn, too and see what you think.

The SA-11 is a cracking player as well, so we would also keep a close eye out for one – you could get one for under £1,000 if you're lucky. You'll find the Marantz still keeps up with the likes of the Leema in many respects...

ALL OR SOME...

Dear Alan.

I need your professional advice whether I should upgrade my entire hi-fi or just selected parts. My current system consists of an Arcam CD 192 player, Arcam Alpha 9 pre and power bi-wired to Mission 753 speakers and using Supra Sword interconnects and Kimber speaker cables. My listening room is about 3m wide and 4m long and about 2.5m tall, and I listen to mostly rock, blues, folk and lots of female vocals, such as Sarah Brightman, Loreena McKennitt and Tracy Chapman

Andrew Thompson via email

PFC The obvious part to upgrade is the pre/power amplifier. The Alpha 9 combo is very good, but both CD and loudspeaker can take an upgrade or two in the amp department. Staying with Arcam, you could go for the new FMJ A38 integrated amplifier with matching P38 power amp. This would be the most logical 'drop in' solution. If you haven't already done so, in order to get the best out of the speakers, position them about half a metre from the 3m wall, about 2m apart and 1.5m away from the opposite wall. As long as the room isn't made of glass and has soft furnishings, this will sound excellent.

ALAN'S TIPS

VALVE BIAS

Thermionic devices are precision engineering devices... from the early 20th Century. A sophisticated and complex inner world of metal usually shrouded in glass, the designs of valves – especially power valves – predate the tight tolerances required of solid-state and especially the latest surface-mount components. All of which means, no two valves are exactly alike.

Companies can predict, with some surety, the characteristics of a valve and supply power tubes in matched pairs or quartets. This is done by testing and matching valves by hand before supplying them (this also means using a valve testing machine... a remarkable bit of mid-20th Century technology that looks like something right out of a 1950s sci-fi movie). However, there's no quarantee that the new matched pair will also match the previous pairing, so sometimes you will need to 'bias' your valves. The bias of a power tube relates to the idle current of the output valve; set too high, the amplifier will start to distort too easily, too low and the amp will sound sterile and bland at all volumes. Put another way, set too hot and the tubes will burn out faster; set too low and you only hope they will.

In most modern amplifiers, the job is done – or part done – for you. Auto-biasing circuits and circuits that merely require you to turn a potentiometer until an indicator light blinks out are commonplace. So are amplifiers with fixed bias, which assume the nature of the power tubes will be within tolerance (in fairness, most are). If, however, you notice your classic valve amp sounding distorted (or very unexciting) after a re-valve, or that one set of valves glows significantly brighter or darker than before, you might need to get the amplifier professionally rebiased, usually through the manufacturer.

You shouldn't have to call out the man with the multimeter too often, though.

Valves should have a working life of 10,000 hours or so and don't appear to age when not being used (the vacuum inside the shroud prevents metal from oxidising, of course). This not aging when stored properly means it's possible to buy classic valves from the 1930s-1950s as 'new old stock' parts. Of course, their rarity means you might end up paying through the nose for the privilege.







REVIEWS

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



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OUR RATINGS EXPLAINED

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

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

recommend you mere uses well we always a 800 olders, the 17 Mkil M, which has excellent build and e a very good impression in HFC 243. At sime price there's also the Cyrus 7, a ng all-rounder in a compact case. 'ter trying the Heart with the standard see switched over to the Siemens yade, a comparison somewhat muddled by

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

w tubes shone
"rough." The Siemens equipped player has an
in snappier sound with better timing that
es with dense material with remarkable
fidence and ease. It even seems to be

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

VERDICT

SOUND

Good bruild and open, living sound from a valve DM, with planty of injust a valve for more of the DM. And Coden't engage as well at the branchort with bias of weight and opener through the sat valves you primeline as the planty of the DM. And the Competition from single chause designst worst help chause designst worst help.

The things we like most about the product

The things we think could be better

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

<u>OUR AWARD BADGES EXPLAINED</u>



Best Buy

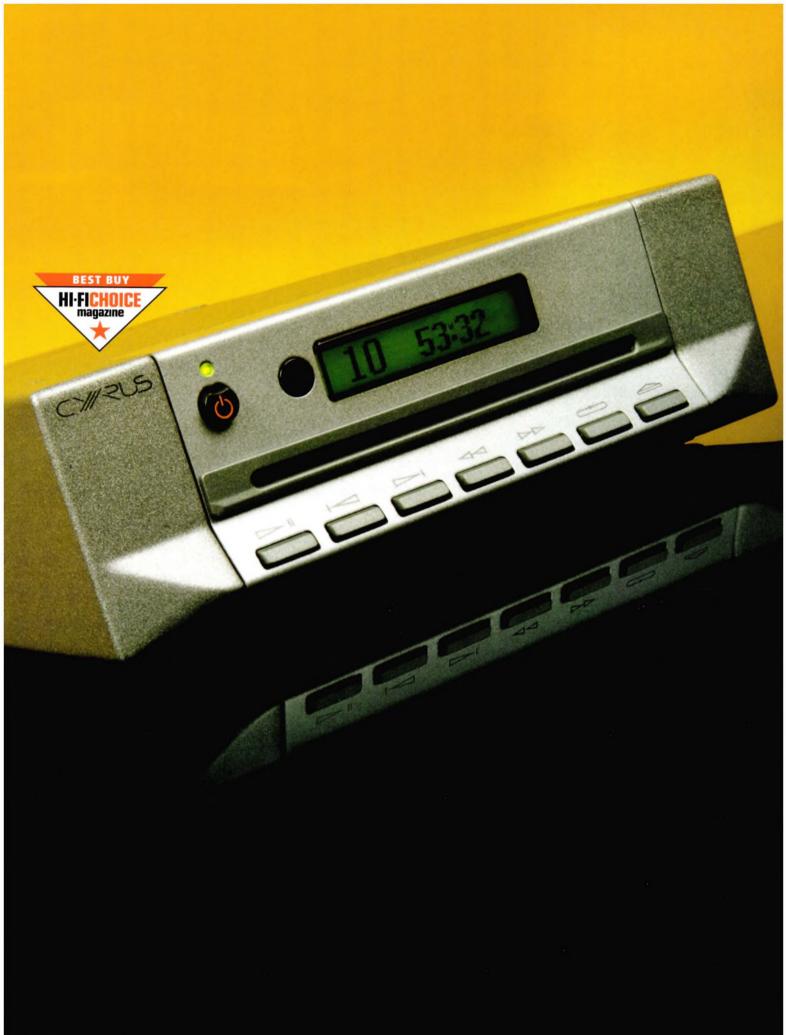
A component receiving the coveted Hi-Fi Choice Best Buy Badge has been judged to deliver excellent performance at its price point, thereby offering outstanding value for money.



Editor's Choice

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

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



Mini masterpiece

Cyrus has built its own Servo Evolution platform, bringing CD replay close to perfection

PRODUCT Cyrus CD 8 SE CD

TYPE CD player

PRICE £1,100

KEY FEATURES Size (WxHxD): 21.5x7.5x36.5cm ○ Weight: 3.5kg ○ Analogue outputs: 4x RCA phono Digital outputs: Electrical (phono) and optical (Toslink) OMC-Bus in and out O Proprietary Servo Evolution technology O Slot-loading mechanism

or over twenty years now, we've been reviewing CD players 'made by' specialist manufacturers - a proportion of which are manufactured by a very small number of companies (originally Philips or Sony, these days just as likely to be an unpronounceable Chinese outfit), who produce CD transport mechanisms as complete assemblies. Take one of these, add a D-A converter, an output stage, a display and a power supply and you've 'made' a CD player...

Cyrus has gone one better than that and in the process has achieved something which the company says is unique. Instead of using a ready-built mechanism, Cyrus has specified each component separately and then produced its own software that knits the whole caboodle into a functioning assembly. We've a little more detail on that and why it matters, in this issue's Techno column on page 21, but what's important to the audiophile is that the

mechanism has been optimised for highquality music replay

That sounds nuts at first. Digits are digits. and really crummy CD (DVD, even) players still manage to get the data off the disc most of the time. But let's make a little analogy here with LP replay: an LP player can be optimised for various requirements. If you're a DJ, for instance, you want it set up so that whatever happens it keeps playing, so you put a lightweight arm on it, set the tracking force to several grammes and mount the whole thing with just a little suspension so that knocks

make them. The purchaser of a ready-built CD transport simply isn't but Cyrus, thanks to a design team steeped in the inner workings of digital disc replay, has taken control at what engineers call a lower layer of the system. And this is the basis of the new 'Servo Evolution' versions of the Cyrus CD players.

From the outside, the CD8 SE closely resembles the old CD8x, except for one important respect. With the SE giving freedom to build up the mechanical parts of the system to taste, Cyrus has opted for a slot-loading mechanism instead of the former tray loader.

"But what's important to the audiophile is that the mechanism has been optimised for high-quality music replay."

don't cause it to skip. If you're a broadcaster, you want minimal clicks and skipping due to dust so again you increase the tracking force, though resilience is less of an issue. But the super-fussy audiophile can fiddle with tracking force, VTA etc. until the sound is best and to hell with incidental considerations.

At the point where the laser reads the CD groove, signals are entirely analogue and, in fact, similar compromises can be made - but only if you are deep enough into the system to

We're not sorry to see the rather rattly old Cyrus tray go, though we do have one niggling reservation about this slot loading replacement. When it ejects the disc, it doesn't push it quite far enough out and gripping it without touching the playing surface is distinctly awkward. Even worse, if one accidentally ejects a disc and wants to reload it, simply pushing it back in achieves nothing except making it completely impossible to grasp, unless you actually end up





We spoke with Cyrus MD Peter Bartlett about the CD 8 SE



PB: Absolutely, they sound better. It is likely that CD will be the safest and highest quality carrier for the foreseeable future. Obviously it is possible to buy music online, but these services are aimed at the mass market, not the needs of the audiophile Cyrus customer

To our knowledge, our SE platform is the only CD engine specifically developed for high-end audio. There are companies claiming one tweak or other, but no one has engineered a 'made for high-end' CD engine. The data sent to our DAC requires less correction because we read it 'right first time'. It is the corrective action required by lesser drives that induces noise into the sensitive analogue stages and limits resolution

The SE is fairly similar, if not slightly better, in terms of disc defect performance compared to the module it replaces. We could set it up, if we wanted to, to play through just about any type of disc defect, but with this comes a compromise in sound quality

We have deliberately tuned our system to favour red book standard discs that have been reasonably well looked after. The engineering team member responsible for the servo tuning has created CD systems with high shock-resistance, or with high scratch playability, but these are not the bestsounding CD engines. For the SE project the R&D team design brief was 'the best sound possible from CD'

Because Cyrus is in control of the whole engine specification we could swap out, for instance, the loader or laser for another, should we choose to.

Developing our Servo Evolution platform gave us control of what loader to use and the vote went to a slot, as drawers are either poor quality or add a disproportionate cost to the machine's overall price.



qrabbing the playing surface. If Cyrus could use its omnipotence over the CD replay experience to fix that, we'd be delighted!

Looking inside the CD 8 SE, it certainly has a familiar ring - indeed, Cyrus is quite happy to admit that the audio electronics are unchanged from its predecessor, which seems sensible enough as the results we got from it were always on the impressive side of decent. Power is derived from two tiny toroidal transformers, one on each side of the case, while the audio board effectively hangs from the top of the case: the new servo board is stacked underneath it. Components throughout are good-quality, with a DAC chip of recent vintage and highperformance op-amps.

At the rear, two sets of audio outputs are provided, plus both flavours of digital output and Cyrus's 'MC-Bus' control system in and out. There's also a socket for a PSX-R external power supply for upgraders. The features are the usual set and operation is slick and simple, with moderately fast disc loading

SOUND QUALITY

Obviously we're always very interested in the performance of a much-trumpeted new model, but in this case the stakes seem to be higher than ever for Cyrus. The thing is, the CD8x was a very good CD player, so in order to avoid a damp squib at this point the SE has to achieve something pretty splendid. So, we plugged it in and cued up a familiar disc... but weren't really blown away. Very nice, but nothing remarkable.

Interestingly, and not for the first time in recent memory, this turned out to be part of this player's strengths. You don't necessarily want a CD player to sound remarkable initially, that could very easily imply that there is something not quite right. Yes, some players do stick out from the herd in even the quickest demonstration, but they don't always wear well and can be very much a question of taste in the long run. The majority stick close to a straight and narrow path for the simple reason that they're technically highly competent and give the same analogue output from the same digits, within close limits.



All the same, small deviations exist between them and this is exactly the sort of thing which only becomes fully apparent after a few tracks'-worth of listening. Sometimes one realises that the balance is a little unusual, or perhaps imaging a shade better or worse than most. In this case, the distinctive feature proved to be resolution. We seemed to be hearing more of the detail between the notes and between the performers in space, than we are accustomed to, certainly from digital sources in this price bracket.

We'll give an example of what we mean by that, by choosing as a test, a disc we've used to evaluate literally hundreds of hi-fi products for more than a decade. It's of solo voices, chorus and small orchestra and it was recorded quite simply in a nice acoustic, with good equipment, giving it some of the most lifelike sound quality we've ever heard. It's proved invaluable for analysing the finer points of performance, especially among CD players and DACs, precisely because of the sheer amount of information that seems to be available.

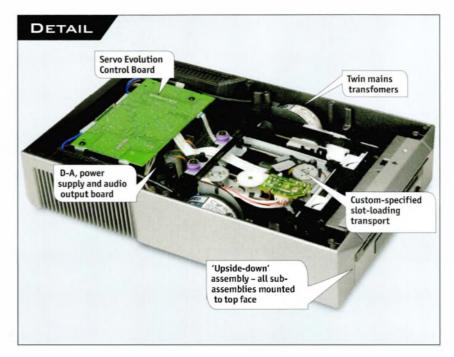
In this case, we soon became aware that the sound of each instrument was exceptionally well defined. One could hear the individual decay of oboe, violin and harpsichord, none interfering with another, but each beautifully portrayed in terms of tone, space and indeed time. Voices, too, had superbly stable tone and timbre, unaffected by anything else within the music texture. It often seems that instruments and voices somehow 'modulate' each other in the replay process, leading to subtle but surprisingly disturbing mix-up and muddle between them and in avoiding that the CD 8 SE shows itself on a level (or very nearly so) with some of the finest digital replay devices we've heard, including very upmarket kit from the likes of Meridian and dCS

ABOUT CYRUS...

The Cyrus story began in the 1980s when, as part of Mission, the brand name was used on specialist stereo amplifiers. When, in 1982, the launch of the CD format took the hi-fi world by storm, the Cyrus R&D team saw the opportunity to embrace a new technology and the first audiophile CD players were the result.

Between 1983 and 1990, Cyrus made a series of extremely popular amplifiers called Cyrus One and Cyrus Two. The latter having the option of adding a separate power supply to boost performance.

Over the years, Cyrus has gained a worldwide reputation for delivering excellent sounding hi-fi product and the range includes CD players, amplifiers and hard disk media servers.



"It is more than merely competent with any musical style we could throw at it, adapting to everything from punk rock to Mozart..."

So it's certainly a very civilised player. But what of its performance with music of a raw, visceral nature? Once again, we can find little but praise. We haven't always been vastly enthusiastic about the rhythm and timing of Cyrus digital sources, but we can't help feeling that the CD 8 SE offers a small, but significant improvement in this area over its predecessors. While there is no suggestion of a tonal imbalance, bass is very strong and clearly defined, with plenty of attack when needed. It may not be quite as extrovert as some we've heard, but then it seems to be an unavoidable compromise that the most overtly rhythmic hi-fi components are not the most detailed. One size, indeed, does not quite fit all!

All the same, this is one of the most assured all-rounders we've come across, certainly if one discounts the esoteric and expensive high end. It is more than merely competent with any musical style we could throw at it, adapting adroitly to everything from punk rock to the infinitely gentler tones of Mozart string quartets. While its tonal evenness and extension, combined with its lack of grain and harshness, make it an attractive choice for long listening sessions.

Arguably, there are some great CD players around at the moment and the Cyrus CD 8 SE is definitely one of them. From top to bottom of the range, it has superb grip and control

over the sound without ever being in danger of strangling the life out of the music. Its technical prowess is clear, too: we ran our usual batch of tests and confirmed that jitter, noise and distortion are all among the very best we've seen from any 16-bit digital source (though once again the digital filter allows some aliasing, unfortunately). Imaging and detail are first-rate and sounds are invariably solid and almost tangible. You'd have to spend truly frightening amounts of money on an amplifier and speakers before you could say that the CD8 SE was putting a brake on overall system performance... and we can't say fairer than that! HFC

Richard Black





LP12 is Majik

Based on a classic design, the Majik LP12 is Linn's most affordable yet

PRODUCT Linn Majik LP12

TYPE Turntable

PRICE £1,995 inc. Pro-Ject 9cc arm and Linn Adikt cart

KEY FEATURES Size (WxHxD): 44.5x14x35.6cm **○** Weight: 15kg **○** 33.3/45rpm with adaptor

• 24V synchronous motor • Upgradable configuration

CONTACT ☎ 0141 307 7777 @ www.linn.co.uk

he Linn Sondek LP12 was once the be all and end all of not only turntables, but serious hi-fi as a whole. In the late seventies and early eighties your masculinity was certainly in doubt if you didn't own an LP12. That's assuming that you believed the hype in magazines and from Linn dealers.

The LP12 was, in fact, so successful for a relatively expensive turntable that it went on to launch thousands of Linn/Naim systems — many of which are still around today. But in the last ten years or so the LP12 has become just another turntable in a hotly contested market place. It's also pretty expensive in the general scheme of things — a full monty version will set you back £4,480 and that's without the arm or cartridge.

The new super-affordable Majik version is a full LP12 turntable with the standard armboard and solid base as well as the "extremely lownoise patented main bearing" and Mazak 8 platter. It has a three-point spring suspension

system and a folded steel subchassis that connects the main bearing to the wooden armboard. The main body of the turntable is solid wood and comes in a variety of types and is surmounted by a stainless top plate which seats the on/off switch. Majik elements include the internal power supply and a Pro-Ject 9cc carbon fibre tonearm. This is surprising, because Linn used to sell its own entry-level tonearms (most famously the Basic). However, the company has a history of using third-party tonearms such as the Grace, so the Pro-Ject is not such a radical choice after all.

The 9cc is the top Pro-Ject tonearm and retails for £450 when sold separately. It has



"In the late seventies and early eighties, your masculinity was certainly in doubt if you didn't own an LP12."

inverted bearings and a conical carbon fibre tube that morphs into the headshell. It can be adjusted for both VTA (armbase height) and azimuth (the tube can be rotated) and comes with an arm cable that plugs into the base and could be replaced if you fancy juggling with the insides of an LP12. Unlike most turntables, this is not something that is encouraged - the LP12 is a difficult design to set up - those springs are inclined to go out of alignment if knocked or twisted and getting them back in place is a kerfuffle even if you've had the training. We managed to lure Linn's Roger Whittingham to do the set up that a dealer would usually carry out and it took him a good two hours

The final piece of the package is Linn's Adikt cartridge, the only moving magnet in its range has a Gyger II replaceable stylus poking out from its shapely belly and threaded inserts for easy mounting in the top. Linn supplies a metal plate which sits atop the headshell to stop the bolts marking the relatively soft carbon fibre. The Adikt usually costs £275, add that to the £1,540 that a standard LP12 costs (which does not include the Lingo power supply at £990) and then factor in the tonearm and you can see that there is a good saving to be had in the

Majik LP12 package. The standard LP12 does include a lid, however.

The LP12 is also probably one of the most upgradable turntables on the market: the Majik package can be modified, one element at a time, all the way to fully-blown status. Linn recommends starting with a Lingo power supply (£990), then a Trampolin base (£140), Akito tonearm (£720), Klyde MC cartridge (£725) and silver tonearm cable (the T. Kable from £280). You can go further, of course, the ultimate system is to add the Keel solid aluminium sub-chassis and arm board (£1,950), Ekos SE tonearm (£2,950) and Akiva MC cartridge (£1,980)

SOUND QUALITY

Linn has long been an advocate of 'being able to follow the tune', which seems a fairly obvious aspect of musical appreciation, but nonetheless makes a change from holographic imaging or bone-crunching bass as an audio goal. This tune deal comes directly from the LP12 which does, indeed, seem to place a lot of emphasis on the rhythmic qualities of whatever you play. Taj Mahal's *Cakewalk Into Town* has a tuba playing the bass line which seems more timely than usual. It doesn't seem quite as deep in tone as it can be and nor do

you hear the difference in level between it and TM's voice and quitar - which may be why its contribution is that much more clear cut. This comes down to relatively compressed dynamic range, there isn't the same difference in the volume of elements within the mix as other turntables reveal. With some material this can be quite appealing. Keith Jarrett's usually rather quiet, but magical moment on Meaning of the Blues (Standards, Vol 1) is rather more clear-cut and substantial than we are used to, which means you can hear more of the attack and decay of each note. It does not seem an overly neutral nor accurate reflection of the disc, however, and whether it's a price worth paying for the tunefulness of the result is going to be a matter of taste.

The treble could also do with some extending, you don't hear a lot of the air and shimmer in cymbals for instance, which might be why the overall result has a slightly cuddly feel. Treble plays a large part in defining notes across the band as the upper harmonics come from that end of the spectrum. The Majik LP12 does, however, deliver high levels of detail. You can hear right into the mix, in a way that the turntables in our group of £1,000 designs (see HFC 309) could not. It also has an assurance to its sound that makes even the most challenging material seem coherent and approachable. It doesn't take out the bite, but it's a bit smoother through the midband than you usually find with a moving magnet cartridge. We used a Trichord Dino+ phono stage with the Adikt, which seemed



We spoke to Gilad Tiefenbrun, Linn's Director of Engineering about the Majik LP12

HFC: Why has Linn come out with a new version of the



GT: With the Majik LP12 we wanted to make the original accessible to the new generation of vinyl enthusiasts. Whilst the LP12 is regarded by many as a legendary turntable, there was a perception that it was very expensive. By introducing a complete turntable, with everything included, for under £2,000, we aim to break that perception and give new customers the chance to discover just how good their music can sound when it's played on an LP12.

What corners have been cut to achieve the price point?

The current model, which comes with no fitted accessories, is exactly the same as the LP12 we start with when building a Majik LP12. The difference is, that we have configured a complete turntable system with accessories, thus lowering the cost to the customer. In effect, you're still buying an LP12, but don't have to buy the best power supply, tonearm and so on, on day one. These are all upgradeable parts of the system. The new component in the package is an internal power supply, which we've included in the deck and means that customers don't have to buy a separate power supply. That's the biggest single saving when buying a Majik LP12 over building up a custom LP12. Of course, by including everything with the turntable, we have also been able to configure a price that saves customers money.

Why did you select the Pro-Ject tonearm?

We actually auditioned a number of potential tonearms and chose the 9cc because its performance and musicality are strong for the price point. Pro-Ject were willing to work with us to deliver on the changes we wanted to make it more suitable for an LP12 set-up. It's, therefore, not an entirely off-the-shelf Pro-Ject 9cc. In addition, Pro-Ject have a similar approach to bearing design to our own, which further lent credence to a good synergy between the LP12 and a Pro-Ject arm at



■ to work well, but most of the Linn two channel amps and preamps have built-in phono stages that are equally appropriate

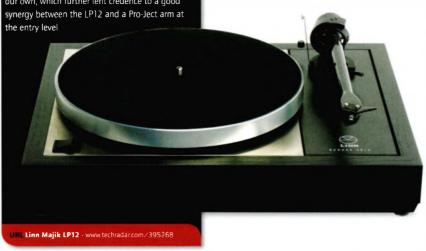
The LP12's undamped spring suspension provides a good degree of isolation from external vibration, but not so much that you can't hear changes in support. We started off using a glass shelf on a Custom Design Icon stand, but replacing the glass with CD's aluminium shelf brought about a significant increase in definition and contrast within the music. This allowed a rather greater appreciation of the reverb soaked soundscapes of Felix Laband's Dark Days Exit, which offered up highly-textured bass notes in the turntables grasp. While the bass isn't as solid as some heavyweight designs, it goes down low and is very well articulated, hence the resolve of the tuba on the Taj Mahal track and the crunchiness of the synthetic stylings of Mr Laband

Out of interest, we swapped the Adikt cartridge for a rather more exotic van den Hul Canary to see if this would counteract the shortcomings perceived. It did enhance dynamics and delivered a considerably more luxurious and finely detailed sound, but not one that could compete with the aged SME Model 20A that we call a reference. This is a rather more expensive turntable and arm, but one as old as ours could probably be had for close to the Majik LP12 price so it's not an unrealistic comparison.

It brings scale, resolution and wide bandwidth to the party, but does not, however, have the propulsive quality that makes the LP12 so musically engaging.

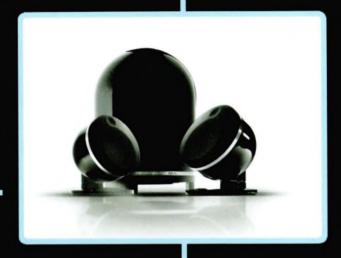
Which goes to show that with turntables you pays your money and takes your choice. The Majik LP12 is a very enjoyable and musical turntable with high build quality and a solid upgrade path. HFC

Jason Kennedy









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Const

Surprising Systems.



Gone Platinum

Monitor Audio's range-topping Platinum series has a little beauty in the line-up

PRODUCT Monitor Audio Platinum PL100

TYPE Standmount loudspeaker

PRICE £2,500 per pair

KEY FEATURES Size (WxHxD): 34x61.5x36.5cm

● Weight: 13kg ● Two-way vented design

■ Ribbon tweeter ● 170mm bass/mid driver

• Sensitivity: 88dB (40hms) • Optional column stands (£350 per pair) • Finishes: Santos Rosewood and Ebony natural wood veneers with clear gloss piano lacquer

CONTACT 2 01268 740580 # www.monitoraudio.co.uk

he Platinum series from British loudspeaker expert Monitor Audio, represents the finest engineering in the company's comprehensive portfolio. Amongst other luxuries, Platinum is known for its high-quality ribbon tweeter units, which as we discovered, are excellent at delivering fidelity.

Hi-Fi Choice has already covered the flagship PL300 floorstander in an extended review

(*HFC* 301), but now it's the turn of the compact and more affordable PL100.

This domestically friendly two-way design, is about as different from the PL300 as you can get (except that they share the same basic technological underpinnings). Where the PL300 is a massive four-driver floorstanding wardrobe of a loudspeaker, the PL100 is a relatively petite two-driver standmount, which

Monitor Audio Platinum PL100 loudspeaker | Review |

is based around a clever ribbon tweeter that's also used in its larger sibling. Although this impressive unit is said to work all the way to 100kHz, measuring such frequencies is notoriously tricky and not altogether reliable.

Monitor Audio offers an optional dedicated stand that bolts directly to the base of the speaker for optimal coupling, although at £350 per pair, we'd also consider something like the market-leading £300 Partington Dreadnought Broadside (HFC 309)

The PL 100 uses a vented bass reflex design, with a 17cm bass/mid driver and a homegrown ribbon tweeter which takes over at a comparatively low 2.8kHz. System sensitivity is typical for a compact design at 88dB, which is slightly disguised by the four ohm nominal impedance and power handling is 120 watts.

and a brace whose end point can be seen on the back panel. The PL100 is also carefully damped with a bitumastic material and finished in an impressive piano lacquer.

The speaker's 'HiVe' port is a low-turbulence design, in some ways reminiscent of Bower and Wilkins' 'golfball' unit. Completing the speaker at the back are some well-finished platinum plated bi-wire terminals, but it would have been preferable if the links between bass and tweeter had been made of wire, rather than the pressed metal links used here.

SOUND QUALITY

Listening to the PL100 is a truly enlightening experience, though having recently spent some quality time with the superb Platinum PL300, we were also confident in the standmount

"...although the bass is relatively lightweight, the Monitor Audio PL100 is more than capable of filling a large-sized listening room."

Although none of this could be described as revolutionary, the materials and technologies used certainly are. The bass driver diaphragm is a smoothly dished, skinned sandwich cone with a honeycomb Nomex core. Light and stiff, it's powered by an elaborately designed magnetic engine. The ribbon tweeter was designed and built in-house and features an extremely lightweight ribbon, investing the unit with a lightning-fast transient behaviour and one which is said to be responsible for the impressively wide frequency coverage.

For many, however, the enclosure itself will be the most remarkable visible element of the design. Available in conservative wood veneers, all edges are smoothly radiused and superbly finished, while the carcases are multilayer plywood laminations and the baffle is cast from a mineral loaded thermoset polymer, chosen for its low resonance qualities. The boxes are extensively

braced with

a front-rear steel reinforcing structure

This is a supremely well balanced design, which is easy on the ear and comes without the overblown quality of some high-end designs. In particular, and this is without question the speaker's crowning glory, it has a truly superb tweeter, which is sharp, clear and precise. It lacks any undue emphasis and has none of the excessive sharpness that's sometimes apparent in other leading tweeter designs. In contrast to many other tweeters, you don't really hear it in it's own right separately from the speaker as a whole.

The ribbon has a relatively wide lateral coverage, not always to be taken for granted with ribbons, so that listening from the side does not quickly result in a collapse of the stereo soundstage into the nearest speaker, or severe loss of stereo imagery. Vertical dispersion is good by ribbon standards, but by no means significantly better than most conventional dome tweeters.

From the conventional directly ahead position, the 100 offers tremendous image specificity, with pin sharp positioning cues. As usual, we used a number of discs during the review's preparation, several of which were clear evidence of the recording venues' acoustics and the reverberation pattern. The effect was as clear as with any much larger, more ambitious speakers

All that's missing is the sense of scale and depth that was suggested by the music. For example, playing Bruckner's Ninth Symphony from the Gunter Wand SACD set suffered It was also true of a recording of Arvo Part's

Passio (the former has been reviewed in Choice Cuts section in the past), the devastating scale and authority of the sound was clearly there on the disc, but the comparatively limited bass extension of the speaker didn't allow these elements to be expressed fully. Of course, we're dealing here with the immutable laws of physics, so such limitations are natural. Small speakers simply don't do certain things that big ones do

Even so, and although the bass is relatively lightweight, the Monitor Audio PL 100 is more than capable of filling a large-sized listening room. If the bass was just a little underpowered, you could tell immediately that something was missing. Okay, it didn't actually plumb any great depths in the bass, but all the cues were reproduced intact.

The bottom line is simple enough: this is a fabulous speaker that's wholly appropriate to high-resolution systems, thanks to its excellent wide bandwidth ribbon tweeter. It looks great and is clearly an object that has been crafted skilfully and tuned to perfection.

Making allowances for the compact nature of the design, it should be hard to better, this despite a minor cosmetic blemish on one speaker of the test pair, where the gasket between the baffle and the enclosure hadn't been lined up properly.

It is a relaxed loudspeaker to listen to, one that does little, if anything to conceal the architecture of the music. If you really want more in terms of scale - the kind that only a larger (or multiple) driver area can produce you're going to have to swallow hard and go for something physically a lot bigger and more costly - the Platinum PL300 being the obvious choice, as Monitor Audio doesn't currently manufacture anything inbetween. It's about time they did, to prevent the Platinum range being sidelined here in the UK. HFC

Alvin Gold





This is Arcam's top-of-the-range FMJ CD/SACD player and it's a cracker!

PRODUCT Arcam CD37

TYPE CD/SACD player (stereo-only)

PRICE £1,000

KEY FEATURES Size (WxHxD): 43x8.5x35.5cm **○** Weight: 6.2kg **○** Formats: CD, SACD (stereo-only)

● Outputs: Digital (optical and electrical) ● Analogue x2, ● Wolfson 8741 DAC ● Learning remote control

CONTACT № 01223 203200 # www.arcam.co.uk

rcam has recently revamped its entire flagship FMJ range (see *HFC* 308 for full details). First seen at Munich's High End show, the line-up has something for everyone in terms of both specification and price. At the very top of the CD player range, is the subject of this review, the FMJ CD37, an SACD-compatible disc spinner that reflects all of

Arcam's CD player know how in one box. Arcam's decision to include SACD compatibility is intriguing, as the format hasn't quite been the success story Sony hoped for, but Arcam's brand manager Geoff Meads points out that SACD disc sales are buoyant outside of the UK and reminds us that it is, of course, an audiophile format and this is an audiophile product. Point taken.

The new range-topping machine has benefited from a lot of the development work seen in Arcam's DVD players. It also directly replaces two models; the DiVA CD192 and the FMJ CD36, taking the top spot in digital audio. It's turned out in the usual Arcam 'FMJ' style, with a smart dot-matrix display that's a

little different in style from recent Arcam CD players as it displays text when SACDs are loaded (the manual claims it also displays CD Text, though we couldn't persuade it to). It still occupies the same amount of panel space as the old ones, though and the button layout is the same, too. And yes, Arcam stays in our good books for including both track skip and fast forward/back buttons!

Functions beyond the basic transport controls do require the remote control, which is Arcam's new CR90 model, a multi-function learning remote capable of controlling multitudinous components including those from other manufacturers. That said, there aren't many functions on the CD37 – layer change on



"We were expecting good things from this player having not had a bad Arcam disc spinner in many years and we weren't disappointed"

SACDs (in the unlikely event you ever find a reason to do so!), display mode switching and the usual track programming functions are about all.

Looking under the lid, nothing immediately jumps out as unusual, though there are some interesting features. The transport itself looks indistinguishable from a normal CD one and the output circuit, with its high-quality opamps and passive components, could be from any respectable digital audio player. Arcam has picked one of the latest DAC chips, a Wolfson 8741 part which handles both PCM (CD) and DSD (SACD) datastreams, with very impressive specifications.

These days, the DAC invariably handles most of the filtering function, which is essential to the operation of any digital audio device and, as such, has to be the single biggest influence on the sound. Wolfson has provided the chip used in the CD37 with several different filtering settings and we feel that Arcam may have missed a trick in choosing the default one when another was available with much lower aliasing in the transition band. The benefits of this may not be vast, but with CD player performance nearing theoretical perfection, every little helps!

The other irony of the DAC is that, like most modern parts, it is a 'multi-bit deltasigma' type internally, which means that it converts both PCM and DSD datastreams into what is effectively a middling format before final conversion to analogue, thus losing the conceptual simplicity of pure DSD. Arcam couldn't have done anything about that, though, and most SACDs will have been recorded through a similarly convoluted digital path.

For the rest, the internal construction is very good, with separate toroidal transformers for analogue and digital circuit sections and extensive screening, including Arcam's 'Stealth Mat' metal fibre screening, ensuring solid grounding between chassis and lid and extra electromagnetic screening on key components. Twin analogue outputs and both flavours of digital output, complete the thoughtful specification. Mechanical noise is distinctly lower than from many players we've tested recently and disc loading time is reasonable — actually, by the standards of most SACDs players, is excellent.

SOUND QUALITY

We expected good things from this player, having not had a bad Arcam disc spinner in many years, and we weren't disappointed. That sentence, of course, highlights the risk of preconceptions and, aware of that, we set up an informal blind test against a couple of familiar CD players, which confirmed that this is a highly capable machine. Its basic sound is clear, extended and unfussy, with detail served up tastefully – never thrust at the listener.

Having said above that CD players are approaching theoretical perfection, it's surprising how they still seem to differ sonically. Differences are seldom night and day (barring the odd, wilfully different design), but can still become quite obvious after a bit of listening to familiar tracks. Rather than substantial changes in tonality or level of resolution, what we tend to find is subtle changes in emphasis, one player perhaps giving a touch more importance to rhythm, say, while another favours lyrics or high-lying melodies. In this case, the most favoured region seems to be the bass and lower midrange.

We hasten to add that there's no suggestion in the sound of excessive level in that frequency band, no added richness or loose, woofy overhang. In quickfire comparisons with other players (and with high-end external DACs fed from the CD37's digital output) we could detect no coloration in that or any other region and yet every time we simply sat back and listened for a few minutes we felt that our attention was being subtly drawn towards lower-frequency sounds. There is indeed a richness, a sense of luxury, to the bottom octaves which couples with the CD37's



GM: The inclusion of SACD reflects the fact that most customers for the CD37 will come from a traditional audiophile background and want to hear their music on the best format available It's to this end that the CD37 includes the latest Wolfson 8741 DACs, which process DSD in its native form when playing SACDs. SACD is still very popular in markets like Holland and the Far East where jazz and classical titles have sold in good numbers.

What's the thinking behind the ferrite slabs

Typically an excess of Electro Magnetic Interference (EMI) within a unit, often generated by other high-speed digital circuits within the product, masks fine detail in the music. Ferrite has a very useful property in that it turns EMI energy into heat. We use it in certain sections of our units to disperse EMI thus limiting its negative effects.

Arcam's publicity mentions the reduction in noise floor due to the screening measures, but is there really much mileage when the source is 16-bit CD?

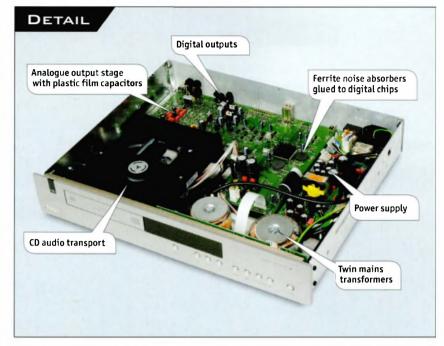
Sonic trials suggest that the masking effects of EMI prey on audio signals no matter what their source type. However, it's worth noting that you can't just fill the inside of the unit with screening measures such as ferrite and Stealth Mat. Arriving at the optimum deployment of these measures comes from experiment and experience and is unique to each product.

Do you think you will still be making Co

I'm sure we'll be making pieces that play CDs for many years to come. Time will tell if they remain bespoke CD players or offer wider playback possibilities.

Burn-in and warm-up are hot (sorry!) topics at present: what is Arcam's recommendation for the CD37?

100 hours of operation is normally sufficient to run-in an Arcam product. For warm up; about 30 mins of normal playback and your Arcam system will be 'on-song'.



■ generally excellent detail to make bass lines easy to follow, even when the midrange and treble are very busy and we found this immensely attractive across a wide range of music.

What makes that even more appealing is that there seems to be no compromising lack of quality in the upper octaves – or hardly any. Perhaps, in the very highest treble there's a hint of grain and less openness and air around the sound than the very finest digital replay can provide (we're thinking seriously high-end here), but it must be said that few if any sub-£1,000 CD players can exceed the performance we felt the CD37 provides in that area. Midrange is exquisitely detailed and stereo imaging is precise in both dimensions, with very good extension, too.

So far, we haven't specified whether we're talking about CD or SACD quality, on the whole, of course, we're referring to the former, mainly because we (and almost all potential CD37 purchasers) have a lot more software, and more points of reference, in that field. SACD comparisons are slightly trickier, but we do feel that this player is one of the best we've heard at avoiding the slightly 'ethereal' quality which has, for us, subtly undermined the appeal of some SACD players. Here, the sound is full-bodied and well grounded – that charming bass clearly doesn't hurt, but the

treble seems unusually well integrated with the rest of the range.

As for the comparison between CD and SACD layers of the same recording (when it's fair, i.e. when both are at the same level and have the same equalisation), it does on this occasion favour SACD: that's not a universal finding but Arcam does make a case for SACD's higher resolution, with just a hint more precision across the board.

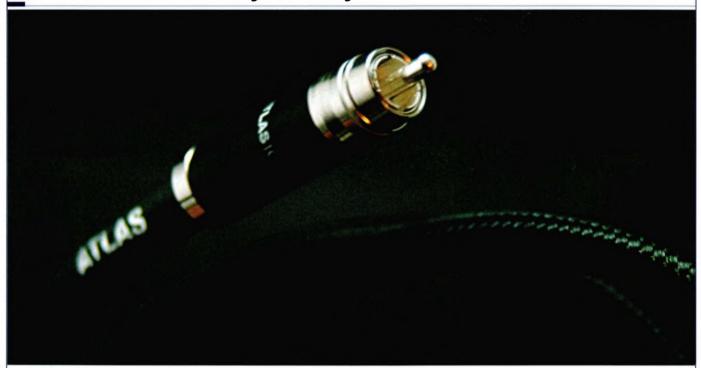
We've been complimentary about a good few CD players in this ballpark recently and it's clear that standards are generally high. This particular offering, however, seems one of the most appealing in its class, not only because of the inclusion of SACD, but because its sound is both excellent overall and tastefully differentiated from the average. There will never be such a thing as a CD player for all tastes, but this one seems likely to satisfy more than most HFC

Richard Black





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"it's right at the top of the tree in terms of sound quality..."

Hi-Fi World, May '08, Adam Smith



Hi-Fi World VERDICT

McIntosh MT10

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LSA Standard Integrated (£5001) [£5000]

LSA Standard Integrated (prev DK Design) (£2500) McIntosh MA2275 (£6500) McIntosh MA92273 (E0300)
McIntosh MA9500, ex-display model (£5195)
Musical Fidelity AS Pre (£1499)
Musical Fidelity S50K Supercharger (£2998)
Musical Fidelity KWS50 Integrated (£5000)
Musical Fidelity KWS50 Integrated (£5000) Papworth TVA-8 Class a integrated (£2000

Qinpu A1,0x Integrated (£300) Qinpu A-8000 MK II Integrated (£1295)

ART Speakers Emotion. Rosenut veneer (£5000) ART Emotion Monitor, Cherry (£4000)

LOUDSPEAKERS

£3750 £3250 £1495 ART Stiletto 6 ex-dem in Oak (£2000) ART Emotion Signature, Ex-dem (£9000) ART Emotion Monitor (£4000) £5995 £3250 AKT EMOTION MONITO' (£4000) ATC SCM50ASL, cherry finish (£7958) AVI Pro Nine Plus Standmount, cherry (£890) Dali Euphonia MS4, Apli upgrade finish (£7500) Dali Helicon 400 (£2995) £4995 £695 £4995 £2250 Dail Helicon 400 (£2395) Hyperion 938, one owner, gloss black (£3750) JAS Audio - Plato Reference (£13995) JAS Audio - Orior (£2300) JAS Audio - Orsa (£1399) £2995 £7995 £1495 £1095 JAS Audio - Orsa (£1399) JAS Audio - Supertweeters, Pair (£649) Leema Acoustics Xone, ebony finish (£1895) Spendor 59 Maple (£2795) Tannoy 15" Monitor Gold Speakers Wilson Benesch Arc, silver stands+side cheeks (£2600) £449 £1395 £1395 £2500 £1695 Origin Live Aurora Mk1 TTable + Origin Live Silver tonearm SME Model 10 Tonearm (£900) Wilson Benesch Full Circle (£2150)

Isotek Nova (£1750) £1195 Isotek Titan Multilink 6 way socket (£395) Isotek Nova (£1750) £325 £1295

Isotek Sigmas, unmarked condition (£995)

(NEW) Marantz

Models: SC-1151 Pre-amplifier SM-11S1 Power Amplifier SA-1152 CD Player

the awesome Legendary Series but costs incredibly, half the





Marantz **Legendary Series**







The Performance 6 Limited Edition witnesses some extremely effective developments to improve on an already successful formula. Huge investment has been made to produce a number of enhancements resulting in improvements in two key areas – the crossover and cabinet.

This series of astute developments to the Performance 6 have produced a loudspeaker that truly encapsulates Mordaunt-Short's continuing commitment to creating realistic reproductions of all types of music as musicians themselves would have intended.

These loudspeakers are a beautiful match with Marantz! Call or e-mail Shadow to find our more about the Mordaunt-Short and Marantz ranges.

"One simply isn't conscious that the sound is emanating from two reasonably large enclosures - you simply hear the music, and the stereo mix, with fine focus and freedom from boxiness."

Paul Messenger, Hi-Fi Choice July 2008



design: © audiography 2008. HFC0808

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EDITOR'S CHOIC

HI-FICHOI

Vita's got talent

Vita's new R4 system is ideal where only one box will do

PRODUCT Vita Audio R4

TYPE One-box hi-fi system

PRICE £500

CONTACT 20 01702 601410 www.vitaaudio.com

he all-in-one music system is hardly new. On the contrary, the idea dates back practically to the dawn of home audio. Historically, the whole point of proper hi-fi was that it was better, because separating the constituent parts allowed them to be done properly. Devices like the Arcam Solo Mini (which we welcomed enthusiastically in *HFC* 307) have shown that the electronics can be miniaturised and integrated with remarkably little quality loss. But with the R4, Vita Audio has gone one better and built the speakers into the box too. Can this neat unit follow the success of the R1 and R2 table radios?

Neat it may be, but it's quite large – you'll not quite lose it in a corner of the kitchen counter. Then again, it does include not just two, but three loudspeakers. There's a subwoofer in the bass, driven by its own power amplifier and relieving the small left and right channel drivers of the need to move large amounts of air. Said subwoofer is aided by a reflex port and a susprisingly generous amount of internal space: Vita has partitioned the unit internally, so that each drive unit has its own space in which to move.

There are plenty of sources available. DAB and FM radio are built-in, as is a slot-loading CD drive which, in addition to regular music CDs, plays MP3 and WMA discs. A USB socket on the front caters for generic portable music players, while iPods can connect to the dock on the top. A line input allows connection of your favourite retro source.

If you've seen previous Vita products you'll recognise the general layout of the control knob and switches at the top of the unit. With the R4, though, that whole assembly lifts out and reveals itself as one of the coolest remote controls we've yet seen – it really looks as if it should have a button marked 'beam me up, Scotty'. There's one potentially serious drawback here, however, this remote is the only way of controlling every function except on and off and it uses a slightly obscure battery



size, AAAA (four-A) as the power supply. Let the batteries run flat and you can't even play a disc or switch the alarm off (yes, it has full alarm and sleep functions) until you've visited your local electronics store for replacements. So always keep spares!

SOUND QUALITY

Maybe we shouldn't admit this in an audiophile publication, but we found ourselves doing most of our listening to the R4 with its '3D sound' function switched on. It seems to be the usual enhanced stereo kind of thing, but it just brings the sound to life in a thoroughly pleasing way. Without it, there is a sense of instruments struggling to get out of the box. Mind you, we've heard more of a struggle with quite a few sub-£100 separate speakers. Although the sound has clearly been balanced for general room-filling and, as a result, is a little bright if one sits directly in front of the speakers, the balance from the R4 is generally lifelike and full-bodied.

More importantly, it can produce a decent sense of scale and dynamics in a performance (even in a fair-sized room). And if you're listening at low volume, then the well-judged 'Loudness' function helps. But turn up the wick

and there's plenty of life and energy. Bass has a nice snap to it and voices are crystal clear and communicative

There are limits to what a system like this can achieve and we're certainly not about to dispose of any hi-fi separates on account of it, but if you have a use for a smart, low-hassle system in your spare bedroom or kitchen you probably can't do much better than this. **HFC**

Richard Black



Much Kudos

Newcomer Kudos launches one of the best loudspeakers of 2008

PRODUCT Kudos Cardea C30

TYPE Floorstanding loudspeaker

PRICE £5,250 per pair

KEY FEATURES Size (WxHxD). 20x112x27cm ○ Weight. 30kg ○ 25mm SEAS Crescendo tweeter ○ 120cm Advanced bass/mid driver ○ Sensitivity. 90dB (6 ohms) ○ Lacquired plinth has complex trilaminate construction ○ 2.5-way reflex design

CONTACT 2 0845 601 9390 www.kudosaudio.com



After a period of inactivity, the company was taken over a few years back by Neat Acoustics, then in 2006, it became an independent entity

once again, headed by ex-Neat designer Derek Gilligan. While the new

operation is continuing to make the less costly S50 speaker stands, it has also introduced a high-performance equipment rack and a range of loudspeakers, christened Cardea.

Hitherto the Cardeas have consisted of a range of four models, comprising the C1 and C10 standmounts and the C2 and C20 floorstanders. These are all two-ways, mixing'n'matching two main drivers, two tweeters and two enclosures in various configurations.

Now the company has finally developed its altogether more ambitious, costly and complex C30, which has some things in common with the C10/20, but taken to another performance level with a more elaborate enclosure and the addition of an extra bass-only drive unit.

The new Cardea C30 is a two-way, plus a bass unit, in what's known as a two-and-a-half-way configuration. This approach has become very popular in recent years, proponents pointing out that it preserves the simplicity of the two-way, while embracing (and indeed taking advantage of) the fashion for floorstanders.

However, critics can point out that a two-and-a-half-way is really just a two-way with a built-in passive subwoofer, with its own inherent disadvantages compared to the more traditional three-way approach.

For example, the very act of rolling off a bassonly driver will introduce a phase delay vis a vis the bass/mid unit, so some bass timesmear is difficult to avoid. In contrast, the three-way has greater power handling and hence, loudness potential. It can use a midrange driver specifically optimised for midrange duties, but it does involve a far more complex crossover network.

Since the styling is discreet to the point of being nondescript, the Cardea C30 looks quite expensive at £5,250 per pair. But that's because the top-quality components and serious enclosure engineering used here are not obviously visible.

The enclosure is more than a metre (112cm) tall, but only 20cm wide and 27cm deep, so it appears quite compact. It has sharp edges all round and is very nicely decorated all over in a matt finish, real wood veneer. Standard finishes are cherry, sycamore, walnut, rosenut or oak (luxury alternatives including rosewood and ebony are available at extra cost). An elegantly shaped, black lacquer finished plinth, separated by spacers to make room for one of the ports, provides secure spike accommodation and ensures fine stability. Drivers are flush-mounted and two small and unpromising-looking thick-frame grilles are supplied with each speaker.

The enclosure is subdivided internally, so that each cone driver is loaded by its own separately ported sub-enclosure. The ports themselves are large and flared, to avoid generating distortion even at high levels. Hollow foam bungs are normally supplied (though not to us) to re-tune the port resonance if need be – a useful extra flexibility, happily not required in our room.

Kudos works closely with Norwegian drive unit specialist SEAS and the C30 uses the latter's most costly Crescendo tweeter. The bass/mid driver has a 120mm paper cone stiffened by Nextel on the outside and a damping compound on the inside. It also has a complex and advanced magnet structure, with an extended pole-piece and copper rings to improve linearity and distortion.

The crossover network is deliberately kept as simple as possible and uses top-quality components from companies like Clarity Caps, Volt and Music First. Two pairs of Michell-sourced terminals are mounted through a solid recessed panel.





"What really distinguishes the C30 from the common and cheaper herd, is the obsessive attention to the very finest details."

What really distinguishes the C30 from the common and cheaper herd, is the obsessive attention to the very finest details during the development process. For example, the enclosure carcase, built from 18mm HDF (high density fibreboard), uses different proportions of resin for different panels in order to help damp and control resonances. Extra internal bracing is used behind the tweeter, as this is the most critical part from a performance point of view. And the plinth is a complex and inert tri-laminate affair, combining HDF with a thick steel plate and a low viscosity membrane

SOUND QUALITY

First reaction, on hearing that a pair cost more than £5,000, was that the price seemed on the high side for the apparent perceived value on offer. Second reaction, having carried out the in-room averaged response measurements to check the speakers were positioned more or less correctly, was that the price seemed a little on the high side for the measured performance

Happily both these assumptions were proved entirely false as soon as the speakers were properly spiked, positioned and connected-up to musical signals.

The good size enclosure and combined bass driver area both suggest that this design is likely to work best in free space and room measurements provided ample confirmation that this was the case. The tonal balance isn't exactly neutral, though the far-field averaged response does hold within a respectable +/-5dB right across the audio band.

Under our in-room conditions output through the bass region is a little strong, but also unusually smooth from 25Hz up to 150Hz. The lower midband (200-600Hz) is a little too lean, while the upper mid (700Hz-1.1 kHz) is slightly 'hot'. There's a 2-4kHz dip through the presence zone, but the treble proper looks both smooth and very well-judged. Sensitivity is a generous 90dB (as specified) and the load is easy to drive too, staying mostly above 6 ohms. The port combination is tuned to a low 35Hz.

The measured performance is quite impressive, despite those minor aberrations but not nearly as impressive as this speaker's wonderfully realistic and engrossing sound quality. Best of all, perhaps, is the exceptional timing, which is right on the money here. It's the most difficult thing to get right, especially with a multi-way speaker, but it's also the most important element in musical communication.

One can talk about the wide bandwidth, the fine dynamic range, the sweet top end, the firm, clear, agile and deep bass and the fine control over cabinet coloration. One can point out the impressive transparency, the ease with which differences in system components are revealed, or the way the tall enclosure adds height and scale to the image. But the acid test of any loudspeaker is how well it communicates music and a crucial strength of the C30 was that it made the types of music that this reviewer would normally just switch off, (solo piano, opera) interesting and enjoyable.

Even audience applause sounded obviously more realistic than usual and that is a very clever trick indeed. HFC

Paul Messenger



• HELICON 400 MK2

THE NEW DALI HELICON 400 MK2

Hybrid tweeter module | 2 x 6.5" driver Bi-wiring terminal | 42-30,000 Hz H1026 x W267 x D501 mm | 32.0 kg

FEATURES

- 2,5-way floor-stander with optional spikes included
- New terminals
- Matched real wood veneer in high-gloss Rosewood or Cherry finish
- Available as 7.1 system

"While this speaker's alluring good looks might make even a super model green with envy, its sound is better still."

The Absolute Sound

Luxury wires

The Mavros range from Atlas is something to aspire to

PRODUCT Atlas Mavros

TYPE Interconnect and loudspeaker cable

PRICE (Interconnect) £540 (1m pair); (Speaker cable) £750 (2m pair) each additional metre approx. £400

CONTACT 20 0800 731 1140 # www.atlascables.com

avros, the Atlas flagship cable, is different from those we're used to, both physically and sonically.

Mavros is a range, rather than a single product, that embraces speaker cable, single-ended interconnects and a balanced/XLR-based interconnect. All three of which were available for this test, though it's the single-ended interconnect and a 2 into 4 bi-wire speaker cable that we're concentrating on here.

The interconnect uses a 'microporous' PTFE dielectric with an ultra-low dielectric constant of 1.5, which improves signal velocity (Nordost makes a similar claim for its cables and there is good reason to believe this is not the usual marketing hype), which is wrapped in a Mylar jacket, a cotton filler to reduce microphony, a close weave-shielding braid to reduce RFI, a PVC jacket and finally an outer woven cotton sheath.

The cable itself is an OCC (Ohno-Continuous Casting) monocrystal cable which is said to have just one boundary in 700 feet of conductor, so that the audio should not have to transverse many grain boundaries. The 73-strand multi-diameter wire cable interconnect and 385-strand speaker cable is 99.999% (6N) free of oxygen and other impurities. Both are made the same way.

The interconnect is available terminated by XLR connectors in the balanced version in various lengths. These are completed with non-compressing, double-screened, self-cleaning plugs. Similar care is taken with the speaker plugs, with spades available as an option.

SOUND QUALITY

One point that cannot escape notice is the physical integrity of the Mavros cables. The connectors are firmly located and show no inclination for the conducting pins to fracture (which happens with hollow pin plugs), or to work loose through handling.



The balance of the Mavros cables doesn't have quite the transparency and speed of a Nordost Valhalla, but it gets close. This is still a fabulously clean, agile-sounding design in both interconnect and loudspeaker versions and it has the particular benefit of being unusually well balanced. LF voicing is expansive and powerful, and there is no tendency for transients and HF content to lead. Its fluid, grain-free presentation is certainly impressive, though in this area it was the interconnect that was the most accomplished.

Atlas claims that Mavros speaker and interconnects work well in combination and this appears to be the case, not least thanks to the similar balance of the two (though the speaker cable is the more distinctive here). I also formed a distinct preference for the balanced interconnect in a system that make good use of such cables (which for this test included the Yamaha 2000 electronics and Denon's DCD/PMA-SA1), but true internal balanced operation is a long way from universal, even with equipment with balanced socketry. And if it is used with equipment that is single-ended internally, single-ended cables are likely to give the best outcome.

Almost imperceptibly, Scottish cable manufacturer Atlas has been growing in status, thanks to some good technology, a straightforward set of technical claims (which are refreshingly free – mostly free – of the gobbledygook that usually surrounds many brands), impressive build quality and, we'd guess, some well-informed listening. **HFC**

Alvin Gold





New romantic

Can valves, transistors and digital technology work in unison?

PRODUCT Unison Research Unico 100

TYPE Integrated amplifier

PRICE £2,950

KEY FEATURES Size (WxHxD): 43.5x18x44cm

○ Weight: 25kg

○ Line inputs: 4x R€A phono,
1x balanced XLR

○ Line outputs: tape, subwooler

○ Rated power: 180w (8ohins)

○ Hybrid valve design

CONTACT ☎ 01753 652669 — www.unisonresearch.com

talians love music – they are the only inhabitants of a hot Mediterranean country who make serious and successful audio components. Maybe having the cooler northern climbs of the country helps in this respect as Unison Research is based in the north east environs of Treviso, where it produces a broad selection of electronics – the majority of which are powered by parallel single-ended valves.

Unison Research's Unico range, however, was developed in conjunction with Professor Leopoldo Rosetto from Padua University. He worked with Unison's chief valve purist

Giovanni Sachetti, to come up with a hybrid

valve/transistor circuit design that would satisfy the quest for an amplifier that combines the sonic virtues of both technologies. The Unico range now offers 12 products of which the 100 is the penultimate, sitting just below the Unico 200. Despite physical similarities, the two are quite different, the 100 has a digital volume control rather than an analogue type and the 100's output stage operates in class AB right from the off, rather than operating in class A for the first 50 watts.

The Unico 100 integrated amplifier is nevertheless quite a beast, it weighs a formidable 25 kilos and delivers a respectable 180 watts from each of its dual mono channels. It does so without looking overly bulky, so it's an even greater shock when you first attempt to move it. As the power output would suggest, the second half of the amplifier is the transistorised one, where three pairs of Mosfets are gathered in a parallel configuration (possibly as a result of its valve roots, Unison prefers to use multiple low-power devices rather than a few big ones).

The preamplifier section is a double triode stage utilising a single ECC83/12AX7 valve, with special attention being given to the interface between glass and silicon. Here Unison says it has used a topology that ensures regulation of the DC component of the signal without compromising performance at low frequencies. The digital volume control consists of an integrated circuit that uses an array of precision resistors combined with digitally controlled analogue switches. The output level is indicated on the front panel display and has 99 steps that start at 0.0 and rise to 9.9. We found that even with the quietest discs and reasonably sensitive speakers, the numerical level never exceeded 2.5 and was usually in the 1.8 to 2.2 range. This number is, of course, fairly abstract, but it would be more satisfactory if the control had been 'geared' so that you could at least approach 9.9.

Switching it on elicits a 30 second countdown via the display, while the amplifier stabilises voltages. It takes somewhat longer to



actually warm up, but produces plenty of heat when it's truly ready to play. The two large fascia-mounted dials control volume and input selection, both also serve a function when pressed (mute and tape loop). Volume can also be adjusted with the system remote, a device that's largely hewn from solid wood and stands up like a cordless phone

Connections consist of four single-ended and

Conversely it does highlight the openness of the Unico 100 which is, undoubtedly, a reflection of the valve content of its preamp section. These may also help the timing, which although is not quite in the Tucana league is better than usual, something which enhances the enjoyment of all manner of music.

Moving the Unico over to a pair of Bowers and Wilkins 802D loudspeakers brings forth a

neutrality at the alter of musical engagement, - a worthy trade-off, albeit one that may not work for all musical genres. Keith Jarrett's piano on his Carneaie Hall disc. for instance. lacks authority, but is seemingly more tuneful and enjoyable than usual. Against this the coughs and splutters of the audience are more obvious, which some might find too high a price to pay. But the result is pretty captivating which, at the end of the day, is what good hi-fi should be about

It is also possible that with careful loudspeaker and cable choice one could find a balance that is more even overall. Unison Research's own sister brand Opera should be the ideal partner for the job. Whether they would also be able to solidify the slightly airy imaging qualities of the amplifier is a different question, but with greater efficiency the could bring out more of the energy; a good hi-fi dealer could advise on this.

The Unico 100 is a well-built amplifier that manages to combine many of the strengths of transistors and valves. It also boasts, in the context of a musically entertaining sound, a removal of harshness and a delivery of real power. HFC

Jason Kennedy

"The Unico 100 is quite a beast, it weighs a formidable 25 kilos and delivers a respectable 180 watts from each of its dual mono channels."

one balanced input, alongside tape and volume controlled sub outputs. These are in a mirrored arrangement that defies quesswork when attempting to hook it up in a dimly lit space! Speaker terminals are doubled up for ease of bi-wiring and the casework is entirely aluminium which is very nicely executed and seldom seen at this price point.

SOUND QUALITY

Having manhandled this beast into a Custom Design Icon rack, we connected it up to a pair of PMC OB1i speakers that had been giving great service with another amplifier. The combination is a lively one, perhaps too lively through the midband, this being an area where both components excel. And while the pairing is extremely open and well timed, it can get a little bit too forthright. Bass lines are very clear cut with reasonable weight, but instruments nearer the midband are a little bit obvious in the mix. It's nice to hear all the air around them, but not if it starts to mask the lead voice in the music. Switching over to a Leema Tucana integrated (around the same price), makes this imbalance more obvious with a more powerful and better timed result that seems rather more tonally even.

more relaxed balance thanks to the relatively 'dark' nature of the midband on this speaker. It is gratifing to hear that the Unico 100 can drive what is a fairly difficult, if reasonably sensitive load. The bass is a little softer than pure transistor designs produce, but it's weighty enough and has sufficient power. This suggests that this twin transformerpowered amplifier has the sort of current delivery capabilities that the manufacturer's figures claim.

Cymbals are still pretty obvious in the mix of many recordings, but they are slightly softened which makes them much more palatable. In fact, this is true of most metal instruments via this amp, in particular brass, which is easier to enjoy thanks to a subtle smoothing of peaks. We found both instruments to be rather more listenable on the Yo Miles album Upriver, which is a bonus because the tendency is to tolerate them while waiting for Henry Kaiser to let rip with his Stratocaster and produce some truly filthy abstract blues. In this instance, you can hear all of his noodlings rather more obviously as a result of the upper midband peak in response.

The Unico 100 is a bit like the Linn Majik LP12 (see page 46), in that it sacrifices



Black Rhodium Tango Bi-wire

TYPE Loudspeaker cable

PRICE E270 (three-metre terminated pair)

e've seen Tango in its conventional non-bi-wire form – just two conductors – but this version adds a further pair of conductors to the construction. As usual in bi-wire cables, the conductors are commoned into a single pair of plugs at the amp end, but terminate separately at the speaker. Off-the-reel costs are £30/pm.

Each conductor uses stranded copper of medium overall gauge, insulated in Black Rhodium's favourite material (silicone rubber), with an overall sheath of some 9mm diameter in soft plastic. It is a practical cable that is easy enough to route.

Although in this case the price differential against single-wiring is quite high, the benefits are very obvious. We felt the bass of single-wired Tango was a little on the rich side and, at times, a touch loose with the bi-wire version. However, control of the lower octaves is definitely a strong point. There may still be a very small subjective boost to frequencies in the upper bass/low midrange region,



Chord Company Carnival Silver Screen

neutral and the treble admirably clear and

extended, with plenty of insight and a real

is also good, with some of the best depth

while in terms of detail there's just the

slightest trace of constriction in complex

musical climaxes. Unless you absolutely

sense of air and space around notes. Imaging

we've heard from a cable at or near this price,

TYPE Loudspeaker cable

PRICE £85 (three-metre terminated pair)

CONTACT № 01980 625700 # www.chord.co.uk

creened loudspeaker cables are not all that common. Interconnects tend to be screened because the signals they carry are much lower in power. They're more easily interfered with by stray electrical fields and a screen largely blocks those. It is indeed pretty much unknown for speaker cables to pick up interference in an obvious way and yet there may still be a good argument to screening them and hence reducing the amount of RF pick-up fed back into the amplifier, where its effects may be subtle but insidious.

Interestingly, this cable doesn't actually connect the screen electrically to the conductors, but it will still have an effect. The conductors themselves are medium-thickness, PVC-insulated copper, twisted together for best rejection of magnetic interference (which is not blocked by a screen). Screened cables can, in some cases, have high capacitance, which doesn't always agree with amplifiers, but that's not so in this case – in fact capacitance is the lowest of the four cables tested in this *Round-Up*, if not by much.



demand the ultimate in bass, this cable is a strong recommendation for budget and even moderately upmarket systems. **HFC**

VERDICT

offering for the price and performance is particularly good in the treble, with a babiqhtness the only drawback



Ixos XHS756

TYPE Loudspeaker cable

PRICE £150 (three-metre terminated pair)

CONTACT ☎ 01844 219000 @ www.ixos.co.uk

he name might not tell one much, but there's quite a lot to this cable. Its appearance is certainly distinctive, with the multiple conductors and those intriguinglooking terminator barrels (which actually merely serve to disentangle the conductors), and as with most Ixos cables, the distinctive feature is the 'Gamma Geometry' weave. This is a bit of a novelty, though, in that there are two sets of conductors interwoven with the non-conducting strands that give the assembly its particular properties. One set is slightly heavier than the other and in bi-wiring mode one could have no end of fun mixing and matching gauge with frequency range. We opted for single wiring, under which conditions this cable behaves in basic electrical terms as a very low resistance, moderate capacitance type.

The sound is generally good all round, without any particularly outstanding areas, but also without any irritating weaknesses or drawbacks. Bass is certainly extended, but not



and ringing as some
can offer, while treble is
open and very sweet. There's a
very well-judged balance between the tonal
extremes and the midrange, which leads to a
particularly natural rendition of human voice,
male or female, spoken or sung. It's surprising
how many cables seem to impart some
coloration to that and it's always nice to find
one that seems absolutely honest vocally. We
were also rather taken with the dynamics this
cable offers, which seem both wide and

confident with no hardening of the sound in loud passages. Imaging is good and this seems to be a cable one could 'fit and forget' in pretty much any decent system. **HFC**

VERDICT An adaptation of the ingenious 'Gamma Geometry' construction which makes for a highly compatible cable with admirably little character.

Wireworld Solstice 5°

TYPE Loudspeaker cable

PRICE £275 (three-metre terminated pair)

CONTACT 2 020 8991 9200 # www.wireworldcable.com

ou've got to admire some folks' ingenuity in creating memorable TLAs (Three-Letter Abbreviations), This cable is part of the all-new 'DNA' range from Wireworld - that's 'Delineated Neutralizing Array'. In the case of the speaker cables in the range, this means that multiple flat, stranded, conductors are stacked diagonally face-to-face, an interesting and unique arrangement that gives the cable high capacitance (so no older Naim or Exposure amps!) and also a rather unwieldy physical nature despite the fairly flexible leadout tails. There's plenty of copper (silver-plated) inside, giving a usefully low resistance and the multiple conductor arrangement means that bi-wiring is an option: indeed, as far as we can see, tri-wiring should be perfectly possible, too

Having carefully routed the cables so that they didn't try to pull out of the terminals on the amp and speakers, we found that this is another bit of evidence linking highcapacitance design with astonishingly profound and solid bass. Cables from



Townshend, Goertz and Electrofluidics were recalled, as we revelled in believable reproduction of large percussion instruments, double bass and piano. This is one of those cases where what are really quite small and subtle differences seem disproportionately audible. While mostly new-found fine detail in the lowest octaves registers as a whole extra dimension of extension, control and tunefulness. There's no sense at all of bass bloat: control is close and tight, but if instruments with a lot of bass energy have

been faithfully recorded you'll get it all in glorious detail through this cable. Midrange is neutral and dynamically assured, while treble seems effortlessly sweet and detailed. This is a remarkably fine cable. **HFC**

Richard Black



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DVD SYSTEM DAV-IS10

The most amazing thing about the Sony system is the powerful sound emitted from its tiny satellite speakers. They are not much bigger than a £2 coin, yet everyone who hears them is amazed. Breathtaking 5.1 surround sound DVD home-theatre system that creates an immersive sound through five tiny

Polk



OUTDOOR SPEAKERS Atrium 55

The Atrium 55 Indoor/Outdoor Loudspeaker is the ultimate in flexibility, reliability and high fidelity sound quality for the great outdoors. The Atrium 55 gives you the freedom to put speakers anywhere you want high performance sound. The kitchen, the den, the guestroom, the patio or pool, even the backyard

Mordaunt Short £ CALL NOW



FLOOR SPEAKERS Mezzo6

For the richest, most dramatic soundstage, the Mezzo 6 floor stander is unbeatable. Using twin 6.5 CPC drivers but with the added bass extension that only an elongated cabinets can produce, this 2.5 way speaker produces a commanding performance time after time. A hand-picked wood composite is laminated and pressed ensuring critical bracing and consistent reproduction of every frequency



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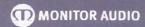
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INFORMATION

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INFORMATION

The design approach is certainly outside the box with the stand's column a clear glass cylinder and the base a clear glass teardrop with integrated spikes. The top plate is robust and the stand is held together with a central chrome tension tube which also doubles as a cable management system.

Alphason

AV CABINET ABRD1100



INFORMATION

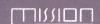
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GROUP TEST & LAB REPORTS: PAUL MESSENGER

MONITOR LOUDSPEAKERS

Six modern interpretations of the classic BBC LS3/5a do battle...

he 'mini monitor' has an illustrious history. The true ancestor of the type was probably the Goodmans Maxim way back in the 1960s, a tiny speaker that surprised everyone who heard it at the time. However, the mini monitor concept achieved its real apotheosis with the arrival of the BBC LS3/5a in the 1970s

This tiny speaker was developed with painstaking care by the BBC's Research Department to provide accurate programme monitoring in confined surroundings such as outside broadcast vans. It used two selected contemporary KEF drive units in a carefully damped, sealed-box, birch-ply five-litre enclosure, and licenses were issued to a number of manufacturers. Although primarily intended for broadcast monitoring, it quickly developed cult status amongst hi-fi enthusiasts. The KEF drive units eventually went out of production, so the 'classic' LS3/5a is no longer available new. However, since some 60,000 pairs were made (in 15-ohm and 11-ohm versions) over twenty years, there's an active second-hand market

If the original LS3/5a set a performance benchmark and established the original mini monitor stereotype, many other designers have subsequently come up with their own variations on the high-quality miniature theme.

All six examples gathered here owe something to the 3/5a, but only the Spendor S3/5R is a 'dead ringer', as its name suggests, though KEF's website claims its XQ10 is: "the rightful heir to the revered LS3/5a". All the others have slightly larger enclosures, but the main driver sizes are broadly similar throughout.

Although the BBC LS3/5a set the initial stereotype, in the late 1980s Acoustic Energy burst on the scene with a more rock-oriented AE1 monitor which was again successful in both professional and hi-fi circles. The AE1 Classic is the current heir to that original.

The other four all offer interesting variations on the luxury miniature theme. The Amphion Ion L has a stylish painted finish and a waveguide loading its tweeter. PMC's DB1 i somehow finds enough room to load its main driver with a transmission line. Both the KEF XQ10

and the Tannoy DC6 use proprietary coaxial drive units – Uni-Qs and Dual Concentrics respectively. **HFC**

EQUIPMENT USED

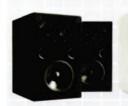
- Naim CDS 3/555 PS CD player
- Burmester 001 CD player
- ▶ Linn Sondek LP12/Rega RB1000 turntable/arm
- Rega Apheta cartridge
- Magnum Dynalab MD 106T tuner
- Naim NAC552 preamp
- Naim NAP500 power amp
- Cables from Vertex AQ, Chord Company and DNM.

MUSIC USED

- → Hello Love/Be Good Tanyas
- Strange Angels/Laurie Anderson
- **⊘** Thanks, I'll Eat it Here/Lowell George
- Beyond Skin/Nitin Sawhney
- Dife on a String/Laurie Anderson
- Wagner Tannhauser Overture/ BPO Karajan

BBC Radios 3 & 4 were also used extensively

ON TEST



Acoustic Energy AE1 Classic



Amphion Ion L £750



KEF XQ10 £700



PMC DB1i £825



Spendor S3/5R



Tannoy DC6 £800



LISTENING TESTS

Loudspeakers vary dramatically in size, type and tonal balance and also interact strongly with the room. The fatal difficulty facing sequential unsighted loudspeaker presentations is the strong tendency to judge each example according to how its balance differs from the model that preceded it. Accordingly, extended hands-on listening sessions were adopted, giving proper scope to adjust to the inevitable changes in balance and also to experiment with the positioning of different models.

LAB TESTS

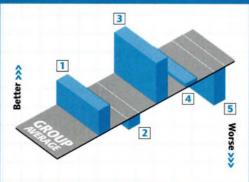
The speakers were tested under in-room conditions, in order to be as representative as possible of real world operating conditions. The test equipment used was a Neutrik Audiograph analogue signal generator with synchronised pen recorder. This was used to plot the far-field in-room averaged response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

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

LAB REPORTS: THE BAR GRAPH

- 1) Sensitivity: Sensitivity is a measure of how loud a speaker will go for a given voltage from the amplifier. It's scaled to 2.83V at one metre (corresponding to one watt of power for an 8 ohm load. It's a widely quoted figure, but can be misleading, as loudspeaker sensitivity can vary quite significantly across the audio range and because lower impedance speakers extract more current and hence power from an amplifier than higher impedance examples.
- **2] Bass extension:** To replicate 'real world' conditions, our figure represents the averaged bass rolloff frequency at –6dB ref the broad midband, measured across the far field for a stereo pair in a 4.3x2.6x5.5m room
- 3] Ease of drive: The lower the impedance of a speaker, the more current it will extract from the driving amplifier for a given voltage (volume) setting. Lower impedance designs are therefore theoretically harder to drive, especially at low and midband frequencies but they also tend to have higher sensitivities, which reduces their voltage requirement for a given level of loudness.
- **4] Overall frequency balance:** The overall broad frequency response trends do much to define the character of a speaker, although true neutrality is the obvious goal
- **5] Response smoothness:** Beyond the overall tonal balance of the speaker, the small-scale smoothness has much to do with the delicacy of the sound and its ability to deliver subtle harmonic shading. It's also a factor that separates more costly speakers from their cheaper rivals.

OUR BAR GRAPHS: AN EXAMPLE



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ACOUSTIC ENERGY AE1

A classic replica that first wowed the industry 20 years ago

t was 20 years ago that Acoustic Energy made a very impressive debut by introducing the original AE1, a miniature pro-oriented speaker that effectively re-invented the concept of the modern highperformance miniature. Although the BBC LS3/5A was already popular with broadcast engineers and hi-fi enthusiasts, it never made it into the recording studios because of modest power handling and loudness capabilities.

That original AE1 cost £700 per pair in 1988. Several more costly variations on a similar theme subsequently appeared, then two years ago Acoustic Energy introduced this 'replica' AE1 Classic at just £845 per pair and although the price has since crept up to £1,000, that's still a very modest increase after 20 years. Some customers may prefer real wood veneers, with or without lacquer, but the Classic's pro-look, textured matt black finish has its own understated, yet purposeful charm.

When the AE1 was originally launched, a key innovation was the use of metal for both bass/ mid and treble driver diaphragms. Neither was a first, but putting them together was certainly unusual and led to many imitators in subsequent years. The main driver has a 110mm pressed-steel frame and a 90mm aluminium cone, while the tweeter uses a 25mm magnesium dome.

Both drivers are neatly flush-mounted and separated by attractively symmetrical twin flared ports, with all the edges of the eightlitre enclosure slightly rounded. The latter's inside surfaces are reinforced and damped with a polymer composite lining. The crossover network, fed from a single terminal pair, uses symmetric third-order slopes.

SOUND QUALITY

Even after twenty-odd years, this Classic version of the AE1 is an entertaining and involving performer. Best kept clear of walls in order to deliver an appropriate quantity of midbass output, understandably there's not going to be much low bass here. But the Classic's fine coherence and impressive freedom from boxy effects provide fair compensation. The elaborate enclosure engineering creates an exceptionally 'quiet' box with very little sonic signature, resulting in a beautifully spacious image with fine focus alongside a broad and deep spread.

Superior midband neutrality and a very even balance are both on the agenda here, going a long way towards justifying this speaker's monitoring status. This is further strengthened by the notably wide dynamic range and very low level of background 'grunge', though it should also be noted that the small radiating area is presumably responsible for a rather muted and modest level of expression.

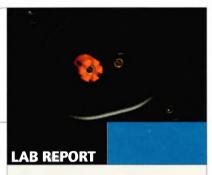
Another point of criticism, perhaps where this design most obviously shows its age, is that the top end is not only a little too bright and obvious, it also lacks top-end sweetness. And this could become a little fatiguing, depending on the characteristics of the driving system.

One way to cope with the strong treble might be to partner the speakers with some extra subwoofery. Extra bass weight can do much to 'balance out' any treble excess and lead to a more satisfying overall result.

In Classic form, the AE1 might be a little long in the tooth, but at the same time it's undoubtedly a fun product that goes a long way towards justifying its 'classic' status

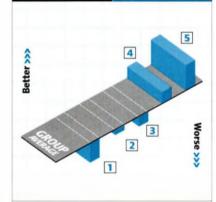






When we reviewed the Classic two years ago, the company claimed 88dB sensitivity, while we found just B5dB. This time around we got just 84dB, which is well below average, though not entirely unexpected for such a small metal cone driver, especially since the impedance stays comfortably above 8 ohms throughout (albeit with a slight discontinuity at around 5.5kHz). With reflex porting tuned to 55Hz, reasonable bass output is maintained down to around 40Hz, even with the speaker well clear of walls, but apart from a slight lack of output at 60-120Hz, the far-field in-room power response is exceptionally flat and smooth. Although this holds out the promise of exceptional neutrality, it also suggests that the treble might turn out to be a little too strong subjectively. A slightly more restrained ton end is normally expected under these conditions. The pair-match was pretty good, however.

HOW IT COMPARES



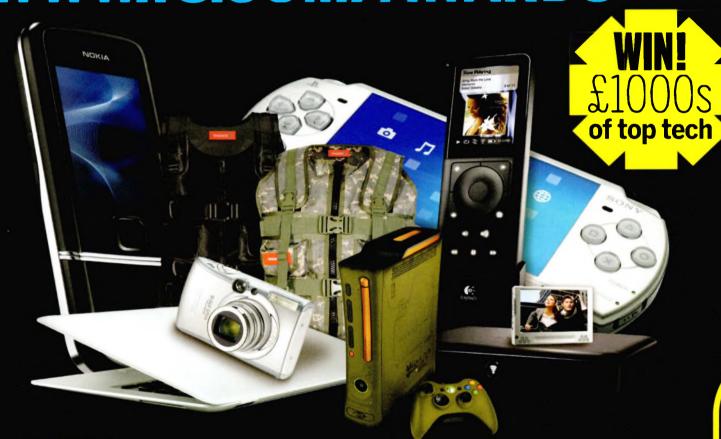
- 1] Sensitivity >> -20%
- 21 Bass extension >> -5%
- 31 Ease of drive >> -10%
- 4] Overall frequency balance >> +10%
- 5] Response smoothness >> +30%

SPECIFICATIONS			
Measurement	Rated	Actual	
Sensitivity @ 1 m/2 83V	88dB	84dB	
Impedance (nominal/minimum)	8/ns	8/8 ohms	
Estimated bass extension (-6dB)	ns	40Hz	





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AMPHION ION L

Like its big brothers, Amphion's Ion L features a tweeter waveguide

elative newcomers on the speaker manufacturing scene, Finnish brand Amphion is best known for its stylish upmarket floorstanders. But as the company has grown, it has started to introduce smaller models, while fully maintaining its reputation for both style and innovative thinking.

The two little standmount two-way lon models are a relatively new initiative. The original (£600 per pair) lon first appeared about two years ago and has since been supplemented by the slightly larger £750 per pair lon L. Either version might have been chosen for this *Ultimate Group Test*, but we opted for the larger of the two, the lon L, as its price, main driver and enclosure size is closer to the group norm than the original lon.

In fact, the Ion L is a little larger than most in our group, its unusually tall cabinet enclosing a volume of approximately nine litres. At the same time, although the main driver is specified at the same 135mm as most of the others, its Nomex cone is a slightly larger than average being 100mm in diameter.

The reason that it's taller is to make room for the large tweeter waveguide sculpted into the front panel. Amphion describes this as its UDD technology (Uniformly Directive Diffusion), which it claims helps the 25mm titanium dome tweeter deliver more even dispersion. It also sets the tweeter back behind the line of the front panel, closer to the position of the main driver's voice coil, which makes crossover integration easier. And it allows the crossover frequency to operate almost an octave lower at around 1.6kHz.

The enclosure is both unusual and exceptionally stylish too. The surface finish is painted, either white, black or silver, and all four horizontal edges are heavily post-formed. With the only grille a perforated metal cover that fits snugly over the bass/mid driver, the result is reminiscent of the designs that Dieter Rams produced for the German Braun brand in the 1950s and 1960s – timeless classics which still look modern today.

SOUND QUALITY

The best thing about the lon L is its fine mid-to-treble coherence. Add to this a very sweet, smooth and well ordered treble and the net result is a relatively rare and very welcome combination of open voicing that's free from any unwanted aggressive tendencies. However, the midband does also have some coloration, possibly related to the c800Hz peak seen in the in-room balance, and this adds a degree of pinched nasality that's most obvious when listening to speech.

Although it sounds reasonably weighty for a speaker of this size and type, the bass delivery here does sound a little softened and lacking in punch and drive. Under our listening conditions the sound was probably best with the ports open and the speakers at least 50cm from a wall. But the overall tonal balance is rather lean and a little thin, so that cellos and the left hand of piano playing sound a trifle undernourished.

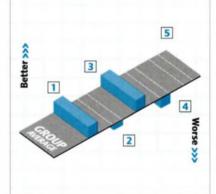
One suspects that the lon L will be commercially successful purely on the basis of its excellent styling. The good news is that the sound quality is pretty good too. **HFC**



Assisted by some excess around 800Hz-1kHz, the lon L just managed its 86dB sensitivity rating, and did so with a reasonably easy amplifier load, the impedance staying around or above 8 ohms through most of the audio range, but falling steadily below 6 ohms above 10kHz. Pair matching was acceptable.

Apart from that 800Hz-1kHz prominence, the far-field in-room power response is impressively flat and smooth, with just a gentle and appropriate roll-off alongside rising frequency. However, with plenty of output from the 50Hz-tuned port and a significant lack of output 60-120Hz, the bass alignment proved less well matched to our listening room. Blocking the ports with the supplied foam bungs and placing the speakers close to a wall did smooth things out somewhat, but left the whole bass region a little too shy.

HOW IT COMPARES



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

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1m/2 83V	86dB	B6dB
Impedance (nominal/minimum)	8/ns	8/6 ohms
Estimated bass extension (-6dB)	55Hz	40Hz



SOUND Clever, sharp styling comes together with fine mid-to-treble coherence and a sweet treble, but the bass end proved less well suited to our listening conditions, with a rather lean character and some lack of punch. VALUE HIFTCHOICE OVERALL



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KEF XQ10

The XQ10 features a brand new 'tangerine' wavequide

he mid-price XQs are the latest range from KEF and this £700 XQ10 is the smaller of two standmounts and sister model to the £1,000 XQ20 (reviewed in HFC 307). Key features include KEF's Uni-Q driver, cunningly curved cabinetwork and beautifully lacquered real wood veneer finish

The XQ10 is a two-way design based on the very latest type of 130mm Uni-Q drive unit, loaded by a front port and an enclosure with an estimated volume of seven litres. A Uni-Q driver places a tiny tweeter on the end of the pole-piece in the centre of the bass/mid cone. so that it actually sits at the latter's effective acoustic centre, creating a 'coincident' variation on the co-axial theme. This makes crossover integration relatively simple acoustically and also ensures off-axis output symmetry, but the recessed tweeter somewhat restricts dispersion

Recent Uni-Q developments include a ventilated pole-piece, an elliptical profile tweeter, a cone profile (that's carefully shaped to avoid interference between the tweeter's direct soundwave and its reflections off the cone) and a 'tangerine waveguide', whereby eight small vanes help the tweeter's titanium dome diaphragm mimic a pulsating sphere.

At 6.4kg, this little speaker feels very solid, the more so because the curved top, base and side surfaces help increase stiffness and avoid focusing internal standing waves. Our samples came in khaya mahogany under a deep, lustrous lacquer; but birdseye maple or piano black are also available. Two pairs of terminals

fit directly through the enclosure and wires links are supplied. The curved base requires special stand-coupling arrangements: the two supplied alternatives are a curved hard rubber pad, or a tripod of metal feet.

SOUND QUALITY

The website claim to some sort of legacy inheritance from the BBC LS3/5a is frankly disingenuous, as the only similarity would seem to be the maker's name on the drive units. The engineering, configuration, measured performance and sound quality, are all quite different.

Given the small dimensions and decent sensitivity, it's no surprise to find that the best results are obtained with the speakers mounted quite close to a wall. But even with this extra mid-bass assistance, the XQ10 does sound rather thin and bright. This certainly ensures plenty of detail, but the tweeter always seems to be drawing rather too much attention to itself and the sound it delivers might have been sweeter to advantage. What is arguably needed here is some sort of subwoofery, because the application of some extra bass power and weight will tend to balance out any excess at the top end

In other respects, the sound quality is promising and positive. Mid-to-treble coherence is very good, the more so because there's no unwanted phase shifting as one moves on or off axis. The voice band is nicely open and the box coloration vanishingly low those four curved panels are very effective at suppressing unwanted noise of all kinds





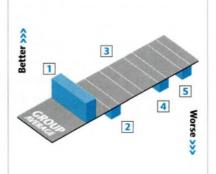


LAB REPORT

Our measurements found a sensitivity of 87dB, more than comfortably confirming KEF's 86dB rating, though this is partly due to a load which hovers around 5 ohms through much of the midband and drops to 4 ohms above 4kHz. Pair matching was pretty good

In-room far-field averaged power response measurements gave rather equivocal results for optimum placement. Away from walls the XO10 showed slightly strong output across the broad presence region; close-to-wall siting helped redress the balance below 250Hz, but led to a pronounced suckout centred on 350Hz, Either way, the treble proper above 2.5kHz looks a shade strong, relatively speaking. With reflex ports tuned to a relatively high 63Hz, ultimate bass extension is inevitably limited, rolling off rapidly below 50Hz, though with wall assistance the zone from 50-250Hz looks well ordered.

HOW IT COMPARES

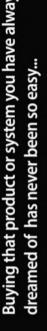


- 11 Sensitivity >> +20%
- 2] Bass extension >> -10%
- 31 Ease of drive >> 0%
- 41 Overall frequency balance >> -10%
- 51 Response smoothness >> -10%

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity@ 1m/2 83V	86dB	87dB
Impedance (nominal/minimum)	8/3.2 ohms	6/4 ohms
Estimated bass extension (-6dB)	63Hz	45Hz



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PMC DB11

The Dinky Box undergoes a major engineering upgrade

ne of the younger speaker manufacturers around, PMC (Professional Monitor Company) was founded by ex-BBC engineers in 1990. Unusually, and partly due to its re-invention of transmission line bass loading, it has had success in both ProAudio and hi-fi sectors.

Such loading requires constructing a long tunnel behind the bass driver, which would seem unlikely within the confines of a tiny (15.5x29x23.4cms) miniature, but the three-fold (four-section) line fitted inside this little enclosure has an effective length of an amazing 1.5 metres.

This is the third time the DB1 (Dinky Box One) has been reviewed in *Hi-Fi Choice*. We covered the original version back in 2003 (*HFC* 240), when a pair cost £550. Eighteen months later, we encountered the £625 per pair DB1+, which featured a better quality tweeter and crossover components.

Now there's been a further major revision and a further price hike. The price of this new DB1i has now jumped up to £825 per pair, but the speaker features substantial further improvements in all respects. And whereas it was possible to purchase kits to upgrade a speaker from DB1 to DB1+, the DB1i changes are too extensive to make this possible.

Almost everything about the new version is different. A new cabinet supplier has improved the quality, fit and finish of the enclosure. PMC's own 140mm cast frame bass/mid driver has a stiffer, better damped 95mm paper cone and an improved voice coil. The crossover networks are pair-matched using high-quality components. But the most important change is

a brand new 27mm soft fabric dome tweeter co-developed with Norwegian OEM driver specialist SEAS.

Finished in a choice of walnut, black ash, oak and cherry real wood veneers, the three internal partitions required to form the transmission line might make manufacture difficult, as does the complex recipe of damping materials, but it also ensures an exceptionally stiff enclosure.

Twin terminals facilitate bi-wiring or biamping and the rear panel also accommodates the large line exit slot plus an attachment plate for a substantial wall bracket

SOUND QUALITY

Some wall reinforcement is clearly beneficial, with a gap of about 15cm between wall and speaker giving the best results under our test conditions. The speaker's small size places obvious limitations on the ultimate bass weight, but the bass loading technique provides the DB1i with an impressive evenness, warmth and harmonic richness.

A major plus with the DB1i is that it has significantly more dynamic grip and enthusiasm than the average for speakers of this size and type. It's not dramatically better in this regard, but it does give it something of an edge in delivering an expressive and involving experience.

However, the overall tonal neutrality doesn't match a true monitor speaker. The DB1i's midband isn't the smoothest or most open midband and the presence dip is clearly audible on speech. But music is a different matter and here it proves a fine communicator with very little boxiness and a notably sweet



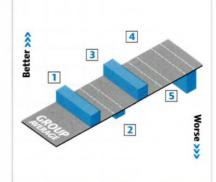
LAB REPORT

The similarity between the measurements taken for the DB1 i and its DB1+ predecessor are quite remarkable, even down to the little 200Hz impedance 'bump'. Furthermore, the changes only serve to reinforce PMC's claim for improved performance, especially in the smoother and more extended top end.

The claim for a sensitivity of 87dB/W remains a little optimistic: our figure (measured in the far field) comes out at 85-86dB/W. However, it is in the context of a very easy amplifier load, which stays comfortably above 6 Ohms throughout.

The in-room far-field averaged power response is pretty well ordered overall, though not especially smooth or flat, with an obvious 1.3-1.6kHz discontinuity. Albeit with decent ultimate extension, bass output is a little weak below 250Hz with the speakers in free space, so a degree of wall loading should be worthwhile.

HOW IT COMPARES



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

SPECIFICATIONS		
Measurement	Rated	Actual
Sensitivity @ 1 m/2 83V	87dB	86dB
Impedance (nominal/minimum) Estimated bass extension (-6dB)	8/ns ohms 50Hz	8/6 ohms 40Hz





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SPENDOR S3/5R

Still 3/5-ing after all these years

here's a rumour that the original inspiration for the LS3/5a was a lash-up that company founder Spencer Hughes put together during a lunch hour, for work on a scale model studio layout.

That's as may be; but it was some years before the LS3/5a actually appeared, probably because BBC Research doesn't operate on commercial timescales and was able to indulge in an extended development programme. When the 3/5a did appear, based on two commercial KEF drivers, it was an immediate success, and stayed in production with minimal changes for around 20 years - far, far longer than any normal commercial speaker design.

Changes at KEF and the consequent unavailability of the original drive units might have forced the official LS3/5a out of production, but continuing healthy demand persuaded companies like Spendor to create variations on a similar theme, while incorporating some two decades of loudspeaker engineering improvements

The latest version is the new S3/5R, which at £725 per pair is £125 less than the \$3/5se we reviewed five years ago (HFC 242).

There's plenty of common ground between the S3/5R and its original LS3/5a inspiration, in as much as both share the same external dimensions and (uniquely in our review group) sealed-box loading. However, the S3/5R's enclosure is turned round, so it's deeper than it is wide; it's fabricated from veneered MDF rather than birch ply and the main driver is mounted from the front.

The 140mm bass/mid driver has a new 90mm plastic cone and a fixed phase-

compensating polepiece extension and the SEASsourced tweeter has a small 20mm soft dome.

Recent improvements in loudspeaker performance have been due to crossover network refinements. The S3/5R has improved conductivity with gold-plated tracks and silver/copper-loaded solder and signal routing to eliminate magnetic interactions.

SOUND QUALITY

Smooth, even and unfailingly polite. That's always been a characteristic of the very best Spendor loudspeakers and the S3/5R is definitely no exception.

This isn't the speaker for those who like their music seriously loud or heavy - or even those who like loud, heavy music. But when it comes to delivering most kinds of music at typical domestic listening levels, the S3/5R has a number of qualities that set it ahead of the pack. Few loudspeakers of any size or price can match its smoothness, its laid-back neutrality, or the precision of its stereo imaging. Boxiness is pretty well controlled and coloration is limited to a mild hollowness.

However, although a well engineered miniature such as this can do certain things exceptionally well, it does have limited dynamic grip and expression, as well as low level resolution, modest power handling and loudness capabilities.

The S3/5R might be very tiny, but that's no reason not to take it very seriously, since what it loses on the dynamic swings, it gains on the neutrality roundabouts. With its smooth, sweet and delicately laid-back sound, it's arguably the closest in our group to





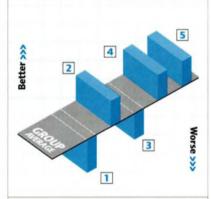


LAB REPORT

The S3/5R measures very differently from the 53/5se that we reviewed back in 2003 - and considerably better too, though to some extent that's because its midrange sensitivity is significantly lower now, registering just 82dB rather than \$3/5se's 85dB (or indeed the 84dB claimed for this model). Although 82dB is a very low figure, the impedance is undemanding, bass extension is exceptional and close-to-wall bass boost is now entirely optional rather than essential (but still worth trying).

The far-field in-room averaged response is remarkably smooth and flat, perhaps a little lacking in midbass energy (50-130Hz) when operating in free space, but very even above that point, with just a very gentle roll-off above 1.5kHz. Although the top end is less smooth than the midband, the notably dull top end found with the \$3/5se is avoided here.

HOW IT COMPARES



- 1] Sensitivity >> -40%
- 2] Bass extension >> +30%
- 3] Ease of drive >> -30%
- 4] Overall frequency balance >> +30%
- 5] Response smoothness >> +30%

SPECIFICATIONS Measurement Rated Actual Sensitivity@1m/2.83V 84dB 82dB				
- ACCORD				
82dB				
8/6 ohms				
25Hz				



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TANNOY DC6

Tanncy's dual-concentrics underpin the new Revolution Signatures

ne of the oldest names of British hi-fi (and ProAudio) loudspeakers, Tannoy's latest domestic Revolution Signature range consists of four stereo pairs and two centre-front models. This £800 per pair DC6 is the larger of two standmounts and is a two-way design based on a 150mm dual-concentric main driver (somewhat larger than our group norm).

Said driver is mounted in an attractively shaped, real wood veneered enclosure, available in either the light oak of our samples, or a darker (and more popular) 'espresso' finish.

The 11-litre enclosure is somewhat larger than the group average and is loaded by a front port. The front panel is necessarily wide enough for the drive unit, but the very slim back is so narrow it only just has room for the strip of five terminals. Like the front and back, the top and base are flat, but the sides form a quite tight curve, which stiffens the structure, distributes the horizontal standing waves and disperses reflections.

Four terminals are quite normal for a twoway loudspeaker; the fifth allows the main driver chassis to be earthed back to the amplifier to minimise RF interference.

Tannoy's famous dual-concentric driver is a co-axial design, using a horn-loaded tweeter firing through the middle of a bass/mid cone. This arrangement assists crossover integration and ensures a fully symmetric off-axis performance. This latest variation combines a 150mm cast alloy frame with a 115mm flared doped paper bass/mid cone,

crossing over to a 25mm titanium dome at 1.8kHz.

SOUND QUALITY

The Tannoy is about 50 per cent larger than most of the others in this test group and as soon as it was brought into the listening room, the consequences in terms of superior dynamic grip and expression were immediately apparent to all concerned.

Auditioning closely mirrored the measurement findings in terms of the overall tonal balance. Even with wall assistance, the sound is a little lightweight and forward, but the net effect is convincing enough and, if ultimate weight and extension is inevitably limited, the sound has decent enthusiasm, a sweet and open presence zone and fine agility.

Wall proximity normally increases voice band coloration, but this Tannoy seemed relatively immune from this problem, maybe because of its lower than average crossover frequency, or the tweeter's relatively narrow dispersion.

Earlier generations of dual concentric tweeters have been criticised for a lack of treble smoothness, but that doesn't seem to be in the least applicable to this latest generation, which has a sweet, discreet and exceptionally delicate top end that's at least a match for the better direct radiator dome designs.

Backs against the wall, the DC6s somehow seemed entirely free from the usual boxy character, presumably assisted by the curved enclosure sides. Indeed, the most significant disadvantage seemed to be the slightly reduced stereo image depth perspectives



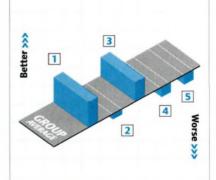


LAB REPORT

Reflecting the fact that its bass/mid cone is larger than the group average, the DC6 comfortably met the relatively high 8BdB sensitivity rating under our in-room far-field regime, despite a relatively easy-to-drive load with a 5.5 ohms minimum around 200Hz.

In-room measurement reveals a relatively dry bass alignment. Output rolled off very gently and progressively below 200Hz with the speakers positioned well clear of walls, but close-to-wall siting filled in the mid-bass zone very nicely, lifting it up to match the midband level. The balance here was impressively smooth (even through the upper midband and presence), if slightly over-projected, while some lack of output through the upper bass and lower midband was also evident. The crossover transition is quite smooth, but the pair match between our two examples was a little disappointing.

HOW IT COMPARES



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

SPECIFICATIONS		
Measurement	Passurement Rated Actual Instituty @ 1m/2.83V 88dB 88dB pedance (nominal/minimum) 8/ns 7/5.5 oh	Actual
Sensitivity @ 1m/2.83V	88dB	88dB
Impedance (nominal/minimum)	8∕ns	7/5.5 ohms
Estimated bass extension (-6dB)	46Hz	40Hz



CONCLUSIONS

These high-value standmounts hold their own against the industry big boys

Ithough our six models might broadly fall into the category 'mini monitor', in as much as all are small yet quite costly affairs with serious pretensions to superior sound quality, the differences between them are obvious enough. The price and size spread might be relatively narrow, but each model has its own distinctive character, physically and sonically.

Extended listening tests were carried out on each of the models, while a pair of original (15 ohm, Chartwell made) LS3/5as from the mid-1970s provided an invaluable

reference point. However, that classic BBC monitor shouldn't be regarded as the model which these modern descendents ought to emulate: monitoring studio microphone techniques is not the same as enjoying your favourite musicians.

These tiny loudspeakers – arguably a little on the small side for our 4.3x2.6x5.5m listening room – do derive significant benefit from their small enclosures, but they also inevitably sacrifice some bass weight and welly, and some sensitivity, too. (Impedance is the third variable in this equation.)

Subjectively, they also tend to suffer from weak dynamic grip and expression, which is probably due to their relatively small radiating areas, though small does tend to lead to superior imaging. In most cases the relative bass levels of these speakers will be helped by a degree of wall proximity, but this needs careful experimentation as it will also tend to increase coloration and reduce transparency.

Although we had no difficulty distinguishing between these different models, because they're so similar in size and configuration, choosing between them can come

down to a matter of personal taste Both the Acoustic Energy and KEF suffered from strong top ends that lacked sweetness, but the differing strengths and weaknesses of the other four tend to cancel out.

The Amphion has a quite delightful top end, but less happy bass alignment; the PMC lacks midband smoothness, but has fine bass and treble; the Spendor is beautifully smooth and neutral, but low sensitivity and loudness potential. Finally, the Tannoy lacks warmth, but does show the significant dynamic advantage of its larger driver and box. **HFC**

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HINTS AND TIPS

>> Floor-coupling spikes should have tight lock-nuts, but don't over-tighten these or you'll strip the socket threads >> Finding the right place to put the loudspeakers acoustically is very important. It's worth taking the time and trouble experimenting

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

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

Reviews you can trust

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

How to use this guide

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

Products that score more than four stars overall are automatically considered for inclusion in the Hi-Fi Choice Buyer's Bible. Any Best Buy or Editor's Choice Badges awarded are also displayed.

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CD PLAYERS

Audio disc players for music only

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

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

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



again before being amplified and sent to the output sockets.

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

A.S.0

WHAT'S A DAC?

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

WHY HAVE SEPARATE TRANSPORTS & DACS?

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

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

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

DO I NEED DIGITAL CABLES FOR A CD PLAYER?

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

WHAT IS OVERSAMPLING/UPSAMPLING?

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

CAN I PLAY SACDS ON A NORMAL CD PLAYER?

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

CAN I PLAY DVDS ON A CD PLAYER?

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

SUPER AUDIO CD

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

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



Rega Apollo £498

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



Cambridge Audio Azur 840C £750

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

Our favourite BEST BUY EDITOR'S CHOICE **CD PLAYERS** HEADPHONE SOCKE CD-RW COMPATIBI SACD COMPATIBL ELEC DIG OUTPUT VARIABLE OUTPUT L ANALOGUE OUT ISSUE NUMBER Audio-only CD and SACD players BADGE? PRODUCT COMMENTS Arcam DiVA CD73 Neatly built and well presented player that's especially good at bass and timing, with detail hardly less assured • • 301 Audio Analogue Rossini 850 Valve-sporting player delivers a warm, engaging sound, but mediocre remote and no optical out may limit appeal • 299 • Cairn Tornado 850 The Tornado is a full-on experience that shuns compromise and delivers intensely real sound for its price 305 Cambridge Audio Azur 740C 500 Very flexible, this innovative upsampling player sounds exceptionally neutral and highly informative 0 293 98 Cambridge Audio Azur 840C 750 Ultra-civilised sound is not to every taste: rhythm-lovers may find this player frustrating 306 Creek Evo 495 A minute treble lift; otherwise this is a very capable player that offers fine value . 285 Denon DCD-500AE Cheap, well built and good, if slightly soft-edged sound quality 160 295 Denon DCD-700AF 250 Excellent entry level quality CD player lacks for nothing. Musicians please note: even has variable speed replay 284 Marantz CD6002 280 A hint of treble unevenness is the only specific flaw; performance is class-leading in most areas 6 301 Naim CD5i 850 Its strikingly competent musical performance comfortably exceeds the expectations of an entry-level player 307 88 Quad 99CD-S 650 Revels in big music thanks to fearless presentation: smaller-scale works can lack focus 291 88 Rega Apollo 498 Unless you can't abide top-loaders, check this out; musically it's a highly praiseworthy performer 285 Sony SCD-XA3000FS 800 A good, if not truly great, all-rounder with CD and fine multi-channel SACD performance do da 6 6 0 69 276 Yamaha CD-S2000 999 Sophisticated, this is a beautifully controlled, high resolution player, although SACD is stereo-only 僚 48 309 £1.000 Bryston BCD-1 2,050 Not as open as some but rather more timely than most, it sounds a lot more gripping than it looks 300 Cairn Fog 3 1,995 Ergonomically challenged, high energy player with Gallic charm and digital preamp on board 302 EC Chord Red Reference CD 13.345 The definitive statement in Red Book CD playing, this player's look and sound places it at the top of the tree a 299 88 Classé CDP-102 Rich, dynamic CD/DVD player with a full bottom end, impressive dynamics and a luxurious yet revealing balanced 0 6 286 EC Classé CDP-202 CD/DVD-A player with brilliant sound, if sophistication is your bag. Includes S-video and composite outputs 284 Conland CDA823 1,750 Don't let the laid-back character fool you - this player has plenty of insight too . • 280 Cyrus CD8x/PSX-R 1,400 Lightness of touch is the key here, but there is also good bass and some very fine detail on offer too 295 EC EMM Labs CDSA 6,995 Classy, stripped down to basics SACD/CD player with some excellent engineering below decks 0 302 Esoteric X-03SE 4.995 Resolution and musicality close to the top of the game. For out and out transparency and build quality it's hard to beat 0 285 EC Gamut CD3 Superb resolve of fine detail combined with a perfectly judged balance and an ability to draw you into the music 289 Leema Antila Musically engaging player that will have you going through your CDs afresh. Balanced connection is best 291 2 4 9 5 Leema Stream 1.095 The most timely disc player at its price point has tactile imaging and good dynamics, but unusual control system • 306 Linn Maiik 1,950 Compact and capable of most CD formats, it's musically communicative with fine pace and enthusiasm 283 Marantz SA-7S1 5,000 Something of a bargain even at this price, the SA-7S1 sets the benchmark for CD/SACD players of its ilk 297 Marantz SA-11S2 . 2 500 Superb value for money, this well-balanced player features various filter settings to customise performance 68 304 Meridian G06 Highly refined player with a combination of analysis and self-effacing response to musical demands . 295 Rega Saturn 1.298 Good detail, lively natural bass, and good integration of musical strands without losing their individual character 295 Roksan Caspian M Series-1 1,250 An exceptionally fine CD player that provides a high-end and musically rewarding performance • 307 0 Shanling CD-T1000SF 1,600 Commendably committed player which gets right to the heart of a wide variety of musical styles 306

SPECSILEY SACD COMPATIBLE Plays high-resolution SACD discs in multichannel and/or two-channel mode. ELEC DIGITAL OUTPUT Electrical coaxial output for digital connection to a DAC or digital recorder OPT DIGITAL OUTPUT Optical Toslink output for digital connection to a DAC or digital recorder. CD-RW COMPATIBLE Will play CD-RW (rewritable) discs, most CD players can cope with CD-Rs. CD TEXT Will display album and track titles from inserted disc. BAL ANALOGUE OUT Balanced XLR output connections for similarly equipped amplifiers.

1,495 Strong timing and rhythm, this player is well equipped for more melodic music, with good detail resolution

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.



Unison Research Unico CD



295

DVD PLAYERS

Disc players for audio and video

Although players featuring both DVD-Audio and DVD-Video are thin on the ground, the universal disc player (that also supports SACD and CD alongside the DVD formats) continues to dominate the worlds of audio and video alike. In fact, it's rare to find a DVD player that doesn't support DVD-Audio and SACD these days.

So, what advantages do universal disc players hold over traditional CD players? Put simply... choice. A DVD player or universal offer the listener the chance to use far more than just your CDs and build up a wider collection of music and video, all played through one device. The technology has matured now, and the performance of all formats played through these devices

gets surprisingly close to dedicated players these days. The same cannot be said of Bluray or HD DVD players, many of which are not yet good enough to play CD well. MP HOM VICETE

DVD-AUDIO, HD DVD AND BLU-RAY

DVD-Audio is a high-resolution music format that offers multichannel, stereo and Dolby Digital tracks on dedicated DVD-A discs. The discs can be played on any DVD player, but can only be appreciated at their best with a DVD-A or universal disc player. In fairness, the DVD-Audio format has not proved to be a resounding success, and SACD discs are more readily available.

The two new kids on the block are HD DVD and Blu-ray. Both the same physical size as the CD and DVD disc, these formats offer even more data storage capacity than DVD (up to 50GB instead of DVD's 8.5GB). However, these formats are the exclusive domain of home cinema and gaming fans. Sadly, the possibility of super-high-resolution music-only Blu-ray or HD DVD discs remains distant at best.

0.8.0

WHICH AUDIO OUTPUTS GIVE THE BEST OUALITY?

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?**

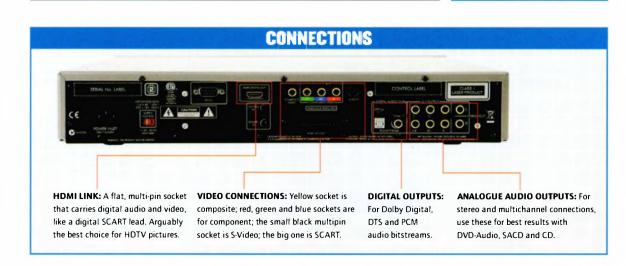
The best connection is HDMI, then component video, followed by RGB Scart. All these are clearly superior to S-video and the basic composite video option.

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

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

WHATIS 1080P?

HDTV is defined by the number of lines the picture creates and whether it's interlaced (like old TV) or progressive scan (like a PC monitor).



0ι	ır favourite	2	BEST BUY EC EDITOR'S CHOICE		c	DEOU	TO AT	ONC	
	VD PL	A	YERS	DWD-A			ICATA G	HEADPHONE	53
Auc	dio/Video disc playe	ers		DVD-A COMPATIBLE	SACIO COMPATIBLE	ELEC DIG OUTPUT	no ord	ONE SO	SSILE NLMBER
BADGE	? PRODUCT	£	COMMENTS	E.	E H	PS	TURINO	SOCKET	BB.
UP T	0.£1,000								
THE	Arcam DiVA DV135	900	Unchanged looks and stereo-only DVD-A/SACD, but the overall performance is great across all formats. Stunning picture, too	0	0	0	0		296
	Denon DVD-1920	250	Respectable (if unexciting) and flexible audio player, but something of a star from its HDMI equipped upsampling video subsystem	0	6.0	97	*	0	276
	Marantz DV7001	600	Enhanced model based on DV6001, but with various improvements, including superior CD replay capabilities	12-	*	0	:50		296
1	Marantz DV7600	600	A mid-market cracker, with sound and picture quality that generally exceeds expectation	(9)	69	3	0		274
	NAD T585	800	Easy to live with universal player that shows clear signs of rejuvenation of the Classic range	0	0	83	0		294
	Onkyo DV-SP503E	300	Budget Onkyo universal player is a straightforward Proneer based implementation, which performs well with audio and video	0	*	≈	*		275
	Pioneer DV-LX50	450	Nicely built universal player for those who value finesse over speed and energy. Decent picture too	0	*	*	*		306
2.74	Yamaha DVD-S2500	700	Universal player, slightly stronger with video than audio, but well turned out with a wide range of analogue and digital in and outputs	0	:59	*	:50		280
ABOV	000,13.3								
EC	Accustic Arts Surr Player 1	4,495	A very high-quality Pioneer-based machine, excellent sound from both hi-res and regular formats	0	0	0	0		299
4.0%	Arcam DiVA DV137	1,250	Good overall audio performance and excellent upscaling HDMI DVD-Video player, but stereo-only SACD playback at time of writing	0	0	0	0		285
	Denon DVD-3930	1,100	Well engineered universal player, with useful bypass facilities for pure audio, and unusually powerful video image processing	0	0		0		287
EC	Linn Akurate CD	3,985	This highly engaging multiformat non-video player doesn't have huge transparency or a fancy box, but is musically addictive	0	0	0	0		299
	Marantz DV9600	1,500	With excellent, next-generation picture and impressive sound quality on CD and SACD, this sets a very high standard to beat	0	0		0		280
EC	Meridian G98AH	3,625	Meridian's most widely compatible G-Series DVD player – groundbreaking DVD-Audio replay and a fine CD player too	0		0	0		265
EC	Naim DVD5	2,565	Naim's first DVD player is a real success, notable for its class-leading sound with CD and (optional) multichannel DVD-Audio						263
	T+A SACD 1245 R	2,000	Dedicated stereo only/SACD/CD player avoids the usual compromises. It does a limited job, but it does it with fine fidelity		0	0	0		279
EC	Townshend TA 565 CD	3,000	A universal machine that excels with music and is quite exceptional with good of stereo CD		0	0	0	0	270

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









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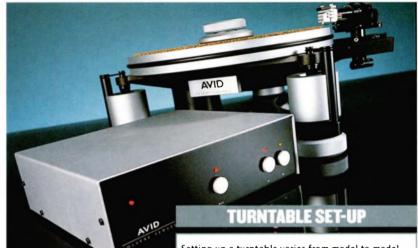
VINYL

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.

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.



Pro-Ject RPM 5 £400

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



The Funk Firm Funk V £760

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



Clearaudio

Champion £1,475

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



Avid

Volvere £2,750

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

33/45

	r favourite				SPE	CIFIC	ATION	S	
	URNT	AB	LES		SUSPECIBLIS CSUS	SPEED CHANGE	SUPPLIED WITH ARM	SUPPLIED WITH CARI	INSS
Rec	ord players			SPEEDS	SAICIE	CHAN	MIHA	E C	SSUE NUMBER
	PRODUCT	3	COMMENTS		SS		RM	A	
EC	Avid Volvere	2,750	A combination of a heavy platter with a sprung suspension that makes the vinyl it spins sound powerful and solid	33/45	0	0			298
10	Clearaudio Champion	1,365	Smart, practical and good-sounding, with impressively 'dead' arm. Isolation recommended	33/45			03		268
8	Clearaudio Emotion	920	Beautifully built with open and clean sound emphasising mid and top, but delivering nice timely bass	33/45			3	1/2	309
	Clearaudio Performance	1,670	Ceramic-magnetic bearing spells a surprisingly uncolored performance. Good arm and cartridge	33/45			*	199	29
С	Clearaudio Ambient	4,220	Innovative use of materials leads to a fast, precise and thrilling sound (tonearm extra)	33/45				0	27
С	EAR Disc Master	7,695	Combines new 'no contact' drive technology and high quality materials to bring state of the art resolution	33/45/78	0	0	opt		276
-	The Funk Firm Funk	450	You won't find another turntable at the price that can touch the Funk for dynamics, tone colour or detail	33/45		0	opt		27
-	The Funk Firm Funk V	750	Vector drive brings a refinement to the standard Funk that increases resolution. For high-class analogue sound, it's a killer	33/45			opt	opt	28
С	The Funk Firm Saffire	1,900	Individual design and a sound that's refined and neutral with strong timing and dynamics	33/45		80	opt	opt	309
,	Goldring GR2	265	Nicely finished Rega-manufactured deck with RB250 arm and an open, engaging sound quality	33/45			8	0	26
	Michell Tecnodec	886	Needs careful partnering but can deliver a very sophisticated result for the money	33/45			0		309
	Pro-Ject Expression II	250	A smooth and engaging turntable with the ability to revel in the glory of vinyl, with upgradable arm cable	33/45		Ø!	0		28
•	Pro-Ject RPM 5	450	Great looks plus an on the ball, engaging sound that puts it in the serious league, needs good isolation for best results	33/45		62	62		279
	Pro-Ject RPM 6.1	600	With its minimal chassis and huge platter this is a steady design that's capable of fine results with a decent cartridge	33/45/78		0	0		29
-	Pro-Ject RPM 9 X	1,200	A gorgeous turntable that sounds as good as it looks – vital and transparent! Price includes carbon fibre arm	33/45			0		26
	Pro-Ject X-Pack	800	Combines some very strong elements (Ortofon Rondo Red) into a killer package with top sound and value	33/45		0	0	0	309
	Rega P3-24	398	Very competent, uncoloured and musical, much improved by £148 outboard electronic power supply	33/45		opt	0		298
	Rega P5/RB700	698	Combines a great sense of timing with market-leading resolution and a phenomenal tonearm — a hard act to beat	33/45		0	opt		25
2	Rega P7/RB700	1,298	A highly capable player that could hold its own in the most exalted company – a vivid and natural performer	33/45		0	opt		25
	Roksan Radius 5/Nima	895	Sophisticated design with accomplished sound quality, excellent imagery and good isolation (acrylic version tested)	33/45	0	0			248
С	SME Model 10A	3,411	Elegant and extremely capable design, tested here with Series V/309 hybrid arm	33/45	0	0	(3)		195
С	SME 20/12A	11,133	Brings a calmness and precision to vinyl replay that we have rarely encountered, build quality is second to none	33/45/78	0	5	-81		293
_									

Ou	r favourite	BEST	T BUY 😥 EDITOR'S CHOCE				
				S	PECIF	ICATIO	INS
r	HUNU	G	ARTRIDGES			REPLACEA	ISSUE NUMBER
MM	and MC cartridges			W	MC	BLE	ŒR.
BADGE?	PRODUCT	3	COMMENTS				
i-	Denon DL-103R	200	Adds refinement to basic DL-103, at a price. One of the best rock'n'roll cartridges around		•		285
5,8	Dynavector DV-10X5	250	A high- output MC with superb dynamics and fine timing that's difficult to mount, but well worth the effort		29		307
10.5	Grado Prestige Gold	110	Produces rich, open and expansive music with the minimum of fuss	-29		0	235
100	Ortofon Rondo Red	300	Delivers detail, power and resolution and makes a good case for its price		59		307
125	Ortofon Salsa	200	Despite a touch of midrange coloration, this cartridge really involves the listener with good extension and a clean, agile sound		100		290
11	Sumiko Blue Point Spec Evo III	239	High output MC with refinement at high frequencies and a nimble, articulate and revealing sound		Se.		270
	van den Hul MC One Special	699	A gorgeous cartridge that's worth the price every time you hear a familiar track in a whole new light				235
EC 33	van den Hul Condor XCM	2,400	A stunning cartridge with stereo imaging, dynamics and detail resolution to die for		29		265
EC	Wilson Benesch Naked Analog	1.450	With its smooth clean highs, transparent midband and nimble bass, this is a lot of performance for the money		8		253

7,000 If you want to hear everything that's on a record then there's no better machine for the job (includes Excalibur II)

Townshend Rock V

EC

Tom Evans The Groove

Trichord Dino/Dino+

1,800

498

Our favourite BEST BUY (C) EDITOR'S CHOICE PHONO STAGES MC PHONO INPUTS MM PHONO INPUTS ADJ. MPEDANCE ISSUE NUMBER Phono stages BADGE? PRODUCT COMMENTS Cambridge Audio 640P o 0 60 An outrageously good bargain that suits budget systems, but can confidently survive upgrades before and after in the chain 305 2 v Creek OBH15 220 Practical and highly compatible unit offering fine detail and pleasing, mellow balance 305 - 1 NAD PP2 phono stage 50 A fine buy for turntable users on a tight budget – open tonality and clarity is distinctly impressive for the money 245 212 234 Tom Evans Microgroove 400 For dynamics and real bass extension with good tonal colour this is the one to beat. The Plus version (£700) is even better!

THE 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 belt from one pulley to another to change speed, but not these ones. SUPPLIED WITH ARM Deck is supplied complete with tonearm – some require a separate purchase in this department, but the dealer will fit it for you SUPPLIED WITH CARTRIDGE Some decks are supplied with a starter cartridge and this is included in the price shown,

Relaxed yet resolute with very good image depth and natural balance, not to mention great flexibility

Plenty of detail, excellent imaging and almost flawlessly neutral: a good choice for maximum information retrieval off any LP

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,

0

Ġ.

201

234

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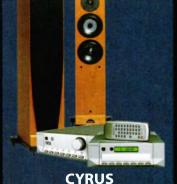
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iQ5SE Speakers

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,949

MARANTZ CD6002 CD & PM6002 Amplifier

MONITOR AUDIO BRONZE BR2 Speaker

SAVE EEE

619ء

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RADIO TUNERS

FM and DAB hi-fi separates

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

DAB or FM?

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

Where FM scores over DAB is in the lower

cost of hardware and the greater reception area. It can also provide higher sound quality if reception conditions are favourable. Absolute sound quality judgements are 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 TU-1800DAB £250

Combines DAB with FM/AM reception and good all-round design at a tempting price.



Creek T50 £550

A thoroughly accomplished AM/FM tuner with a substantial and detailed sound.



T+A T1210R £1.000

This FM tuner looks, feels and sounds top-notch - great detail and imaging.



Magnum Dynalab MD 90T £1,195

FM tuner with valves - 'affordable' for an MD, but still streets ahead of most radios.

Our favourite BEST BLV 60 EDITOR'S CHOICE

TUNERS FM & DAB HI-FI SEPARATES PADGE? PRODUCT Creek T50 FM M I 128 Very fine results indeed with precision, polish and insight added to excellent basics 0 Creek Evolution 495 Sound is detailed, cohesive and extended both tonally and spatially - very classy FM.M 80 308 Cyrus FM-X 500 A classic no-nonsense FM tuner that achieves gratifying sonic results. Upgradable with PSX-R power supply FM 7 283 Denon TU-1500AF 130 Well attuned to the crowded modern FM band, this tuner produces clear, detailed sound with plenty of gusto FM,M,L 100 281 . Denon TU-1800DAB There's a little grain on FM, but the decent performance on both bands makes this a great dual-band choice DAR EM M 200 283 250 Magnum Dynalab MD 90T 1,195 No remote or presets as standard, manual everything and valves... but its sound is simply sublime FΜ 257 Marantz ST7001 300 FM reception could offer a little more detail and insight DAB is fine, but near-identical Denon 1800 is cheaper! 200 0 283 NAD C422 FM M 180 Admirably free of roughness or other obvious nasties, with just a slight lack of clarity 30 250 Pure DRX-702ES 210 Apparently good value is restricted by persistent veiling on FM: 'PAC' on DAB mellows sound a little DAB.FM.M 99 283 Rega Radio 3 Strong bass, clear treble and a high enjoyment factor make this an appealing FM performer FM.M 20 Rotel RT-02 279 A highly competent tuner which always sounds appealing and fuss-free FM,M 30 0 242 T+AT1210R 283 1.000 High-end looks are matched by the sound, which is detailed and sophisticated, with useful features too FM 100 Arcam DIVA DT91 DAB,FM Some grain at low levels, but sound is lively, large in scale and tonally very natural. Very smartly Cambridge Audio DAB500 DAB 10 150 Very good sound, plus optional response tweaks, and slickest operation yet 248 Denon TU-1800DAB 200 DAB.FM.M 200 Very good detail and a highly believable impression of real musicians playing. Imaging can be a little constricted 299 Marantz ST7001 250 Midband detailed and precise: treble can be thick but bass is extended, and sound generally energetic DAB,FM,M 200 NAD C445 DAB,FM FM is laid-back despite bright balance, but has good detail. DAB slightly livelier than most 30 299 Onkyo T-4555DAR 350 40 Admirably free of grain or obvious tonal blemishes, this tuner achieves a high standard in all areas on DAR EM

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

STEREO AMPLIFIERS

Integrated and pre/power amps

Amplifiers come in two basic forms: integrated and preamplifier (pre) plus power amp combinations. Integrated simply means that both pre and power sections are in one box. There are definite advantages to separating the low level, delicate signals in the preamp from the radiations of a power amp, so the more ambitious designs come in two or more cases. In some cases, each channel has its own power amp called a monoblock.

Amplifiers use two basic technologies: transistors or valves. Transistors are popular because of their practical and technical advantages, but valves – aka tubes – live on owing to aspects of sound quality that trannies can't replicate. If you want to play your music loud, use trannies; if you appreciate acoustic music, try valves.

The fundamental of amp/speaker interfacing is power rating and speaker sensitivity. You can drive a high-sensitivity speaker with a ten watt valve amp, but it takes a 200W behemoth to get the best out of speakers which present a difficult load. As a rule, you can't have too much power.

How to choose an amp

The main areas in which amps vary are: timing, dynamics, stereo imaging and transparency. Timing is the ability to present the attack and decay of each note precisely; amps with strong timing have a snap and coherence that is very appealing.



Dynamics is a general term for the ability to portray variations in level between individual notes and is different to dynamic range (the difference between the loudest and softest notes). Dynamically strong amps tend to have more life and energy.

Stereo imaging is how solid or three-dimensional an instrument or voice sounds. The point of having two rather than one speaker is to make it possible to recreate the soundstage of the original recording, thus amps that have strong imaging skills can create a sonic space that seems to extend the room.

Transparency of detail is the most obvious difference between amps. One amp will present more subtlety than another, but the drawback with using this as your main criterion is that a forward or 'bright' sounding amplifier will emphasise detail at the expense of overall musical coherence.

SHOULD I LEAVE MY AMP ON **ALL THE TIME FOR BEST RESULTS?**

All audio electronics perform better when they are warmed up, and this is particularly the case when it comes to amplifiers. If there's no way that you can leave it on all the time, make an effort to switch it on at least 20 minutes before listening.

WHAT IS BI-WIRING AND **BI-AMPING?**

Bi-wiring is when you run separate cables to the treble and bass/mid terminals on the speaker. In most instances, this improves sound quality so long as identical cables are used. Bi-amping is using two stereo amps to drive one pair of speakers, using one amp to drive the treble and the other for the bass/mid sections of the speakers.

WHY DO VALVE AMPS HAVE **SO LITTLE POWER?**

Valve amps are inherently low powered in absolute terms – at least when you compare them to their transistor-based cousins. But when partnered with high-sensitivity loudspeakers, they are quite capable of producing perfectly adequate head-banging levels.

HOME CINEMA STEREO

Stereo amps can be used in home cinema set-ups as well. You don't get the surround and centre channels, but well set-up stereo speakers do a remarkably good job of creating atmosphere for movies. Stereo amps tend to be better at reproducing music as they don't have the (electrical) noiseinducing digital processing of AV amps. AV amps cost three to four times as much as stereo models of a similar quality.



If you thought the PM7200 was a great budget amp, just wait until you hear this! Its sound is so detailed and involving, you'll think it costs twice the price.



Cyrus 6vs2 £600

The latest 'singing shoebox' from Cyrus is an absolute peach! Strong rhythmic flow, tunefully extended bass and excellent stereo imaging are among the highlights.



Are you looking for an amp that combines weight and musical gravitas with rhythm, detail and subtlety, with gorgeous build quality to boot? In that case... here it is!



This amp's massively enjoyable musicality is hard to beat: all the effusiveness of a great valve amp and none of the stereotypical softness. Brilliant!

STEREO AMPS BUYER'S BIBLE

OTEDI				S	PECIF	ICAT	IONS	
ntegrated amplifie	Note that the product of the product					HEADPHONE SOCKET	POWER OUTPUT (W)	ISSUE NUMBER
ADGE? PRODUCT UP TO £1,000	3	COMMENTS	LINE INPUTS	PHONO INFUT	REMOTE CONTROL	Ξ	3	9
	500	A smart and practical ampletfering good span and page, with natural dynamics and good datail	6	MM	th	0	60	28
								30
			5 7	0	20 80	12	100	30
			6	opt	in the second	1/3	75	2
			6		en	8	100	2
- 5			8		320	(0)	120	
			5	ont			-	29
			7	opt	0	0	85	2
						(0)	40	2
			4	MM	76	0	50	2
				MM	- QC	0	70	2
			3	20			70	2
			4		恢		50	3
			5	0	Ð	9	80	2
Pioneer A-A9			4		3	0	80	2
				MM			50	2
	999	Valve hybrid whose sound is as idiosyncratic as its styling, short on neutrality but high on sparkle	6		92		100	29
	4.400						100	0
			6				180	
		,	4				50	3
			4		- 55		150	
			5	MM	0		50	3
· ·			6	Н	0	7,9	100	2
			6	opt	0		60	2
Leema Pulse	1,195	An organic and revealing sound alongside good power reserves and superb features, including a great MM/MC phono stage	5	(3)	0		80	3
Moon Evolution i-7	4,750	Sophisticated, with an elegant build and sound quality, very limited features, even by high-end standards	5		0		150	
Musical Fidelity A1008		With DAC, phono stage and built-in valve buffer, this powerhouse amp can really grab hold of a loudspeaker	4	0	0		250	
Mystère ia11	1,250	Small, deceptively powerful integrated valve amp with a crisp, pacy sound	4				40	3
NAD M3	1,899	Massive and flexible, it goes very loud with fine authority and dynamic range, but lacks some sparkle	7		9		180	
Naim SuperNait	2,350	Serious communicative ability meets convenience in this sophisticated and powerful integrated design	6		0	0	80	2
Pathos Classic One Mi			5		3.		70	3
Primare I30	1,500		6			0	100	2
Pure Sound A30	1,100		3				30	2
Sugden A21aL Series		Lovely solid-state Class A amplifier, sweet as a nut and more powerful than its predecessor	5	opt	0		21	2
Unison Res. Unico Sed	condo 1,200	Very good detail and coherence. Tonality is natural, imaging precise and deep, and dynamics are wide and unforced	6	opt	0		110	
Unison Research P70	3,495	Delightful valve amplifier with fine neutrality, sweet midband, impressive bandwidth and ample power	4				70	3
Yamaha A-S2000	1,499	One of the few amplifiers to offer the benefit of true balanced operation at this price point	5	opt	:31	0	160	30

Ou	Ir favourite e best buy to editors choice									
S	STEREO AMPLIFIERS				POWER	LINEINPUTS		REMOTE CONTROL	POWER OUTPUT (M)	ISSLE NUMBER
Pre/power amplifiers			PREAMPLIFIER	POWER AMPLIFIER	PHONO NPUT					
BADGE?	PRODUCT	Ŧ	COMMENTS	勇	田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田	S	PUT	ROP	3	男
UP TO	£2,000									
	Advance Acoustic MPP206/MAA406	900	This pair has good build and finish and a balance of qualities that's hard to beat for the price	0		4	opt	0	150	309
	Cambridge Audio Azur 840E/840W	2,000	Enterprising technology delivers a pre/power combo that always sounds detailed, composed and controlled	ė		8	opt	0	200	309
7	Croft Precession I/Polestar I	1,400	Compact pre/power combo with battery preamp and hybrid power, with freedom from timesmear, bass could be firmer	0		6			25	290
E3	Cyrus Pre Vs2/6 Power	1,000	Pre offers stunning resolution and feature count for the money and power is subtle, open and musical	0	2		0	0	50	290
EC	Naim NAC 122x/NAP 150x	1,575	Musically rewarding with outstanding sophistication, grip and insight for such a modestly priced design	1954	0	6	opt	130	50	287
	Rotel RC-06/RB-06	598	A capable and surprisingly powerful-sounding combination which offers real value	0	0	5	0	0	70	285
-	Russ Andrews HP-1/PA-1	1,198	Simply featured, but sounds appealingly realistic and solid. Highly capable in all areas design	0	-6	2		0	50	303
ABOY	E £2,000						100			
	Arcam C31/F38	2,050	Very civilised sound, in the best possible way. Well featured and smartly built	0		7	opt		100	308

EFECSIVEY LINE INPUTS input sockets for source components with a line level output: CD players, DVD players, tape decks, honers, phono stages etc. PHONO INPUT input sockets and onboard phono stage for a cartridge. Either MM (moving magnet) or MC (moving coil), occasionally both. REMOTE CONTROL A remote control is supplied with the amplifier. HEADPHONE SOCKET To drive your cans with POWER OUTPUT Manufacturer's rated output in watts per channel.

BUYER'S BIBLE STEREO/AV AMPS

	r favourite				SPECIFICATIONS							
5	IEKEU	AI	MPLIFIERS continued	PRE	POWER AMPLIFIER	_	PI	REMOTE CONTINU	POWER OUTPUT (W	ISSUE		
Pre	re/power amplifiers			PREAMPLIFIER	AMPLE	LINE INPUTS	PHONO INPLIF	COMI	MAIN	E NUMBER		
BADGE'	PRODUCT	Ξ	COMMENTS	東	勇	SIN	PE	õ	3	BER		
	Border Patrol Control Unit	2,995	Bluff looking valve preamp, with one of the most neutral yet dynamic sounds around	0		5	opt			277		
€C	Bryston BP26 DA/2B SST	5,550	Bryston's top preamp is now a serious competitor. The power amp reveals a lot of signal and delivers serious grunt	-0	0	6	opt	0	100	278		
	Bryston BP26/3B-SST	5,300	The epitome of the iron fist in a velvet glove school of hi-fi. Dynamically superb and very detailed	0	0	8	opt	0	150	308		
EC	Chord Prima/Mezzo 140	6,100	Small, muscular, beautifully made and styled and sounds like a dream	0	0	5		0	120	269		
EC	Classe CP-700/CA-M400	13,350	Pre plus mono power combo with superb build, huge power and enormous flexibility. Sounds stunning, too	0	0	6	opt	0	400	293		
EC	Cyrus DAC XP	2,200	A knockout DAC/pre with naturalness and resolution to die for and six digital inputs for signals up to 96kHz	0		2		0		266		
100	Densen Beat B-200/B310	2,300	Lively, energetic combination that bring a great sense of scale to familiar recordings	0	0	8		opt	80	276		
EC	Densen Beat B-250/B-350	8,200	Upgradeable to surround, with sweet preamp and slightly coloured power amp, but sound is big and assured	0	0	6		0	125	270		
EC	ECS EA-1	6,000	Understated monoblocks with real transparency to the fine detail, passion and energy in your record collection		0				180	253		
EC	Gamut D3	3,430	Creamy smooth, yet lets you hear all the fine detail that goes to making a tonally rich, dynamically strong sound	0		5	opt	0		265		
EC	Gamut D200 Mk3	3,950	A great power amp that's now even better - one of the best regardless of price		0				200	247		
EC	Hovland HP-100/RADIA	12,745	Uncommonly musical valve/transistor hybrid transcends stereotypes, one of the genuine high achievers	0	0	9	opt		125	250		
EC	Krell FPB 700cx	14,998	Reference class amplifier may represent overkill in many systems, but when no compromise is called for, this is it		0				700	234		
EC	Linn Klimax Kontrol	6,000	Beautifully executed example of Scots audio art, sounds as clean as it looks and is a lot more transparent than most	0		4		0		238		
EC	Marantz SC11S1/SM-11S1	5,000	Preamp and power amp duo delivers high resolution and is consistent with different loudspeaker loads	0	0	6	0	0	220	304		
EC	Naim NAP 500	11,875	Wonderful neutrality, bandwidth and dynamic range, plus Naim's traditional leading-edge definition		0				140	208		
-	Roksan Caspian M Series-1	2,245	A well-matched, powerful and enjoyable sounding amplifier combo that brings out the strengths of its CD player	0		5		0	85	307		

AV AMPLIFIERS

Surround sound amps for music and movies

The multichannel, surround sound or AV amplifier is a popular option, thanks to the success of the DVD player and home cinema. Now you can buy five channels or more of amplification for the price of two. Now that multichannel music is also on the agenda, there's a lot to be said for a good AV amp or receiver (an amp with a radio tuner built in).

So if you fancy hearing what DVD-Audio, SACD or even music DVD-Video can do, then check out a multichannel amp and speaker set-up – they're stunning with movies and none too shabby with music.

AV amps are usually designed primarily for movies and come with digital processing for the various soundtrack formats – Dolby ProLogic (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.

A.S.

HOW MANY CHANNELS?

Depends on how many speakers you want. Multichannel music discs come with six or 5.1 channels, but for new movies, 7.1 is where it's at. 7.1 set-ups also mean you have speakers directly behind you – preferable for music discs.

WHAT'S THE DIFFERENCE BETWEEN A PROCESSOR AND AN AV AMP?

Processors don't have built-in amplification and you need separate power amps. AV amps and receivers have processing and amps in the same box.

WHAT DOES THE .1 IN 5.1 STAND FOR?

This is the LFE (low frequency effects) or bass channel that is reproduced by a subwoofer.

HI-FI MEETS SURROUND SOUND

With DVD-Audio and SACD offering highquality multichannel music, surround sound is no longer just a home cinema thing. An increasing number of people want to build a multichannel system that will do their music as well as their movie DVDs justice, and the number of AV products delivering sufficient quality is on the increase. But most aren't cheap – building a top-quality system with five or more channels is inevitably more expensive than sticking with stereo. There

are some very decent integrated options below £1,000, though the best (and most costly) route is to buy a separate processor and power amp(s). Or you can add AV amplification to a stereo model you can't bear to part with.

AV AMPS BUYER'S BIBLE



DSP-AX759SE £550

If you're looking for an affordable multichannel amp that's good with music as well as home cinema, this is a top buy.



DiVA AVR350 £1,500

Arcam's latest receiver offers a good helping of processing and connection options, with exceptionally musical sound.



AVC-A 11 XVA £2,500 A splendid 7.1-channel amp that packs in

the latest digital links and processing formats without sacrificing sound quality.



SSP-600/CA-5200 £11,900

Anyone seeking a high-end multichannel solution that's equally adept with music and movies should park their ears here.

Our favourite BEST BUY C EDITOR'S CHOICE

AV AMPLIFIERS

Multichannel amplifiers			Æ	LINE INFUTS	7.1 COMPATIBLE	UNEL FOWER (M)	IN BUSSI	
	PRODUCT	ī	COMMENTS	RECE VER	NFUT	ATEL	ERIM	NUMBER
	CHAMMEL INTEGRATED AMPS			20	07	1-1	55	2
.5	Arcam DiVA AVR350	1,500	Sets the standard for music and movie performance at the price, although features count low and HDMI limited	0	7	.0	100	284
	Cambridge Audio Azur 640R	600	Simple and elegant receiver. Attributes that reflect in good sound quality without the distracting toys you'll find elsewhere	0	7	0	100	292
EC	Denon AVC-A11XV	2,500	Sensible, real world derivative of AVC-A1XV. but still immensely flexible, and well endowed with digital i/o		11	0	140	273
EC	Denon AVC-A1XV	4,000	Inelegant, but powerful and effective tool with excellent auto set-up and capable of driving two 5.1 systems simultaneously		0		170	266
EC	Lexicon RV-8	5,000	Classy multi-zone receiver lacks high tech digital attributes (HDMI etc) but majors on very effective audio engineering	0	10	0	140	267
	Marantz SR-12S1	3,000	A multichannel amp that can be taken seriously in stereo too Resources are in the engineering rather than the gimmickry		3	0	160	255
EC	Pathos Cinema-X	4,750	No processing, just sexy Italian style, a sextet of valves and the chance of 450 watts in stereo! Cultured sound, too		5		110	270
EC	Pioneer VSA-AX10Ai	3,000	State of the art one-box amplifier with enhanced sound quality, auto set-up and other enhancements		10	0	150	260
ES	Sony STR-DB798	250	Cheap but effective, and passably good with pure audio sources, but control system messy		7	0	100	273
	Sony STR-DB795	300	A superb value little amplifier, well appointed technically and successfully tuned for UK ears	0	7	0	100	260
100	Yamaha DSP-AX759SE	500	More a stereo amp with basic multichannel thrown in, but a great performer with music at this price	0	6	0	100	287
MULTI	CHANNEL PHEAMPS/PROCESSORS	AND POW	MAMES					
(40)	Arcam A90+7.1 mod, P90/3	1,920	Add Arcam's multichannel module and a P90/3 power amp to the A90 stereo integrated and you've got got superb purist 5.1		8	0	90	250
	Arcam AVP700/P1000	3,000	Cutting-edge processor/tuner with HDMI sounds great, but the matching Class H power amp lacks finess to match its power	0	8	•	135	275
EC	Arcam FMJ AV8/P7	5,750	High-quality preamp/processor (£3, 150) and seven-channel power amp (£2,600). An excellent fusion of stereo and surround sound		7	0	180	235
EC	Classe SSP-600/ CA-5200	11,900	Subtle, exacting sound, tremendous flexibility and high power audiophile standard amplifier - lacks hi-tech digital interfaces		11	0	200	278
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
	Linn Exotik	1,750	Is hi-fi ready to make the jump to multichannel music? Linn think so with this musical preamplifier		4			260
EC	Linn Exotik + DA	3,245	Good analogue preamplifier with multichannel in/out up to 7.1 and a home cinema processor of quality combine to make a tempting package		8	0		291
EC	Meridian 861	9,833	Powerful surround processor with flexible modular construction, marvellous versatility to drive any speaker configuration		6	0		230
	Naim AV2/NAPV175/NAP150	4,175	First truly credible multichannel system from Naim is idiosyncratic but offers excellent basic sound with modest spatial steering		5	0	50	238
EC	Parasound Halo C1/A51	7,500	Powerful and flexible processor/power amp combo with impressive sound. Excellent value – processor includes onboard screen		11	0	250	243
-10	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	0	120	238

SPECS INT 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.

UND·S

NEW PRODUCTS FROM LINN & NAIM

CALL SALES: (020) 8318 5755 or 8852 1321 - 248 Lee High Road, London, SE13 5PL 0% APR Credit options are available for purchases of new products exceeding £900, please call for details. E&0E

New Linn - Sneaky Music DS Player £995



Also available for audition the Akurate DS and Klimax DS music players

The new Sneaky DS network music player joins the Linn Digital streaming line up and provides additional flexibility with on board pre and 20W power amplifiers. Can be used as a stand alone or as part of a multi room system solution. You can order Sneaky DS via our Mail Order service or better still visit for an audition if you can, see our website or call for more information on how we can help you integrate more music in your life

New Naim - Superline & NS01 Music Server



NaimNet NS01 server available now

Analogue - the fabulous new SuperLine, a high performance Moving Coil phono stage that has a brass suspended chassis and a class A amplifier feeding 25 regulated supplies. Digital - The New NS01 Music server offering 600 album WAV file capacity of quality music. Visit billyvee.co.uk for more info or come and listen.

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.

VE 8

Though some speakers have a power rating, this isn't as informative as a rating for how difficult they are to drive, nor does it indicate wattage extremes for the partnering amp. In practice, an amplifier cannot be too powerful. Our listings quote ease of drive to indicate how much power

your amp needs to avoid a mismatch. An above-average (A+) speaker will work with amps rated at 25W plus, while an average (A) speaker will need 50W or more, and a below average (A-) speaker could require 100W plus to sound its best. These are guidelines rather than rules.



Choosing speakers

Because speakers and the rooms they are used in vary so much, choosing a pair tends to be quite subjective. To find some that will suit you, try to listen to a good variety to hear how they differ, and if possible, audition some at home. Tonal balance tends to vary the most, but is less important than more subtle factors such as timing and dynamics. Finally, listen with your ears not your eyes - great-looking speakers aren't necessarily great sounding.

Spikes

Floorstanding speakers and stands have threaded inserts for spikes that allow rigid coupling with the floor. These have the advantage of draining resonance from the speaker and giving tighter bass, but can result in more vibration getting back to the electronics and often cause the floor to resonate as well

0&4

IF SPEAKERS ARE RATED AT 75 WATTS, DOES THAT MEAN I NEED A 75 WATT AMP?

No, see the box on power for the full story.

WHICH SPEAKERS ARE BEST FOR SMALL ROOMS?

Those designed to work close to the wall will be smoother in confined spaces. Speakers that have relatively dry, tight bass will also sound better.

WHICH SPEAKERS ARE BEST **FOR BIG ROOMS?**

Big, efficient, easy-to-drive designs are more likely to be able to fill a room better than compact models.

DO I NEED TO BUY CENTRE AND SURROUND CHANNELS FROM THE SAME BRAND AS **MY STEREO SPEAKERS?**

Yes, assuming that you're wanting to create a homogenous surround sound experience, where voices don't change when they move from one channel to another.

HI-FICHOICE BUYER'S BIBLE



Mercury F4 £350

Tannoy's Mercury speakers have a long history of 'quality' sound at low prices, and the latest range is no exception – this floorstander is thoroughly engaging.



Ikon 6 £899

Complete with a ribbon super-tweeter, this is an exceptionally capable floorstander for the money, delivering a highly detailed and truly engrossing sound.



805S £1,600

A superbly well-engineered standmount that's capable of delivering magnificent musical communication, alongside superior subtlety and delicacy.



Mordaunt-Short Performance 6LE £4,000

This extraordinary speaker stands at the pinnacle of Mordaunt-Short's current range. State of the art resolution and imaging are among its many attributes.

Our favourite BEST BUY ED EDITOR'S CHOICE

~	TPDF/		ARFAVERA		-					
	eo speakers	J ;	SPEAKERS	SIZE W.H.D.ICM	FLOORSTANDER	EASE OF DRIVE	BASS FROM (42)	FREE SPACE	CLOSE TO WALL	SSUE NUMBER
	PRODUCT	ĩ	COMMENTS	CM)	99	N.	(ZH	ACE.	ALL	H
	£1,000				-	H				
	Advance Acoustic UM20	200	Classy styling and finish, with solid build and fine overall balance when sited close to a wall	18,30,21		A	43			30
	Acoustic Energy Aegis Neo 3	370	Pretty, neutral floorstander sounds open with wide dynamic range and good bass weight	20,90.5,24	0	А	24	0		29
	Acoustic Energy Aelite 3	750	Wood-veneered all-rounder has exceptional neutrality with deep smooth bass	20,103,39	-0	Α	22	0		29
	Acoustic Energy AE1 Classic	845	Sharply priced classic replica has a beautifully balanced midband, wide dynamic range and little boxiness	18,29.5,25.5		Α-	45	0		28
100	ALR Jordan Entry L	500	Not the most pretty speaker but a sonic triumph, with a beautifully judged balance and impressive transparency	20,86,29	0	А	23	0		27
-	ATC SCM11	849	A very fine little speaker that's at its best with good, natural recordings where it adds little and reveals much	21,38,25		Α-	55	0		29
4100	Aurousal A1	450	Single-driver system is coloured but wonderfully coherent and very effective at communicating emotions	20.5,36,27		А	40	0		29
-5	AVI Neutron IV	499	A great example of what can be done with a genuinely small speaker, but the warts-and-all balance won't suit all	15,27,21		A-	65	0		26
	B&W DM303	180	Chunky looking and liuvely sounding, with deep bass, a fine midband and a restrained top end	30,33,23		Α	23		0	22
	B&W CM1	500	Luxury miniature has neutral, laid back sound, with low coloration, fine imaging but weak dynamics	16.5,28,28		A-	40	0		27
10	B&W 683	899	A fine all-round performer with high-class drivers at a very realistic price	20,99,34	0	Р	20	0		30
	B&W 705	900	Deft, delicate and delightful, if a little bass light, with clever enclosure and driver engineering	22,42,29		Α	35	0		25
	DALI Ikon 6	899	Needs care with setup, but rewards you with impressively transparent and almost obsessively detailed sound	19,100,33	0	Α	37	0		27
19	DALI Ikon 7	999	Bulky vinyl floorstander has high sensitivity and a bright sound with superior coherence, delicacy and transparency	20,114,34	0	A+	22	0		27
r):	DALI Monitor 1	1,000	Beautiful miniature with advanced drivers sounds marvellously coherent with fine vocal expression	16,32,24		Α	40			29
	Dynaudio DM 2/10	775	Unfashionably bulky standmount has fine dynamics, grip, bass and headroom and is delicate and well mannered	27.5,45,35		Α	22	0		29
	Epos ELS 303	399	Midband is impressively smooth, even and coherent, but the sound lacks some dynamic grip and top end detail	18,85,20	0	Α-	28	0		27
	Epos M5	349	Gorgeous miniature works well close to wall. Could be smoother but communicates with authority	18,33,21		A-	40		0	26
	Epos M12.2	449	A true classic stand-mount with lovely presentation, fine sound balance, superior coherence and low coloration	20,37,25		A-	40	0		26
	Focal Chorus 706V	369	Advanced drivers deliver a smooth, even, overall balance with healthy dynamic expression and tension	22,39,25		Α	30	0		30
	Focal Chorus 816 V	1,000	Fine, warm balance, superior dynamics, and a sweet top end, but could be smoother	28,100,37.5	0	Α+	20	0		28
10	Heco Celan 300	595	Does tone colour, dynamics and detail with aplomb and communicates superbly in its +2dB mode. Sensitive, too	23,36,33		A+	40	0		30
	JBL Studio L880	700	Good value floorstander with neutrality, massive headroom and plenty of punch. Could be more transparent	22,99,37	0	Α	25	0		27
nn	KEF iO3	280	Shapely, vinyl-covered stand mount has lively dynamics and fine imaging, but could be smoother and sweeter	22,37,33		Α+	40	0		28
-	KEF iQ9	800	Shapely and solid floorstander has wide bandwidth and dynamic range with superior neutrality and sensitivity	22,94,33	0	Α	25	0		27
	Mission elan e34	400	A return to form for Mission with a pacey, vibrant sound matched to good looks	35,96,34	0	Α+	48	0		29
00.	Monopulse 42A	995	Uniquely different in style and sound, midband time-coherence is magnificent but treble is too restrained	26,110,25	0	Α+	28	0		27
	Monitor Audio BR2	200	Good looking standmount has a muscular sound with superior coherence	18.5,35,25		A-	30		0	29
(8)	Monitor Audio BR5	400	Not the best dressed in its class, but detailed, bold sounding, good value and an easy electrical load	17, 85,25	0		36	0		29
100	Monitor Audio GS10	800	More neutral tonally than some recent MAs. Quality stereo design which take's up little room and is easy to drive	20, 36, 27		Α-	40	0		28
50	Monitor Audio Silver RS8	800	Bold, dynamic sound marks it out from the crowd, and it's an easy load that works well in larger rooms	90, 18, 27	ò	Α	33	0	0	27
	Mordaunt-Short Avant 906i	350	The generous, well balanced sound shows good enclosure control, could do with more grip and better spikes!	16.5.85.29.5		A	40	÷	ř	28

loudspeaker effectively. A+ 25 watts plus A- 50 watts plus A- 100 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)

BUYER'S BIBLE STEREO SPEAKERS

Ē	TEDE		CDEAVEDO		SP	CIFI	CATIO	NS		
	reo speakers	J (SPEAKERS continued	SIZE W.H.D. (CM)	FLOORSTANDER	EASE OF DRIVE	BASS FROM (HZ)	FREE SPACE	CLOSE TO WAL	ISSUE NUMBER
	PRODUCT	ξ	COMMENTS	(CM)	DER	HINE	E	PACI	WALL	1001
	PMC TB2+	795	Classy transmission line stand-mount has superior midband, restrained presence and a bright clean top end	20,40,30		А	28	0		2
	ProAc Tablette Ref Eight	699	Stunning standmount with electrostatic-like imagery. Its Signature brother costs £200 more and is even better!	15,27,23		A+	40	0		2
	Q Acoustics 1010	99	Neatly styled miniature has limited bass and power handling but fine midband voicing at a very sharp price	15,21 5,19.5		А	48		0	2
	Q Acoustics 1050	330	Great value, the sound lacks smoothness but has fine dynamics and impressive transparency	19.5,97,5,30	0	A+	28	۰		-
	Quadral Pico	849	Could be more muscular, but neutral and open with spacious imaging and little coloration	19,34,26		A-	30			
	Rega R1	298	Cute baby sounds busy, coherent and involving, if a touch thin. Sweet and delicate treble with even bass	15,32,24		А	50		•	Ŀ
	Russ Andrews SP-1	399	This tweaked Focal 705V RA has a sound that is immediate, engaging and, most importantly, great fun	19.2,31.5,24.8		Α+	65			
	Spendor S3/5R	725	Small, beautifully accurate monitors are excellent for speech, but not suitable for thrash metal in barns	17,31,19		А	90	42		
	Tannoy Mercury F4	350	Floorstander has an engrossing sound with good dynamics and a warm, restrained output	20.5,97,29	0	A+	24		0	
	Tannoy Revolution DC6	800	Pretty compact standmount likes wall loading, delivering a lively even bass and smooth coherent midband	23,36.5,23		А	40		0	
	Totem Rainmaker	795	Standmount has a big sound, with a smooth midband and brighttop. Could have more punch and warmth	17,35,5,23		А	25			
	Triangle Antal Esw	995	Smoother than its predecessors, with a beautifully balanced bass and midband, though the top end is uneven	20,108,34		А	20	- 33		
	Wharfedale Diamond 9.1	180	Superior shape and finish at an exceptionally sharp price, Sound is laid back, but free from boxiness	19.5,30,28		A-	45	42.7		
	Wharfedale Opus2-M1	1,000	Elegant mid to compact three way, a new direction in recent years for Wharfedale	23,51,36		A-	42	6),		
30	Æ £1.000		THE RESIDENCE IN COLUMN 2 IN COLUMN 2 IN COLUMN 2							
	A2T Mezzo	2,000	Seamless overall coherence, with persuasive monitoring capabilities. Sounds a little mid-forward. Top could be sweeter	27.5,40,26		A+	40	0		
]	Amphion Prio 520	1,600	Gorgeous styling and a lively sound with good voice band integrity and a sweet top end	16,104,22	0	А	40	0		
]	ALR Jordan Classic 5	1,200	Slim, laid back floorstander has sweet sound with fine coherence, imaging and dynamic range	17,99,26	d	А	28	0		
	ALR Jordan Note 3	1,350	Costly but clever; adjustable ABR gives much of the weight of a floorstander with the agility of a standmount	24.5,37,31.5		А	26	0		
	ATC SCM16A	2,203	Makes a great case for the active speaker. Good value, including built-in amps, and fuss-free	27,45,33		ACT	42	0		
	ATC SCM19	1,499	Super linear motor system, heavy weight construction and fabulous veneer that makes the ATC a pro favourite	22,44,31.5		A-	54	0		
]	Audio Physic Spark 3	1,499	Classy and discreetly laid back floorstander has delightfully neutral balance and surprising bass weight	15,98,22	0	Α+	27	0		
	AVI ADM9	1,000	Active mini-monitors that are exceptionally accurate and dynamic, and they give good iPod, too	20,30,26		ACT	60	0		
]	AVI Duo	1,299	Sophisticated floorstander, a natural partner for AVI's electronics. Unusually clean and honest musical presentation	19,77,28	0	А	50	0		
]	B&W 802D	8,000	Great liming, superior dynamics and a sweet top end all enhance musical communication. Makes sweet music	37,115,56	0	А	<20	0		
]	B&W 805S	1,600	Classy standmount with excellent coherence and imaging. Can sound laid back but otherwise a real delight	24,39,33		А	25	0		
	Dynaudio Focus 220	1,850	Cleverly tapered floorstander has a brilliantly smooth, neutral balance and very sweet treble, Could be more dynamic	20.5,98,29.5	0	A-	<20	0		
]	Focal Chorus 816WSE	1,399	The W cone treatment makes some of the qualities associated with Focal's high-end models more competitive	998,28.2,37.5		A+	39	0		
]	Focal Chorus 826 V	1,250	Times nicely, goes loud with ease and will produce precise imaging if appropriately set up.	28,104,37.5	0	А	45			
	Focal Chorus 836V	1,549	Bulky, sharply priced three-way could be prettier. Has good bass with genuine grip, but top could be sweeter	28,115,38	0	А	28	0		
]	Focal Electra 1027 Be	4,000	Outstanding mid and top with fine delicacy and low coloration, but lacks some bass grip and drive	265,111,35	0	A-	25	0		
	Free FS1	3,000	An elegant active design for anyone after the minimum of wiring. Wireless with Sonos or Airport Express	16,87,27	0	ACT	35	0		
]	Gamut Phi5	2,550	Lovely and discreet floorstander has excellent sound and several very clever engineering touches	17,100,24	ū	Р	20	0		
]	Jamo Reference R909	7,500	Top model (in a class of one) is open, full and easy on the ear, and surely a classic in the making	48,127,54	0	Α-	25	0		
]	KEF Reference Model 201/2	3,500	Very classy but costly three-way stand-mount with much improved Uni-Q; could be more transparent	25,42,41		А	30	0		
	Kudos Cardea C1	1,450	A very pretty compact standmount with a delightfully subtle and delicate sound quality	20,35,27		А	40	0		
]	MartinLogan Source	1,599	Careful install needed, but capable of remarkable transparency at an extremely competitive price	24,120,37	0	А	42			
]	Meridian M3100	1,850	Attractive and capable active (125w) with great imaging and strong bass. High neutrality and good power handling	19,39,25		ACT	45		opt	
	Monopulse 42A	1,495	Oddball styling, fine bass-to-mid balance and dynamics, and superb voice coherence, but untidy treble	26,110,25	0	А	25			
	Monopulse 82	2,495	Could be more neutral, but excellent coherence, lively dynamics, fine imaging and a wide dynamic range	27,110,25		۸	-20			



After 5 years in production, the Dino is still one of the most popular phono stages around. Highly versatile with accessible switches on the baseplate to facilitate a wide range cartridges.

'Never Connected' power supply technology virtually removes all incoming mains noise allowing only the music to be heard. Visit our website to learn more about this exciting product and the high performance Diablo phono stage.





BUYER'S BIBLE

	ır favourite				SP	ECIFI	CATIO	NS		
Ste	reo speakers		SPEAKERS continued	SIZE W.H.D (CM)	FLOORSTANI ER	EASE OF DIVINE	BASS FROM INZ	FREE SPACE	CLOSE TO WALL	ISSUE NUMBER
SAUGE	PRODUCT	£	COMMENTS	5	B	7	2	×	-	30
EC	Monitor Audio PL300	5,000	Completely new level of sophistication from a brand best known for mainstream, cost effective designs	41,111,47	41	A-	28	20		30
С	Mordaunt-Short Perf 6 LE	4,000	Striking moulded enclosure minimises coloration, while overall balance is smooth, neutral and open	24,115,43	40	А	22	30		30
	Neat Elite SE	1,499	Smooth and natural performer with notably expressive midband. Fine voice articulation and unusual sweetness	20,90,18	ģ¢.	А	25	63		2
:	Neat Motive 1	1,200	Beautifully neutral balance sounds open without aggression. Fine midband but could be more authoritative	16,92.5,20	0	A-	20			2
	Neat Momentum 3i	1,745	Sounds a lot bigger than it looks, with good coherence and an impressively wide dynamic range	22,38,27		A-	23	è		3
	Opera Seconda	1,295	Classy cabinetwork plus beautifully judged neutrality with crisp, clean and deep bass	24,1025,31.5	•	A-	20			2
•	PMC Wafer 2	1,650	Clever 'hang-on-wall' speaker has minimal sonic compromises. Smooth midband delivers impressive stereo imaging	33.5,57.5,10		Α+	45		•	2
G	PMC FB1+	1,695	Nicely proportioned floorstander has a sweet top and a beautifully natural, open and restrained midband	20,100,30	9	А	20	•		2
С	PMC EB1	5,950	The best argument for large speakers that we've heard in a long time	29,120,46.5	.0	Α-	19	-		2
3]	PMC GB1i	1,275	Pretty little floorstander has great class with fine delicacy and sweet detailing	15.5,87,23.4	-4	А	30	73		3
	Quad ESL 2805	4,500	Uniquely wonderful natural realism, exceptional imaging, coherence and low level detailing	70,107,38.5	0	A-	45	-3		2
	Rega R7	1,498	Super-slim and super-smooth floorstander has fine agility with a slightly bright overall character	27,98,35	67	А	25	1.		2
	Rega R9	2,498	This subtle, laid back but very informative performer has a very superior dynamic range, especially in the bass	17,103,39		А	25	9		2
C	Revel F32	3,200	Meticulously balanced, tonally neutral design makes for a taut, well disciplined sound	22,105,39	0	А	20	0.5		2
С	Revel M22	1,800	A remarkably clean and revealing speaker with superb tonal and microdynamic capabilities	22,37,30		A-	48	58		2
	Roksan Caspian FR-5	2,000	Sharp looking speaker sounds exceptionally open and lively without aggression. Could be warmer and richer	20,100,25	0	А	22	L2		2
	Ruark Talisman III	1,499	No bass demon, but a sophisticated and agile speaker epitomising Ruark's design ideals	22,84,31	0	А	22	· ·		2
0	Sonus Faber Cremona Audit.	2,690	Open, exciting and with surprisingly good bass this is 'The Little Speaker That Could' (stands £575 extra)	20,35,37		А	50	0		3
c	Sonus Faber Grand Piano D.	2,498	The Grand Piano Domus has a fabulous physical appearance and delivers a clean, refined sound	21,106,31	Ġ	A-	32	T:		2
С	Tannoy Dimension TD8	4,000	This stylish speaker is a splendid all-rounder, with fine dynamics, precise imaging and minimal coloration	31,86,30	0	A-	25	0		2
	Tannoy Glenair 10	2,999	With a 250mm dual concentric driver this is a generously proportioned, highly engaging speaker for a good price	36,100,35	0	Α+	38	9		2
	Totem Model 1 Signature	1,595	Expensive, but very seductive miniature delivers a beautifully smooth and balanced midband	17,31,23		А	35	8		2
	Triangle Genese Quartet	1,895	Great material value and a solid all round sonic performance with great loudness potential	23,117,37		А	25	0		3
	Triangle Celius Esw	1,395	Not the smoothest sound around, but has great vigour and enthusiasm, plus good scale and weight	20,117,34	0	А	22	0		2
0	Triangle Magellan Concerto	14,750	New 'sw2' version is less immediate than its predecessor, but it's easier to live with and remains highly enertaining	60,160,45		A-	32	0		2
	Usher Compass CP-6381	2,500	Lots of speaker for your money, with plenty of deep bass, unusual styling and massive build	35,127,65		А	20	0		2
	Vivid Audio B1	7,750	Impressive cabinet design combined with hi-tech drivers to make truly world class speaker	27,110,38	0	A-	40	۰		2
	Wilson Benesch ACT	8,400	Superb enclosure gives uncanny freedom from 'boxiness'. Well balanced, but top end might be sweeter	23,108,36	0	А	20	0		2
С	Wilson Benesch Curve	5,000	Much (but not all) of the ACT's performance in a much more compact and affordable package	23,91,37		А	28			1
C	Wharfedale Airedale Neo	9,000	Expansive yet relaxed sounding, the Neo is a coloured but surprisingly musical and enjoyable speaker	52,115,45	0	A-	25	0		2
	Yamaha Soavo 2	1,200	Cunningly crafted stand-mount with a beautiful balance that always sounds lively, open and involving	22,38,35		А	28			2

	r favourite			SPEC	DIFICA	IONS	
Bas	UBWO s speakers	Uŀ	FK2	SIZE W.H.D. (CM	POWER (W	BASS FROM (HZ	SSUE NUMBER
	PRODUCT	3	COMMENTS	_	-		-
8	B&W PV1	950	Gorgeously styled sub shakes the air but not the floor, delivering a very clean sound with negligible coloration	29,34,35	500	20	259
EG	B&W ASW850	2,000	Does all the things subwoofers should do with music and movies alike, but transparently and seamlessly	53,56,52	1,000	18	246
EC	Eclipse TD725sw	2,700	Delivers solid meaningful bass, but with unusual tunefulness, speed and articulation	52,47,50	500	40	287
	Monitor Audio ASW100	300	For the price, this compact subwoofer performs particularly well	32,32,34	120	27	225
EC	REL 305	795	Landmark mid-price sub, works particularly well with low crossover frequency, looks great too	32, 36, 34	300	25	284
	REL Stampede	550	Few subs at this price match the Stampede's subtlety and ease of integration. Much more hi-fi than AV	28,40,29	100	18	257
	REL T1	595	Standard setter at the price: flexible, easily set up and packs quite a punch	36,40,420	300	25	291
	REL Strata 5	700	Highly musical sub that integrates well but the REL Stampede offers near-identical performance for less money	32,46,33	150	18	257
	REL Storm III	900	Excellent sub with powerful, detailed and deep bass. Comprehensive facilities, including flexible filter adjustment	42,62,33	150	18	225
	REL Storm 5	1,000	Well engineered, good bass depth, appropriate for mixed hi-fi & home cinema/multichannel systems	34,52,37	200	15	267
	MartinLogan Dynamo	449	Refined, compact sub brings established MartinLogan virtues to a new price and size point	29,35,32	200	25	301
	Velodyne SPL-800R	699	Powerful, highly configurable sub with auto setup feature and attractive, compact packaging	26,27.33	1,000	28	286
EC	Wilson Benesch Torus	5,200	Amp and sub package built like a sophisticated pile driver, with deep, state of the art performance	45,33,45	1,000	10	290

SPECSICE 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.

Award Winning Hi-Fi Cables



















IXOS XHT458 HDMI Cable 1m

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WORKSHOP

WORKSHOP NOTES 3: REVIEWS REVIEWED

Reviews are important in the great game of audio and rightly so as a good reviewer will bring independence, insight and experience to his trade. But we often find that far too many reviews have only a passing acquaintance with reality. Why so?

A list of what goes wrong includes reviewers with cloth ears (they do exist, it seems), or just having a bad hear day (sorry..), non standard kit sent for review, editors changing copy (very common), poor system matching etc... And that's before we factor in prejudice & rule bending (alas, audio is a business). Common sense tells us, then, that good reviews in several magazines earmark a product for further investigation. I put it to the jury that buying kit unheard, based on a single frothy review is daft. I mean, who is going to be living with it? You or the reviewer? Did he take your preferences, system & room into account? You are the only reviewer that really matters. Read, then listen, then decide.



ATC's new SIA2-150 integrated 150wpc amplifier. No reviews yet; does it sound as good as it looks?

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BUYER'S BIBLE

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

Cans are split into several types. There are open and closed-back designs, the latter being

amplifiers, which tends to increase the price.

best for noisy (or noise sensitive) environments as they minimise leakage and intrusion. Open-back types tend to have a more open, less 'in-head' sound. There are also three variants of earpad design: circumaurals enclose the ear and press on your head, supra-aurals press on the ear and intra-aurals sit in the ear and are particularly popular with personal stereo users.

Getting the best from your cans

Getting a good result with headphones is not

quite as straightforward as it should be. Merely plugging them into the output on your CD player or amp will not give particularly engaging results unless you are very lucky. If you are planning on serious listening, invest in a dedicated amp – the increase in dynamics is not in the least bit subtle. A variety of models are made and prices start at around £80 for a QED, a little more for designs from, say, Creek or Musical Fidelity. And if you're really into cans, look up the valve-powered Earmax.

Our favourite BEST BLY ED EDITOR'S CHOICE
HEADPHONES
Stereo headnhones

	Stereo headphones				SUFRA-ALRA	CIFICUMALRA	OPEN BACK	OLOSED BACK	WEIGHT (g)	AM JACK ADAPTOR	ISSUE NUMBER
BADGE?	PRODUCT	Ę	COMMENTS	ನ	7	7	×			×	
-	AKG K270 Studio	129	Pro oriented design which is very transparent and great with acoustic material			0		0	270		230
EC	AKG K1000	650	Neutral, analytical and completely out of the head sound, suitable for connection to speaker outputs only				8		270		244
	Audio Technica ATH-W1000	400	Superbly comfortable and very revealing. Long listening sessions are a pleasure with new musical insights			-81		0	250	0	304
	Beyerdynamic DT770	190	A touch coloured in the mid, but less than most closed cans; detailed and with excellent bass			0			290		287
	Beyerdynamic DT880	200	Informative, neutral and surprisingly close to good loudspeakers. Good for occasional and long-term listening alike			0	87		205		300
	Denon AH-D2000	250	Among the best closed-back headphones we've heard and very fine by any standards.			0		0	350	•	309
	Grado SR225	180	Tonally shows the way to Grado's amazing GS1000 flagship, but detail and soundstage are not truly class-leading		*		⊕		200		300
EC	Grado GS1000	995	One of the finest transducers on the planet, with detail to die for			9	0		250		288
	Sennheiser HD485	65	A great all-round headphone for occasional or even heavy use, refined in sound and comfortable, too			0	0		220	0	296
	Sennheiser HD595	150	Technology from upmarket HD650 model makes this a very revealing headphone that's also extremely comfortable			0	87		270	0	266
EC	Sennheiser HD650	300	Astonishing resolution and hardly less impressive tonal balance make this a true hi-fi experience			.0	0		260		252
	Sennheiser PXC450	299	Noise-cancelling model: as good as it gets for making the most of listening in planes, trains and automobiles			0		0	240	0	302
	Shure SE420	240	Expensive and no replacement for top conventional 'phones, but streets ahead of most in-ears with real refinement					0	15	۰	295
	Shure E500PTH	420	Sophisticated in-ear design with three drivers, plus switchable 'voiceover' mic in the lead; high-quality stuff					0	20		285
	Stax SR-001 Mk II	239	Expensive and power hungry, but this electrostatic drags personal stereo into the world of high fidelity	0	55-		*		280		268
EC	Stax SRS-2020 Basic Sys. II	349	Luxury option at its price, but the sound delivery is five-star quality all the way	0			0		205		295

SPECS IXEX* 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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BUYER'S BIBLE STEREO SPEAKERS

CABLES



Wires to hook your system together

Hi-fi cables come in two varieties: interconnects and speaker cables. Analogue interconnects come in

preset lengths, generally with RCA (phono) plugs attached, though some equipment uses XLR connectors for balanced connection - this can be sonically advantageous, especially over longer runs. Speaker cable is commonly sold by the metre and can be used without plugs or can be fitted with screw or solder-on types.

Choosing cables is not quite as straightforward as it might seem. One problem is that components interact with the cables you use and this often results in audible effects, but there are few cables that are fundamentally incompatible with any components, and we recommend the advice of a good dealer. In any case, you should look to spend as much as you can afford.

Digital cables come in two flavours: electrical and optical. In most instances electrical varieties sound better than optical, given the choice, but optical cables may be a better bet over long runs (10m+). Optical inputs/outputs usually use Toslink connectors, while most electrical types use RCA plugs, but some opt for BNC connection instead - check your components before you buy.

	r favourite				SI	ONS			
nter	CABLES Interconnects and speaker cables PRODUCT S COMMENTS			SOLID CORE	COPPER	SILVER	CABLE	8	
ANALO	QUE INTERCONNECTS								
m.	Atlas Questor	70	Very open and informative at high and mid frequencies, with slightly dry bass. Imaging particularly fine	0		Ф			29
(0)	Audioquest Sidewinder	45	A lively and detailed cable, with fine tonality and excellent rhythm. Slight added upper-bass warmth does little to detract	0		0			29
(8)	Black Rhodium Prelude	80	Practical and sensibly priced all-rounder that seems happily compatible with a wide range of kit	6-		0			29
10	Black Rhodium Coda	150	Superb bass and excellently neutral and detailed midrange: treble generally sweet with occasional slight constriction	0					2
EC	Black Rhodium Concert	255	This DCT cable from the Polar range gives a distinctively dark timbre, rich in detail, with low subjective noise	0		0			2
(0)	Cambridge Azur Reference	50	Performance wouldn't shame a cable at twice the price: especially adept in the treble with no trace of dryness	4		0			2
	Clearer Audio Copper-Line Alpha	50	Sounding like something a good deal dearer, this cable offers near high-end detail and seems highly compatible too	0		0			2
	Clearer Audio Silver-line	244	Complex, well-screened cable which offers good sound all round with exceptional bass – at a pricel	0		0			27
EC	CrystalCable Piccolo	260	Thin cable, but tougher than it looks, Piccolo has some qualities of a solid core type generically - notably resolution, focus and articulation		۰		6		2
	Ixos Ixotica IX1	200	Notable for its relaxing sound, this cable still presents plenty of analytical detail	0		0			28
	Monster M350i	45	Few cables at this price reveal so much about the recording space. Clear treble, too						2
me.	Monster M1000i	200	Very capable, with only a hint of bass dryness to set against excellent results elsewhere	6		-			2
	Nordost Wyrewizard Dream	95	Slight lack of precision in extreme treble, otherwise detailed and neutral with authoritative bass		0	0			3
100	Oehlbach NF214	63	The bass is a matter of taste, but suits many smaller speakers. Very good mid and treble	19		0			2
00	Profigold PGA3000	60	Not the ultimate for lovers of clinical precision, its character is engaging and detail and extension are good			%.			29
100	Supra EFF-1X	77	Lively-sounding cable which maintains a high level of detail and neutrality. Musically, a great all-rounder	0		0			3
:	Townshend Isolda DCT 100	99	Silky-smooth treble, with remarkably good detail too: midrange and bass also very fine		0				30
re)	van den Hul Integration Hybrid	125	Bass is nothing remarkable, but mid and treble are outstandingly open and clear: very transparent	SP		-83			3
18.	Wireworld Luna 5	30	Authoritative bass and clear treble outperform many cables at twice the price	0		4			2
DIGITAL	INTERCONNECTS								
17	Atlas Compass	50	Slight improvement in detail over giveaway cables, plus distinctly more tuneful bass and more open treble, make this fine value	0				Ε	2
EC	Clearer Audio Silver-line	125	Very satisfying performance with finely-etched detail and sweet treble					Е	2
1	Supra AnCo	80	This cable can give a useful fillip to a good transport/DAC combination, even in a high-end context	0		6		Е	3(
EC	Wireworld Starlight 5	90	Clear gains in detail and imaging precision are this cable's main strengths: good value and near-high-end performance	0				Ε	2
8/1/1	HOUSILES PHICE PERMISORE								
1.0	Atlas Hyper 1.5	10	Don't look to this cable to beef up the bass, but its performance at higher frequencies is revelatory at the price	Ф		Ф			29
	Atlas Ascent 2.0	55	A highly analytical cable, with more bass extension than at first appears and very fine detail across the board	0					29
	Chord Epic Twin	40	Good all rounder, which generally sounds relaxed and musical, and a full bass that stops the right side of sounding blowsy						28
EC	CrystalCable Piccolo	1,480	Tougher than it looks, Piccolo has some of the qualities of a solid core type generically – notably resolution, focus and articulation		0		0		3
100	Kımber 8PR	12	A cable that really enjoys the music, also admirable for the levels of analytical detail it allows through. Excellent value			0			2
	Monster MCX-1s	8	Notable for its bass, which is perhaps a touch overdone at times but could be a good foil to small speakers. Good mid and treble	0		0			28
EC	Nordost Heimdall	162	Alternative to Valhalla, silver plated, micro-monofilament construction, low colouration, hi-res and suitable for exacting systems	0					2
	QED Silver Anniversary XT	5.50	Full bass and nicely detailed treble combine with good imaging - a budget bargain	0		9			27
(8)	QED X-Tube XT300	10	A natural and well controlled sounding cable that's cost effective for mid-priced systems		0	0			23
EC	Supra Sword	116	Zero inductance construction, medium resolution cable that has an excellent midband and is fundamentally musical	Şir		0			28
EC	Townshend Isolda DCT	50	Cryogenically treated 'impedance matched' cable with stabilising components added: great sound all-round		-0	0			2
	van den Hul The Bridge	6	Better bass than treble, with good detail though a touch of constriction at times	6-		0			2
	Wireworld Luna 16/4	5	Budget biwire cable offering tuneful and extended bass, good treble, and midrange with just a little lack of detail						2

SPECS KEY STRANDED Cable has a number of (usually) twisted 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

Z

STANDS AND SUPPORTS

Equipment racks and speaker stands



If you want to get the most from your source and amp components, it's important to consider good quality support. Dedicated equipment supports are racks and tables made specifically to hold hi-fi gear, and the best can have a profoundly positive effect on sound because, for example, they can help to isolate kit from ground-borne vibrations and mechanical or electrical interference. Equally, if you own a pair of small 'bookshelf' or 'standmount' speakers, it's important to place them on good quality, purpose-built speaker stands.

Our favourite BEST BUY EC EDITOR'S CHOICE COIIIDRACNT CI

	•	701	ENI SUPPURIS	HEIGHT	OP PLATE SI	_	UMBER OF S	SE	ISSUE NUMBER
Equi	pment supports			M TH	SIZE (CM)	WELDED	SHELVES	SHELF TYPE	MBI
BADGE?	PRODUCT	£	COMMENTS	S	S	0	S	- H	35
	Alphason A5-G	399	Nice looking, very solid and practical with a pretty well balanced sound, but lacks a little detail	80	66,46		5	Glass	247
	Atacama Equinox	280	Stable, modular design with style. Excellent bass transients and a fresh design concept	81	50,50		4	Glass	217
88	Audiophile Base Std Supp't	900	Not cheap and quite bulky, but it's all worth it as sound is unusually detailed and resonance-free	57	46,35		3	MDF	302
	Custom Design Icon Signature	330	Gorgeous wood and glass looks: sound lacks a little detail but is nicely lively	75	56,37		4	Glass	286
	Custom Design XL4	380	Simple construction pays off in smart looks. Sound contribution is minimal and largely harmless	65	60,42		4	Glass	293
88	Custom Design Icon 400	600	Beautifully built, conveniently adjustable and with little sound of its own, a very classy rack	75	57, 41		5	Glass	263
BB	Custom Design Concept 400	700	Slightly drab looks, but great sound and efficient use of space ('Acoustic' version tested – standard version £300)	74	48,40		4	Metal	247
	Custom Design Milan	449	Respect is due to any stand that looks this good with nothing more to complain of than slight muddying of detail	57	48,39		4	Glass	302
BB	Custom Design Vantige	449	'Acoustic Aluminium' shelves plus steel supports equal practicality plus musical satisfaction: just a shade bright	62	49,44		4	Metal	271
	Partington Minim	420	Adds its own character to the benefit of rock most particularly, but slightly to the detriment of acoustic sounds	78	45,37	0	5	Glass	302
	Quadraspire Q4 Reference	480	Excellent performance from the school of wobbly racks. Natural sounding and plenty of detail	51.5	49,39.5		4	MDF	217
	Russ Andrews Torlyte Rack	988	Attractive modular system made of very light Torlyte: a touch of added warmth is its only vice	68	54,49		4	Torlyte	240
(3)	RA Torlyte Platform	130	This unassuming platform can be a godsend, cleaning away mid/treble muddle from the sound	8	48,36		1	Torlyte	302
EC	Townshend VSSS	1,300	The Seismic Sink goes all glassy and attractive, yet retains the same excellent vibration-killing sound quality	76	35,50		4	Glass	273

Our favourite BEST BUY COLOR'S CHOICE

Partington Heavi II

Russ Andrews Torlyte

5	PEAKI	E	R STANDS	HEIG	TOP PLATE			NUMBER	ISSI
	Speaker stands SAGGE? PRODUCT S COMMENTS				E SIZE (CM)	FILLABLE	WELDED	R OF LEGS	ISSUE NUMBER
BADGE?		£	COMMENTS	(CM)		1111		0,	
	Anvil Sound Display Stand	226	A variety of smart looks available - sound is clear and precise	50	20,17			1	293
88	Custom Design RS300	110	An attractive stand whose lack coloration and ringing makes suits it to high resolution systems, at a tempting price	56	16.5,18			1	281
	Custom Design SQ402	100	More a range than a model, capable of fine results especially with Acoustic Steel top plates	62	18,16.5			2	299
EC	Custom Design SQ404	200	Robust four-pillar design gives very low coloration and maximises performance of speakers great and small	61	18,16.3			4	283
RR	Partington Ansa 60	99	Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent	62	18,15			4	232
68	Partington Dreadnought BS	295	Sound is better defined in almost all areas than cheaper, slimer stands can offer	62	17,23	0		5	309

MENT 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

SPENIER STANGE SPEES (137) 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.

399 Robust to the nth degree, this stand helps produce very taut, precise bass and detailed upper frequencies

FILLABLE The stand can be mass-loaded with sand and/or lead to stop ringing. WELDED As opposed to bolt-together construction. NUMBER OF LEGS That support the stand.

299 Very relaxed sound from this metal-free design, with excellent imaging too

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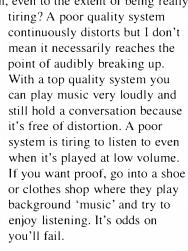


This is a fairly well-trodden path but it leads to dissatisfaction, endless upgrades and a lot of wasted money. It's likely that the system will help you lose interest in music pretty rapidly. The problem is that there are more myths about hi-fi than Aesop's Fables. CD gives you perfect sound. All CD players sound the same. A £50 CD player plays high fidelity music. All magazine reviewers are experts. Big speakers are always better than small ones. More watts per channel is everything. MP3 format gives you high quality. A collection of 'Best Buy' components will be a great system. And so on and so on ... ALL MYTHS!

Music - the real aim

Our aim must be to buy a hi-fi system that will prove musically satisfying, reliable and deliver true value for money. If the system doesn't excite you musically you've wasted your money. What is even worse is that you may not even realise you've bought a bad egg — you'll just switch the TV on instead and your desire to

listen to music will gradually diminish. Have you ever been in a pub or club where you realise it's very difficult to conduct a conversation, even to the extent of being really



What and Where to buy

The system you think you want may not be right for you. – So where do you start? Here's an important tip...don't start with WHAT, start with WHERE.

There is only one way to give yourself the best chance of getting it right first time, and that's through a specialist hi-fi dealer. Now it's likely you have preconceived ideas that may put you off visiting one. Although you would welcome the advice and guidance, you don't know the technical jargon. You don't want to be talked down to. Your friend has said they only sell expensive gear and they're not interested if you don't have a big budget. They're expensive. Again, just myths. Most specialist hi-fi dealers are running their business because, above all, they love music. They spend a large portion of their time listening to music and comparing systems to get the best possible result. They know the component combinations which don't gel together and, conversely, they know the combinations which give the best performance within a given price range. But they all also know the system must suit you.



VALUE FOR MONEY

* * * * *

SERVICE

 \star \star \star

FACILITIES

VERDICT

Hi-Fi)for your money

Buying or being sold to?

Now there's a group of long-established specialist dealers who are totally committed to putting the customer first. Their idea of 'selling' is to discuss your requirements, offer their advice, give you the best options, then play the systems for you and allow you to be the judge.

Listening to your choice of music in a peaceful, well organised demonstration room, you may be surprised and, almost certainly, relieved to discover how easy it is to hear the differences between components and between systems. You'll be able to make a clear and informed decision about what to buy. It comes down to trusting your own judgement rather than the opinion of a reviewer you've never met... and who won't refund your money if you're not satisfied or be at the end of a phone to sort out any problem you might encounter.

The story doesn't end there. These shops won't abandon you once you've put your hand in your pocket. They won't leave you to set up the system you've selected as best you can. They'll install it in your home, make sure it sounds great, and make sure you're entirely happy with the way it works. Why? Because a high proportion of these dealers' custom comes through people who have bought from them before, either directly or by commendation. It's vital to them to get it right for you.

Getting the best deal

Oscar Wilde wrote "... too many people today know the price of everything and the value of nothing." Specialist retailers know that not all potential purchasers will seek them out. They tend to attract the more discerning, thoughtful customers. Let's face it, a good deal is about more than just a good price. After all, unless you've got money to burn, you'll be living with your new system for years. Most of these dealers offer much longer equipment guarantees than provided by the manufacturer, a very worthwhile benefit, but it also makes it in the dealer's interest to ensure high build quality and reliability. Maybe you could save a few pounds by buying piecemeal but you'll lose out on the overall package. As far as the dealers are concerned, maybe they believe that taking care of their customers properly is a nicer way of doing business than just handing over boxes.

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2nd-hand shootout

Surf the airwaves with the best budget tuners

Ithough there are now a dozen ways of listening to radio, FM still takes some beating. It may not be the quietest method of transmission, but a really good set-up will still beat PC, cable, satellite, DAB or any other format you care to mention for musical realism. With FM not likely to be switched off for at least another ten years, there's still plenty of time to enjoy one of the best 'real' audio bargains about.

Once you've got yourself a decent outdoor aerial the first port of call for a cheap-as-chips FM tuner is the former best seller; the Denon TU260. Now 18 years old, the original TU260 ran for nearly ten years. The later TU260 II lasted half as long, but stuck to the same winning formula. Essentially, when this £100-£130 tuner was new nothing came close in terms of sound quality. The well-balanced, neutral, if a little bass-light sound quality still impresses today - especially against the bandwidth starved DAB network tuners. In addition to sounding pretty good, this delightful tuner was also carefully made. There are no moving parts and everything is soldered together properly, so only the most abused examples are likely to be problematic. A TU260 can be had for as little £15, with even the best example of the, RDS equipped, MkII fetching no more than £50.

If you fancy spending your beer money on something a little quirkier, then consider the Creek T40. With a life span of 11 years, it exceeded even the original TU260. At it's most popular in the late-1980s, most T40s will be pretty creaky by now. But don't let that put you off. For about the same money as the Denon you get an analogue design with a mellifluous sound quality. There's no doubt that the T40 is a robust little thing with a good reputation for lasting. That unique eighties-tastic black vinyl case can get a bit

tatty, though. One mechanical weakness is the tuning potentiometer that can detach itself from the reduction drive (the bit that gears the users 'twist' to suit the moving scale). If this is the case then, most likely, the knob will simply fall off, so it's not that hard to spot.

With a typical second-hand price of around £70, the Cambridge Audio T500 is a little more expensive than the others here. That said, given the exceptional sound quality it's still a bargain and, like the others, something of a giant-slayer against more expensive machines. Launched in late 1998, the T500 used the same tuning circuitry as the £400 Creek T43 (the one that replaced the T40). Given a decent aerial it sounded wonderfully open and transparent, yet even with a weak signal it still sounded good thanks to a special mono/ stereo mix system. With a hint of affordable esoterica about it, the popular T500 has something of a cult following. This has meant that even today there are a number of firms willing to 'supercharge' the venerable Cambridge - try Chevin Audio in Derbyshire for a serious upgrade to output stage and power supply (£150), to make this a real wolf



Above: Denon TU260L II

attention. Beginning the first domestic DAB tuner sold in the UK, that's hardly surprising. Yet it's not the 10, but the Alpha 7 that we're considering here. Priced at £230 at its launch in 1996, this fine tuner is now easily available for £50. We've even seen them for as little as £30, which has to be worth it, even if you only ever listen to one concert on Radio 3!

The sound quality is smooth and on the warmer side of neutral. It's not as revealing as the T500, but if you're system is already on the lean-sounding side this might not be a bad thing. It's hard to go wrong buying a second-hand Alpha 7 tuner. The front panel can crack and discolour and the display can drop digits. Other than that there's little to worry about. Heck, we even saw one at a dealer for £45, giving you further peace of mind. If you're feeling particularly lazy, remote controls can be had for around £20.

"...fancy spending your money on something a little quirkier, then consider the Creek T40."

in sheep's clothing. With build quality not up to Denon's standards or, indeed, that of newer Cambridge Audio products, the T500 can be troublesome. The power supply can play up and the spindly tuning knob can snap its board connection. Either way, the cost of repair may exceed the value of the tuner so tread carefully.

Our final tuner bargain comes from yet another British audio stalwart. In the late 1990's Arcam's Alpha 10 tuner attracted much FM may be deeply unfashionable these days, but for the initiated it only means there are some stunning bargains available second-hand. Despite costing up to £230 new, these tuners are now available for a quarter, or less, of that today. Genuine hi-fi for the price of a concert ticket? These four give you just that, and then some HFC.

Dominic Todd Next month, E3,000 CD players



Above: The Cambridge Audio T500

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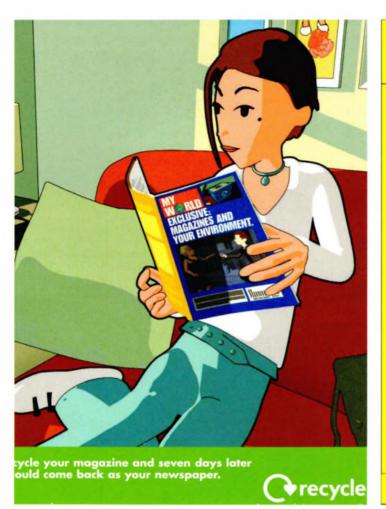
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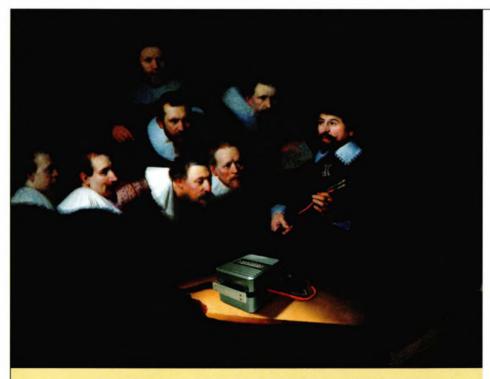




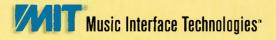




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READER CLASSIFIED

Welcome to *Hi-Fi Choice Reader Classified*, the UK's first and best <u>free</u> private ads service for second hand hi-fi. These pages a must-read if you're thinking about buying used kit, and if you want to sell something it's definitely the place to be. It's <u>free</u> to place an advertisement – simply submit your ad of up to 30 words,

remembering to include your phone number and county. The simplest way to send your ad is via email to: hificlassifieds@futurenet.co.uk.

Or mail to: Reader Classified, Hi-Fi Choice, Future Publishing,

2 Balcombe Street, London NW1 6NW. Please note that this service is open to private advertisers only.

FOR SALE

ARCAM ALPHA 9 integrated amplifier, £100. Arcam Alpha 9 power amplifier, £100. Denon TU-260 II tuner, £50. Audioquest Indigo bi-amp cable, 3 5m, £50. All in excellent condition. 01923 243043 (Herts).

ARCAM A70 amplifier, hardly used, boxed, mint, £350. Chord Rumour 2 speaker cable, eight metre pair, £39. Chord Crimson interconnects, boxed, £19. 01903 243806 (W. Sussex).

AUDIO ANALOGUE PUCCINI

amp, silver, mint condition, boxed, £200. 07881 553117 (SW London).

AVI LAB SERIES Integrated with phono stage, excellent condition, with original box and manual, £850, 07795, 652876 (Bucks)

B&W 684 floorstanders, one month old, five-year warranty, can demo. (£699) bargain at £500. Move forces sale 01274 541282 (W. Yorks)

B&W DM7 MK 1 speakers, £70. Lumley Reference LV1, new Mullards just fitted, £250.0191.417.1669 (after 6pm) (Tyne and Wear).

BELDEN 83803 mains cable, 1.5 metres with Clipsal and Wattgate 320i plugs, as used on Clearer Audio Two available, £60, 01639, 774144 (S. Wales).

CAMBRIDGE DVD79 DVD player, Cambridge Azur 540R-S AV Receiver, Gale 3050 midspeaker, Gale Storm 10 active subwoofer, assorted cables, £250 the lot slest@glamchick eclipse

co.uk (Exeter).

CLASSIC AMPS Pioneer A88x, £190 Rogers Ravensbourne, £60, unused. Speakers: Wharfedale 708s (black), £145. Goodmans 'Imagio' IC100s, £85, mint, boxed. Various quality

interconnects. Tel 07837 188670 (Essey)

CYRUS CD8X/ PSX-R Silver finish, immaculate condition, £700. 01424 442225 or 07910 224018 (E. Sussex).

CYRUS DAC X quartz silver, as new, boxed, instructions, 18 months old, £650 ono 01422 885440 (W Yorks)

KEF C95 speakers. Matched pair in immaculate condition Floorstanding. Teak finish. Beautiful sound, £120 ono. 01842 862979.

lands@onetel.com (Suffolk).

KRELL FPB300CX in mint condition (unused), only taken out of the box for photo 220v-50Hz £4,600 and shipping For more details ewadv@hotmail.com (Israel)

LINN LP12 (1996), Basik LXV, Elektra (new), serviced and reset, £449. 07891 700542 or 01352 714568 (Flintshire).

MANA 5 TIER rack, £350. Naim Aro tonearm, £300. Linn LP12 with Mantra power supply, £300. Naim NAT 01, £400. 07831 745391 (Berks).

MANA MINI TABLE, £50 Pro-Ject phono box, £25. 01323 723292 (E Sussex).

MARANTZ SA-15 SI SACD player, mint, boxed, manual and remote. Genuine reason for sale, £799 ono. 07708 431963 (Cheshire)

MARK LEVINSON 390S CD player, all original, box, manual, still under guarantee, 07920 538813 (London)

MARTINLOGAN SEQUEL 2

electrostatic hybrid speakers, only £850. Sansui TU-719 classic analogue tuner, £65. Yamaha KX-580 cassette deck, £50 All superb condition sonically/ /cosmetically. 07853 498379 (E. Sussex).

McINTOSH MCD201 CD/ SACD player, excellent condition with manufacturer's warranty, £2,400. Shunyata Hydra-2, £240. Shunyata power cables, £120 each. 07810 434589 (Glasgow).

MICHELL ORBE SE (DC version), Origin Live Encounter MkII. Ortofon Rohman cartridge All mint, boxed, £2,400. Buyer collects. 01384 394441 (W. Mids)

MISSION 782 floorstanding loudspeakers, beech finish, boxed, immaculate condition, £200ovno. 01689 828680 (Kent)

MONITOR AUDIO GOLD

Signature 10 speakers, piano black finish, six months old, mint condition, boxed, manual c/w Atacama SE6 stands, £400. 07941 174804 evenings (Berks).

MUSICAL FIDELITY A5 CD player, as new (not yet run in). Going over to vinyl, £900, no offers. 01268 415 017 (Essex).

MUSICAL FIDELITY KWDM25

CD player, mint, £2,500 ono. Cyrus DAC XP, £1,200 ono. 01744 782173 (Merseyside).

MUSICAL FIDELITY ELECTRA

E101 integrated amp. Pro-Ject Xpression1 turntable, unused. Both in perfect condition. 07762 021618 (E Sussex).

MUSICAL FIDELITY MVT and P170 pre/power amplifiers, c/w power supply, £349 ono. Celestion SL600 speakers, £299 All boxed, excellent condition. Carnival Silver Plus cables, 2 8m bi-wire, £79 pr. 01984 640588 (Somerset)

MUSICAL FIDELITY NU-VISTA

3D CD player, in mint condition and owned from new, boxed with manuals, controls, £1,250. 01303 863424 (Kent).

NAIM 150 Power amp, NAC112 Preamp, CD5 player, NAT05 remote control tuner. Little used, mint, manuals, £1,850 the lot. Hutter black storage system, £240. ProAc Studio 1 speakers and stands, £270. 020 8977 6433 (Surrey).

NAD 352 amplifier and NAD 542 CD player for sale, excellent condition, £300 together or £175 for amp and £150 for CD player 07940 659384 (F. Sussex)

NAIM CDX serial no.152856, excellent condition, boxed.
Naim NAC82 serial no. 180328, excellent condition, boxed.

BUYING TIPS

Buying second-hand can be a great way to pick up a bargain. A formerly expensive second-hand component might well prove a better long-term bet than a brand-new product if the price is right.

Do some research on which brands have a good service back-up, so if something does go wrong, you can get it fixed. Unless you purchase from a dealer, you're unlikely to get any warranty, so it's up to you to ensure the fitness of any gear that you buy.

Usually, speakers should be less prone to breakdown than amps, and amps should be more reliable than CD players. But any abused component could be trouble – have a proper demo and judge the seller as well as the goods!

ISSUE 311 O OCTOBER 2008 **ON SALE 21 AUGUST 2008**

In-depth reviews of the most vital new kit, including...

- Audio Technica ATH-W5000 headphone
- ▶ Fatman iTube 452 valve amplifier
- ▶ KEF IQ30 loudspeaker
- Prima Luna Proloque 8 CD player
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FOR SALE

Both items priced to sell. £750 each, or £1,400 for both. 01509 260537 (Leics)

NAIM NAIT 51 Integrated amplifier. Ex-demonstration model, boxed and in perfect condition. £450. 07736 280018 davidp.warren@ntlworld.com.

NAIM SYSTEM NA CDX2 CD player, £1,450. NAC 282 pre amp, £1,600. NAP 250-2 power amp, £1,300. Hi-Cap power supply, £500. Owned from new. In excellent condition and boxed. 0161 973 2583 (Manchester).

ONKYO DV-SP 503ES SACD/DVD player, as new, boxed, £100 ono. Linn Basik pickup arm, excellent condition, £75 ono. Audio-Technica AT-OC10 moving coil cartridge, excellent condition boxed, £75 ono. sykesmodo@hotmail.co.uk.

ORANGE AUDIO valve preamp, handmade in Germany with Sovereign Valves, Bartolomeo Aloia Transparenza ST-140 audio amplifier handmade in Italy, Magnum Dynalab FT-101 tuner, handmade in Canada. All items are finished black. Sensible offers only. 07730 808899 (Cobham, Surrey).

PMC GB1 floorstanding speakers, cherry veneer, perfect condition, superb build and sound, roomfriendly size, huge saving on new, (£1,145) £595. 01462 680262 (Herts)

PRIMARE 30.1 amplifier, excellent condition, boxed, instructions, £450. 01255 675115 (Essex).

REGA APOLLO CD player, silver, mint condition, £375ono. ATC SCM10 excellent mini-monitor loudspeakers, walnut, vgc, £225. 01480 860075 (Cambs).

ROGERS LS3/5A loudspeakers with matching stereo AB1 subwoofer/stands (£1,200), £600. Vintage AKG C12A nuvistor microphone, variable polar diagram, perfect working order. 0131 551 6123 (Edinburgh).

ROKSAN KANDY MKIII silver, £350. Bowers and Wilkins 804S, new in box, still under warranty, £1,900 ono. Marantz CD-63 KI Sig, £250. Marantz CD-17 KI Sig, silver, latest spec, £400. 020 8684 1274 (Surrey).

RUARK EQUINOX speakers, Piano black finish. In very good condition, these high-end speakers sound and look superb. (£2,200). Bargain at £680. 01252 870861 or 07812 914460 (North Hampshire).

PAIR OF SONY SS-X70ED floorstander 150 watts maple speakers. Excellent condition, £275 ono. 01223 361598 (Cambs).

amplifiers, £250. Sony Professional Walkman, needs attention 01708 457691 (Essex).

SONY DVP-NS999ES DVD/CD/SACD player, progressive scanning, champagne gold finish, ES build quality, excellent condition, (£1,000) £350. 01243 528010 (W. Sussex).

SONY TA-F3000ES Esoteric series amplifier, exc++, boxed, £195. Heybrook HBS1 speaker stands, suit larger standmounts, exc, £30. NAD 4020A FM/AM tuner, £25. All prices plus carriage. 01706 345418, mail@rodtheobald.force9.co.uk. (Lancs).

SOUNDCARE captive spikes. Suit floorstanders. Fantastic upgrade, all the benefits of spikes without the damage! Ideal for wooden floors/carpets. (£70), £40. 01235 762171 (Oxon)

SPENDOR S6 loudspeakers, three years old, hardly used, boxed, £600 ono. Nordost Blue Heaven interconnect, £40. 07854 160942 (Lancs)

SUGDEN A21AL Class A amp,



PRO-JECT DEBUT III, £60. Celestion SL6 loudspeakers, £130. Kenwood 3090 minidisc player, £60. Sugden C51/P51

excellent condition, factory serviced, original packing, £525. 01403 255153 richermail@aol.com (W. Sussex).

SUMO ATHENA AND POLARIS

Class AB pre and power amps, classic sound, 150W per channel, £900 pair. Meridian 200/203 CD transport and DAC, £500 pair. 07801 917291 (Berks).

UNISON RESEARCH hybrid valve system. Unico Secondo 120W/ch integrated amplifier, Unico CD player, Unico R AM/FM/RDS tuner. Mint, with boxes, £2,500 (may split). Spare Quad 99, Primare CDI10 remote controls. 023 8073 8935 (Hants).

UNISON RESEARCH Smart 845 SET monoblocks (pair) £1,550; Avalon NP2 Evolution loudspeakers £1,200; Graaf WFB-One valve phono/line preamplifier £795; Moth RCM £50. 01923 219711 (Watford).

VINCENT CD 53 CD player, silver finish, one month old, XLR/RCA outputs, clean open sound, (£800) sale price £500. 07727 244348 (Kent)

WHARFEDALE EVO 30

floorstanders, maple, mint, £475. Matching centre channel free with purchase of main speakers. Arcam A85, stereo amp, silver, mint, £475. All for £950. 086 8543102 (Wexford, Ireland).

WANTED Audiolab 8000P power amp, 'E' serial number, with manual and box. Also Chord Odyssey 2 speaker cables 2x3m, Chord Chameleon Silver Plus interconnect (RCA) and PMC DB1 speaker wall brackets wanted. 01234 302769 (Beds)

WANTED Music library, LPs and 10" records from the 1960s and 1970s and related catalogues. 07807 866672 (Northants)

wanted Top-quality hi-fi seperates and complete systems: Naim, Linn, Cyrus, Meridian, Arcam etc. Fast, friendly response and willing to travel/pay cash. 07815 892458 (Essex)

WANTED Reggae and Ska 45s and LPs – 1960 to 1980. Condition immaterial if priced accordingly. Any quantity from 1 to 1,000. de.koningh@virgin.net 01732 832452 (Kent)

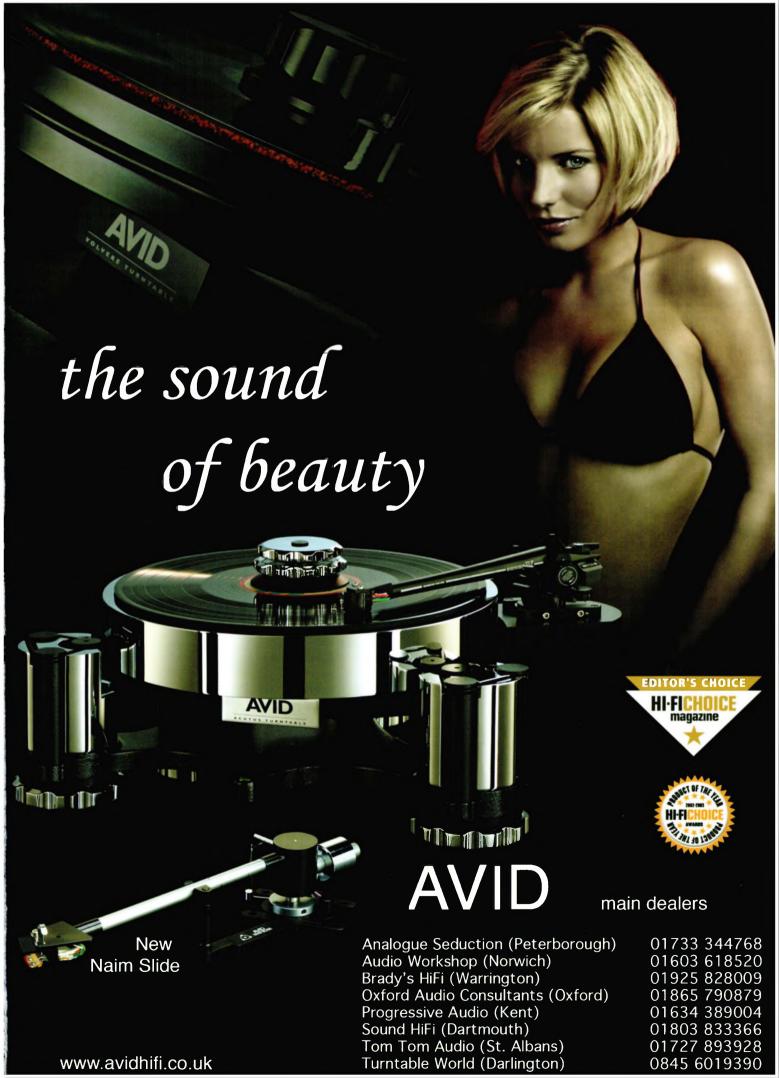
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