

Arcam Solo neo: our verdict

State-of-the-art Solo takes separates head-on

Marantz's all-format CD-slayer

£2,450 'universal' beauty set to trouble CD-only machines



Hi-Fi Choice

PASSION FOR SOUND

www.hifichoice.co.uk

Issue No. **336**

September 2010 **£3.99**

Power play

Six-way pre/power supertest reveals hi-fi's brightest new stars

The end for CD & LP?

High-quality Spotify for audiophiles could soon be a reality

29 seductive products tested including: Funk, Kudos, NAD, Cyrus and Rotel



future
techradar.com
SEPTEMBER 2010
9 770955 111090
09 >

The last detail

Resolution Audio's sublime Cantata CD reveals all to become our new 'reference' player

COMPETITION WIN!

A Micromega IA-100 amplifier worth **£1,125**

Good news for CD owners

British company re-invents the HiFi

"Mr Brennan you are a genius. The JB7 is truly a wonderful thing. I have only owned mine for two days but already it feels like an old friend. I admire its simplicity of operation, its range of functions, its unobtrusive size, and the quality of sound simply delights me. It's all I could wish for. Thank you. Kind Regards."

When Martin Brennan designed the Brennan JB7 he threw out the rule book. The Brennan is a CD player with a hard disk that stores up to 5,000 CDs. It saves space and clutter and delivers near immediate access to an entire music collection. JB7 owners rediscover then fall in love with their music again simply because the Brennan makes it so accessible.

The Brennan also records from vinyl and cassette so you can enjoy your entire music collection but keep it out of the way in another room or retire it to the attic.

You can use the JB7 in two ways. You can use it with loudspeakers or you can play it through your existing HiFi. The Brennan gives names to tracks and albums from a database of 2.6 million CDs as you load each CD. It takes a few minutes to load a CD.



Small enough to pick up with one hand, Big enough for a lifetime of music

The Brennan has a unique text search facility that shows a reducing number of matches as you press successive letters on the remote control. Once you get the hang of it you can find one track or album out of your entire music collection in a few seconds. So to find "Nessun Dorma" you would press letters "NES" or "DOR" and scroll through the shortlist of matches.

What's the point of owning CDs you don't play?

What's the point in owning hundreds of CDs worth thousands of pounds if you never listen to them?

The problem with CDs is that it's quicker to make a cup of coffee than dip into a CD. Try timing how long it takes to pick a CD, load it in the CD player, play a snippet from a track or two, eject it and put it back where it came from. Then there is the problem of finding music. The print on a CD spine is tiny. What if the track is on a compilation CD? What if the CD is in the car? Then there is the clutter. You need to keep your CDs near the player or you won't play them. So you are forced to share your living space with hundreds of cheap plastic boxes.

CDs are great but they are also inconvenient, inaccessible and a bit of a chore – that's why Martin Brennan designed the Brennan JB7.



in seconds • Browse albums by spinning the volume knob • Display tracks by name as they play • Load CDs in about four minutes • 2.6 million album database – updated monthly • Seven rainbow colour coded playlists • 180 X 32 soft scrolling vacuum fluorescent display • Segue function blends one track into the next • One touch record from vinyl, cassette or radio • Loads and plays MP3 from USB • Remote control or front panel • Volume knob pushes to use as a selector • Delete tracks you

don't like • Clock with alarm • 60 Watt power amplifier • 4.8 X 16 X 22cm steel and aluminium construction • Small and tough enough if you are on the move • Used by restaurants, hotels, pubs, dentists, schools • Sold to more than 30 Countries • Backup music to external USB hard disk for safe keeping • "Superb"-Gramophone • "Best Buy" - Hi Fi choice • Choice of colours Navy Blue or Gun Metal • Optional matching loudspeakers • Prices from £359.

Key Points

Three sizes – up to 5000 CDs

• One button plays the entire collection at random • Text search finds tracks/albums/ artists



The face behind Brennan



Martin is a physicist and computer engineer. He has around twenty silicon chips to his name, written over a million lines of computer code and co-designed the world's first 64 bit games computer. "I always liked the promise of CDs. It wasn't so much the quality but the quick access to a given track. After vinyl and cassette that was a real plus. My first CD player was a five CD multi changer. My second was a ten CD changer for the car. I liked the idea of quick access to more than one CD and music that didn't repeat after 40 minutes. These players were fine but a bit clunky – there were several seconds of silence between CDs and in the car I could never find the right CD.

A few years ago I had a go at loading my cassette collection onto a PC. Cassettes were obsolete but I owned around 100 and the music on them reflected an important period in my life. I recorded all of the cassettes on to the PC over a period of several weeks. The thing is I never listened to the music on the PC. Somehow using the computer to listen to music never worked out. Maybe the computer was in the wrong place but I think it lacked the immediacy of a physical play button. In the end the computer got a virus and the music files were lost – I still had the cassettes thankfully. The JB7 is really my personal ideal music player".

To get the whole story and order visit www.brennan.co.uk

Hi-Fi Choice

PASSION FOR SOUND

YOUR EXPERTS



PAUL MESSENGER
EXPERTISE: SPEAKERS

PAUL is the UK's foremost expert on loudspeakers. Having worked as a speaker designer and reviewer for over 30 years Paul is internationally recognised for his ability to assess loudspeaker performance, and report on developments in the field.



JIMMY HUGHES
EXPERTISE: SYSTEM OPTIMISATION

JIMMY has been involved in hi-fi for over 40 years. His knowledge of tweaking and optimising systems is unrivalled in the hi-fi industry and he brings enormous expertise to the pages of Hi-Fi Choice. If anyone can help you improve your set-up, it's him.



RICHARD BLACK
EXPERTISE: TECHNOLOGY

RICHARD writes exclusively for *HFC* and brings his experience as a successful musician and recording engineer to the title. As Technical Consultant, he's our authority on tech testing, ensuring that our verdicts are beyond compare.



JON MARKS
EXPERTISE: DIY AND VINTAGE

JOHN previously edited *Hi-Fi World* magazine before joining the UK's leading title, *Hi-Fi Choice*. Jon has a wealth of reviewing experience, as well as a passion for vintage audio gear and a gift for repairing and upgrading ageing kit.



ALVIN GOLD
EXPERTISE: PERFORMANCE AUDIO

ALVIN is an internationally respected audio reviewer who has contributed to a huge range of magazines over the years. He has a very full 30 years of reviewing under his belt and has a passion for both high-performance and high-end hi-fi.



JASON KENNEDY
EXPERTISE: TURNTABLES

JASON edited *Hi-Fi Choice* through the Brit-pop era and relinquished the helm after 17 years on the title. A hi-fi addict since his twenties, Jason fell for the beauty of vinyl and has never looked back. He's here to help you get the best from your LPs.



MALCOLM STEWARD
EXPERTISE: EMERGING TECH

MALCOLM is a legend in hi-fi magazine circles. A former editor of *Hi-Fi Review* he was one of the best-known and most outspoken reviewers of the 1980s and 1990s. He now writes exclusively for *Hi-Fi Choice* and he loves being 'back'.

Welcome...

www.hifichoice.co.uk Issue No. **336** September 2010



Power. It's addictive when talking hi-fi. Valve amps aside, the more power the better as far as we're concerned. So it's fitting that this month's *Blind Listening Group Test* is

dedicated to getting more power into your music-listening, with a six-way head-to-head of **the latest pre/power amps** (p34).

But, of course, you get out what you put in, so elsewhere in this issue, we've got a cracking selection of cutting-edge source components, from **Marantz's** high-value UD8004 universal (p60), through to **Resolution Audio's** stunning £6k Cantata CD player (p72). For those of you looking for a complete music solution, there's a comprehensive review of **Arcam's** long-awaited streaming, all-in-one **Solo Neo** (p50), which takes the headache out of system-matching altogether.

Dan

Dan George Editor
dan.george@futurenet.co.uk

FUTURE PUBLISHING, 2 BALCOMBE STREET,
LONDON NW1 6NW +44 (0)20 7042 4000

OUR PROMISE TO YOU

HI-FI CHOICE is passionate about high-fidelity. We're dedicated to the very highest standards of sound reproduction. Our commitment is to bring you the most reliable, in-depth hi-fi equipment tests anywhere and we're backed by the UK's biggest technology publisher. Our expert writers will help you get the most from your hi-fi and guide you towards the best-performing products for your budget. Our passion is your passion.



Subscribe: myfavouritemagazines.co.uk 0844 848 2852 (p122)



Jordan Acoustics

freephone:

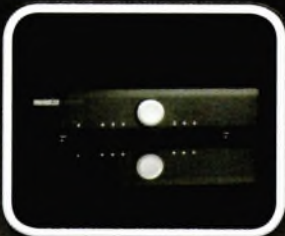
0800 121 4771 / 4772

e-mail:

ask@jordanacoustics.co.uk

web:

www.jordanacoustics.co.uk



Great Hi-Fi need not cost the earth as Musical Fidelity perfectly demonstrates with the NEW M1 and M3 Series

M1 DAC - 24/192 Upsampling DAC

It has four digital inputs: coax, optical, balanced and USB. The M1 DAC will lock on to any SP diff signal at; 32kHz, 44.1kHz, 48kHz, 88kHz, 96kHz and 192kHz. The M1 DAC upsamples to 24-bit at 192kHz, delivering a breathtaking performance at a surprisingly affordable price.

M1 HPA - Class A Headphone Amplifier

The HPA's extraordinary low output impedance means that it can drive any headphone with complete linearity and low distortion. It has two inputs; line and USB (from computers etc.), two headphone sockets on the front panel and a loop out facility. The HPA also has a variable line output so that it can be used as a very high quality simple preamp.

M3i - Integrated Amplifier

The M3i delivers 70 watts per channel into 8 ohms and 137 watts into 4 ohms, so will perform well even when driving power-hungry loudspeakers.

M3i is in effect, a separate Class A preamp with a stereo power amp, in a single elegant package.

Modest in price it may be, but it achieves huge ambitions and offers true high-end performance.

M3CD - Compact Disc Player

There is definitely more to the M3CD than meets the eye. Low distortion, virtually flat frequency response, low noise / low jitter and a unique high-tech digital-stream noise filter, which makes a large contribution to its technical performance and musicality. The M3CD also has a mains choke filter that allows the M3CD's five independent power supply units to work properly, regardless of mains irregularities.

Again, modest in price, the M3CD is a wonderful achievement from MF, which will find many a home.

Call Jordan Acoustics on 0800 121 4771 to find out more about Musical Fidelity.

MUSICAL FIDELITY

0% FINANCE OPTIONS*
AVAILABLE

ART Loudspeakers Deco 8

Designing state-of-the-art loudspeakers is a fine art...

It didn't take long for the news to spread as to just how special the 'Deco' series is. Every serious customer of ours who has auditioned a pair of **Deco's** has purchased them and we've never had a single pair returned!

The most popular model in the **Deco** series has to be the **Deco 8**, which employs in standard form the "**Seas Crescendo**" tweeter and **Seas 220mm Paper Bass-Mid**, together with **WBT Platinum Terminals**. There is then a **choice of different levels of internal components**, coupled with an endless choice of supercar paint finishes. While the standard model is very impressive, move up to the signature version for example and the increase in performance is tenfold.

The **Deco 8** will thrill and excite any music lover. You won't believe just how low this speaker can actually go! It's tight too, and very fast, allowing you to easily follow intricate bass lines and it has the slam to rearrange your insides if you so wish.

art loudspeakers



0% FINANCE OPTIONS*
AVAILABLE

Pearl 'Limited Edition'

SA-KI CD/SACD Player & PM-KI Integrated Amp

"A fitting tribute to Ken Ishiwata, this is a beautifully presented, immaculately engineered system that delivers the sonic goods like few others at or near the price."
Hi-Fi World, Feb '10

"...Mr. Ishiwata has put together a fantastic digital player for £2,500. He's not kidding when he talks about the emotional component of the music being the most important thing to him. While it's not easy to make an excellent SACD player for £20,000, it's way easier than it is to accomplish it for just under £2,500 retail."

Jeff Dorgay, Tone Audio, No.23

Ken Ishiwata's 30th Anniversary 'never to be made again' Masterpieces have almost all gone. We have just a few of each left in stock so be quick if you want to own something truly special!



marantz

Hi-Fi Choice Contents

www.hifichoice.co.uk Issue No. **336** September 2010

NEWS & OPINION

8 **Audiofile**
Marantz brings KI Pearl Lite to the masses

23 **Opinion**
The commentators with clout

28 **Letters**
Our readers talk hi-fi

89 **Music Reviews**
Our picks of the best new releases

130 **The back page**
Our guide to digital music, part four

READER SERVICES

97 **Help & Advice**
Your questions, our answers

104 **Reader Classifieds**
The UK's best place to buy and sell

107 **Next issue**
What's in store next month

BUYER'S GUIDE

109 Britain's most useful hi-fi buying information

CD Players/Turtables/Phono cartridges/
Radio tuners/Headphones/Integrated &
pre/power amps/Cables/Speakers/
Equipment supports **UPDATED MONTHLY**



COVER STORY

34 **Blind-listening Grouptest:**
Pre/power amps £1,500-£2,900



WIN!

WORTH
£1,125

33 A Micromega
IA-100 integrated amp



84 **Lost albums:** Never released vinyl



16 **Spotify:** Streaming for audiophiles?



92
Beautiful Systems: Audio Analogue/Amphion



The performance on internet radio is excellent, with outstanding freedom from coloration

Arcam Solo Neo p50

TESTED THIS MONTH



50
Arcam Solo Neo One-box system



60
Marantz UD8004 Universal disc player



72
Resolution Audio Cantata CD player



78
Canton Chrono SL 580 DC loudspeaker



100 **Mini Test:**
Interconnects

REVIEWS

Definitive verdicts on the latest new kit

50 **Arcam**
Solo Neo one-box system

54 **Kudos**
X2 speaker

59 **Hanss Acoustics**
RC20 record cleaner

60 **Marantz**
UD8004 universal disc player

65 **Funk Firm**
FXR tonearm

66 **BitPerfect**
Systems Reference 1 multi-media server

71 **Stello**
DA100 Signature DAC

72 **Resolution Audio**
Cantata CD player

77 **Supra**
AGS-10K audio transformer

78 **Canton**
Chrono SL 580 DC

GROUP TEST

Pre/power amplifiers
£1,500-£2,900

37 **Astin Trew**
AT1000/AT5000

39 **Cyrus**
Pre XPD/8

41 **NAD**
C165BEE/C275BEE

43 **Parasound**
P3/A23

45 **Rotel**
RC1580/RB1582

47 **Tsakiridis Devices**
Alexander/Artemis

MINI TEST

Interconnects

100 **Atlas**
Movros

100 **van den Hul**
The Wave

101 **QED**
Profile

101 **Chord Company**
Optichord

Subscribe: myfavouritemagazines.co.uk 0844 848 2852 (p122)

Audiofile

All the latest news and views from the hi-fi industry



Pearly lites

Marantz ushers in £999 'lite' versions of its £3,000 KI Pearls

PRICE: £999 (EACH)
AVAILABLE: AUGUST 2010
CONTACT: 01753 287941
WEB: MARANTZ.COM

Marantz has launched affordable, 'lite' versions of its upmarket KI Pearl SACD and integrated amplifier. The new KI Pearl Lites have been created due to demand for a more affordable Pearl product, according to Marantz's 'brand ambassador' Ken Ishiwata. Priced at just £999 each (compared to £3,000 each for the regular

Pearls), the new lite versions represent a significant cost saving over the original models, whilst retaining many key features and adding some new ones, too.

The combo features a number of advanced connectivity options, including easy integration of iPod portables via a front-mounted USB port, plus digital inputs on the SACD



NEW FOR 2010

MARANTZ HAS ALSO just announced several other new hi-fi products, which we will elaborate on in forthcoming news pages.

In a nutshell, the new 2010 line will also include two new budget models, the CD5004 and matching PM5004 at £220 each, plus a midrange (£550) integrated; the PM7004, which is a 70-watt engine also featuring the TCC system.

For forward-thinking audiophiles, there's also a CS4392 DAC-equipped network audioplayer, the £700 NA7004, which supports a multitude of formats and benefits from both DAB+, FM and internet radio. Big on connectivity, the player has USB inputs in addition to coaxial and optical and is also very iPod-friendly.

The system is designed to reproduce the original recordings as the musicians and recording engineers intended

player, enabling other digital source components to utilise the advanced on-board 24-bit DAC. Yet there's also a nod to the past. Along with the deliberate use of old-school side cheeks in the styling, Ken has reintroduced Tri-Tone Control (TTC), which is Marantz-speak for its three-way tone control system: bass, mid and treble. Originally introduced in the 1970s, Ken clearly sees a place again for user controls, what with the proliferation of compressed music files.

The KI Pearl Lite SACD player retains the same Xyron transport as its bigger brother, as well as an

identical CS4398 Cirrus Logic DAC. Its new 'DAC MODE' function enables the player to also be used as a DAC via its optical and coaxial inputs, plus its USB-B input enables PCs and media players to be used, too, so users can enjoy HD music files. The player is based around a completely new, double-sided PCB where, it's said, additional circuitry has been used to reduce jitter.

Joining the player is the matching amp. Boasting 70 watts into an eight-ohm load and 100 watts into four ohms, the discreet current feedback amplifier has customised components, plus the aforementioned

TCC tone controls. A large toroidal transformer provides the oomph.

Commenting on the Lites, Ken Ishiwata said: "The system is designed to reproduce the original recordings as the musicians and recording engineers intended...we try not to alter any other information on the original software".

Competition in the £1,000 price bracket is strong, however, and includes our recent (*HFC 335*) *Group Test* winner, Roksan's Kandy K2 (£899) and Moon's 'Recommended' CD.5 (£999). Samples are expected this month, so expect a review in the November issue. ●

IsoTek®

The power to deliver 'clean' power



Aquarius replaced the companies GII Mini Sub and is the latest product in IsoTek's unique range of multi-award winning power conditioners that are designed and hand made in England using the finest materials and built to the highest of standards.

Formed in July 2001 IsoTek's vision has been to create high-quality mains power conditioners that stretch beyond current conventions. Through careful market analysis and extensive research, IsoTek has been able to launch products that dramatically improve the performance of all components used within an audio or visual environment, a fact that has been proved by countless international reviews and over 25 audio awards.

"IsoTek is the leader in mains conditioning products"

HI-FI NEWS

"IsoTek is the UK's biggest name in mains filtration"

HI-FI CHOICE

"Not all mains conditioners are created equal... IsoTek has built itself a reputation as a purveyor of mains conditioners that actually improve (as opposed to just alter) the sound"

HI-FI WORLD

For more information and to obtain your free IsoTek brochure please call:

01276 501 392

info@soundfoundations.co.uk
www.soundfoundations.co.uk www.isoteksystems.com

"The whole auditioning process took about 30 seconds. Play a piece of music on GII Mini Sub. Play it again on Aquarius and wonder why you were so attached to the GII Mini Sub." "Very highly recommended"

HI-FI PLUS. ISSUE 68,



SIRIUS



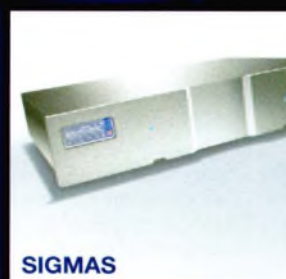
ACCESSORIES



ORION



VISION



SIGMAS



TITAN

Array of talents

JBL's new 1400 Array loudspeaker is big, heavy and loud!

It may almost qualify as portable next to its siblings, the D66000 and K9900 S2, but the 1400 Array floorstander still tips the scales at a massive 52kgs per cabinet.

The pro-style looks are perhaps not particularly easy on the eye, but the DNA this loudspeaker has inherited from the world of professional audio has certainly endowed it with undeniable strengths.

Underpinning a transducer array able to reach high SPLs without strain, is a reflex-loaded 14-inch pulp-cone woofer, its bottom end reaching a claimed 32Hz (-3dB), while its crossover point is set at 750Hz. Mimicking the crossover design decisions made in the D66000 and K9900 S2, a single aluminium-diaphragm compression driver covers the bulk of the upper frequencies, in this case running all the way to 8kHz.

High sensitivity is one of the cornerstones of JBL's flagship speakers, so it's no

surprise to find that this driver is blessed with a neodymium magnet system, as is the titanium supertweeter which is said to output as far as 40kHz (-3dB). That said, the 1400's fourth-order crossover slopes, despite including low-loss inductors and polypropylene capacitors, play a role in producing a final claimed sensitivity of 89dB.

Power is nothing without control and that extends to the construction of the trapezoidal cabinet. Flimsy enclosures with ineffective damping will inevitably be forced to flex by the music, thereby producing surprisingly loud SPLs of their own. To eliminate this very audible coloration, JBL has specified 40mm MDF with extensive bracing in the lower half of the cabinet and rigid. SonoGlass horns for the mid and supertweeter.

Available in either black zebrawood or mahogany

veneers, the 1400 Array is supplied with brass spikes to pierce carpet, though somehow we doubt stability will be a problem.



PRICE: £8,500 **AVAILABLE:** NOW **CONTACT:** 01423 359054 **WEB:** CSECUSTOM.COM

Super Sonus faber

New speaker signals a rebirth of Italian excellence

Sonus faber has unveiled its best speaker yet which, the brand claims, is "destined to change the audio world dramatically".

Priced at a jaw-dropping £150,000, standing just over 1.7m tall and weighing in at 610kg a pair, the Fenice (Phoenix) represents something of a rebirth for the Italian high-end speaker maker. Although only 30 pairs of the speakers will be made, elements of their design, engineering and research will filter down into

more affordable models, beginning later this year.

Armed with a trio of innovative patents, the speakers include a Sound Field Shaper that controls the sonic radiation of the speakers, enabling the soundfield to be customised for three-dimensional listening. Reflex ports have been treated with insulating material for ultra-low frequency response, while an advanced suspension and decoupling system removes any physical vibration.



PRICE: £150,000 **AVAILABLE:** NOW **CONTACT:** 020 8971 3909 **WEB:** SONUSFABER.COM

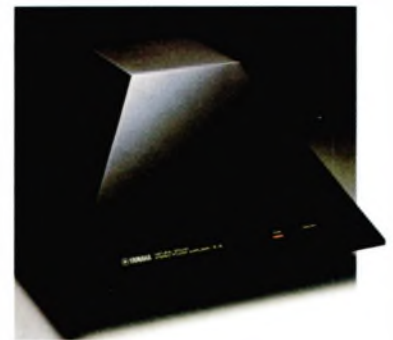


Physics degree

THE STYLISH, LAID-BACK look of Audio Physic's Virgo 25 speaker, is just one of many changes that the German firm has made to its latest floorstander, to celebrate its 25th year in business.

The midrange drivers and tweeters are identical, while the tweeter additionally boasts the groundbreaking SSC decoupling from the loudspeaker cabinet. A neoprene gasket for the heavily damped terminal plate is indeed novel. The same goes for the Active Cone Damping, a silicone rubber ring pressing around the periphery of the metal cone to eliminate break-up.

PRICE: £6,500 **AVAILABLE:** NOW **CONTACT:** 01903 524617 **WEB:** C-TECHAUDIO.CO.UK



Safe and sound

YAMAHA HAS ISSUED A SAFETY notice for all owners of the following amplifiers: A-760; A-760II; A-960; A-960II; A-1060; M-50; M-70 and the iconic, pyramidal B-6. Apparently, after almost 30 years' service, in rare cases, the power supplies in these components may become faulty and, in exceptional circumstances, begin to give off smoke or even catch fire. Yamaha request that owners unplug the amp immediately and contact them for further advice on 01908 369213 or email service@yamaha.de



TRIANGLE
MANUFACTURE ELECTROACOUSTIQUE

Magellan

by TRIANGLE



TRIANGLE products are available in the UK through our four authorized dealers :

THE MUSIC ROOM

JACK LAWSON
Glasgow, Scotland
0845 4000 400

MAYFLOWER SOUNDS

PETE DUNSTAN
Scrooby, South Yorkshire
01302 711 528

KRONOS AV

DAVID CAMPBELL
Dungannon, N. Ireland
0288 775 3606

AUDIO IMAGES

TIM DEARING
Lowestoft, Suffolk
01502 582 853

www.triangle-fr.com

Natty performance

Good things come in pairs for valve specialists NAT Audio of Serbia

It may now be almost two decades since the start of the valve resurgence, but NAT Audio's Plasma R preamp and Se2se monoblocs stand out from the crowd which has tended to typify the second thermionic coming.

For many, the gold standard in single-ended amplification involves one 300B per channel amp. For those who seek a punchier, less rose-tinted presentation, the 211 is the preferred option,

appearing in pairs in the NAT Audio Se2se.

That rare beast, a parallel single-ended amplifier, the Se2se has a claimed output of 70 watts per channel at 1kHz. Helping maintain its composure under load is the fact that each stage in the circuit has its own voltage regulation. There's no interstage coupling transformer either, as the job of driving the 211s directly is handled by one of the two 6N1P triodes set into the chassis' top plate.

Like the monoblocs, the Plasma R preamp has regulated power supplies and no global negative feedback. The CNC-machined aluminium chassis hides a pure class A triode design, built around the mil-spec version of the 6NP30. Working alongside it are the EZ80 rectifier and OD3 voltage stabiliser.

An added bonus for those who prefer to remain rooted to the sofa while listening to all this impressive kit, is the Plasma's dinky remote.



PRICE: £10,334 (SE2SE); £4,692 (PLASMA R) AVAILABLE: NOW
CONTACT: 01984 624242 WEB: NATAUDIO.COM



Get fluxed

FURUKAWA'S HIGH-END flux series of components may not include a time-warping Flux Capacitor, but the Powerflux mains lead is now to be joined by the Speakerflux, the Lineflux and the Jumperflux.

The Lineflux interconnect (shown above), shares all key flux series materials and treatments in the pursuit of top-notch, non-magnetic conductors. The OCC copper cabling is cryogenically treated and encased in a polyethylene dielectric before being terminated with rhodium-plated stainless steel connectors.

PRICE: £300-2,000 AVAILABLE: NOW
CONTACT: 01276 501392
WEB: FURUTECH.COM



Pure value

DAB STALWART PURE is now joining the small list of firms bringing the cost of DAB ownership down to FM levels. The ONE Mi, a compact version of the PURE ONE, is a snip at £35. That said, the ChargePAK battery is an optional extra.

PRICE: £35 AVAILABLE: NOW
CONTACT: 0845 148 9001
WEB: PURE.COM

THE MONTH IN NUMBERS

1

is the number of years ARC's very limited Anniversary Edition Reference preamplifier will remain on sale

30

years Ken Ishiwata has spent working with Marantz on their specialist products

70,000

60

percent of all money spent on music in 2009 was spent by men, according to the BPI

Hertz is the resonant frequency of Bowers and Wilkins' diamond tweeter

NEWS IN BRIEF

A selection of news-breaking stories on everything hi-fi!



• **BOWERS AND WILKINS** has well and truly moved into the fast lane. Having decided to make itself known to a new audience buying iPod docks and car audio systems, it will be sponsoring two Team Fazzt Indie 500 cars. bowers-wilkins.com



• **NEVADA RADIO** is joining the likes of Pure in offering affordable DAB radios. While DAB+ is a future upgrade for Pure's ONE Mi (see previous page), it's fitted as standard along with FM reception on the £60 Sinfonie II. nevadaradio.co.uk



• **THE CHORD COMPANY'S** latest creation to receive a Plus suffix is the ChameleonPlus interconnect. Beneath the brilliant blue two-layer PVC jacket lies a braid and foil screen preventing interference from reaching the silver-plated OFC cabling in its teflon coat. chord.co.uk



• **MARK LEVINSON'S** No326S preamp has now arrived on British soil. Independent transformers feed audio and control sections, to keep the seven configurable inputs free from noise. marklevinson.com

• **ERRATUM** Gremlins clearly stowed away in the hold of the plane delivering Audio Analogue's Rossini CD player last month: in its lab report, THD+N should have read 200%, not 20%.

Research, developed

The Anniversary Edition Reference preamplifier from Audio Research redefines high-end valve amplification



Audio Research Corporation (ARC) has introduced a no-holds-barred preamp in order to commemorate the 40th anniversary of the company's inception.

The firm's designers recently unveiled the limited edition Anniversary Edition Reference preamplifier which will be available for one year only. The two-box implementation provides a an initial indication of ARC's intent to realise perfection. The second sign is the sheer weight: 13kg for the audio

chassis, another 18kg for the power supply.

The first stage of turning AC into very low-noise DC, is four individual transformers, two R-core, two toroidal, one of each handling high-tension and low-tension voltages for each dual mono channel. Downstream of these are separate regulators for each channel, built around 6550C and 6H30P valves, followed by multiple stages of further electronic regulation of HT and LT rails. The result is a claimed noise level of

109dB, below a 2-volt RMS output via one of the two sets of balanced outputs.

The seven inputs (XLR and RCA) are routed through audio circuitry constructed around a total of another eight 6H30P dual triodes. The 104-step volume control on the fascia is joined by the source selector and buttons for processor feedthrough, XLR/balanced socketry, Mono, Invert and Mute. This is "the best preamplifier ever produced by Audio Research", claims the maker.

PRICE: £23,000 **AVAILABLE:** NOW **CONTACT:** 020 8971 3909 **WEB:** AUDIORESEARCH.COM

DESERT ISLAND DISCS

Paul Masson of Audio Partnership takes us through the tunes that fuel his passion for hi-fi



STEVIE WONDER
SONGS IN THE KEY OF LIFE

A year behind schedule *Songs* was well worth the wait. The double LP and four-track EP still sounds fresh over 30 years later and *Another Star* is my favourite track.



THE WAILERS
CATCH A FIRE

As a reggae nut, I was fortunate to see The Wailers in 1973. The powerful social commentary, set against a raw reggae backdrop was hugely influential.



JIMI HENDRIX
EXPERIENCE
ELECTRIC LADYLAND

The last of three albums, this is Jimi Hendrix in total command of his prodigious talent, while Voodoo Chile is pure genius.



MARVIN GAYE
WHAT'S GOIN' ON?

This LP resonated with the mood of a deprived black America. Gaye's soulful vocals and piano, backed by the Funk Brothers, delivers protest songs in a way nobody else ever has.

Bowers & Wilkins

The origin of true sound



One material sums up our uncompromising quest for perfection in sound reproduction more than any other. Diamond. A unique combination of lightness and rigidity, it's the ultimate tweeter dome material. So when we were designing our flagship 800 Series Diamond reference speakers, we knew

that nothing else would do. Now, for the first time ever, you can experience the unparalleled clarity of diamond in every speaker in the range. True sound. Made for recording studios. And now available everywhere else.

www.bowers-wilkins.co.uk

Spotify

INTERVIEW

Heads in the cloud

Streaming services have been of limited interest to audiophiles, but that could soon change says tech expert **Adam Hartley**

Spotify has been the darling of the technology world since it launched in the UK back in February 2009. The Swedish-based music streaming service offers over eight million songs for users to instantly listen to on their PCs, Macs or smartphones. There is both a 'freemium' ad-supported option and a premium

£10-a-month subscription service, which is both ad-free and offers better quality audio.

The company is currently adding around 10,000 additional tunes to its already-impressive music library on a daily basis.

The service, and the technology that powers it, emerged from earlier attempts by companies such as Napster in the US, with these and other types of peer-to-

peer services breaching copyright and falling foul of the music industry. By comparison, Spotify has the full blessing of all the major and independent record labels, because it promises to help them generate revenue for their artists. Spotify is also a hit with users, with over five million already signed up to the service in Spain, France, Sweden, Norway and Finland.

We spoke with Spotify founder and CEO, Daniel Ek and VP of Products Gustav Söderström to find out more about how the service might appeal to the committed audiophile.

"We want to be a music platform for everyone – and appeal to audiophiles."

How did the idea and concept for Spotify emerge?

"There are some inherent differences between a cloud-based solution such as Spotify and your offline solution, where you use your own physical disc or a digital file on your computer's hard drive," explains Spotify's founder and CEO, Daniel Ek. "There are really two basic questions: 'how do the labels accept our model?' and, secondly, 'what is interesting about it for consumers?'"

"Spotify has an interesting model, in that it has a free, advertising-supported part and a premium part. The ad-supported part gives people the chance to try out the service and it also makes the network a lot bigger than it would be if it was a premium-only service. This is important for those who want to share music and communicate about music with other



Spotify co-founders, Martin Lorentzon (left) and Daniel Ek

THE ULTIMATE DESKTOP SOUND

NOW EASIER TO REACH

The great sound upgrade for a whole £140 less.

We've improved our standard desktop sound system by combining our award winning, more dynamic speakers, the TD508II with the renowned TDA501II amp to create the 'Ultimate Desktop System'. What's more, it's at a promotional price that saves you £140.00. What better reason to upgrade today.



ECLIPSE TD SERIES
Just for the pure performance.

SPECIAL PRICE
£679.99
RRP £820
Offer valid 1.5.2010 - 28.9.2010
See www.eclipse-td.net for details.



With eight million tracks on tap, musical chairs was always going to be popular

people. And that is something that increases quite dramatically and we can clearly see that in our numbers.

"Additionally, having a cloud-based service where there is no marginal cost associated with listening to one more track drastically changes the way you listen to music. You simply start listening to a lot more music. To me it almost feels like a mission to get a lost generation to start listening to more new music again. Many people stop listening to new music after their early twenties, but when they start using Spotify again, they find that they start listening to a lot of new music.

"Since Spotify is cloud-based it lends itself very, very nicely to sharing music. You can send a

simple link to a playlist – which might consist of gigabytes' worth of music if stored locally – in an email to someone instantly. Obviously, since the dawn of time, music has always been something very social. There is a reason people turn music on when they have friends coming over. But there hasn't been a financial model that has allowed people to be very social with music until these kinds of models that Spotify and others now offer."

How do you differentiate yourselves from other similar services?

"Spotify kind of took a stand against other services, who would often define themselves in the press and to everyone else with this word 'streaming'," explains VP of Products Gustav Söderström. "Our aim has been to actively try to avoid saying that. We want to compare ourselves with the existing music solutions that people have, where they play files from their hard drive or CDs on their stereo.

"So the aim for Spotify is that when you search for a song and then you find it and you click it, it should start playing just as fast as if you actually had that music on your computer. It should be as fast as a desktop music player. And I think we have managed to reach that goal. We have many users telling us that it is actually like having all the music in the world on their hard drives. Which is exactly what we are aiming for.

"Streaming technology is a means to an end. And the end is to give a really, really good music management tool and music experience. If the best way of doing this would be to sell you physical CDs, then we probably would have done that. But with the technology we have this is a better way."

How do you persuade audiophiles to use Spotify?

"Well there are two things that we have done, really," says Söderström. "One is to offer a higher bit-rate mode for paying users. So we offer the option of listening at 320kbps on Spotify Premium and we use the Ogg Vorbis codec, which is considered to be very good amongst audiophiles.

"Now while that is considered to be very high quality, it is obviously not the same as listening to a total lossless quality file. But we have managed to persuade a lot of audiophiles that the marginal increase in quality is quite drastic at the lower bit-rates, but smaller and smaller at the higher bit-rates. Obviously we get the files from the labels in lossless format, in FLAC. But we don't stream them in lossless formats. This has more to do with the user experience based

on current broadband and mobile internet networks.

"Streaming lossless files would consume very large amounts of bandwidth for people. It would also make Spotify much more prone to a bad user experience, with problems such as stuttering and the like, which is something that we pride ourselves in not having at all. So we have to try to manage the best audio quality offering with the best user experience. Higher audio quality with a bad user experience is not an option for us.

"The other thing is that we launched a major update recently, whereby you can also play your local music files stored on your hard drive via Spotify as well. So you don't have to have another digital music players running alongside. And if you are a premium user, then we actually add that music to your Spotify mobile player as well. The idea here is that we know that some audiophile users have lots of higher bit-rate files that they will want to play for specific songs. They still want to have instant access to all the music in the world, but they are not prepared to pay the price to have every song in the world in a lossless format, which would cost them millions of pounds. So our 'local files' option allows you to play those songs with your own files."

Spotify's VP of Products Gustav Soderstrom

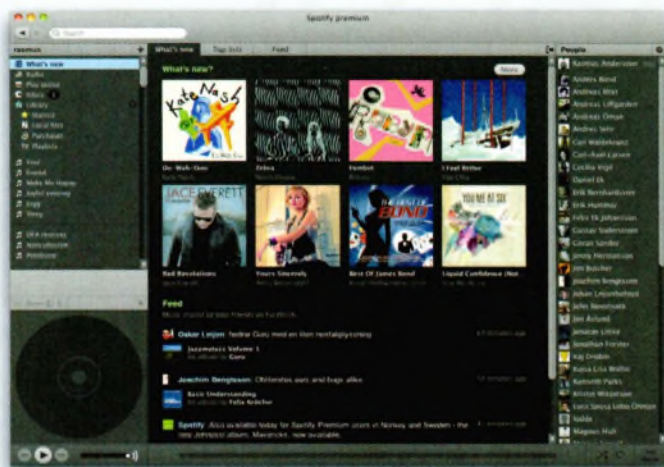


GET UP AND RUNNING

IF YOU HAVE YET TO TRY out the service for yourself, then point your internet browser to spotify.com and download the Spotify Open client to your desktop. It really is that easy!

If you want to use the higher bit-rate 320kbps option or wish to use Spotify on your iPhone, Android phone or Symbian smartphone, then you will need to sign up for the £9.99 a month subscription package, which you can sign out of at any point, should you decide it is not for you. There is no need to worry about getting stuck in lengthy contracts.

Spotify Premium also gets you access to exclusive content and a few other 'added-value' type features, but it is the enhanced sound quality and synced mobile phone applications that are the real sell here.



The social and sharing elements to Spotify's site are increasingly important (above), while the design of the application is simplicity itself (below)



Any plans to introduce a lossless streaming service to Spotify in the future?

"Well I would say that we are always looking at how we can improve the service," says Söderström. "At the moment there are more external factors that put the hold on very high bandwidth streaming. So as networks and infrastructure improve, then we are certainly going to be looking at that."

Can you partner with internet service providers to offer lossless streaming as an additional paid-for option?

"Well I cannot comment on potential deals," Söderström says, choosing his words carefully, "but what I can say is that we know that a number of users probably would be prepared to pay for lossless and we are considering that as part of our roadmap. We are looking at the various options as

to how we can offer increasingly higher-quality modes.

"In the end, we want to be a music management platform for everyone. And the pinnacle of that is to appeal to audiophiles. We definitely want to serve them. And this is why, in the meantime, we let you introduce your own high-rate or lossless files into Spotify from the local files that you have on your computer. And then use Spotify streams for everything else."

What about Apple and those rumours of a soon-to-be-launched iTunes streaming element to iTunes? How can you compete?

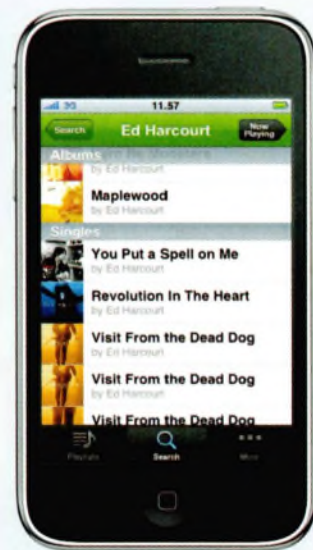
"Well, we will have to compete with actual services if and when they may appear," Söderström says. "Apple is currently not in the same business as us, as they don't do subscription streaming. If that happens then we are definitely

going to fight to be the best service out there. I think it is great for consumers and for everyone if there are more players, which will push us to keep fighting hard and constantly improving our offering."

What of the mobile apps that you already offer for iPhone, Android and Symbian?

"It is a fairly complex problem to solve, to offer the same quality of audio on each individual package. When we started with mobile streaming, the predominant services that were out there were advertising 96kbps or lower rates of streaming. And we chose to have the same level of audio quality as we have on desktops, which a lot of people thought was wrong. On the assumption that, 'most people can't tell the difference anyway,' and so on. But for us that is the difference between trying to build a real music service rather than 'a fun thing' to play with on your phone."

Spotify's iPhone app has proven to be hugely popular with users



Has Spotify been a difficult sell to the music industry and artists?

"Of course there were music streaming services before us, but I think what Spotify did was to create the first really good product based on that concept," says Daniel Ek. "We set up Spotify with the fundamental aim of providing a sustainable revenue stream for artists and the industry as a whole.

"If the music industry continues to lose money through piracy as it has in the past decade, there

may not be much of an industry left in ten years' time. Right now 95 per cent of all downloads are illegal, and we're looking to take this 95 per cent of music fans and bring them into a user-friendly, legal environment where they can get exactly what they want, while also contributing money back to the artists by either listening to ads, subscribing to the service, purchasing downloads or, in the near future, buying gig tickets and merchandising on Spotify.

"Users are also finding a lot of new artists, either through new playlists sent by friends or by simply dipping into the service. Maybe they heard a cool song in a movie, checked out the artist on Spotify and then bought the album, or sought them out in an upcoming concert. Many tell us they still enjoy buying CDs or downloads – and, in some cases, they're listening to lots of new stuff. The fact that single sales enjoyed a record year in 2009 (32.7 per cent increase to a record 152 million, with 98 per cent of those being digital downloads) again demonstrates that far from cannibalising the music market, we're helping revitalise it." ●

CONNECTING YOUR HI-FI IN THE LOUNGE

"What people do today is to connect their laptop with their audio system, which has the benefit of giving you control over what music you listen to," says Söderström, adding, "my suggestion would obviously be to get Spotify Premium, which gives you 320kbps streaming. You take the music that you have on your hard drive in higher bit-rates and add that to your Spotify library in 'local files' so that you can play them.

"Down the line we are obviously looking a lot more at the types of things we can do with the living room," he adds. "So we are developing Spotify TV with TeliaSonera in Sweden – so right now we cover your cell phone, your computer and soon we will be moving into the living room. I think the average user has most of their music on a mobile player, but music fans also consume a large amount of music in the living room, so that is certainly something that we are looking at."



A class above

Prepare yourself for a giant leap in acoustic performance. The great sound upgrade starts this September.

www.kef.com

GP Acoustics (UK) Limited, Eccleston Road, Tovil, Maidstone, Kent, ME15 6QP U.K. Telephone: + 44 (0) 1622 672261 Fax: + 44 (0) 1622 750653

A timeless musical experience



REFERENCE 5
Vacuum Tube Line-stage Preamplifier

■ ■ It is the best
valve preamplifier
I've ever used. ■ ■

Ken Kessler | Hi-Fi News | Jan 2010



REFERENCE CD8
Compact Disc Player

■ ■ Quite possibly
the best all-round
single box CD
player I've heard. ■ ■

Roy Gregory | Hi-Fi+ | Issue 64



REFERENCE PHONO 2
Vacuum Tube Phono Preamplifier

■ ■ The most
persuasively
lifelike phonostage
I've heard. ■ ■

Jonathan Valin | The Absolute Sound | Jan 2010

Over 40 years Audio Research has established a new syntax of emotional, evocative sound. Motivated by the uncompromising pursuit of the ultimate musical experience, Audio Research has created a succession of products that have each gained iconic status. Built by hand with the end user always in mind, Audio Research components combine innovation with longevity – all units being repairable to original performance standards, no matter how old.

The Audio Research collection encompasses both valve and solid-state technology, delivering some of the most critically acclaimed CD players and amplifiers yet devised. The three components featured above – the latest additions to the world-famous Reference line – have already received the rapturous reception one expects of this prestigious marque.

Like all true musical legends, Audio Research creates timeless classics; whichever component you choose, you'll find it's the ultimate sound investment. For details of the full range and your nearest dealer, contact Absolute Sounds.

audio research
HIGH DEFINITION

absolute sounds ltd
58 Durham Road, London SW20 0TW
T. +44 (0)20 89 71 39 09 F. +44 (0)20 88 79 79 62
www.absolutesounds.com info@absolutesounds.com



Going up to eleven

Dynamic range is a much-valued attribute in recordings *and* hi-fi systems says **Richard Black**

We all know what 'dynamic' means, more or less: the difference between the loudest and the quietest bits of a recording. It's easy enough to define which are the loudest bits, but what about the quietest? For me, as a pianist, the 'quietest' I can play means the quietest attack to a note, but in audio terms that's only about 30-odd dB below the level of the loudest. What is really at issue, from an audio reproduction standpoint, is the quietest sound that we can hear at all and that basically means the decay of notes into silence.

The funny thing is, though, that the dynamic range of live music depends on your vantage point. To some extent this is obvious: imagine someone playing an instrument, say guitar, in a large hall. The quietest sound you can hear before each note decays to complete inaudibility is the same everywhere (it's limited by the acuity of your ears), but the loudest bits will be louder if you stand close to the guitar rather than far away. If you were to make a recording of that guitarist in that environment, the bottom end of the dynamic range would probably be limited by the electronic noise of the microphones to something similar to our biological threshold of hearing, so a recording made close up will have a bigger dynamic range.

Even discounting the bit about decay to inaudibility, the dynamics of a live performance vary from place to place in an acoustic space. If you are close to an instrument, the attack of a note will be strong and the decay will only have a little reverberation in it from the space around because most of the decay (on notes that aren't damped suddenly by the player)

The 'dynamics' of a concert hall are very impressive



will be from the instrument rather than the space around. Further away, the reverberation of the room will have a bigger effect and the whole shape of the attack/decay envelope will be different. The one thing that is consistent is the relative loudness of the attack of each note.

Add the variable of multi-microphone recording (assuming a multiplicity of performers) and even that is not consistent. It's OK for each instrument considered alone, but the relationship between them is now as much in the hands of the balance engineer as of the performers themselves. Clearly, if you make a 'purist' recording with a single stereo pair of microphones, a sensible distance from the performers, you'll get a more honest version of the musical dynamics, but it's clear from the above that the dynamic range will in most senses be smaller than if multi-mic techniques are used (assuming no electronic compression). But then, one of the criticisms made of early multi-mic recordings was that they were too dynamic, which is arguably fair – they set out to astonish and startle!

Sound area

All that applies to recordings of acoustic instruments in live spaces, but what about studio productions of largely electronic sounds? Even here, we can't really be dogmatic, because many of the same considerations apply to loudspeakers as to live performers: their relationship to the room and the listener does a certain amount to modify the dynamics of sounds originating from them. Not as much as a large concert hall might do, to be sure, but still something.

Headphone listening eliminates all the variables on playback, of course, although the lack of crosstalk between the channels (as heard through speakers) means the dynamics will still be 'wrong' when compared with what the engineers heard through whatever speaker system they were using.

Quite simply, dynamics are just another area of sound (along with frequency response and imaging) about which it is remarkably hard to be certain when we listen to recordings. Of course we want our electronics to be honest about dynamics but, as is so often the case, the ear turns out to be the final arbiter – if it sounds right...

If you make a 'purist' recording with a single stereo pair of microphones, you'll get a more honest version of the musical dynamics



RICHARD BLACK

A musician and recording engineer, Richard knows a thing or two about hi-fi – he's been writing about it for over two decades

WHAT DO YOU THINK?

Are headphone dynamics 'wrong' compared to that of speakers? Let us know.

Email us now: hifichoice@futurenet.com

ADAPTIVE AUDIO



Chordette. 
for the way you listen

The GEM has been joined by a full family of amazingly capable products. Any input source, any software.



PEACH

Coaxial, Optical, USB, APT-X Bluetooth DAC



DUAL

Analogue & USB Output Phono Amplifier



PRIME

4 Input Pre Amplifier, Bidirectional USB



TOUCAN

Headphone Amplifier with USB + RCA



SCAMP

50W Stereo Power Amplifier with USB + RCA



MOGUL

High Performance Micro PC, 6 USB, HDMI 1080P Monitor O/P + Ethernet



GEM

USB, APT-X Bluetooth D to A Converter

Call
01622 721444

Email
sales@chordelectronics.co.uk

Visit
www.chordelectronics.co.uk

CHORD
Chord Electronics Limited

Hi-fi gets Teeth

Martin Pipe discovers how a technology intended for mobile-communications gizmos could benefit music listening

Bluetooth was originally designed to provide short-range (i.e. tens of metres) wireless communication between mobile devices. Cellphones were among the first products to adopt it, for the 'hands-free' headsets that all drivers should now be using. However, the technology is beginning to assume a role in high-quality audio. Sennheiser sells a pair of noise-cancelling headphones with Bluetooth instead of wires.

Its PXC-310BT can play music stored on suitable cellphones, or it can be partnered with any other audio source provided the optional Bluetooth transmitter is used. Chord Electronics' innovative Chordette Gem is a budget DAC with a difference. In addition to a USB port, which enables it to be used as a high-quality PC soundcard, is an on-board Bluetooth receiver that can be 'paired' with any suitable audio source.

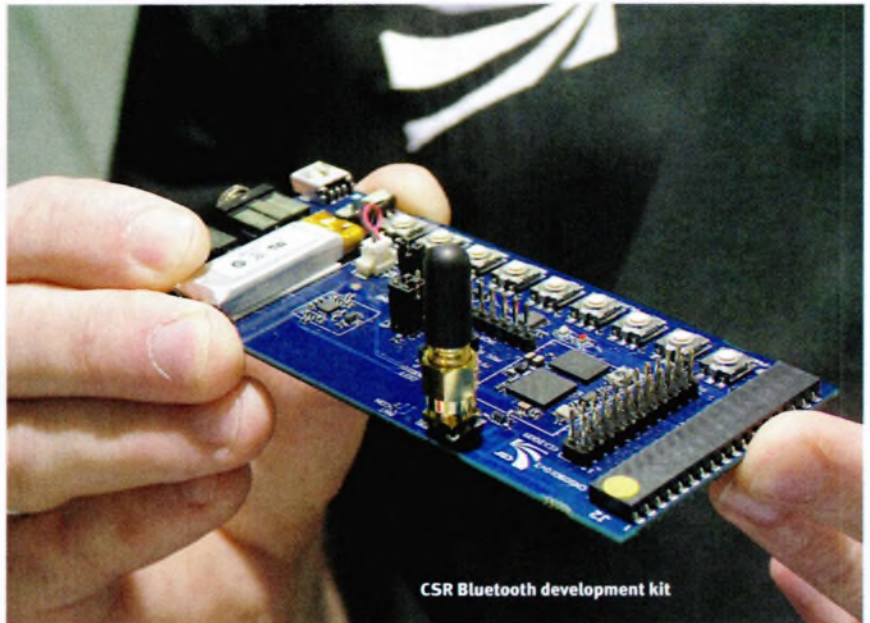
To be able to transmit audio, products like the Sennheiser and Chord rely on the 'Advanced Audio Distribution Profile' (A2DP), which defines how high-quality audio can be streamed from one Bluetooth device to another. Audio bitrates are 352kbps, although the latest Bluetooth standard (3.0+HS) can muster uncompressed PCM-friendly transfer-rates of 24Mbps.

The range of codecs supported by A2DP includes AAC and the ATRAC that underpinned Sony's MiniDisc audio format. Today, though, most audio applications rely on the 'apt-X Bluetooth' codec. This uses what apt-X's Stephen Wray describes as "non-destructive, transparent coding techniques" to achieve a 4:1 compression ratio.

The apt-X's origins are in professional broadcasting, where factors like low latency (i.e. no delay) and resilience to errors are important. Naturally, these characteristics have applications elsewhere – Bluetooth included. "The only problem with apt-X," Chord's John Franks told us, "is that it isn't across all transmission products yet". Nokia and Samsung products support it, though, and for its part, Chord has been working with Apple.

X marks the spot

The apt-X codec, together with radio chips developed by Cambridge-based CSR, feature in the Sennheiser and Chord products. Radio considerations are of equal importance to the codec. "When Chord's A2DP Bluetooth module was designed", says Franks, "we were very insistent on having the radio-frequency side well sorted. We can confirm that 30 metres is readily achievable – we have achieved over



200m, with some readily available dongles attached to laptops".

So what does the immediate future hold for Bluetooth hi-fi? In the US, Marantz has been selling Bluetooth-enabled AV receivers since last year. Chord, flushed by the Gem's success, has announced the Chordette Max, as well as the Peach, described by Chord as a 'Mark 2 Gem', and the Mogul.

The latter is a high-performance PC that, amongst much else, will store music collections. Thanks to its on-board Bluetooth, tracks could be streamed to Bluetooth equipment around the house. Multiroom audio without the hassle, in other words. We hope that speaker manufacturers will get also get involved.

We suspect that the 21st-century equivalent of those '80s Wharfedale classics, the Active Diamonds, would go down well. One speaker would contain the amps for both channels, the power supply and Bluetooth circuitry.

For best results, the music would be stored in either an uncompressed form (PCM/WAV) or using lossless compression like FLAC. Music stored on mobile phones tends to be compressed using M4A or MP3 – a Bluetooth phone would transcode this into apt-X before sending it on its way. In other words, your music is strained by two stages of lossy compression. Says Franks: "Some phones are certainly better than others – and the more an algorithm compresses a music source, the worse it seems to sound...".

Tracks could be streamed to Bluetooth equipment around the house – multi-room audio without the hassle



MARTIN PIPE

Martin Pipe has been an audio enthusiast for 30 years, and a tech journalist for 20 of those. He also helps to run HFC's labs.

WHAT DO YOU THINK?

Has Chord seen the future with Bluetooth? Email us now: hifichoice@futurenet.com

"Hipness is not a state of mind, its a fact of life"
Cannonball Adderley



Fidelity

with SOUL

Chord Indigo Plus Digital

Whilst most hi-fi and home cinema enthusiasts are happy to accept the influence that interconnects and speaker cable can have on the performance of a system, many people struggle to accept that a digital cable can be equally influential.

The common reaction is that since the cable is only carrying a digital signal, the design and quality of materials used in the cable will have far less influence. Listening tests however, show this is not necessarily the case. Repeated listening tests using high quality digital to analogue converters and home cinema receivers have shown that digital cables can and do have an effect on the sound quality of the system in which they are used. Digital cables are capable of affecting levels of detail, dynamics, sound staging and the rhythmic and tonal characteristics of a system.

The improvements that the Indigo Plus Digital can bring to a system should not be dismissed lightly.

THE
CHORD[™]
COMPANY



www.chord.co.uk

Get advice on all aspects of hi-fi and home cinema from the Cable Doctor and sign-up for our newsletter, keeping you in touch with the latest product development news, exclusive competitions and technical tips

Stars in my ears

The original Linn/Naim Active PMS Isobarik system was hugely aspirational. But as *Jimmy Hughes* recalls, it was a mixed bag

There's an old saying: Be careful what you wish for – you may actually get it. I found this out the hard way when I acquired my 'dream' hi-fi system. Back in the 1970s, Linn and Naim produced one of the first 'active' (Aktiv) systems; Linn PMS Isobarik speakers, a Naim NAXO electronic crossover and three Naim NAP 250 power amps.

I first heard this combination sometime in 1977 and it was a revelation – I was literally blown away. While Passive DMS Isobariks produced a somewhat rich/dark tonal balance that was a full and warm, if a shade colored, Active PMS types were much more open and detailed, with amazing clarity, separation, and dynamics.

By 1978 I was the proud owner of Passive Isobariks powered by a single Naim NAP 250 and the system rocked. But what I really wanted was the Active system with three NAP 250s. I finally achieved my goal in late 1979, but Audio Nirvana proved curiously elusive.

For while the Active system definitely offered many benefits and improvements, musically, the end result often seemed less than the sum of the parts. On the plus side, clarity was superior, and you got much better detail and separation. But Passive Isobariks – for all their faults – had a you-are-there 'real' quality.

On a good recording, you could almost imagine you were hearing music being performed live. The performance sort of unfolded in front of you. The presentation had amazing atmosphere and cohesiveness – qualities that the Active system (for all its technical superiority) seemed to lack.

As it happened, my next door neighbour owned a Passive Isobarik/Naim NAP-250 system. So I was able to hear his set-up, in a room similar to my own, on a regular basis. I'd tweak my system and convince myself I'd made significant improvements. Then I'd go and hear his system and realise something was still lacking...

Naturally, I wanted to have my cake and eat it; I desired the atmosphere and cohesive timing of the Passive speakers, plus the openness detail and dynamics of the Actives. But it never quite happened. Sadly, I reached the conclusion that Passive and Active Isobariks were very different animals – despite having much in common.

Knowing what I know now, I think I understand why my old Active system did not fully deliver – in part, it had much to do with the tweeters being driven directly from the



The Isobarik sound was unique and unrivalled

power amps – something that gave the top-end increased brilliance and immediacy.

At the same time, it risked the high frequencies becoming aggressive and dominant. How ironic that the main benefit of an Active system – powering each speaker drive unit directly, with no passive crossover components in the way – was also its downfall! Adding a little resistive damping would've helped restore the balance.

When You're Young and In Love...

For me, hearing Active Isobariks was love at first sight – I was totally smitten; swept off my feet. Stars in my Ears – I was so bowled over by all the positives, I failed to notice any of the negatives.

With hindsight, my experience with Active/Passive Isobariks illustrated how rash and presumptuous it is to assume that 'improvements' come without unwanted side effects. It demonstrated how difficult it is to retain all the positives you've got, while at the same time moving forwards to a higher level.

This doesn't just apply to hi-fi – it's true of many things in life; from relationships to sport. It's only when you achieve a proper balance between all the various aspects that an end-result greater the sum of the parts is possible.

Living happily and contentedly with a hi-fi system is more than getting a massive high on that first exciting encounter – it's a long-term relationship; a marriage no less! That said, by getting Active Isobariks I sowed a few wild hi-fi oats – the experience was hugely exciting, and very educational. ●

For me, hearing Active Isobariks was love at first sight. I was so bowled over by all the positives, I failed to notice any of the negatives



JIMMY HUGHES
A hi-fi enthusiast for four decades, Jimmy's knowledge of system-matching and record-collecting are unmatched in the industry

WHAT DO YOU THINK?
Do you accept compromise for certain strengths?
Email us now: hifichoice@futurenet.com

Letters



Get in touch! email us at hifichoice@futurenet.com or write to: **Hi-Fi Choice Letters, Future Publishing Ltd, 2 Balcombe Street, London NW1 6NW**

Sponsored by:

Russ Andrews
Solutions for better music & movies



Group tests: not always the usual suspects

Group test groupie

While I'm always keen on the selection of components you feature in your group tests and agree that the blind-listening format is the only genuinely useful way of reaching unbiased side-by-side conclusions, I can't help but notice that some brands seem to be conspicuous by their absence.

I don't recall the last time I saw Linn or Naim in a group test in the mag, probably because it was so long ago (if ever!). This is despite the fact that both are major manufacturers who've sold thousands and thousands of components. Come on *Hi-Fi Choice* – expand your range of reviewees! **dennis, via email**

HFC We can only wonder why some brands, including some very well known ones, appear to lack the confidence to submit their equipment for group tests. It's definitely not the case that we don't ask them – we do!

Winning a group test against five of its peers is surely the ultimate accolade for any

component and we often choose components which have been well reviewed in their own right, to ensure a high standard.

All we can say is that we'll keep on asking. Please also feel free to contact any manufacturers whose gear you'd like to see in a group review; perhaps this is one of those occasions where purchaser power could have an impact.

Hey, good looking

I've now read the June and July issues of the mag in the new format and really like the fresh look. In particular, the product reviews layout, which seems easier to read and the columns to the side of some of the articles with extra info.

You seem to be focusing increasingly on the area of downloads and the newer ways of handling and listening to music, which keeps an old fart like me up to date with the technology and how to apply it.

Finally, whatever you do, keep Richard Black as a reviewer – I enjoy reading his take on things.

Pete Cunningham, via email

HFC Many thanks for your kind comments, Pete. It's always rewarding to know that the months of hard work put in by the editorial and photographic teams have well and truly paid off.

Fear not, we have no intention of putting Richard out to pasture (not that he'd be kicking his heels, as he's always in demand in the music and audio industry). We'll maintain our focus on cutting-edge technology too, as the hi-fi market evolves.

Dab-bling

It's a shame you don't have a section for your readers to comment on some of the articles you publish (Well, there are always the letters pages! Ed.) I will comment anyway!

Personally DAB Radio doesn't interest me. I listen to Freeview radio and all the main BBC radio stations are transmitted at 192kbs, so the sound quality is very good.

There are a number of benefits to Freeview radio along with the sound quality, one of them being that you can normally use your existing TV aerial to receive the signal. On top of that, if you have a DAC, you can buy yourself a cheap digibox with S/PDIF or optical output and connect it to your DAC or CD player. You'll save yourself a shed load of money by not having to fork out for overpriced hi-fi equipment, or having installed roof aerials that you don't need.

Please pass this tip on to your readers, most of whom will have paid the BBC via their licence fee.

Mike Booth, via email

HFC We asked Dominic Todd and Richard Black for their responses:

DT: Some good points you've made there, Mike, and I would agree with you that Freeview can be an excellent source for digital radio. Where it doesn't suit everyone is that, as you say, you do need a TV licence to listen. On top of that, if you want any text information, you'll need to switch the TV on. You'll also have to remember the station numbers if you want to find them without the TV. Another consideration is that many people still have their TV and hi-fi in separate parts of the room, or even separate rooms altogether, making connection cables longer than ideal. Finally, what happens if you want to listen to the radio and your better half or the kids are watching TV? One for a single man, I think!

RB: Mike's comments make a great deal of sense and I've mentioned Freeview as an option in the past. The quality is indeed often (slightly) higher than on DAB and if you already have a Freeview box and no competition for TV/radio within the household, it's a no-brainer.

On the other hand, in many locations DAB doesn't require an external aerial and is more



Video killed the radio star, but will radio on the internet murder DAB?



Devices like Systemline's Music server look increasingly like the future of digital audio

convenient to use than Freeview. Horses for courses – and don't forget internet radio, too!

iProb

As a hi-fi fanatic now experimenting with digital files I found your column in HFC 334 on building a digital music library very informative.

On your advice, I downloaded dBPowerAmp, which easily ripped my CDs (well, some of them!) When I tried to play the files, however, I was informed by Nero, Windows Media player and other programmes that my files were unrecognised. How can I resolve this problem?

Mike, via email

HFC's Malcolm Steward:

If you ripped your CDs to FLAC, then programs such as Windows Media will not play them without the installation of the relevant codec. I would suggest using VLC media player instead, which will handle FLAC and virtually any other audio/video file you throw at it without any problems or additions. It's freely obtainable at the following website: <http://www.videolan.org/vlc/>.

You might also like to investigate the free version of Media Monkey (<http://www.mediamonkey.com/>). This is a neat music player and will manage your rips – up to 50,000 tracks – in its library. It promises to synchronise with iPods and iPhones as well, but I have not tried this facility because I do not own any 'iGadgets'.

Are your CDs in good condition? I have to say that dBpoweramp has never let me down or refused to rip a CD. I have had the occasional glitch with it not liking the odd track, but cleaning the CD and re-ripping it always seems to work. You might try Exact Audio Copy, which I consider to be the absolute best ripper and see how you get on with that.

Again, the software is free from: <http://www.exactaudiocopy.de/>, but be sure to read the documentation thoroughly.

Ex-static

Jimmy Hughes writes amusingly about the Quad 57 loudspeakers he heard in his youth (HFC 334). I frequently listened to them in the showroom of Horns of Oxford, where for a long time they were the gold standard against which everything else was tested. Alas, they just would not fit into our then living room, so I bought some big Radford speakers instead.

A later house move did allow us to install ESL63s, now succeeded by 2805s. The reaction of friends (including professional musicians), who hear the system is always one of astonishment that such natural sound can be achieved. Yet, in your *Buyer's Guide*, which lists 60 speakers costing over £1,000, there's just one planar, the Magneplanar 1.6. To thousands of enthusiasts for electrostatics of various brands that must seem absurdly biased. No doubt the best conventional speakers suit much rock and pop music better, but needs and tastes are more widely varied and a well-balanced *Buyer's Guide* ought surely to reflect that.

Robin Briggs, via email

HFC: In an ideal world, our *Buyer's Guide* would be enormous and all encompassing, featuring everything we've ever reviewed, as long as it was still current product. Unfortunately, however, the guide has a limited pagination, to give us space for reviews, features and the rest of the magazine! Because space is limited, we have to remove some the older entries each month, to make way for the new additions.

Sadly, this means there are casualties as some great, but ageing products make way for the latest newcomers who have scored highly enough to earn a valuable place in the *Buyer's Bible*.

That said, we promise to take a look at our speaker listings again and if there is an electrostatic model we've tested recently (that's still current), we'll endeavour to redress the balance.

LETTER OF THE MONTH

What a lovely pair

PRIZE
WINNER!

Bi-amping in a box: NAD's affordable and effective C245BEE power amp



I WOULD LIKE to know (if there are any) the benefits of stereo bi-amping. I recently posted a thread on a well known hi-fi forum on this very subject and it caused quite a stir: roughly a fifty-fifty split! Some respondents gave apparently scientific evidence, to some degree against. The rest simply said that they absolutely hear a difference for the better.

In my Musical Fidelity system, I noticed immediate and obvious improvements in soundstaging and the speed and depth of the bass. Could you please shed some light on this subject?

Craig, via email

HFC's Richard Black replies:

Bi-amping works on the basis that each power amp has to deliver power over a narrower frequency range and, of course, slightly less power than in the single-amp case. But across the vast ranges of amps and speakers the benefits are not uniform. In some cases the difference may be imperceptible and, on the odd occasion, it happens that bi-amping performance is slightly worse than single-amping.

WIN A RUSS ANDREWS POWERMAX MAINS LEAD WORTH £45!

Letter of the Month winners will receive an impressive Russ Andrews PowerMax mains lead worth £45, so drop us a line now: hifichoice@futurenet.com



How we test

Hi-Fi Choice employs the most rigorous test and measurement regime in the business, here we explain why our verdicts are beyond compare



Hi-fi reviews

No other magazine offers a more reliable standard of hi-fi testing. Technical Consultant **Richard Black** explains...

EXPERT TESTING

FOR OVER THREE decades, *Hi-Fi Choice* has been trusted for its combination of subjective and technical review expertise. The crucial consideration for any audio component is how it sounds, but it is important to back this up with laboratory measurements for many reasons – everything from the wish to check basic performance to the possibility of uncovering peculiar behaviour under conditions, perhaps slightly different from those of the subjective tests.

Listening

Subjective testing doesn't necessarily require the world's sharpest ears. What's more important is the experience to analyse the sound arriving from the hi-fi and this is where our subjective reviewers come in: they have been listening critically to audio equipment for aeons and have learned to identify the characteristics that make kit informative, involving or just plain dull.

Measurement

But even the most experienced listener, with a stack of familiar recordings heard in familiar surroundings, can't always know what is causing a particular

characteristic in the sound. Brightness, for instance, may be a function of frequency response or distortion and this is where measurements come in. We analyse a range of parameters to see just where the correlation lies between sound and design. Our test equipment has been tried, tested and added to over the years and again our experience with it is unrivalled.

Straightforward presentation

We call on that experience to boil down the measurements to simple bar charts, which show at a glance how well a component behaves relative to others in its category. It's this combination of subjective and technical expertise that makes our reviews the most useful in the field.

“crucial consideration for any audio component is how it sounds, but it is important to back this up with laboratory measurements...”

OUR AWARDS



EDITOR'S CHOICE: Awarded to those products that are judged to deliver reference-standard performance



RECOMMENDED: The products we feel meet a certain high standard of performance



GROUP TEST WINNER: Comparative tests can only have one true winner, and this badge says it all

STATE-OF-THE-ART HI-FI TECH

HFC's test equipment is the most advanced kit available



AT HI-FI CHOICE, we have access to some of the most advanced test equipment currently available on the market, including the Audio Precision APx585, which you'll find in the labs of many top hi-fi manufacturers. The 585 can be configured to test a variety of key hi-fi products, such as amplifiers, CD players/DACs and – with the help of a specially-calibrated microphone – loudspeakers.

In conjunction with some conventional lab equipment at our disposal, the 585 will also be used to test analogue playback equipment including phono stages and turntables. These objective measurements – which conform to recognised industry standards – are designed to complement subjective evaluations such as the listening panels organised by our internationally respected reviewers.

The standard of our test facilities is unrivalled in the UK press. Quite simply, no other magazine offers this level of cutting-edge testing, making the verdicts in *Hi-Fi Choice* the only ones you can really trust.

Unrivalled group tests

Hi-Fi Choice is the only magazine to offer blind-listening group tests, fully backed up with objective data

BLIND-LISTENING TESTS

THIS CRUCIAL test involves relatively rapid-fire comparisons of the test units for a panel of three listeners who are not aware of which product they are listening to. Levels are accurately matched and the test is conducted with the minimum of distractions, playing the same programme through each system while the listeners take notes of whatever pleases or bothers them.

In this way, an evaluation free of prejudices based on brand, price or appearance can be made, while the different tastes and sensitivities of each listener help round out the analysis and make it more widely applicable. Occasional repeats of kit give a 'sanity check', while years of experience help make the process efficient and reliable.

SIGHTED LISTENING

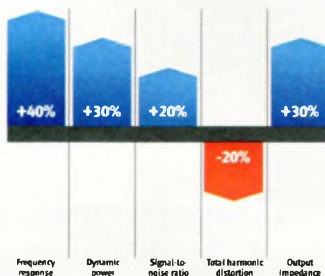
IN ADDITION to the 'blind' test, the author also spends a longer period listening to each system with various items of partnering equipment and a wider range of music. Apart from the obvious fact that this is how most people listen most of the time, this also has the advantage that interesting aspects of the sound can be investigated and different musical

styles tried out to see what works, not to mention experimenting with such variables as listening level.

Long-term reference pieces of equipment (some from past reviews) get substituted for the kit under test from time to time, in order to check on performance relative to the rest of the audio world, while recordings made by the author provide a live reference.

TECH LABS

RESULTS AT A GLANCE



THE POINT of lab tests is twofold: first, to establish basic operating criteria for the equipment and make sure it will work under likely conditions of load, input level etc. and second, to find out what lies behind the subjective observations noted. To this end, all the units in this group were checked for maximum output power and response flatness using basic analogue test equipment – signal generator and AC level meter, plus an oscilloscope to look for the onset of overload.

Other parameters were measured using a high-performance analogue-to-digital converter connected to a PC, with the data analysed digitally to show up such characteristics as distortion (including total harmonic distortion) plus intermodulation and digital aliasing distortion.

Finally, five basic parameters are summarised for each unit in our unique bargraphs:

FREQUENCY RESPONSE

Amplifiers should have a response that's flat within a small fraction of a dB. We test this by sweeping a signal across the band and noting the largest deviation.

DYNAMIC POWER

The basic power measurement is continuous sine-wave power into eight ohms. However, we also take into account short term delivery into normal and low-impedance loads.

SIGNAL-TO-NOISE RATIO

Ideally, amplifiers should have a better SNR than any source they are likely to be fed from. This means the target is about 100dB – noise should be at least 100dB below maximum output at typical volume settings.

TOTAL HARMONIC DISTORTION

We measure this in the midband, with the power amplifier driving near-full power into an eight-ohm load, but our bargraphs also take into account performance at other output levels and frequencies.

OUTPUT IMPEDANCE

A low output impedance means good control of speakers, while a high one can lead to response irregularities. We measure this by examining the degree of output 'sag' when a load is applied to the amplifier.

TESTING EQUIPMENT USED

Source: Pink Triangle PT Export/SME309/Highphonic MC-A3/Cambridge Audio Azur 640C/Stello DA100 DAC

Speakers: •B&W 803s

•ATC SCM20

•Rogers LS3/5A

Cables: Wireworld, Furukawa, van den Hul

TEST MUSIC USED

LED ZEPPELIN:
BLACK DOG



DICK HYMAN:
PLAYS FATS WALLER



MOREAN:
SYMPHONY G MINOR



THIS ISSUE'S BLIND PANEL

This month's panel of experienced listeners from within the industry are:



ED SELLEY
JOB: FREELANCE JOURNALIST

ED WORKED IN RETAIL before joining some of the biggest names in the hi-fi industry creating and supporting audio products



ABBAS HUSSAIN
JOB: MANAGING DIRECTOR

ABBAS IS currently the main man behind Wireworld UK, but was also involved with Orelle, a maker of fine amplifiers

DEFINITIVE VERDICTS

No other magazine offers an equivalent listening programme

Few, if any, magazines in the world can equal our dedication and thoroughness in combining blind and sighted listening with extensive lab tests and detailed internal examination of equipment passing through our hands. Each of these is equally important and it's not just that we do them – we also bring to the table decades of audio experience.

Our listeners in the *Blind-Listening Group Tests* for example, are experts from within the hi-fi industry. Each and everyone of them is used to listening critically during product development and initial product testing. In fact many of them also get involved in making recordings and their own music.

One of these is *HFC's* Technical Consultant Richard Black, who has been involved with designing, testing and evaluating audio equipment for a quarter of a century.

It's the culmination of all the aspects mentioned on these pages that makes for the most reliable hi-fi verdicts in the business.

TESTED THIS MONTH: PRE/POWER AMPS
TURN OVER NOW!

FOR THE MUSICIAN IN YOU



The London Music Show is the UK's biggest and most inspirational event for anyone with a passion for making or playing music. All abilities. All genres.

Guitars | Drums | Sound technology | Music production | Unplugged |
See top live acts | Meet iconic musicians | Learn new techniques |
Buy the latest gear | Demo the coolest kit | Beginners' workshops |
Exclusive masterclasses | 100s of exhibitors | 1000s of products

EXCITING | INTERACTIVE | UNMISSABLE
www.londonmusicshow.com

Bringing music to life



**London
Music
Show** 2010
8-10 October / ExCeL London

Blind-listening Group test

PRE/POWER AMPLIFIERS £1,500-£2,900

Max your music!

Can a step up to good-quality pre/power bring real sonic gains? **Richard Black** investigates

WE DON'T OFTEN feature two-box amplifier systems in our *Blind-listening Group Test*, mostly because there simply aren't that many of them around. Recently, however, there's been a small, but significant move back towards separate pre- and power amplifiers, after a period in which the integrated apparently reigned supreme at price points to well over a grand. There's no blindingly obvious single reason for that, but we're not complaining.

Quite the opposite, in fact. There always was plenty in favour of two-boxers and it's nice to see some of those advantages returning to the affordable end of the market. The most obvious is that you can have a relatively modest-looking preamp on view somewhere handy, while the power amp hides its bulk out of sight. But it's also very useful to keep speaker cables short and given what a decent set of speaker wire can cost that's both a sonic and a financial gain. (Yes, you need longer interconnects, but those tend to be less detrimental and less pricey.)

And with the resurgence of LP, a preamp with a built-in phono stage will always have a better time of it than a powerful integrated ditto, because there will be a smaller mains transformer with less stray field and less current floating around the unit in general.

"There's been a small but significant move back towards separate pre- and power amps."

Then there's the business of upgrading a few years down the line. Only having to replace half the amplifying system is clearly preferable to replacing the lot. By the same logic, there's near-infinite scope for mixing and matching preamps and power amps and it's worth pointing out that practically all preamps currently available are entirely compatible with practically all power amps, at least in terms of audio signal levels.



PRICING

Ranging from £1,500 (Astin Trew) to £2,900 (Tsakiridis Devices), this group covers the cheaper end of amplifier separates. It's good to report that one can see pretty clearly where the money has gone and while the Astin Trew in no sense looks cheap, it doesn't offer the features of the Cyrus, say, or the vast power reserves of the NAD and Rotel. Tsakiridis's offering trades on sound quality and hand-built construction, but even so it offers a decent five inputs and remote control, quite a rarity with valve amps even now.

ON TEST



Astin Trew AT1000/AT5000
£650/£850 **P37**

A combination of valve and solid-state amplifying devices in both preamp and power amps is something of an AT trademark and is likely to provide distinctive sound. Designed in the UK and built in China, these are remarkably good-looking products with a good, no-nonsense specification. Power is fairly modest.



Cyrus Pre XP D/8 Power
£1,350/£875 **P39**

We use the word sparingly, but this preamp may really be just about the ultimate in flexibility, with six analogue and five digital inputs. Both it and the power amp have various upgrade options available and although their most obvious home is in an all-Cyrus system, they can perfectly well partner sources from other brands.



NAD C165BEE/C275BEE
£650/£900 **P41**

The latest designs by Bjorn Erik Edvardsen, these amps seek to uphold the NAD tradition of performance at budget prices. Some concessions to price can be seen in the construction, but the feature count is impressive and the power amp is well equipped to drive demanding loads to high levels, day in, day out.



Parasound P3/A23
£800/£900 **P43**

The Parasound brand is not so well known in this country, but has a strong following in its home, the USA. These Taiwan-built amps bring subtly distinctive looks to the party, together with a strong set of features and very good build quality. The preamp is the only one here to offer both phono input and a balanced line input.



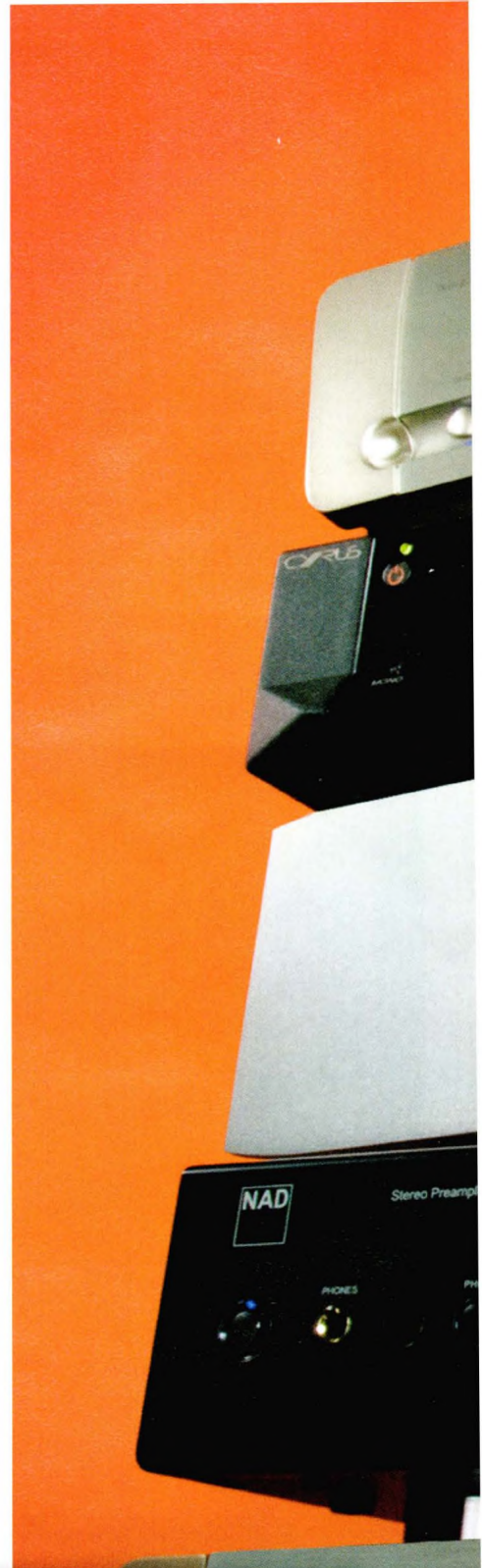
Rotel RC1580/RB1582
£1,000/£1,100 **P45**

Rotel has seriously upped the ante on the power output front here, with a 200-watt rating, which is still distinctly conservative. The preamp is well equipped and includes one of the best built-in phono stages we've come across, based on a particular op-amp chip of excellent performance but highly priced.



Tsakiridis Devices Alexander/Artemis
£1,450/£1,450 **P47**

All-valve units are all about electronic simplicity, with only the bare minimum of signal-path components to get the job done. That said, the Artemis still manages to offer output stage options and adjustable feedback. Construction is distinctive, based on polished stainless steel, though the graphics are a matter of taste!





Somehow Coventry didn't seem such a bad place after all



Pro-ject
AUDIO SYSTEMS

Worth the odd sacrifice.

Distributed in the UK by: Henley Designs Ltd, 01235 511166
www.henleydesigns.co.uk, e-mail - info@henleydesigns.co.uk



Astin Trew AT1000/AT5000 £650/£850

Confident duo packs a punch with all types of music, but is less subtle with more complex melodies

DETAILS

DISTRIBUTOR:
Astin Trew
TELEPHONE:
01491 629629
WEBSITE:
astintrew.co.uk

Astin Trew is a young company which we've watched develop with increasing admiration.

We'll come to the all-important sound performance in a few paragraphs, of course, but we would be remiss if we didn't praise the company for the highly professional look and finish of its amplifiers: these are really very smartly made units that, clichés aside, genuinely transcend their price tag. Most of the manufacturing process is carried out in China, but AT has done its homework and attended to all sorts of details.

And the insides have hardly been skimped on, either. For a start, the AT5000 is a fully dual-mono power amp, right down to mains transformers – two hulking great toroids, each feeding a bank of smoothing capacitors after some low-noise Schottky rectifiers. The amplifying circuit uses a variety of devices, including a single valve per channel, small-signal transistors and a pair per channel of output MOSFETs, which are fixed to each side panel for heatsinking. Rated power is quite modest for the size.

Over at the preamp, good-quality construction remains a theme. All

components are through-hole types and again there are a couple of valves in evidence as well as a lone dual op-amp which, like the electronic volume control chip, sports a tiny heatsink. One minor annoyance concerns volume steps, which as so often are fine over the top (mostly useless) part of the range and coarser lower down. Six line inputs (including the front-mounted MP3 mini-jack) should cater to most users.

Sound quality

If our listeners didn't entirely go overboard for this combination, they did find some nice things to say about it. Its presentation was felt to have plenty of drive and well-extended bass, while the treble is extended and open. The main problem seems to be precision, in the most general terms. Both in the bass and in the treble, there is a slight lack of control which lessens impact and smudges detail, making the sound frustratingly hard to focus on.

This is a real shame because there are clearly aspects to the sound that are excellent. Tonality is very good in the voice ranges, while the unforced bass extension makes the most of sustained low notes from instruments like organ and low brass. Treble is clear and sweet, but too easily upset by densely layered music.

It's a similar story with rhythm. If you hear something simple and rhythmic, for instance an insistent percussion riff at the start of a song, there's great energy to the sound and a real feeling of urgency. When the rest of the band comes in, though, the rhythmic impetus is lost or, at least, very much lessened

and weakening the structure of the music significantly.

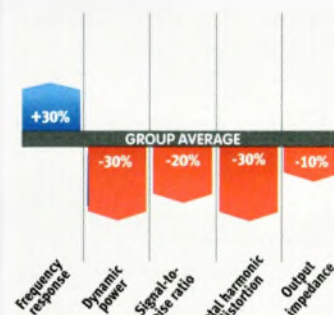
If your tastes run predominantly to small-scale music – string quartets, say, or simple voice-and-guitar ballad stuff – you will be well placed to appreciate what this combination does in the way of tonality and insight. More broadly speaking, though, we find ourselves with reservations about the way it fudges the issue with more complex music.

TECH LABS

LAB REPORT

Experience suggests that a valve or two tends to contribute markedly higher distortion than most solid-state products offer and that's the case here. At high output there's plenty of distortion of just the kind that valves produce. This drops off quite rapidly with level, but as it does so it leaves what it still a relatively high level of higher harmonics, typically the product of a Class AB output stage with a little crossover distortion. Only in the low tenths of a watt region does this disappear and it's likely it has a good deal to do with the lack of control noted by our listeners. Frequency response is excellent, both units effectively dead flat across the audio band, and output power is a little below the manufacturer's figure, with slightly asymmetric clip.

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Beautifully put together and capable of beguiling sounds

VALUE FOR MONEY ★★★★★ **DISLIKE:** Loses the plot when the going gets tough

BUILD QUALITY ★★★★★ **WE SAY:** An attractive product, which seems rather too limited for general recommendation on sonic grounds

FEATURES ★★★★★

OVERALL



DEFINITIVE AUDIO

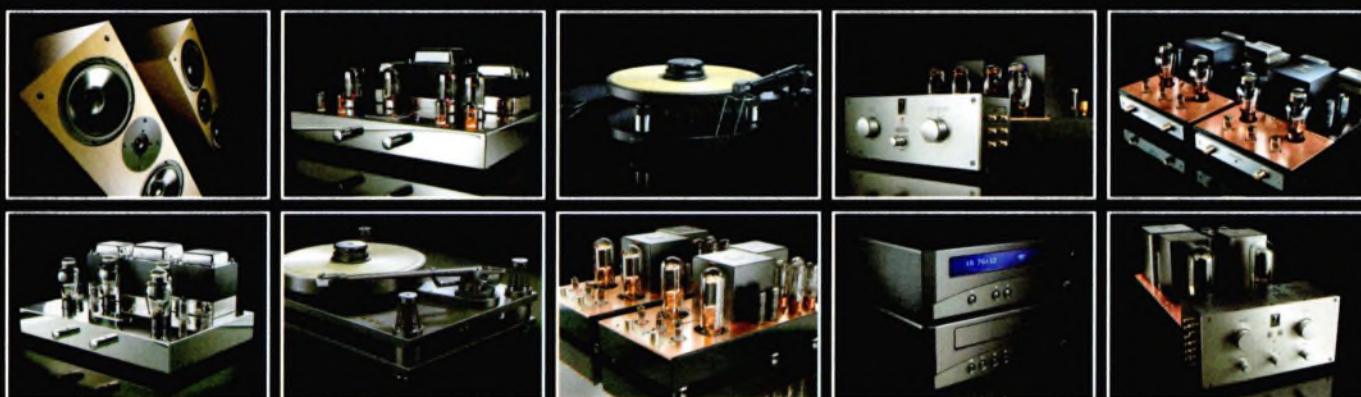
THE WORLD'S FINEST HI-FI SYSTEMS



LIVING VOICE

Loudspeaker Systems

Main image: Living Voice OBX RW loudspeaker in Santos Rosewood



L to R: 1. Living Voice IBX R2 2. Art Audio Concerto integrated amplifier (GE) 3. SME 10 & Series V arm 4. KSL Kondo Negro integrated amplifier
5. KSL Kondo Gakuoh 300B mono amplifiers 6. Art Audio Argento 300B integrated amplifier (WE) 7. SME 2012 & KSL Kondo lo-J cartridge
8. KSL Kondo Gakuon 211 mono amplifiers 9. Resolution Audio Opus 21 CD player 10. KSL Kondo Ongaku 211 integrated amplifier



Cyrus Pre XP D/8 power **£1,350/£875**

A traditional-sounding pre/power amp combi from Cyrus, that works hard to establish itself against the competition

DETAILS

DISTRIBUTOR:
Cyrus Audio
TELEPHONE:
01480 435577
WEBSITE:
cyrusaudio.com

Built, as ever, into the famous Cyrus diecast chassis, these units are picked from among the comprehensive range of pre and power amplifiers in the company's catalogue. To some extent we've chosen an unusual pairing as the preamp significantly exceeds the power amp in price and its usual partner would be the X Power, but apart from anything else, Cyrus offers an upgrade path to take the 8 to X status, so the model chosen initially matters less than usual. In addition, the preamp includes DAC functions so its price can fairly be thought of as including a DAC, as well as an analogue pre.

We mentioned upgrades and this is a major attraction of Cyrus. The obvious one for each of these products is the PSX-R power supply, one of which can be connected to each amp for improved resolution and finesse – it won't do anything for output power, though. To that end, you can switch the 8 Power to mono mode and add another for the other channel, increasing power from 60 watts to well over 100 watts.



On removing the bottom cover of the Pre XP D, the most notable feature is the amount of unfilled space on the main circuit board. The DAC board is separate and the whole lot is powered by a large toroidal transformer. The 8 Power, of course, has rather more going on inside, its circuit made up mostly of discrete transistors and again powered by a large toroid. Output is on BFA connectors, for which you will need suitably terminated speaker cables or adaptors.

Sound quality

Something turned up with these amps that we've found before with Cyrus electronics – they seem to lack excitement, especially in quick comparisons with other, more forward, kit. For some listeners, that's just about the worst sin an amp can commit, but we think that excitement should come from the music, not the equipment and there really is such a thing as too much of it. Some amps (and CD players) seem initially exciting, but ultimately lack insight and fine detail. A criticism one could easily make of these units.

In fact, they are capable of a very high degree of subtlety, as was picked up on very quickly by the member of our listening panel for whom that is of paramount importance. He identified this as one of the most revealing combinations in the test, its character (or lack of it) making it a very honest and straightforward part of the reproduction chain.

So far, then, it looks like a classic case of 'horses for courses'. One further aspect requires comment, though and that's the bass. All our blind listeners felt – as we did, sighted, later – that this is not the

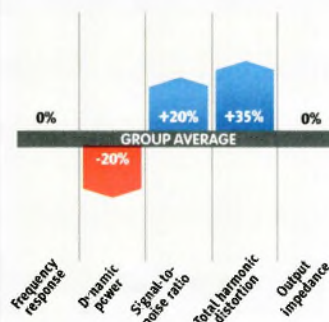
Cyrus's strongest suit. Extension is fine, but there's less impact than one might wish for, less immediacy and less precise control of the loudspeakers. The tuning of low notes is less obvious than it can be, and both subtle and overt sounds lack a little attack. It's not a major drawback and is the sort of thing one can soon become accustomed to, but we certainly wouldn't object if it could be tightened up a little.

TECH LABS

LAB REPORT

You wouldn't expect a huge power output from such a small unit, but Cyrus's rating of 60W is still comfortably exceeded and single-channel power delivery is more like 100W, with brief peaks of, at least, 110W. With respect to distortion of every kind, performance is very good: the raw distortion figure is already good, but what's even better is that it improves as output drops and there's effectively no sign of the dreaded crossover distortion. Even at high frequencies the amps' linearity is excellent. Noise is very low and the response of both units is very even; the quoted roll-off refers to high-frequency loss of the power amp, but the bass of pre and power amps is beyond reproach despite the subjective findings.

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LUKE:** Detailed and subtle, with little character added to sound

VALUE FOR MONEY ★★★★★ **DISLIKE:** For some, those same attributes translate to "boring"

BUILD QUALITY ★★★★★ **WE SAY:** The only real drawback is lacklustre bass, but the resolution is compensation

FEATURES ★★★★★

OVERALL



No compromise sound from *any* system

60 Day
Cable Home Trial

The SuperKord™ - our most advanced mains cable

After extensive research we have developed a new generation of mains cables that gives an astounding improvement over our original range. So good is the performance of the new mains cable that we've christened it the SuperKord™ - fitted with new SawyersDisc Technology™.

The best way we've found to describe the improvements gained with the SuperKord™ in your system is that it brings you so much closer to the performance recorded onto your discs. Singers seem to perform with much more expression, musicians play 'better' and you get a greater sense of the musical message. Using the new cable is like peeling back layers to get right back to the original performance.

But don't take our word for it - try it for yourself. **We are so confident that you will be delighted by its effect that we are offering the SuperKord™ with a 60 day home trial.** Phone us now for more information, or to order yours, on **0845 345 1550** or online at **www.russandrews.com/superkord**

"it's like you are taking a step closer to the musicians."

SuperKord Classic-SD™ Code 1554
1m **£350.00** 1.5m **£377.50** 2m **£405.00**

Order online at
www.russandrews.com/superkord

To request your copy of our **FREE catalogue**, 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 customer magazine *Connected to Music and Movies*, go to **www.russandrews.com/catalogue** or call us on **0845 345 1550**

KIMBER KABLE
Exclusive UK distributor

Russ Andrews®
Solutions for better music & movies

Mail Order Direct • 60 Day Cable Home Trial • Cable Upgrade Scheme • Free Delivery (orders over £100 within UK Mainland)



High quality mains plug fitted with a Russ Andrews fuse for improved connection to the mains supply

NEW mechanical damping in the mains plugs and in SawyersDiscs™ 'tidies up' the high frequencies and reduces glare and splashiness associated with some recordings.

Woven cable geometry for RFI rejection

8 hyper-pure copper conductors insulated with Teflon

BRAND NEW TECHNOLOGY

NEW SawyersDisc Technology™ fitted to each end of the cable enhances the RF-rejecting properties of the cable's weave and is 'tuned' to the cable, terminating it more effectively. *Brings about a more tuneful, musical sound with better detail and resolution.*

Wattgate W350i Ag IEC connector for improved connection to equipment

Where to use it:

SuperKord Classic-SD™ is perfect for:

- ✓ Sources - including CD and DVD players, turntables, tuners
- ✓ preamps
- ✓ LCD, plasma, CRT TV screens, projectors





NAD C165BEE/C275BEE £650/£900

NAD's budget combi looks very promising, but while looks can be deceiving the listening test reveals all

DETAILS

DISTRIBUTOR:
Armour Home
Electronics
TELEPHONE:
01279 501111
WEBSITE:
nadelectronics.com

From the original kings of budget audiophilia, comes a particularly well-equipped preamp and a strikingly powerful power amp, all tastefully presented in traditional NAD charcoal black.

NAD is one of only very few brands to include tone controls, although as our Marantz news feature on p8 shows, they might be making a comeback! There's also a subwoofer output which we don't imagine too many stereo folks using, but the rest of the facilities are very useful. We're particularly impressed with the flexible phono stage, which caters for both MM and MC cartridge and even has adjustable loading.

The C275 BEE power amp is a chunky beast with the option to be used in bridged mode if its normal 150 watts isn't enough for you. It also offers NAD's 'soft clipping' and has a switchable input level control for use with preamps with excessive gain – it would also ease bi-amping with other models of power amp. Like the C165 BEE pre, this is a well built unit, though there's no denying that component quality is less fancy than in many of the other amps in this

group. A notable feature of both units is their use of NAD's own 'Class A gain module', a small circuit board in a metal enclosure which replaces the more common op-amp chip. There are no less than six of these in the '165. The module is made up from surface-mounted components but all the parts on the amps' main boards are through-hole.

Sound quality

Once again, comments from our listeners (who of course didn't know which amps they were reinforcing past impressions of the brand, in particular comments about the energetic though not always perfectly controlled sound. Clearly there's some room for taste here, but the consensus was that the energy was very much welcome and the control not so terribly missed, with the result that much more was said in favour of these amps than against them.

And indeed it does seem that detail is not bad at all, if sometimes just a little untidily presented – but it's still there. This might not be the amplification package you'd want, if you need to know exactly how far behind the speakers every member of a band is standing, but you will still be able to hear plenty about what (and how) they are playing on their instruments. The sound nicely balances the attack and 'bite' of each note with its sustain and decay and there's no sense of panic as more instruments join in and chords get thicker.

There's also a great dynamic flow to the sound, something of a hi-fi intangible but something two

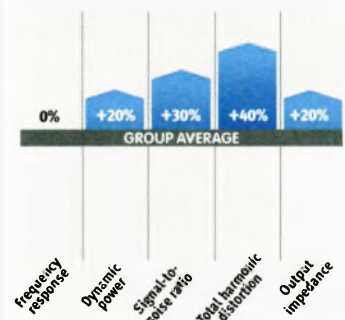
listeners commented on explicitly. This all ties in with the general feeling of energy and drive and does make for quite exhilarating listening, especially at high volumes (obviously a temptation with all that power on tap). Out at the frequency extremes there is good extension: bass could possibly use a little more tunefulness and the treble isn't always quite the sweetest around, but they are both more than creditable.

TECH LABS

LAB REPORT

Precious little to criticise here, with performance somewhere north of very good. Noise is particularly low: our quoted figure is already good but with the volume control turned down it's even better. Taken with the very well-extended treble response (still less than 1dB down an octave above the usual 20kHz limit), that would appear to mark these units out as good partners for high-resolution digital sources. Output power is well above NAD's figure and peaks comfortably exceed 200W. On the distortion front, there's little, if any sign of crossover distortion and harmonics pretty much vanish completely below a couple of watts output. Things are less good in the high treble, though the performance is still remarkable.

RESULTS AT A GLANCE



Hi-Fi Choice

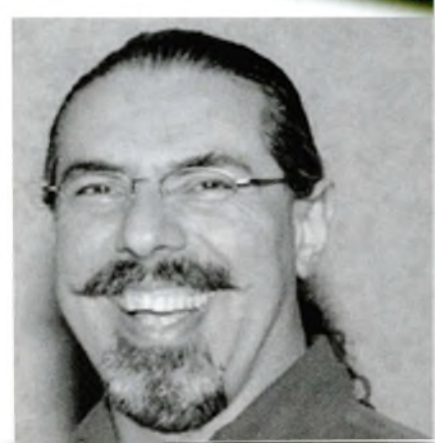
OUR VERDICT

SOUND QUALITY ★★★★★
VALUE FOR MONEY ★★★★★
BUILD QUALITY ★★★★★
FEATURES ★★★★★

LIKE: Powerful, energetic, exciting and well detailed
DISLIKE: Slight lack of control, though it doesn't detract much
WE SAY: An impressive pair of units. Only the most demanding detail freak may find the sound a little rough-edged

OVERALL





Roksan

Warranty Notification

Effective 1st November 2009, all Roksan electronics and turntables supplied via authorised dealers are to be covered by a 5 year parts and labour warranty.* As a gesture to existing customers, this will also be extended to all current owners of K2 products.

In an age where product longevity and second hand resale values are constantly under threat, Roksan wish to reward their loyal customers by allowing their warranty to be transferrable from owner to owner. Thus, the warranty stays with the product from initial date of sale to 5 years old as long as it remains within the country of origin.

* terms available upon request



Distributed in the UK by;

Henley Designs

www.henleydesigns.co.uk,
sales@henleydesigns.co.uk, 01235 511166



Parasound P3/A23 £800/£900

This pre/power duo boasts a sound performance that adds extra dimension to vocals

DETAILS

DISTRIBUTOR:
Invision
TELEPHONE:
01359 270280
WEBSITE:
parasound.com

Parasound is a name which will be familiar to those interested in American audio, but historically it's not had much visibility in the UK.

These two products are part of the company's 'Halo' range, value audiophile products designed in America but built in Taiwan. Very nicely built, too – the cases are well finished and exceptionally solid, while the look and feel are generally first-rate.

The P3 preamp is well equipped with inputs, including a balanced line input and also a phono stage. A little confusingly, the phono alternates with one line input and selection between the two is by rear-mounted toggle switch: another toggle selects between balanced and unbalanced for 'Direct 1'. Two 'direct' inputs are selected by relays and have nothing to do with the (electronic) tone controls, while others are switched electronically. The actual amplifying is done by op-amps, an impressive number of which adorn the main circuit board.

The A23 power amp uses mostly discrete transistors, including three

pairs of output devices per channel, with a large toroidal transformer giving near-dual-mono design. A choice of balanced and unbalanced inputs is given and the amp can be configured in bridged mode for massive (mono) output.

Sound quality

Slightly divided opinion greeted these amps, but the overall impression is of a very musical performance, involving and communicative, with perhaps a slightly underwhelming rhythmic drive. As such, not for the first time, it works better with some music than others. The surprise is in exactly which music seems to work – funnily enough, it went down very well with Led Zeppelin, probably because the only way to undermine the rhythmic content of Led Zep is by completely removing all bass below 200Hz. On the other hand, our more gently rhythmic opera track seemed a little directionless, its less overt beat needing a little more cossetting to work effectively.

Detail is good, clear and unforced, and never verging into the 'dissected' sound that many associate with American high-end. Tonality is generally natural, although some concern was mentioned that piano sounded a little artificial through these amps. Voice is good, though, and harmonic-rich sounds such as violin and trumpet are nicely presented.

Perhaps the most impressive aspect of these amps' performance is imaging, which proved equal to any in the group,

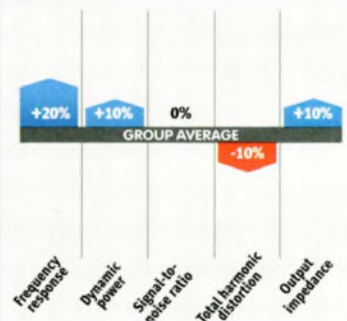
perhaps indeed superior. As one listener commented, the sound really seems to come out of the box, out of the speakers and out of the room – there were clearly performers several yards behind the back wall of the listening room and their position was stable in both dimensions across all the dynamic ebb and flow of the music. Perhaps more than any other aspect, this makes the performance of these amps little short of captivating.

TECH LABS

LAB REPORT

As the numbers show, these amps put out more distortion than most at high outputs. That's almost entirely due to the A23 power amp, which generates quite a few harmonics above the noise floor at high output. However, its performance quietsens down considerably as the level drops and at a more typical day-to-day output of 10W there is only a trace of second and third harmonics visible. In practical terms, this means the performance is actually rather better than the sport figure suggests. Noise is low, if not record-breaking and output is plentiful. Single-channel output is only a little higher than when both channels are driven, but short-term headroom reaches about 180W. The response of each unit is 0.1dB down at both 20Hz and 20kHz.

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Excellent imaging and good detail in general

VALUE FOR MONEY ★★★★★ **DISLIKE:** Not always the most rhythmically lively; slightly synthetic piano

BUILD QUALITY ★★★★★ **WESAY:** A well-featured combination with a good spread of qualities and plenty of power. Phono stage adds to the attraction

FEATURES ★★★★★

OVERALL



ANTHONY GALLO
 ACOUSTICS

ARCAM

ATLAS Cables

audiolab

AUDIOVECTOR

audio

B&W

CHORD

CHORD

CHORD

CHORD

CRESTRON

CYRUS

DHCE

DENON

epos

expresunc

GENELEC

Goldring

GRADO

IMAGE

IsaTek

JVC DORA

KEF

kudos

LINE

Lumagen

marantz

MUSICAL FIDELITY

NAD

naim

meat

ONEVO

Panasonic

PASC

ProAc

Project

Q

QUA

REGA

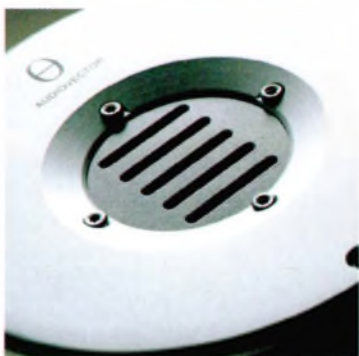
ROTEL

SENDER

spendor

Velodyne

WELLS



HI-FI | HOME CINEMA | AUTOMATED SOLUTIONS

Based conveniently in central Guildford, P.J. Hi-Fi has specialised in the demonstration, provision and installation of quality hi-fi and home cinema for over 20 years. Our dedicated demonstration rooms allow you to listen in comfort to a range of exceptional products, whilst our friendly and knowledgeable staff are always on hand to answer any questions you may have.

Whether you are looking for your first genuine hi-fi system, want to create a bespoke home cinema or wish to distribute music and movies throughout your house, P.J. Hi-Fi can provide a solution to suit all budgets and criteria.

As a truly independent retailer we are proud to say that we hand select, test and scrutinise all the products that we supply, ensuring a consistent standard of quality and reliability over our entire range of equipment.

Drop in today to discuss your requirements or phone / email us to book a demonstration.



Visit our dedicated demo rooms at:
 3 Bridge Street
 Guildford
 Surrey
 GU1 4RY

Opening hours:
 9am-6pm Monday to Saturday

Telephone:
 01483 504801 or 01483 304756

Email:
info@pjhifi.co.uk

Web:
www.pjhifi.co.uk



The only real hi-fi shop in Guildford





Rotel RC1580/RB1582 £1,000/£1,100

An undisputed badge-winner, Rotel promises a great deal for the money and delivers... in spades

DETAILS
DISTRIBUTOR:
B&W Loudspeakers
TELEPHONE:
01903 221500
WEBSITE:
rotel.com

Like NAD, Rotel has for many years steered a careful course somewhere between the vast multinationals (Sony, Yamaha) and the small specialists, as well as managing to maintain a profile associated with distinctive products of good performance and value.

These amps are actually among the more expensive we've seen from the company and it's no surprise to find out that they are the current stereo range-toppers. In terms of basic specification they are well equipped, with the RC1580 preamp offering eight line inputs, plus phono (both flavours), while the RB1582 is a particularly high-powered beast.

But does one actually need that much power for domestic audio? Obviously the answer entirely depends on the speakers, the space to fill with sound and the target loudness. A few spare watts never hurt and the high current delivery, which is also on offer, is often handy for controlling awkward speakers, even at lower levels.

You'll notice that the preamp thoughtfully includes separate

source selection for listening and recording. In order to provide this flexibility, Rotel has had to compromise slightly on the signal switching arrangements, which use relays for listening and an electronic switch for recording. The volume control is a motorised mechanical one, and the (switchable) tone and balance controls also use mechanical parts.

The power amp features a particularly large mains transformer, with separate secondary windings for each channel, plus huge supply smoothing capacitors grounded via a large copper plate.

Sound quality

Even when playing at quite modest levels (the same as all the others in the blind test, decided empirically but well within the envelope of the least powerful here), these amps still manage to put out a powerful and convincing performance. By unanimous acclamation, they rocked harder than any others here and overall achieved the most convincing musical results. The nearest thing to a serious criticism was the mention of slight stridency on piano and other tuned percussive sounds.

Take rhythm, for instance. Right across the board, the sound was felt to have not just excellent drive but also great rhythmic solidity and consistency – it never wavers whatever happens to the musical texture. In part, this is due to the very solid, but also very well-tuned, bass, but the taut midrange clearly also plays a role. Treble is clean and detailed, with very

nice decay into ambience, while the detail is just delightful, clear and precise.

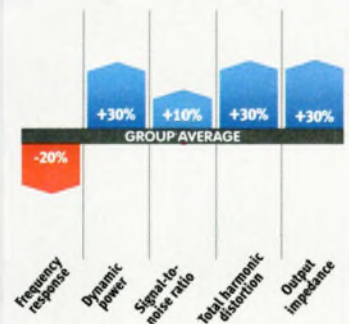
You want more? Dynamics, maybe? They're generous and beautifully judged, on both the small and the large scale – the big swells across a whole orchestra and the little inflections in an individual voice or instrument. Oh, and though it couldn't be part of the main listening as several amps didn't have one, the phono stage is also something of a gem.

TECH LABS

LAB REPORT

With a cool 230W available from both channels at once, this is one of the most powerful amps we've tested in a while. Huge current reserves are available and low-impedance loads can be driven in comfort, although continuous sine-wave operation under such conditions will eventually blow internal fuses, as we found out! We doubt real music could precipitate that, though. Distortion is very low, even at the best part of 200W output, which is quite an achievement. It does creep up a little at very high frequencies, but even there it effectively vanishes below about 10W output – certainly the 'first watt' criterion is well met. Frequency response is very flat in the treble (there's actually a tiny rise from the power amp) and only minutely curtailed in the bass.

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Powerful and great-sounding in all areas
VALUE FOR MONEY ★★★★★ **DISLIKE:** Just the slightest hint of upper-midrange
BUILD QUALITY ★★★★★ **WESAY:** It looks high end and it really sounds the part too. This kind of sonic authority is something to treasure
FEATURES ★★★★★

OVERALL



Guildford Audio

Astintrew
Audio Analogue
>Audio Research
Audiophile Base
Copland
Crystal Cable
Dream Vision
EAT
Gamut

Grado
Heed Audio
Isotek
Jadis
Koetsu
Krell
Lavardin
Martin Logan
Micromega

Mimetism
Music First Audio
Musical Fidelity
Nordost
Ornyko
Plinius
Prima Luna
PS Audio
Resolution Audio

Roksan
Shanling
Siletech
SME
Sonus Faber
Stands Unique
Stax
Sterling Broadcast
Stratton Furniture

Sugden
Sunfire
Theta
Transparent
Velodyne
Wadia
Wilson Audio
Yter
Z-Axis

AUDIO RESEARCH

Raising the bar

DS1200 INTEGRATED AMPLIFIER - 200WPC

ANNIVERSARY EDITION REFERENCE PREAMPLIFIER - AVAILABLE FOR ONE YEAR ONLY.

DS450 POWER AMPLIFIER - 450WPC

ad design: © audiography 2010, GA/HFC-155335

t. **01483 537 577** | m. 07979 515577 or 07810 546103 | e. sales@guildfordaudio.co.uk | www.guildfordaudio.co.uk

Black Rhodium

Improve the performance of your music system with the best cables

Contact our top dealers below to hear and buy your Black Rhodium Cables

<p>Zouch Audio Ashby, Leicestershire 01530 414128 www.zouchaudio.co.uk</p>	<p>Audio Excellence Swansea 01792 474608 www.audio-t.co.uk</p>	<p>H.G. Rapkin Northampton 01604 637515 www.hgrapkin.co.uk</p>	<p>Z Lensman East Grinstead 01342 305103 www.zlensman.com</p>
--	---	--	---

www.blackrhodium.co.uk Telephone: 01332 342233



Tsakiridis Devices Alexander/Artemis

£1,450/£1,450

Variations in performance levels are disappointing

DETAILS

DISTRIBUTOR:
Ikon Audio Consultants
TELEPHONE:
01473 217853
WEBSITE:
tsakiridis-devices.com

New to us in the UK it may be, but Tsakiridis Devices is a brand with over two decades of history. A family-run outfit from Greece, it makes valve-based audio with the emphasis very much on affordability. Many of the basic themes will be familiar to valve aficionados, including the use of simple circuits with little or no feedback, thus ensuring that the valves' character is unchecked, for better or worse.

The Artemis power amp comes with a choice of EL34 or KT88 output valves fitted. Small-signal amplification and drive for the output devices are provided by a pair of 12AT7 valves at the front and the simplicity of the circuit is obvious when one looks inside the case. Of the two large transformers, one is for mains, one for output. Two top-mounted toggle switches give options for more or less feedback and for triode or 'Ultralinear' (tapped primary) operation.

The Alexander preamp is built into a large case, mostly made of polished

stainless steel (as is the Artemis), with a dark plastic front panel. Again, there's plenty of fresh air inside, the audio circuitry requiring just one valve (E88CC) per channel and a handful of passive components. Five inputs are provided, four on phono connectors and one on XLR, but this last is not in any meaningful sense balanced as one side of the XLR is connected to ground: the same is true of the XLR output. The volume control is motorised for remote controllability and input switching is by relays.

Sound quality

It's clear that these amps are much more highly characterised than any others in the group and as such it's no surprise that they divided opinion among our listeners. At best, they sound lifelike and energetic, with good midrange tonality extending up to a clear and sparkling treble. That suits them well to voices and music for smaller ensembles and indeed they play such stuff very convincingly and with a real sense of verve and enjoyment.

What they don't do quite so well is bass, be it transient (percussion, plucked bass) or sustained (heavy orchestral brass). It's not so much that the level is curtailed, but there's rather limited impact and not nearly as much precision as we heard from some others in the group. It all seems rather splashy and approximate, and rhythm – when it depends mostly on the bass, which of course it often does – feels rather sluggish.

Detail is something of a mixed bag, too. Ultimately it is limited, but there's a saving grace in that such detail as comes through is cleanly

presented so the lack is not as keenly felt as it might be. All the same, side-by-side comparison soon enough shows that some of the resolution of, say, the Cyrus and Rotel combinations is missing and familiar recordings seem to lack the occasional little touch here and there.

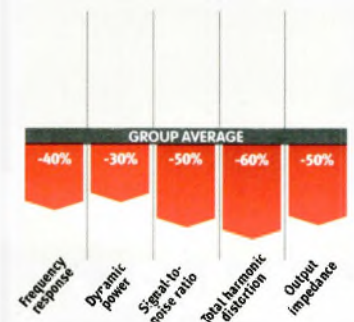
In fact, we felt that ultimately the variations in performance with dynamic level are the biggest failing of these amps. Quiet music is lovely, but we can't recommend £2,900-worth of hi-fi just for that!

TECH LABS

LAB REPORT

Valve amps are often (not always) rather iconoclastic on the test bench and these certainly fall into that category. Output power is not as obviously limited by clipping as is the case with solid-state amps, but 40W seems a fair figure for Ultralinear mode – actually we measured nearly as much in triode mode but it rather depends on one's definition of overload. Distortion is around the one per cent mark from 20W output upwards and, contrary to popular belief about valves, it contains plenty of harmonics. Noise is surprisingly high and we were rather concerned by a level imbalance of a couple of dB between channels. Bass response of both units is slightly rolled off and maximum treble output of the Artemis is limited.

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY

★★★★☆

VALUE FOR MONEY

★★★★☆

BUILD QUALITY

★★★★☆

FEATURES

★★★★☆

OVERALL

★★★★☆

LIKE: Some very good midrange tonality and energy

DISLIKE: Given noise level raises concerns about quality control

WE SAY: An intriguing departure from the norm, but we're unsure about ultimate detail

Conclusions

Pre/powers really do offer gains over integrations and there's one in particular...

SOMETIMES A WINNER just jumps out at us – and so it was with this group. But that's not to say that the others are devoid of merit. Even the rather eccentric units from Tsakiridis Devices have some qualities going for them and despite reservations, we are happy enough to suggest you give them a listen, especially if you are looking for something a little out of the ordinary.

That leaves four pairs with identical overall scores, but very different specific attainments. As so often, personal taste comes into the equation here, not to mention the business of features. Do you prefer the ultra-civilised Cyrus or the energetic but occasionally unruly NAD? Would you rather listen to small-scale music through the Astin Trew, or lively rock through the Parasound? Do the

multiple digital inputs on the Cyrus (which is very decent, by the way) pull you in that direction?

There's also the possibility, with separate pre/power amps, of mixing and matching. We didn't try very much of that during this test (there's little point even starting – just count the permutations!) but at the very least it can serve when features don't match up to requirements. One thing we did establish, to no very great surprise, is that power amps tend to have more character than preamps, a general observation that may be of some use if you do want to mix things up.

We're quite certain, though, that we'd be happy in the long-term company of at least four of these systems, probably five. Standards are high. ●



CD PLAYER:
 Roksan Kandy K2
 £899

A winner in our recent CD players group – assured and exciting in equal measure

LOUDSPEAKERS:
 Magneplanar
 Magneplanar 1.6
 £1,499

Dipole speaker with unusually low coloration – needs plenty of power

PMC FB1i £2,100

Excellent extension at both extremes is complemented by natural midrange

THE WINNER IS...



EVEN THE BRIEFEST scan of our comments and ratings will show, soon enough, that there's a clear outright winner in this group.

Rotel's amps seem to offer a bit of everything, indeed a good deal of everything and more of most of it than any of the others here. They are more than merely competent, and since they also offer as good a set of features as any, recommending them in glowing terms is mandatory. High end on a budget? We'd struggle to think of a better candidate for the term!



RESULTS AT A GLANCE



Make/model	Astin Trew AT1000/AT5000	Cyrus Pre XP D/8 Power	NAD C165BEE/C275BEE	Parasound P3/A23	Rotel RC1580/RB1582	Tsakiridis Devices Alexander/Artemis
Price	£650/£850	£1,350/£875	£650/£900	£800/£900	£1,000/£1,100	£1,450/£1,450
Sound	★★★	★★★★	★★★★	★★★★	★★★★★	★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★
Features	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Conclusion	Outwardly attractive, but rather too limited for general recommendation on sonic grounds	Deserves a protracted listen. Slightly lacklustre bass, but the resolution is compensation	Plenty to enjoy. But demanding detail freaks may find the sound a little rough-edged	Well featured, with a good spread of qualities and plenty of power. Good phono stage	Looks and sounds high end – real sonic authority. Good phono is icing on a tasty cake!	Intriguing, but we've concerns about ultimate detail and also about quality control

Key features

Line inputs	6	6	6	6	8	5
Recording outputs	1	1	2	1	2	1
Phono input	No	No	MM/MC	MM	MM/MC	No
Size (WxHxD, mm)	430x110x340/430x110x340	215x75x365/215x75x365	435x99x300/435x150x370	437x105x350/437x105x350	431x99x337/431x144x407	430x140x400/165x190x410
Weight	6kg/12kg	4kg/4.3kg	6kg/15kg	7.3kg/13kg	7.7kg/17kg	6kg/4kg
Balanced input	No	No	No	Yes	No	Yes
Headphone output	Yes	Yes	Yes	Yes	Yes	No
Rated power output	50W	60W	130W	125W	200W	45W

Lab conclusions E = Excellent | G = Good | A = average | P = poor

Frequency response	0.1dB E	0.3dB G	0.3dB G	0.2dB E	0.4dB G	2.8dB A
Output power	18V/40W A	23.5V/69W G	37.5V/175W E	34V/145W G	43V/230W E	18V/40W A
Signal-to-noise ratio	97dB A	105dB E	108dB E	102dB G	104dB G	88dB P
Distortion	0.3% A	0.002% E	0.0015% E	0.02% G	0.003% E	1.5% P
Output impedance	0.1ohm A	0.08ohm G	0.06ohm G	0.07ohm G	0.04ohm E	1.5ohm P

a lifetime of listening pleasure awaits you



Wadia



Ayre

Davone

STAX

DR. FEICKERT ANALOGUE

almarro

QUADRASPIRE

AUDIO ACOUSTICS



THIEL



MUSICARCH

hi-fi specialists in musical architecture

www.musicarch.co.uk | discover@musicarch.co.uk

01273 607 983 | brighton | east sussex

DEMONSTRATIONS BY APPOINTMENT ONLY PLEASE



Full stream ahead

The Arcam Solo neo is the first 'hi-fi' one-box system to provide network music facilities
Malcolm Steward swops five boxes for just one

The Arcam Solo first saw the light of day around six years ago when most audiophiles had CD as their primary source. That is probably still the case for many but there is increasing demand now for machinery that can handle streamed music, whether it's sourced from the user's home network or from the internet. And streaming ability is what the Solo neo brings to the party.

Naturally, being a member of the Solo family, it also offers CD and

radio capabilities – the latter now including internet broadcasting – along with its integral preamplifier and power amplifier stages. Furthermore, its USB port can play music from local devices such as memory sticks or hard drives, while the duplex RS232 connector offers playback and control of iPods by way of the optional irDock.

Dot matrix

There is no doubt that Arcam's Solo neo is a looker. Only available in

DETAILS

PRODUCT:
Arcam Solo neo

ORIGIN: UK

TYPE: One-box system

WEIGHT:
7.75kg

DIMENSIONS:
(WxHxD)
430x 80x350mm

FEATURES:

- Connections for custom installation
- Matching compact Muso speakers available
- Adjustable bass equalisation to assist with speaker placement
- iPod compatibility through Arcam irDock

DISTRIBUTOR:
Arcam

TELEPHONE:
01223 203200

WEBSITE:
arcam.co.uk

Silver – because black does not flatter its lines so gracefully – the quadrant-shaped edges on the unit's fascia act in a whole that is greater than the sum of the parts to give the unit a thoroughly and classically stylish appearance. Without them the neo would be plain. With them it looks damn sexy.

In the lower half of the fascia there is a dot matrix display panel, which provides information and feedback to the user. Arcam has been thoughtful here and provided double-height lettering on some menu options that is a considerable help for anyone with less than 20/20 vision. It is a shame that the eyesight of those past 40 was not given the same consideration when the tiny lettering and icons on the front panel push buttons were applied in grey paint on the silver background, or when the remote control handset was selected (We did spend some time peering through a magnifying glass trying to find the button to open the CD drawer!).

The Solo neo, considering it starts life as a multiple-source hi-fi system



condensed into a single unit, is nonetheless reasonably well equipped, with inputs for external devices and preamp outputs should you need more power than the integral 50-watt design can deliver. However, Arcam is at pains to insist that if users connect external components to the neo, then they do so with high-quality, well-shielded interconnects. This is so they do not negate the strenuous efforts that the company has put into making its circuitry as quiet as can be by using cables that might act as aerials and introduce electromagnetic interference.

One unusual measure that Arcam employs to counter noise is what it calls Stealth material, which converts high-frequency radiation to heat and is placed above the CD mechanism.

The unit features a Wolfson 24-bit Delta Sigma DAC, that operates natively at 44.1 kHz when the CD input is selected, but switches its sample rate to 48kHz when it is used with the DAB, USB and network sources.

“The ability to reveal low-level detail is what separates exceptional hi-fi from that which is good.”

The output is, by way of a Toslink connector, used as a further method to keep the overall noise floor down through galvanic isolation of the connection to any external DAC or digital recorder.

The neo will operate wirelessly, but for the review we did as we always do and ran it through a wired, Cat 5 connection for the added security and consistent performance this brings. We tested the neo as a stand-alone player through NEAT Petite SX standmount speakers and Chord Company Epic cables and as a feed to two DACs; the inexpensive Cambridge DacMagic and the rather more expensive Naim DAC feeding tri-amped active Naim DBLs to see how it fared under intense scrutiny. In recognition of its good looks it



TALKING POINT

WE QUERIED the maximum resolution of digital media that the neo could handle because this is capped at 24-bit/48kHz. Arcam is primarily targeting the mainstream buyer with the neo and not the hard-core computer audiophile.

The company's research indicates that a majority of potential buyers will find CD resolution files to be more than satisfactory and they will not be concerned if the neo will not handle the relatively small number of 24-bit/96kHz or 24-bit/192kHz files in circulation.

Of greater importance, the neo handles all the popular file formats currently available including WAV, FLAC, WMA, MP3 and AAC.

was parked on the top shelf of a Quadraspire Sunoko Vent support.

Network music sources were a NASrip computer, a NetGear SAN (Storage Area Network) and a VortexBox ripping NAS unit, affording us access to differently stored rips that could furthermore be compared to the original CDs.

Good looking

There is little argument that the Arcam Solo neo is a strikingly good-looking piece of industrial design, one that is surely destined to be displayed proudly in the home and not tucked away out of view.

The neo targets buyers who want separates performance – or close to it – from an all-in-one unit and designing such a device brings with it positive and negative considerations: not the least of the negative elements is keeping the earth plane at zero volts when there are several separate power supplies serving different elements on the circuit board, and minimising noise migrating between the various elements of the design. This goes

Q&A...

SENIOR ENGINEER, ANDY MOORE SPOKE TO US ABOUT THE DESIGN OF THE SOLO NEO



HFC: What were the design hurdles on the neo?

AM: One thing we had to overcome in an all-in-one type unit is the control of radio frequency chatter between the building blocks. For instance, between the delicate audio preamp stages and the electronically noisy-CD drive and servo engines. We also paid a lot of attention to the power supply interaction between the supplies that have to power different parts of the design. We use multiple regulated power supplies and separate windings from the transformer to isolate the independent sections of the design. We pay careful attention to keeping the earth points as clean as possible to ensure that we minimise noise.

Are these proprietary methods?

We have used a range of proprietary damping materials to reduce noise and interference further, like the Stealth Mat and Mask of Silence, featured in the top of the range Arcam FMJ series. These reduce internal RF pollution within the Solo neo and enable the system to dig deep into the low-level detail of a given source and unveil subtleties that are often lost: even in systems that cost a lot more. The difference that this level of engineering brings is far from subtle.

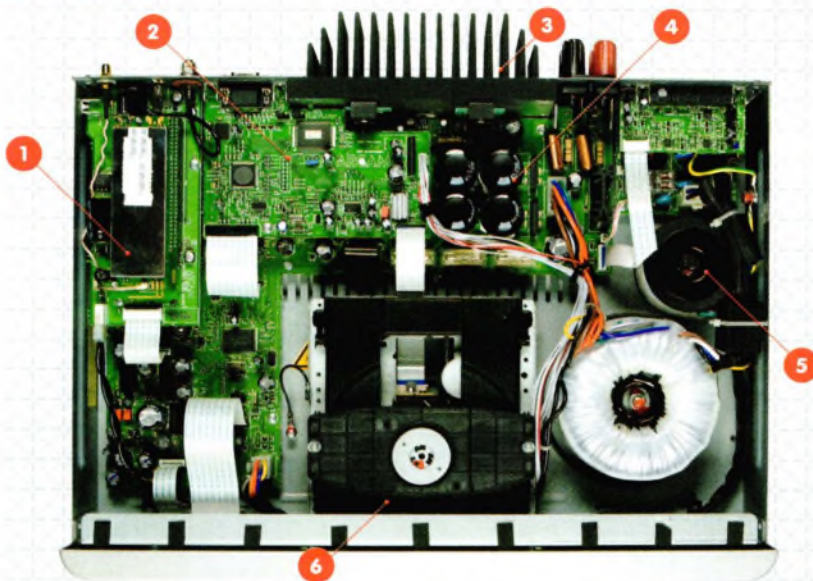
Any new additions?

An important addition to the original Solo platform is the network card, carefully installed with its own independent PSU, which allows the owner to enjoy many thousands of radio stations on the web and customise favourites using the Arcam web radio site (arcamradio.co.uk). The card also allows full interaction with PC audiomediat through wireless or wired Ethernet connections.

So the final intention was to do what?

Arcam's engineers worked hard to keep the Solo neo as simple as possible. The user interface, with its bespoke software, is straightforward and responsive, while the new remote control features improved navigation of iPods. The neo is a big step forward in performance and functionality.

HIDDEN TECH



- 1 Internet radio/network streaming/DAB+/FM module
- 2 High performance digital servo CD engine
- 3 Oversized amplifier heatsink
- 4 Multiple bulk storage capacitance with mechanical damping
- 5 One of two multiple linear toroidal power supplies
- 6 CD drive

beyond simply physically separating the relatively clean analogue stages and the 'dirtier' and noisier digital sections. To minimise noise Arcam has introduced multiple power supplies, using a servo technology to ensure that all zero-voltage points remain at zero volts and do not waver sympathetically with varying demands for power.

An easier to spot performance tweak are the dampers wrapped around selected capacitors. Certain capacitors tend to act like empty drinks cans being struck and resonate, affecting their musical performance through microphony: the dampers act like a rubber band around the can and quell those vibrations.

This might seem a minor consideration, but increasingly nowadays, the performance down close to the noise floor, the ability to reveal nuances and low-level detail, is frequently what separates the exceptional hi-fi from that which is merely good.

Polyrhythmic

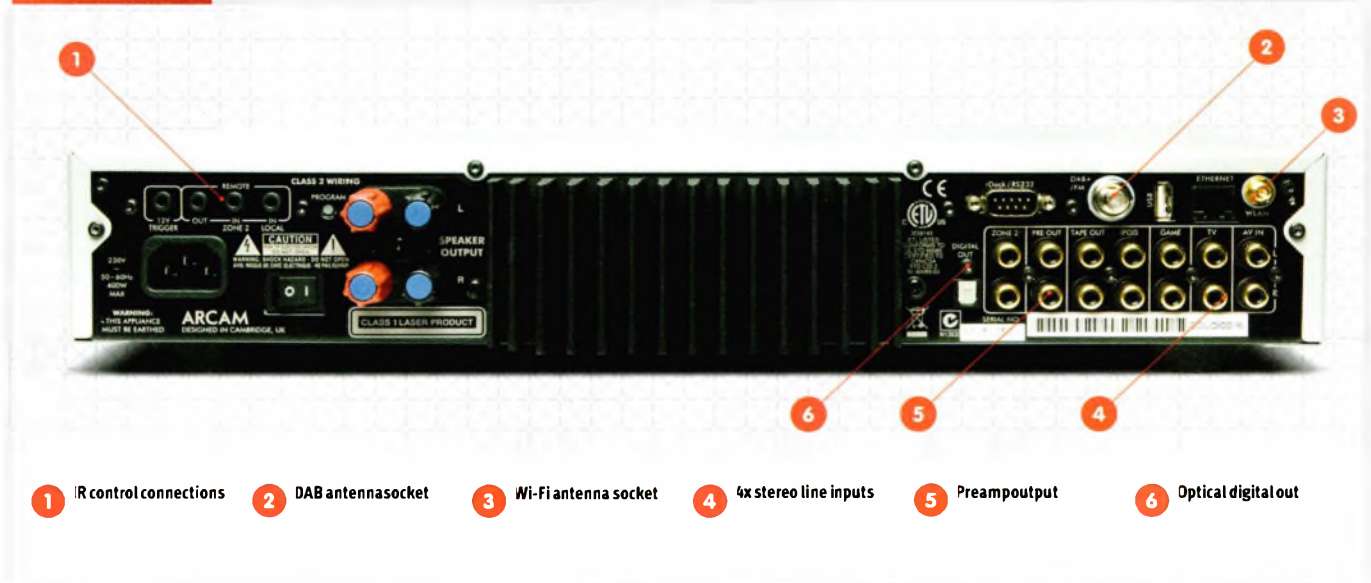
To ascertain what sort of signal the network media components were sending to the neo amplifier section we first listened to the output from the DAC through the big tri-amp reference system. All seemed well with a richly detailed, musically

rewarding performance emerging. The top end has plenty of sparkle and well controlled energy while the bass has speed, power and good note shape and pitch definition. Afro Celt Sound System's *Shadowman* exhibits all its intense instrumental texturing and wealth of detail, while powering along with marked polyrhythmic determination. Switching to the neo's integral amplifier stages, the sound retains the same fundamental character.

The low-frequency performance, however, loses a degree of weight, because the NEAT Petite SX loudspeakers (unlike the active Naim DBLs) do not enjoy the benefits of 15-inch bass units.

Playing Aurelo Martinez' *Laru Beya* and Speed Caravan's *Kalashnik Love*, the neo/NEAT combination impresses with its very generous soundstage and shows a clearly organised instrumental and vocal arrangement spread across a wide, deep vista. On both types of music the system displays excellent transient performance with distinct silences between notes, lending its temporal delivery genuine impetus and a real sense of purpose. Even *Killing an Arab*, which would have been rendered far too politely on early generations of Arcam

CONNECTIONS



1 IR control connections 2 DAB antenna socket 3 Wi-Fi antenna socket 4 4x stereo line inputs 5 Preamp output 6 Optical digital out

electronics, displayed distinct angst and vitality here.

We then played some William Carter baroque guitar, but that is stored on a NAS at 24-bit/192kHz resolution, which the Arcam would not accept. Neither would it play Dawn Langstroth's 24-bit/96kHz *Highwire* album. It could not be troubled to throw up an 'out of range' error message or similar, but just sat there insolently saying nothing.

We found the USB input equally perplexing when we plugged in a memory stick containing a variety of different hi-res tracks, starting with a 24-bit/88kHz recording. It enumerated all of the tracks, but sat dumbly when we pressed the play button. This not a communicative way of dealing with problems such as users plugging in a device with overly hi-res music on it. And 24-bit/96kHz is hardly an extreme resolution these days.

The neo seems thoroughly content with orchestral music and big-band jazz, using its copious soundstage to particularly good effect on the Frank Sinatra *Duets* album. It also enjoys smaller-scale recordings equally, giving voices and instruments plenty of room in which to manoeuvre and allowing the listener to choose whether to focus on one or all of them

The performance on internet radio is excellent, with outstanding clarity and freedom from coloration on Radio 4 announcers' voices. Those voices demonstrate extreme detailing and remarkable realism with very little sense of artificiality.

The CD player, too, performs delightfully, sounding scrupulous in its information-retrieval and fluent in its musical communication. Sia's *Some People Have Real Problems* was completely engaging, both in terms of her impassioned vocal performances and the

HOW IT COMPARES

WE COMPARED the £1,350 neo to the £2,100 Naim Uniti, which offers near-identical facilities – CD replay, radio and suchlike – but will handle files up to 24-bit/96kHz resolution. The patently obvious differences between the two are the aesthetics: the Arcam looks suave and androgynous, like a Justin Timberlake, while the Naim has all the polish and poise of Lemmy from Motorhead. That comparison also applies to their musical performances. We found that we could work and listen to the neo, but when the more costly Uniti was playing it was difficult to concentrate on anything other than the music. We also feel that the Uniti hangs on more determinedly and sounds more composed at high volume replay levels. Neither unit, though, seems to relish being pushed too hard.

recreation of her backing band's skilful playing. The decay on the drumkit, in particular the way cymbals faded gently into silence, warranted recognition for Arcam's seemingly successful efforts in lowering the noise floor.

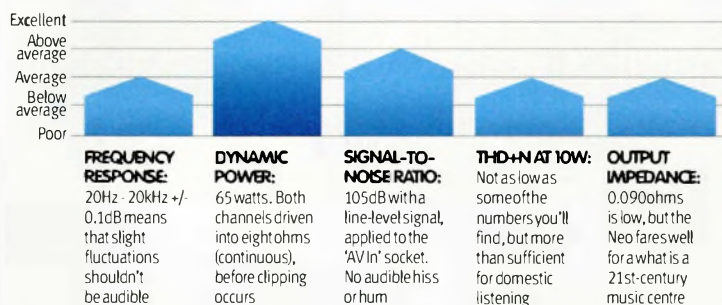
No-brainer

The Solo neo is a very capable performer and would certainly trounce most older separates, but whether it truly competes with today's finest is a moot point: it rather depends upon the particular makes and models to which it is compared. That said, the neo is a noteworthy achievement, however, a compact and highly attractive, multi-function unit that can take the place of a rack full of boxes and cables if needs be.

Certainly, if you're looking for a convenient system, it seems a no-brainer thanks to amazing performance and versatility. ●

TECH LABS

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** The industrial design and aesthetics are striking.

VALUE FOR MONEY ★★★★★ **DISLIKE:** The UI could be more communicative, when asked to play media beyond its capabilities.

BUILD QUALITY ★★★★★ **WE SAY:** A solid performer, the neo's interface could be better, but internet performance is a delight.

SPECIFICATIONS ★★★★★

OVERALL





Affordable Xcellence

Kudos's £2k Cardea C2 was a finalist for 'Best Speaker over a £1,000' in last year's HFC Awards. **Paul Messenger** looks at a bright newcomer

Kudos might be a relative newcomer on the British loudspeaker scene, but it has rapidly established popularity among dealers and customers alike. And that's in spite of the fact that its original Cardea range of floorstanders and standmounts carry quite substantial price tags.

Made in England

The basic idea behind the new X-series is to provide Kudos quality at rather lower prices. However, the £1,350 asked for a pair of these X2s does seem quite hefty in a marketplace where the lower price end is dominated by models produced in the Far East. The X2, therefore, does seem quite costly when compared, say, to the Malaysian-built Radiance 2 from Acoustic Energy (HFC 334), but that seems to be the price premium for using UK and European-sourced components. The question must be whether any advantages in presentation and sound quality help to offset that price premium.

Pure simplicity

This is a simple two-way floorstander, essentially devoid of unnecessary frills, as much in the interests of sound quality as in keeping the costs down. Although there are certain advantages in going to multi-way systems, most of those only really become apparent when a system is being played at fairly high sound levels. At normal listening levels, the simplicity of the two-way may well be advantageous.

Furthermore, all the essentials are in place here and the ingredients, including English cabinetwork, Norwegian drive units and crossover components from UK suppliers Clarity Caps and Volt, are exceptional.

The drive units, tailored by SEAS for this application, consist of a 150-millimetre cast-frame bass/mid unit with a 95mm-diameter flared

and doped paper cone, which crosses over to a 25mm fabric-dome tweeter.

Extended footprint

The sharp-edged enclosure is built up from 18mm MDF and comes wrapped up in a wide choice of mostly real wood veneer finishes – black, cherry, maple, oak, rosenut, walnut and satin-white.

This is a very compact loudspeaker, just 170mm wide and 780mm tall, so the addition of a pretty little black painted plinth, cleverly shaped with some chamfering, extends the footprint and ensures good basic stability even when the spikes are fitted. Small optional vestigial grilles covering just the drivers are held magnetically in place.

One unusual feature is that the spikes used here are locked by plastic thumbwheels, an arrangement that proves very effective, both in keeping the spikes tight and also avoiding stripping the mounting sockets. The plinth is attached to the enclosure proper via spacers, allowing the reflex port that's fitted into the base to operate. Signals are fed via a single pair of multi-way socket/binder terminals.

Surprise package

The measured findings might lead one to believe that this floorstander would put in a rather indifferent performance, but that wasn't the case at all. Mounted well clear of walls, as the in-room measurements indicated, the X2 delivers a surprisingly entertaining performance that belies its measured unevenness.

Driven by a high-class system, based mostly around Naim amplification components, the sound is lively, coherent, expressive and quite dynamic, with little of the 'boxy' or nasal colorations that the measured unevenness might lead one to expect.

The relatively small size of the bass/mid drive unit was evident in the significant harmonic distortion

DETAILS

PRODUCT:
Kudos X2
ORIGIN: UK
TYPE:
Two-way floorstanding loudspeaker
WEIGHT: 12 kg
DIMENSIONS: (WxHxD)
166x780x206mm
FEATURES:
• SEAS-sourced bass/mid driver
• Grille magnetically secured
• Compact enclosure
• Downward-firing ports
DISTRIBUTOR:
Kudos Audio
TELEPHONE:
0845 601 9390
WEBSITE:
kudosaudio.com



WHILE KUDOS only claims a sensitivity of 86.5dB, our tests suggest that 88dB is closer to reality, which is a rather generous figure in view of an amplifier load (impedance) which stays comfortably above six ohms throughout. However, it's difficult to be precise about the sensitivity because the overall in-room, far-field averaged frequency response is rather uneven. The port is tuned to around 45Hz, very close to a major room mode, so the in-room bass alignment under our conditions was marred by excessive 50Hz output.

Elsewhere, output is a little lean 70-130Hz, rather strong 140-280Hz, and a little lean again 300Hz-1kHz. The most worrying feature, however, is a very obvious -6dB dip centred on 1.5kHz, following after a minor peak around 1kHz, while the extreme top looks a shade strong.

While the impedance shows a well-controlled characteristic and a decent pair match, there are a couple of resonant wrinkles, most obviously around 220Hz, and again at 1.2kHz.

that was produced when feeding the speakers with high-level 20Hz sine waves in order to carry out the in-room measurements.

Despite its lively coherence, this is not a particularly sweet-sounding speaker and it can become a bit aggressive when being driven hard. However, it's the top end where this starts to become most apparent and at anything like normal listening levels this didn't prove to be a problem.

Indeed, the midband and top end are this speaker's real strengths, delivering music and speech with fine coherence, good timing and plenty of brio and enthusiasm that makes the X2 a thoroughly entertaining listening experience.

“Mounted well clear of walls, the X2 delivers a surprisingly entertaining performance that belies its measured unevenness”

The bottom end is rather less impressive, lacking a bit of warmth and rather more in the way of grip and authority. Its net energy level here is about right to match up with the mid and treble, but definition, poise and timing are less than the best, so the overall effect is of a speaker that leads with its midband and top, leaving the bass as a bit of an afterthought. Depth also seems a shade constrained when playing naturally recorded choral material.

Inevitably, in view of the ingredients, the X2 does have its limitations. Although the measured behaviour might have been better, the sound quality is what really matters, and here the X2 is always involving and entertaining, providing the volume level isn't pushed too hard. ●

Hi-Fi Choice

OUR VERDICT

<p>SOUND QUALITY ★★★★★</p> <p>VALUE FOR MONEY ★★★★★</p> <p>BUILD QUALITY ★★★★★</p> <p>EASE OF DRIVE ★★★★★</p> <p>OVERALL ★★★★★</p>	<p>LIKE: Floorstandersounds lively, coherent, informative and entertaining</p> <p>DISLIKE: Quite pricey, lacks overall smoothness and bass end grip and authority</p> <p>WE SAY: Pricetagreflects UK manufacture and top-quality components give a lively and informative sound</p>
---	--

It's a breeze to buy high-end gear at www.coolgales.com.



Clearaudio Innovation Wood
turntable, £6250

With mag bearing, speed control. "A superb way of playing vinyl that never draws attention to itself." (*Hi-Fi World*) **ON DEM**



Transfiguration Orpheus L
cartridge, £3400

New 1 Ohm internal impedance version. "Totally natural rendition of music." (*Hi-Fi News*) **ON DEM**



Graham Phantom II
tonearm, £3550

Interchangeable armtubes. "A masterpiece of craftsmanship and design savvy." (*The Absolute Sound*) **ON DEM**



Scheu Laufwerk 2 turntable, £4350

Massive 80 mm platter, Papst motor. "Reference quality...reference quality looks." (*TNTAudio.com*) **ON DEM**



Zyx R-100 Fuji
cartridge, £1450

High-purity crystal copper coils. Supremely lucid, precise, transparent.



SME V tonearm, £2180

The all-time classic. "Perhaps the last great flowering of the tonearm designer's art." (*Hi-Fi News*) **ON DEM**



Michell Gyro SE turntable, £1135

The classic John Michell design. "Should appeal to anyone looking for a high-end deck." (*Hi-Fi News*)



Lyra Delos cartridge, £895

Replaces Argo i. A new standard for mid-range low-output moving coils. **ON DEM**



Clearaudio Unify tonearm, £1360

Phenomenal unipivot, available in carbon-fibre and wood versions, 9, 10, 12, and 14 inch lengths.



Pro-Ject Xpression III turntable, £435

Gloss black base, acrylic platter. "Better imaging, better ambience and dynamics." (*Hi-Fi News*)



Sumiko Blue Point Special EVO III
cartridge, £239

A favourite high-output moving coil. "A big helping of moving-coil goodness." (*The Absolute Sound*)



Thomas Schick tonearm, £995

"The question is no longer *Will this stand alongside my other, more expensive tonearms?* but, rather, *Do I really need more than this?*" (*Stereophile*) **ON DEM**

Plus other turntables from
Acoustic Solid
Clearaudio
Michell
Pro-Ject
Roksan
Scheu
SME
VPI

Plus other cartridges from
Audio-Technica
Brinkmann
Cartridge Man
Clearaudio
Denon
Goldring
Grado
Lyra
Ortofon
Sumiko
Transfiguration
Zyx

Plus other tonearms from
Clearaudio
Hadcock
Michell
Ortofon
Pro-Ject
Roksan
Scheu
SME
VPI

Cool Gales, hi-fi made easy. Give us a click. Give us a call.

≈ COOL GALES



Keith Monks Omni Mk VII record cleaning machine, £3295

Cleans all size records. "If you're looking for the best, well, here it is." (*Stereophile*)



Aesthetix Rhea phono stage, £3900

Ten valve design. "A sense of palpability and immediacy that recalls the magic of live music." (*The Absolute Sound*) **ON DEM**



Eclipse TD-712z Mk II speakers, £5295

Now available in piano black. "More life-like and cohesive than just about anything you can buy." (*What Hi-Fi?*) **ON DEM**



Loricraft PRC3 record cleaning machine, £1395

The standard for serious vinylphiles. "Even brand new, sealed records benefit." (*PositiveFeedback.com*)



Leema Acoustics Agena phono stage, £2995

Reference unit with two inputs, fully adjustable. Integral DAC with USB port. **ON DEM**



Esoteric X-05 SACD/CD player, £4495

Awesome one-box unit. "There aren't enough superlatives to describe this machine." (*The Absolute Sound*) **ON DEM**



VPI 16.5 record cleaning machine, £575

Our most popular budget unit. "An essential component." (*Hi-Fi+*)



Whest PS.30RDT phono stage, £2799

Dual transformer, dual mono. "A brilliant all round design." (*Hi-Fi World*) **ON DEM**



Stax SR-007 II SE Omega System headphones and amp, £3195

Hand-selected valves. "If I have to go through life with only one of the Stax amps, give me the tubed SRM-007t." (*Stereophile*) **ON DEM**



Record Research Lab record cleaning fluids, £19.95

The gold standard for use with record cleaning machines. Always in stock.



Pro-Ject Tube Box II phono stage, £310

Great valve unit. Budget version of acclaimed Pro-Ject Tube Box SE.



Nordost Red Dawn cabling, from £275

Superb price/performance. "Cleanest, quickest and most natural wires I've yet to hear." (*SoundStage.com*)

Plus other analogue care products from

L'Art du Son
Clearaudio
Goldring
Keith Monks
Last
Loricraft
Lyra
Milty
Moth
Onzow Zerodust
Ortofon
Roksan
Scheu
Sumiko
VPI

Plus other phono stages from

Aesthetix
Clearaudio
Esoteric
Graham Slee
Leema Acoustics
Lehmann
Lyra
Pro-Ject
Thomas Mayer
Whest

Plus great audio gear from a huge, and ever growing range of manufacturers. Visit our website for **reviews, brochure downloads**, and details of our **30-day money-back guarantee**.

www.coolgales.com

0800 043 6710

The Victoria School House ≈ Bath



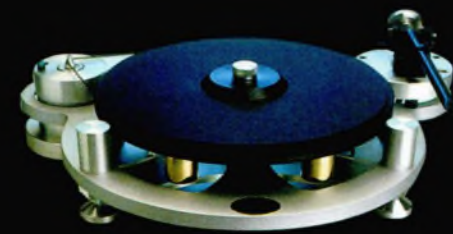
BRITISH DESIGN AND
ENGINEERING AT ITS BEST

After 35 years, Michell is still a family run business with a team of dedicated and proud craftsmen, producing quality turntables and accessories



Orbe SE

The Michell flagship for music lovers who are not prepared to compromise



Gyro SE

The classic Michell turntable, refined over many years of development to its current level of performance.



TecnoDec

Entry level turntable incorporating features from the classic Gyro



MICHELL ENGINEERING

J A Michell Engineering Ltd
2 Theobald Street, Borehamwood,
Hertfordshire, England, WD6 4SE

Telephone: 020-8953 0771
Fax: 020-8207 4688
michell-engineering.co.uk

www.2ndhandhifi.co.uk ...what are you up for?



tel: 0845 6019390

SUMMER SALE NOW ON - AT LEAST 10% OFF ALL MARKED PRICES IN RED

Analogue		Amplifiers	
Acos Lustre, excellent Japanese tonearm	149	Air Tight ATM-1s, excellent boxed	2999
Arcam RD80 Superarc, Mission 774, vgc	279	Arcam A28, nr mint boxed in black	499
Basis 2200 Signature, Vector 4, Clamp c 18k new	4999	Arcam Alpha 9C/P Pre/Power, excellent boxed	499
Benz Micro Glider, excellent low hours	399	Audio Innovations S500	499
Cardas Neutral Reference Tonearm Cable, weeks old	299	Audiolab 8000CAP grey versions excellent boxed	349
Circaudio Unity tonearm, brand new	999	Audiolab 8000, excellent in black	299
Decent Audio Washell, used	149	Audion Silver Night 300c SE integrated, boxed	749
Garrard 301, good cosmetics, full working order	799	Audio Research SP11mk2, 2009 AS service	2499
Linn LP12, Batik LVX, boxed	499	Audio Research LS15, excellent boxed	1299
Linn LP12, Ekos in black ash	1299	Audio Zone Amp 2 Monoblocks	799
Linn LP12 Rosewood, Cirkus, Lingo, Ittek, boxed	1499	Bel Canto Pre 3/5300 Power, excellent boxed	1499
Mana Acoustics Washell, used	249	Bryston BP26 two box preamp, mint	1999
Michell Hydraulic Reference, SME 3009, new lid	749	Bryston BP20 pre & 3BST poweramp, excellent boxed	1899
Michell Electronic Reference (no arm/SME cut)	699	Bryston B60R integrated, nr mint boxed	999
Monitor Audio MA500 Direct Drive, excellent!	249	Conrad Johnson PV15L, preamp boxed	1399
NAD S33 Turntable (Planar 2), RB250, Goldring Elektra	149	Consonance Cyber 10 Signature, excellent boxed	699
Project RPM10, speedbox, nr mint boxed	999	CR Developments Calypso, excellent boxed	699
Project X Pack, very low hours nr mint boxed	499	Krell KAV300, vgc classic integrated c/w remote	999
Rega P3, in green	279	Krell Evolution 600 Monoblocks	17499
Rega P1, ex demo	149	Lawson No27 Power amp, vgc	1499
Rega Planar 2 c/w RB250 and Super Bias, excellent	149	Lyngdorf TDAI2200 with Roomperfect and DAC	2999
Rega RB250 with stubmod	119	Marantz PM17K1 integrated excellent boxed	299
Roksan Reference PSU in black, ex demo	Call	Marantz SM17 Power, excellent boxed	299
Roksan TMS1 & DSU superb boxed, recent TM service	1749	Melody 101 pre and Matching Monos, ex demo	Call
Roksan Radius 5, Nima arm, acrylic finish ex demo	799	Melody 2A3 Integrated, ex demo	Call
SME 3009/2, excellent	179	Meridian 501 with MSR and phono boards	299
Systemdek IIX, Rega RB250 vgc	179	Moon P7/W8 Pre/Power combo, excellent boxed	6499
Systemdek IIX, c/w Systemdek arm, vgc	149	Musical Fidelity F15, excellent boxed	749
Thorens TD160 Super/ SME 3009/Dynavector	299	NAIM NAIT XS, excellent boxed	849
Tom Evans The Groove, excellent	1099	NAIM 250, boxed, recased to olive & silverwood in 2000	799
Well Tempered Amadeus GTA, ex demo	2125	NAIM NAPV145, excellent	999
Wilson Benesch Act 1 Tonearm, nr mint superb	799	NAIM NAP250.2, excellent boxed	1749
Radio/Recorders			
Arcam DT81, excellent boxed	199	NAIM NAC82, napsic, excellent boxed	899
Arcam FMJ26DAB	Due in	NAIM NAC52, excellent boxed	1999
Denon TUJ260L mk2, excellent boxed	49	Quad 34, excellent boxed	199
Nakamichi ZX1000L, just serviced, vgc	49	Quad 99 Stereo power amp, excellent	299
Pioneer F93T due in	299	Quad 909, as new boxed in black	699
Quad FM3, vgc	99	Rega Cursa 2000, pre, excellent	249
Quad FM4, vgc	179	Roksan Caspian M Series integrated ex demo	799
Revox B77 1/2 track, pro NAB, Cover, remote etc	49	Roksan Kandy K2 integrated ex demo	599
Yamaha KX580 nr mint	49	Rotel RC06 & RB06 Pre/power mint boxed	399
Digital			
Arcam CD17, nr mint boxed	499	Rotel RA1412, excellent 70s monster integrated	499
Arcam Alpha 9, excellent, remote, DCS ringdac lovely!!	299	Suggden A21SE, as new boxed	1299
Audio Aero Capotole Mk2, excellent	Due in	Tag McLaren 60iur, nr mint boxed	399
Audiolab 8000CD original version black	299	Loudspeakers	
AVI Lab Series CD player, as new boxed	799	AVI Neutron IV, excellent, ex demo units boxed	349
Consonance CD2 2 24bit, excellent boxed	599	B&W 805S in Rosenut boxed vgc	1249
Copland CD822, excellent boxed	649	B&W DM70 excellent for year, full working order	999
Creek Classic CD, black	499	Definitive Technology Mythos 2, pair, bargain!	399
Cyrus CD6SE, excellent silver boxed	499	Dynaudio Contour 1 3mk2 excellent boxed	749
Cyrus DAD3Q24, excellent boxed	349	Focal JMLab 1007Be, nr mint boxed	1249
Esoteric CV60, mint boxed, SAVE £2000!	2499	Focal Sibs Cinema pack XXL fronts, XL centre and rears	749
Linn Numenik, vgc	299	Kel Reference 103.3, with Kube	Call
Marantz 8003, excellent boxed, Due in	499	Kel TDM4DS, excellent in black	299
Marantz SA15, excellent boxed	499	Kudos C10, early hi-wire pair in Rosenut	299
Marantz CD17K1, excellent boxed	399	Magneplanar MMG as new boxed	599
Marantz CD12/DA12 Due in	999	Magneplanar MG1.6, ex review	1499
Meridian G98, excellent boxed	199	Marlin Logan Purity, ex demo, for details	1999
Musical Fidelity Tubalogi Rare as	999	Marlin Logan Odyssey, excellent boxed	2999
Na.m CD5, excellent boxed	99	Monitor Audio GSW12 Gold series Subwoofer, excellent	699
NAIM CD3, excellent	349	Monitor Audio MA1800 Gold, large floorstander, bargain	349
NAIM CDS2/CDPS, nr mint boxed	1749	Monitor Audio BR5 in Walnut, excellent boxed	349
Pathos Digt, superb boxed	1649	Monitor Audio BR1 in Walnut, ex demo	119
PS Audio Digtlink DAC, as new ex demo	Call	Monitor Audio Platinum 300, excellent crated	3499
Rega Apollo, ex demo	Call	PMC FB1+ in Walnut, boxed	1499
Rotel RCD02, excellent with remote	199	Proac Studio 140 in Ebony, excellent boxed	999
Shanling CD1100, excellent late model!	549	PSB Alpha B1 Sienophile Product of the year BARGAIN!!!	999
Shanling Omega Drive, vgc flight cased, serviced	1749	Quad 21L in Birds eye Maple finish, nr mint	349
Suggden CD21SE, as new one owner boxed	799	Rega RS1, mint boxed	279
Suggden CDMaster Biju CD player, as new boxed	599	Rega RS3, ex display in Gloss Black nr mint	Call
Tag McLaren CD2DR, excellent boxed	349	Revel Performa F32, excellent boxed, serious value!	1399
TEAC PD600, mint boxed due in	Call	Spendor S3/55e, excellent boxed	Call
TEAC P700/D700 excellent boxed 1/2 size pair	749	Tannoy Mercury, excellent boxed due in	79
Unico Research Unico CDP, excellent boxed	599	Telemo with 'beaks'	599
Vincent CD-S6, excellent boxed, due in	Call	Thei CS7 2, large floorstander 213k new BARGAIN!	2999
AV/Accessories/Cables			
Chord Epic Speaker cables, factory terminated pair	Call	Usher Mini Dancer 2, ex demo, nr mint	Call
Isolek and LAT extension blocks	Call	Usher Be718 Standmount, Usher stands, excellent boxed	999
Linn Classic Movie, excellent	899	Wharfedale Diamond Home cinema pack, ex demo	Call
Meridian G68 Pre/Processor, excellent boxed with MSR	1999	Wharfedale Active Diamond 7.1s - rare boxed!	119
NAIM XP52, nr mint boxed later version	1749	SPECIAL SYSTEM DEALS	
NAIM Supercap in Olive, new Burndy	1749	Arcam Solo, nr mint boxed	699
Onkyo 307, 607 & 807, as new ex demo boxed	Call	Esoteric A10 Amp & SA10 SACD Player, save approx 50%	Call
<p style="text-align: center;">Tel 01642 267012 Tuesday to Saturday 10 'til 5 or email choice@2ndhandhifi.co.uk anytime</p>			

Get into the groove

Jason Kennedy is a sucker for the latest sub-£500 vacuum vinyl-cleaning system from 'Chi-fi' analogue specialist Hanss

Hanss Acoustics is a Chinese firm with a penchant for all things 'vinyl'. It has some pretty impressive turntables and a rather good phono stage in its range, so the debut of this innovative and attractive record cleaner was only to be expected.

A curvy box built out of extruded aluminium, the RC20 is significantly less imposing than the competition, yet it offers much the same spinning and sucking abilities – skills that are intrinsic in the pursuit of vinyl freshening. It doesn't offer the cleaning thread found on Keith Monks machines, but neither does it cost that sort of money. Instead you apply cleaning fluid with a supplied brush and let the vacuum dry it off – a simple process that takes about three minutes per album.

A real sucker

The RC20 is a hefty, but attractive beast by record cleaner standards, while its high-quality finish looks like it will endure heavy use without blemish. It comes with a very substantial record clamp that is quick to attach, once you get the knack, with a rubber skirt to stop cleaning fluid getting on the label. The platter is 230 millimetres in diameter and made from 8mm acrylic. It's pretty solid and has a foam mat stuck to the top side which grips the vinyl and allows you to apply substantial pressure without fear of slippage.

There is clearly plenty of torque in the motor, as no reasonable amount of pressure seems to slow it

down. You are supplied with a nylon filament brush with which to apply a cleaning fluid of choice (we used Russ Andrews Revive, which seems good value so long as you apply it sparingly). Once the fluid has been vacuumed off the vinyl, it can be drained through a rubber hose that protrudes from the back of the cleaner. However, after half-a-dozen LPs there was still no fluid to be seen, so it must have an internal reservoir.

Two clean rivals

Build quality is very good for the price, it's more elegant than a VPI HW 16.5 (£550) or the Moth machine (£500) and takes up rather less space than either, but it doesn't have the lid that those competitors offer. Fortunately, silver doesn't show the dust but you need to keep the foam mat clean and only a paper cover is supplied for this purpose.



► DETAILS

PRODUCT:
Hanss Acoustic RC20

ORIGIN:
China

TYPE:
Record cleaning machine

WEIGHT:
11.8kg

DIMENSIONS:
(WxHxD)
380x370x270mm

FEATURES:

- Aluminium case
- Record clamp
- Fine tooth brush
- High torque motor

DISTRIBUTOR:
ABC Audio

TELEPHONE:
0208462 1379

WEBSITE:
hanssacoustics.com

The only machine we can find that looks like it gives the Hanss a run for its money is the Okki Nokki at £395. This also doesn't have a lid, but looks better than most and can spin discs in both directions.

Shake 'n' vac

In use it spins at a slow speed (somewhere around 15rpm) and it's easy to apply some cleaning fluid and use the brush to work it into the groove. You then swing the suction beam across and turn on the vacuum, which pulls the beam down onto the vinyl for as long as it takes to dry off the cleaner – we found this took at least a minute, which is quite a long time to be listening to a vacuum cleaner, so the ear defenders were donned. Alternatively you can use the vacuum for a few revolutions and air dry any residual fluid. This requires some means of stacking the vinyl such as a plate rack, but is a quicker method for multiple albums.

In terms of performance, the RC20 does what it says on the tin and extremely well at that, so long as you get the vinyl thoroughly dry. It is gratifying to get old vinyl that didn't look dusty or dirty to sound so much better; all manner of instruments and voices have more realism and the overall result is distinctly cleaner as one might hope.

Mould release

What's surprising is that the RC20 makes so much difference to vinyl that already looks pretty clean that you can easily understand the benefits to an old, second-hand LP. Mind you, the logic is less obvious with a new one. Russ Andrews puts it down to the mould release agent used in vinyl record manufacture and for which his Revive cleaner is specifically concocted to remove. But you need a good cleaner to use it with and the Hanss is the perfect companion. ●

Hi-Fi Choice

OUR VERDICT

FUNCTIONALITY



LIKE: Well built and attractively finished, with excellent clamp and plenty of suction

VALUE FOR MONEY



DISLIKE: Noisy, no dust cover and slow drying time

BUILD QUALITY



WESAY: If you are after a record cleaner that's easy to use, then the RC20 is right on the mark

FEATURES



OVERALL





Format specialist

Marantz plugs the yawning gap that exists between high-resolution audio and video sources. *Alvin Gold* may have found 'the one'

The idea of universal disc players is not new. They've been around in the form of computer drives for a long time, as well as domestic disc players, but the players are usually not quite what you might expect from the description on the tin.

The players, for example, have traditionally limited themselves to CD, DVD-Audio and SACD, while computer drives will invariably include DVD-Video, Blu-ray and baseline audio compatibility in the

form of compact disc. They certainly don't get their hands dirty with high-resolution audio.

Self-contained

There are exceptions, however, and the UD8004 is several steps closer than most to being a truly universal player, though this doesn't mean it will play everything. It is a self-contained single-box standalone player, which starts out as a high-performance audio disc player and includes CD, DVD-Audio and SACD

▶ DETAILS

PRODUCT: Marantz UD8004
ORIGIN: Japan
TYPE: Universal disc and SD card player
WEIGHT: 8.5kg
DIMENSIONS: (WxHxD) 440x110x399mm
FEATURES:

- CD, SACD (inc multichannel), DVD-Audio, Blu ray and DVD player
- RC-5 remote control, terminal for custom controller
- Pure Direct mode
- 1080/24p via HDMI

DISTRIBUTOR: Marantz Hifi UK Ltd
TELEPHONE: 01753 680868
WEBSITE: marantz.com

– in both two and 5.1 channel form. It is also a high-performance video player and will play conventional DVDs and Blu-ray discs (for which it is equipped with an HDMI output – v1.3). It has a number of intriguing extras too, such as the ability to play SD card media, which adds compatibility with MP3s and JPEGs in a form that may be more convenient than using a disc. For example, if transferring audio data from MP3 players.

Marantz has an impressive track record of making high-end disc players to suit both audio (CD, SACD) and video (DVD, Blu-ray) disc formats. This one does both, in a single box, which is almost unheard of elsewhere. The design is fundamentally a slightly simplified version of the UD9004 all in one flagship, but at a much more affordable price and with similar premium level aspirations. Outside the Marantz stable, there are very few functionally similar options.

Marantz is one of the very few producers that makes its own disc player mechanisms (along with



IF YOU WERE to ask what distinguishes this player from most of the rest of the market, it's quite obvious that versatility comes at the head of the list. Highlights include the Anchor Bay ABT2015 scalar/de-interlacer and the discrete HDAM-SA2 output, which takes more design effort and a higher component count than the usual monolithic IC to drive the output stage. Another key element is the use of three separate boards for analogue signal processing, but all channels have the same layout to maintain signal uniformity, while multiple PC boards allows the designer plenty of land area to do a good job.

Denon, the other main autonomous element of the D&M empire), and the test player is home to one of the few player mechanisms capable of playing SACD, DVD-Audio and Blu ray discs – the internal software being software updatable as required. It will also output to other devices in stereo and multichannel across a number of interfaces, including HDMI and a range of good-quality analogue interconnects. The design supports 1080p Deep Color video, plus Dolby True HD and DTS Master Audio at digital level and multichannel audio (in its various iterations) in fully decoded analogue form.

Other impressive internal hardware includes an Anchor Bay AQBT2015 processor for upconversion of video

“It performs like the high-end player it is, in both video and audio context. It does a complex job extremely well.”

to 1080p, while audio processing involves a version of the HDAM discrete output stage, which is often associated with this brand. The audio datastream involves sophisticated power supplies and three separate audio boards. Control is exercised by an attractive, compact ‘glow key’ remote.

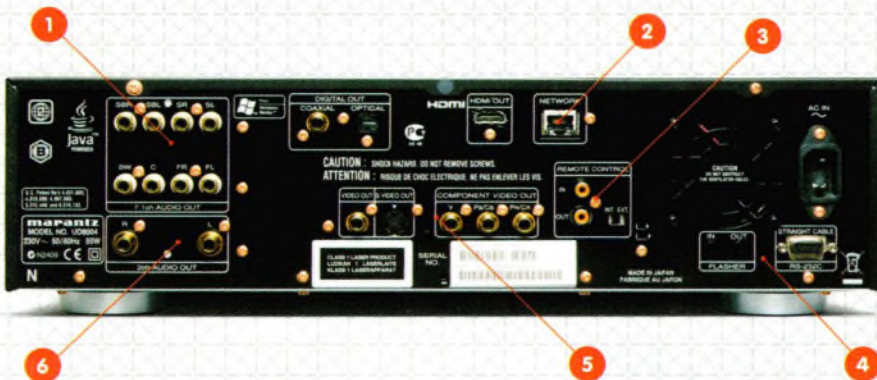
Beautiful bodywork

Assessing build quality and value is slightly more complicated than you'd expect. First, like all Marantz equipment (especially upper-end players like this), build quality is beyond reasonable reproach, but there is more evidence of value engineering than with other dedicated Marantz high-end audio or DVD disc players and this is part of an inevitable trade-off against the sophisticated internal design and the selling price.

The bodywork is lightweight and even a touch flimsy in parts, although some anti-resonance features are included in the double-layer base. There's no headphone socket, either. The player is also a little noisy when settling down into its play modes and there is a low-level contribution from the internal cooling fan, though you would only expect to hear a faint rushing sound between tracks in a very quiet room.

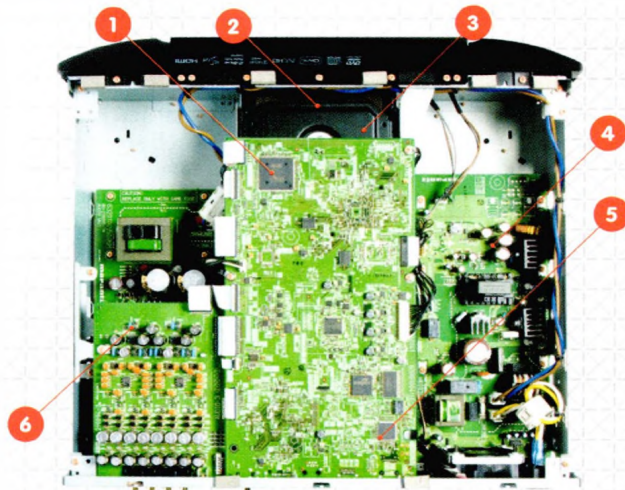
The remaining question is does it represent real value? The answer is

CONNECTIONS



- 1** 7.1 channel analogue output with two identical audio boards
- 2** Network connection for BD-Live and software update
- 3** Marantz remote control bus
- 4** Flasher in/out and RS232 for custom installation
- 5** Analogue outputs and analogue D/A converter
- 6** Audiophile stereo output stage

HIDDEN TECH



- 1** Analogue device for HD and SD Audio
- 2** Disc tray has a robust anti-vibration characteristic
- 3** Marantz high-precision mechanism for Blu-ray, SACD and DVD-Audio
- 4** Power section for microprocessor for digital audio
- 5** Video stage with ABT2010 processor
- 6** Analogue audio stage with three dedicated boards and analogue power supply

an unequivocal yes. It performs like the high-end player it is, in both video and an audio context. It does a very complex job extremely well, and at a price that is comparable to single purpose players that collectively perform similar roles.

Cooking quality

Audio has a similar level of importance to the video in this case, but it's not our job to cover the video performance in any detail. Suffice it to say, this is a true high-end video disc player as well.

Some of the review period was also spent with this player helping with an upcoming review of Wagner's *Tristan und Isolde*, playing non-lossless linear cooking-quality LPCM and DTS Master Audio, but although most impressive, the majority of the the audio 'donkey

work' is performed off-player. The situation with audio-only discs is much more straightforward and almost entirely positive. The best audio quality is delivered by SACD, and we had some very impressive results from various titles, including a multichannel SACD of Benjamin Britten music – the same Reference recording issue which includes Peter Grimes *Four Sea Interludes* and *Passacaglia*, that we reviewed not long ago in a non-SACD transfer, as well as a regular CD of Peter Gabriel's *Scratch my Back*.

Let's not pretend that the Marantz totally bowled over the opposition – we often give house room to some very fine and costly disc players, which currently includes another design from the same D&M group stable – the Denon DCD-SA1 – a true dedicated high-end CD/SACD

QUESTION TIME

WE SPOKE TO OLIVER KRIETE, SENIOR MANAGER OF PRODUCT MARKETING AT MARANTZ, BASED IN EINDHOVEN, ABOUT SOME OF THE DESIGN DECISIONS FOR THE UD8004

HFC: Why did you include SACD, given the low priority that many of us give to this format.

OK: My view is that SACD still has a future, depending on your musical interests. You won't see the next album from Robbie Williams on SACD, but audiophiles will welcome support for the format, which is widely used in some areas of the market – classical and acoustic in particular.

HFC: What does this player offer the music video fan that he/she can't get easily find in a low cost player from other sources.

OK: It's all about picture quality, great pictures to accompany the music tracks. The results on screen are almost 3D, so you need good quality parts to achieve this and they're not cheap. The UD8004 has very good black levels and subtle gradation in low-light areas. This is something that low cost players will always struggle with.

player, but the Marantz acquitted itself well on test.

The prognosis is that the Marantz is lean, clean and exquisitely detailed and has a little more punch than a number of SACD players, some of which can sound a tad lazy or laid back. This is no bad thing, but the quality of the output was not totally beyond reproach. There was a hint of granularity in the sound, though the effect is subtle enough to not always be noticeable. It was no match, however, for the palpably more transparent and sophisticated Denon DCD-SA1.

The UD8004 is not as universal as it purports to be. And we were a little surprised to see that it lacks a USB port. But it is about as close to fulfilling the brief for a true universal as you can get right now. It is expensive, but measured against its capabilities, not unreasonably so. It costs little more than half the price of the flagship Marantz UD9004, for example, which is the parent model from which it (and many of the 8004's technologies) derive.

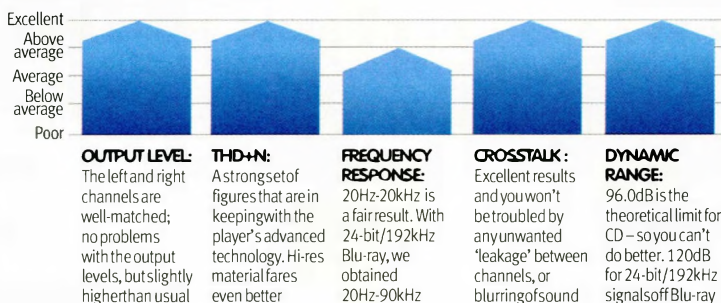
But if you're looking for a more accessible alternative, some of the recent Sony Blu-ray players (including some models from the BDP-S series) are also capable of playing the high-resolution audio only format, SACD, at a much lower entry price. DVD-Audio is not available, but so what?

Multi-function

By any standards this is an impressive player, which fully earns its stripes for any normal audio (or video) application. Like many multi-function players it is a little slow and noisy, when attempting to work out what was required of some disc types, but it always got there in the end, while the internal cooling never became a nuisance on test – though it was not inaudible. ●

TECH LABS

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Sophisticated and a highly capable player that just about does it all
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Some noise from the fan and takes a while to identify certain disc types
- BUILD QUALITY** ★★★★★ **WE SAY:** A new style of player, for a new type of system with a broader range of capabilities
- SPECIFICATIONS** ★★★★★

OVERALL



audioemotion

www.audioemotion.co.uk

e info@audioemotion.co.uk

t 01333 425 999

Music is our Passion

- > Loudspeakers
- > Amplification
- > Digital
- > Analogue
- > Cables
- > System Infrastructure
- > Accessories
- > Pre Owned

PURE POWER

YOUR CLEANEST, MOST ACCURATE POWER SOURCE



PurePower 2000

- 1400 Watts Continuous Load
- 2100 Watts Short Duration
- 4200 Watts Peak

Our price: £2495

"This is the best, most performance-oriented AC power device we have ever tested."

Ken Taraszka AVRev.com



PurePower 1050

- 1050 Watts Continuous Load
- 1500 Watts Short Duration
- 3150 Watts Peak

Our price: £2149

"Rarely does a product come along that takes away nothing and instead, enhances almost every aspect of your system."

Sujesh Pavithran TheStar.com



PurePower 700

- 700 Watts Continuous Load
- 1000 Watts Short Duration
- 2100 Watts Peak

Our price: £1595

PURE POWER™ MAINS REGENERATION

How much power does your hi-fi / AV system consume?
Visit our website for your **FREE POWER AUDIT**.

- > Please ask about our unbeatable part-exchange programme.

PEACE OF MIND CHARTER

- 5 year first owner warranty on all new and pre-owned equipment*
- 14 day no quibble exchange plan
- 'Industry best' part exchange prices
- Free room optimisation consultation using our proprietary software
- Finance available on all products

* terms & conditions apply

Home Demo
available on most
products*
(*subject to conditions)

audiosanctum

PERFORMANCE AND QUALITY



▶ 07517 889 738 ▶ www.audiosanctum.co.uk ▶ Info@audiosanctum.co.uk



Hi-Fi World
VERDICT

BEST BUY
HI-FI CHOICE
Magazine

If you want the best from your system, this is the affordable Room Analyzer that you should not be without... and it seems the reviewers agree too!

"Highly effective acoustic analysis tool that's simple to use and understand."

- Hi-Fi World

"For a lot less money than most loudspeaker upgrades, this brilliantly conceived product fills a real niche and is highly recommended."

- Hi-Fi Choice



Hi-Fi World
VERDICT

"The player itself tips the scales at a healthy 9kg and some of the features found on it are, again, astonishing considering the price."

"Superbly built and with an impressive sense of pace and weight, the CD100's performance belies its affordable price tag."

- Hi-Fi World



Jimmy Hughes uncovered one of hi-fi's best kept secrets - XTZ. Here are just some of the comments from the exceptional Hi-Fi Choice (Issue 333) system review:

"An amplifier and CD player with this sort of finish and build quality for just £600 and £365 respectively? Unbelievable!"

- Hi-Fi Choice

"Musically, the presentation is clear and unpretentious - a very nice system that's a pleasure to listen to."

- Hi-Fi Choice

HiFi just doesn't get any better than this for the price!

44 HIGH STREET
ETON
BERKSHIRE SL4 6BL

01753 631000
www.studioav.co.uk
sales@studioav.co.uk

studio



The latest reference products from Mark Levinson, Revel and the Focal Utopia range redefine the standards for music reproduction, forming stunning partnerships.

Music that stirs the soul

We are southern England's only official Mark Levinson and Revel reference dealer, and these fabulous products, together with Focal Utopia speakers, are on demonstration in our luxurious listening rooms.

We are exhibiting at the National Audio Show 2010, Whittlebury Hall, Northants on 25th and 26th September, and will be using these and other high end products throughout the two days.

Visit us in the Priory Suite on the first floor for your chance to hear music that stirs the soul.

FOCAL

mark
levinson

REVEL



Tube upgrade



Funk Firm's dramatic rethinking of the armtube has finally born fruit, **Jason Kennedy** finds out if it's ripe for the listening

Arthur Koubesserian is one of those audio engineers who genuinely thinks outside of the box. He has been doing so since he set up Pink Triangle in the late seventies and his Funk Firm continues the theme with its first tonearm.

The FXR takes a radical approach to the problem of resonance by placing a carbon fibre cross section in the middle of a thin, walled aluminium tube. An approach which he claims makes an incredibly stiff, yet light-weight tube that's far superior to the beams found on other tonearms. But isn't that another Rega bearing, we hear you mutter.

Beam me up

Yes, at least that's what it is on the outside. On the inside Arthur has replaced the lateral bearings with ABEC 7 ball races from Switzerland. But it's the armbeam that's the most significant – that CF cross-section runs the length of the tube and terminates in a Clearaudio-style slot to which you bolt an aluminium block with fixings for the cartridge and supplied SME fingerlift. Alignment is a matter of establishing the correct overhang, which makes set up relatively straightforward.

The FXR is available in two forms. You can buy a complete arm which is based on a Rega RB301 and has a stainless steel shaft rather than the three-point fixing usually found. This version comes with a collar to allow VTA adjustment and costs £1,175.

We have the alternative form, which is a modified RB300/RB250, where the customer supplies an arm and Funk installs the new bearing and FXR arm for £900. This version retains the threaded base of the original and thus is less straightforward to adjust for height. However, aftermarket collar systems are available, or you can use spacers.

Perceptions

The FXR is a well-executed modification and the parts that Funk adds are machined and finished to a high standard. The tube is anodised in red and the 'headshell' metalwork is anodised black. The way that the SME finger-lift sits between the mounting block and the cartridge can make installation rather tricky, but once it's there it's a very nice lift to use. If you have two cartridges each can be bolted to a mounting block for easy changeover.

Perceived value is undermined a little by the Rega bearing section and

► DETAILS

PRODUCT:
Funk Firm FXR
ORIGIN:
UK
TYPE:
Tonearm
WEIGHT:
295g
DIMENSIONS:
(WxHxD)
90x90x240mm
FEATURES:
• Carbon fibre reinforced aluminium arm-tube
• SME finger-lift
• ABEC 7 bearing
DISTRIBUTOR:
Funk Firm
TELEPHONE:
01273 585042
WEBSITE:
thefunkfirm.co.uk

while we've seen this on more expensive arms (Townshend's Excalibur, for instance), smarter implementations such as that by Audio Mods (*HFC 335*) can be had for less.

Cosworth-syle upgrade

Funk's argument is that you are getting a Cosworth-style upgrade for your money and the sound quality does bare this out, most tellingly, when you compare the FXR with a standard RB300. The latter sounds overblown and loud with little image focus and quite severe smearing of detail by comparison. But then again, the RB300 only cost £210 in its day, so you'd hope the revision improves matters, but what about something serious like an SME V? The FXR also makes this stalwart sound colourful – the V adds a distinct bloom and muscularity to the sound, which once again smears detail, albeit in rather more subtle fashion.

This was a shock. The Series V is a superb piece of engineering and a highly regarded piece of kit, yet it was clear that the FXR delivered more of the music in a calmer and cleaner fashion. The Cosworth analogy would seem, therefore, to be surprisingly accurate.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Incredibly clean, calm and resolute. Giant slaying performance

VALUE FOR MONEY
★★★★★ **DISLIKE:** Cartridge mounting is a bit more fiddly than usual

BUILD QUALITY
★★★★★ **WESAY:** By killing arm tube resonance, Funk has removed a major barrier to fidelity. A real winner

FEATURES
★★★★★

OVERALL





Serving up an ace

Malcolm Steward discovers an audiophile-grade music server from BitPerfect that delivers large music libraries with real hi-fi authority

The BitPerfect Reference 1 is a comprehensively equipped and complex beast, but it can be set up to be appropriately commodity-like if the user prefers it. Company owner Karl Woodward, who has been involved with computers and pro audio for many years, opines that if his six-year-old daughter can figure out how to record, store and play media from disk, then he knows it will be plain sailing for any adult.

We tested the Reference 1 solely as a music server, but it also makes a very respectable video server having come about because Karl wanted a simple-to-operate,

high-performance entertainment hub for his family at home. If one is building a high-quality, PC-based music server, it does not involve too much additional effort to add video capabilities into the mix.

What's it good for?

The suite of software that comes with the Reference 1 presents users with considerable opportunities. Do as we did and place it in a broadband-connected room with a music system and it will download music from the internet or let you listen to internet radio. It will also rip CDs, and retrieve metadata and cover art from the

▶ DETAILS

PRODUCT:
BitPerfect Reference 1

ORIGIN: UK

TYPE: Music server

WEIGHT:
9.86kg

DIMENSIONS:
(WxHxD)
430x50x310mm

FEATURES:

- E-mu sound card can resample 16-bit/44.1kHz all the way up 24-bit/192kHz in hardware
 - Digital input and ADC will allow ripping vinyl/tape to hard disk
 - Software updates free for life of machine
 - Up sampled replay through direct sound, WAVE or ASIO drivers to suit user requirements
- DISTRIBUTOR:**
BitPerfect Systems
- TELEPHONE:**
0151 609 1830
- WEBSITE:**
bitperfect.co.uk

internet to allow you to store that music in its library or on any machine or device connected to the same network. The primary software installed on the Reference 1 for organising and replaying music is Media Monkey.

If the Reference 1 is located in a room where there is a television or projector, not only can that be used as the interface for controlling the server but users can rip their DVDs (including Blu-ray titles, where legal, the manufacturer insists) onto the unit – or network attached storage device – and watch them back through the Reference 1's HDMI connection, with the benefit of enhanced sound and picture quality.

It is worth noting that much of the software on the player is 'tweaked', so users need to be careful not to erase it: the installed version of the easy-option, Windows Media Player, for example, can, nonetheless, handle 24-bit/96kHz FLAC files without the additional plug-ins that the standard version needs. Finally, one could always install MicroSoft Office and send emails while listening to music, provided your collection of rips is sufficiently uninspiring.



IT IS FAIR TO SAY that BitPerfect can be pragmatic, generous and obsessive simultaneously in its pursuit of performance. To begin with there are its nuded interconnects and then there are the more sane accessories it can and will supply without putting a huge mark-up on their cost.

At the last Heathrow show, the company was demonstrating the Reference 1 with an inexpensive DAC fed with a clock signal from an Antelope Audio Isochrone Trinity high-definition master clock, which can deliver audio at 384kHz. The same company supplies the Isochrone 10m Rubidium Atomic clock, which has a stability rating of 1 second in every 1000 years. Include one of these and your system will boast greater accuracy than most Pro Tools studios (from where your music most probably originated). This also explains why BitPerfect refers to Macs'n'DACS and MP3s as merely "pretending to be hi-fi."

The Reference 1 also benefits from the highly regarded (in professional circles) E-mu 0404 PCI sound card, which offers 24-bit sound at up to 192kHz from its on-board crystal – or an external clock that BitPerfect will happily source and supply for you. The DAC is an AKM AK4395 and all the external connections to the card – digital and analogue in/out – are provided through flying breakout leads, which, unusually in audiophile circles, employ quarter-inch jacks alongside the more conventional RCA and Toslink sockets. As the review system predominantly uses DIN sockets, a phone call to the ever-helpful Chord Company secured suitably terminated analogue interconnects.

“The Reference 1 is capable of delivering uncompressed rips with true candour and musical coherence.”

The Reference 1 is housed in a modified all-aluminium Silverstone LC04 case, one of the most spacious and stylish HTPC (Home Theatre PC) enclosures on the market. The case integrated effortlessly with the host of Naim components on the system racks, except for its rather bright, blue power indicator. Given that the BitPerfect is personalised-to-order, the company could remove or adapt the light if you find it intrusive.

Ripping duties fall to a LG drawer-loading Blu-ray/DVD-ROM drive, tested for offset before installation, while a two-terabyte Western Digital Caviar Intellidrive hard disk offers quiet, ecologically friendly storage. The SATA (Serial Advanced Technology Attachment) cables to these devices are shielded locking types – built to MOD standards – and are superior to the usual low-rent types provided by most manufacturers, which are seldom great performers.

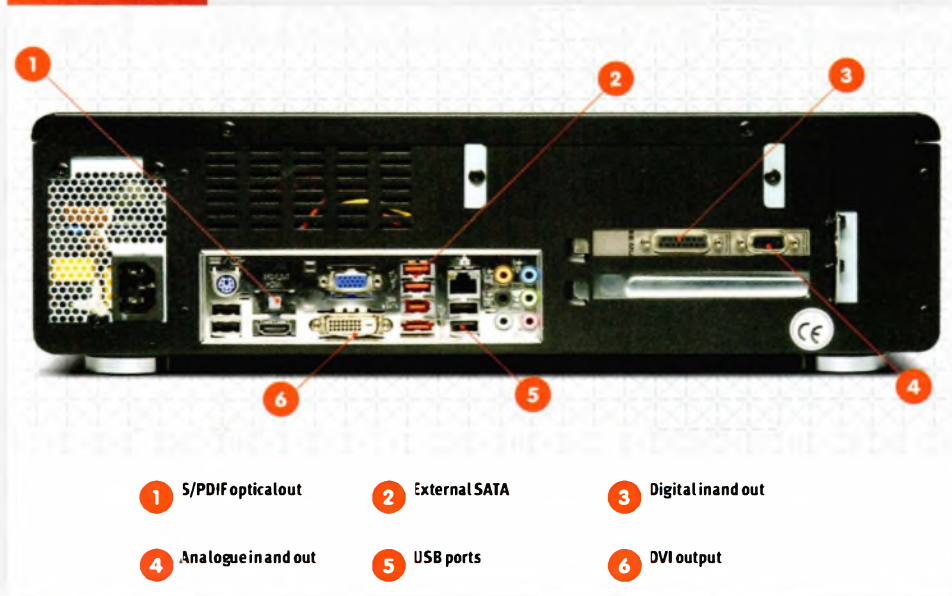
One or two further seemingly small points are worth mentioning, just to demonstrate the lengths to which this company will go to ensure its servers deliver the finest sound – and picture – quality. Its cables are irradiated – that's right, nuded – for enhanced performance. This, they tell us, eliminates any vestige of moisture in the molecular structure of the wire or joints so leaving the copper as pure as can be. BitPerfect

BitPerfect build

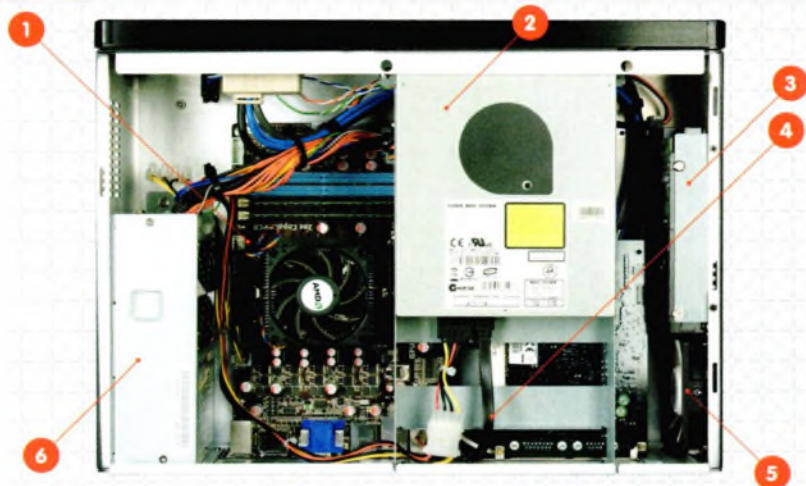
The BitPerfect Reference 1 is based on a high-specification Asus motherboard with an AMD dual core processor running at 3.0 GHz, along with fast DDR3 (Dual Data Rate) memory. All this makes the machine a speedy and responsive performer,

even when running Windows Vista. The OS is not the plain type you might have on your home PC, but has undergone many modifications and has numerous proprietary plug-ins and codecs (added by BitPerfect) to deliver the sound quality any audiophile listener will demand.

CONNECTIONS



HIDDEN TECH



- 1 **2oz copper PCB**
- 2 **Blu-ray combdrive**
- 3 **Hard disk Intelli drive**
- 4 **Shielded SATA cable (MOD specification)**
- 5 **Super-silent gold ball extractor fan**
- 6 **350-watt silent PSU**

assured us, however, that handling these wires will not cause you to glow in the dark. Finally, before installation every part of the main PCB is scrupulously hand-cleaned and inspected and the contacts treated with Kontak contact enhancer to promote long-term reliability.

Reference sounds

The fabulously detailed sound of the Reference 1 mixes the scrupulous information retrieval of the best of American high-end devices with the energy, verve, and musical fluency of the best of British. Listening to Duke Robillard's exquisite guitar playing, it is hard to ignore his magical, subtle endeavours to extract ever richer tonality and expression from every instrument he plays. His delicacy of touch is sublime and strikingly communicative: the replay clearly makes obvious the elation he

experiences when he adds new expressions to his instruments' vocabulary. On another of his discs he works with singer, Susann Forrest on a cover of the Searchers' 1960's hit, *Sweets for my Sweet*. Here his guitar-playing is again gorgeously detailed with every aspect laid bare – tone, phrasing, leading edge attack, sustain, decay, reverberation and release – as is Susann Forrest's voice, making the performance vibrantly animated and truly joyous.

It's also worth noting the incredible dexterity of the Reference 1 with low frequency information. It is outstanding with bass and drums and delivers a highly tangible recreation of the instruments, more often with quite startling dynamic realism. The player's low end sounds rich and colourful, while being taut and controlled. There is no overhang or monotone boom evident here.



WE ASKED KARL WOODWARD, from BitPerfect, what sort of system he would choose to demonstrate the potential of the Reference 1, and the type of system he would be happy to live with using it as his primary source.

"I was completely blown away by the magnificent active Naim DBL loudspeakers. They really showed what the Reference 1 was capable of doing. Their sheer power coupled with their breath-taking subtlety brought out all its technical strengths along with its communicative prowess.

"Even so, I doubt that a system with such enormous loudspeakers, multiple amplifiers and power supplies, would be easy or practical for most, so I would recommend something far simpler: a pair of decent, active, 'book-shelf' loudspeakers. In fact, I am currently using at home: the Focal CM550, a two-way, bi-amplified, near-field professional monitoring system."

Leading edges are crisp and pitch definition is flawless. That is just through the analogue outputs: for the best results, you need to hear its S/PDIF connection feeding the Naim DAC, which also has a meaningful, authoritative and accurate low end.

Bob Dylan's *Modern Times* album, perhaps best demonstrates the Reference 1's combination of vitality, dynamics and detailing with a subtle but thoroughly invigorating and inspiring rendition of *Spirit On The Water*. Dylan's voice is both explicitly detailed and emotionally persuasive. His band is also exquisitely portrayed and equally communicative and the two elements – voice and band – gel convincingly and effortlessly as one tight, cohesive unit.

The server was certainly not troubled by more complex mixes or dense orchestration. For instance, it made light work of *Varèse Amériques*, with its uncompromising instrumentation and dynamics.

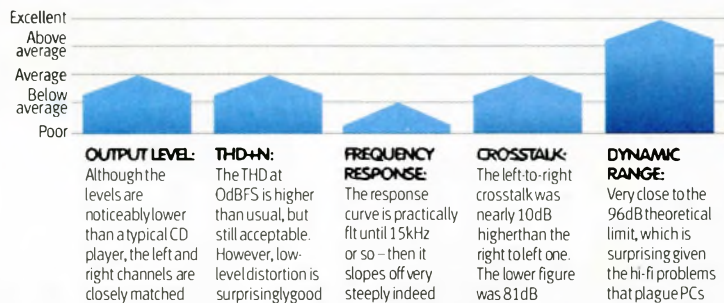
Organiser

The Reference 1 is a first-class performer and capable of delivering uncompressed rips with true candour, balance and musical coherence. Helping its portrayal to be even more engaging is the way it scavenges and then organises detail, even among instruments and voices, way back in the mix. Perhaps, though, its most enticing characteristic is the way it extracts the passion from a performance: be that vocal or instrumental, the performer's emotions come across compellingly

There is nothing more tedious than a component whose presentation gives the impression that the musicians would rather be down the pub than in the studio. The enthusiastic Reference 1 completely avoids this charge and shows itself to be comfortably ahead of the competition in this vital respect. ●

TECH LABS

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** The sound at its best with good rips can be breathtaking
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** The user interface could be more inspiring
- BUILD QUALITY** ★★★★★ **WE SAY:** We enjoyed it as an audiophile music server, while feeding Blu-ray rips to a home cinema system proved equally rewarding
- SPECIFICATIONS** ★★★★★

OVERALL



audio-T

Sound & Vision Solutions

While many of our competitors have chosen to focus on home cinema and screens, at Audio T we've never lost sight of our roots... set down in 2 channel hi-fi over 44 years ago. That's not to say we don't sell home cinema, we do, but we also have a range of 2 channel brands that is second to none.

All our stores have enthusiastic staff and a comfortable demonstration room (where we can even make you a decent cup of tea).

So if you love music and want a system that will make you listen to more, you know where to come.

Basingstoke
01256 324311

Cheltenham
01242 583960

Reading
0118 958 5463

Blackpool
01253 300599

Enfield
020 8367 3132

Southampton
023 8025 2827

Bolton
01204 395789

Epsom
01372 748888

Swansea
01792 474608

Brentwood
01277 264730

Lancaster
01524 39657

Swindon
01793 538222

Brighton
01273 609431

Manchester
0161 839 8869

Tunbridge Wells
01892 525666

Bristol
01179 264975

Oxford
01865 765961

Warrington
01925 632179

Camberley
01276 685597

Portsmouth
023 9266 3604

Worcester
01905 619059

Cardiff
029 20228565

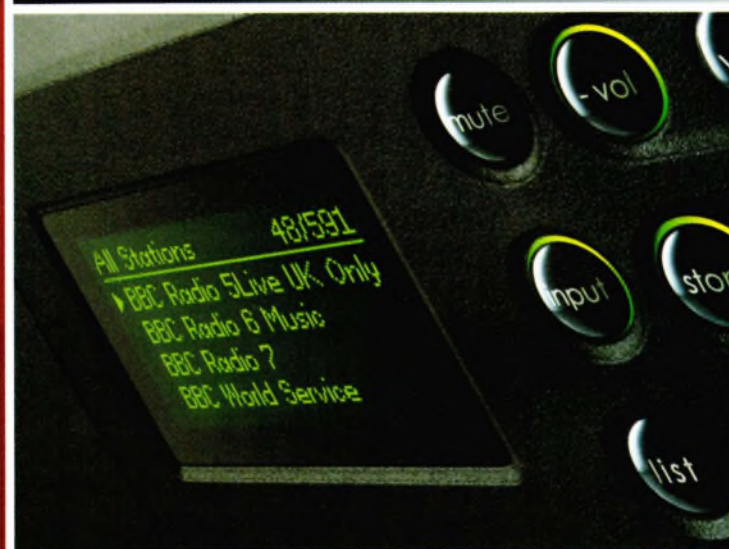
Preston
01772 883958

Buy Now, Pay in 12 Months Time*

On the following brands: Naim, Cyrus, Electrocompaniet, Rega, Bryston, Chord Electronics, Linn, Arcam, NAD, Marantz, Quad, Roksan, Sugden, Michell, Project, B&W, Dynaudio, Focal, KEF, Monitor Audio, PMC, ProAc, Spondor, Tannoy, Totem, Wharfedale, Pure Sound, Rotel, Pioneer, Denon, Dali, Vienna, Vita and Tom Evans.

**Subject to status. Ask instore for details. Not all brands are available in every shop so please check our website before traveling.*

www.audio-t.co.uk



Hi Fi Racks Ltd

Bespoke Audio Visual Furniture

Create excellence in audio performance and appearance with our beautiful tailor-made racks in the best solid hardwoods

WINNER! 2009
Hi Fi Racks Podium Range

WHAT HI-FI?
2009 Podium Winner
AWARDS 2009
PRODUCT OF THE YEAR
RECOMMENDED
BY HI-FI RACKS PODIUM

HI-FI CHOICE
Awards 2009 Winner



We manufacture racks to suit **Naim • Linn • Arcam • AVI • Cyrus • Denon • Meridian • Marantz • Nad • Quad • Teac • Rotel • and many more.**

Made in beautiful hardwoods such as **Oak • Ash • Cherry • Walnut • Maple • and many more.**



www.hifiracks.co.uk

Phone 01572 756447
Fax 01572 756447
Email Info@hifiracks.co.uk

Hi Fi Racks Ltd, Unit 24F
Pillings Road, Oakham
Rutland, LE15 6QF

STORES: Basically Sound and Vision Norfolk • Stoneaudio U.K. Limited Poole • Phase 3 Worthing Worthing • Audiofile Limited Bishop's Stortford • Home Media Limited Maidstone • Audience Bath • Tavistock Audio Tavistock • Wilkinsons HI-Fi Ltd Lancashire • The Audio Room Hull • The Sound Organisation Ltd York • Audio Affair Birmingham • Divine Audio Market Harborough • James Morrow Edinburgh • Musicraft Derby • Frank Harvey Covertry • Audio Emotion Leven • The Home Cinema Centre Edinburgh • Cloney Audio County Dublin, Ireland



David Price Hi Fi World

"The Orbit....a brilliant sounding £65 Mains Cable ..over any other £100 + mains cable"

Janine Elliot HI FI News - The Missing Link Family of Cables.... -

"The most beautiful looking and extremely musical cables money can buy"



HI FI World 'World Standards' Award June 2009

The Link Cryo Reference Interconnect ...

"Our favourite affordable high-end interconnect - out performing designs at three times its cost"

'Wired For Sound' - Adam Smith HI FI World - The Link Interconnect ...

"distinctly out of the ordinary offering a very detailed and crisp sonic picture - leading edges of notes were beautifully precise and forthright with no sense of hesitancy or blur...the bass end of the spectrum was lithe, tight and focused ..."



The Missing Link are Specialists in High Quality British HI FI Cables at Affordable Prices

Power Cables with Silver Plated Connectors from £48

Copper Interconnects from £40 - Silver Plated Copper Interconnects from £59

The Finest Pure Silver Interconnects from £195

Speaker Cables from £130

★ We also have an excellent range of DIY Products and Cable Kits ★

Including our own Ultra-Pure Silver plated Plugs & Sockets

Upgrade your power cable with an Ultra-Pure Silver plated EP5500 mains plug for only £12



The Missing Link*

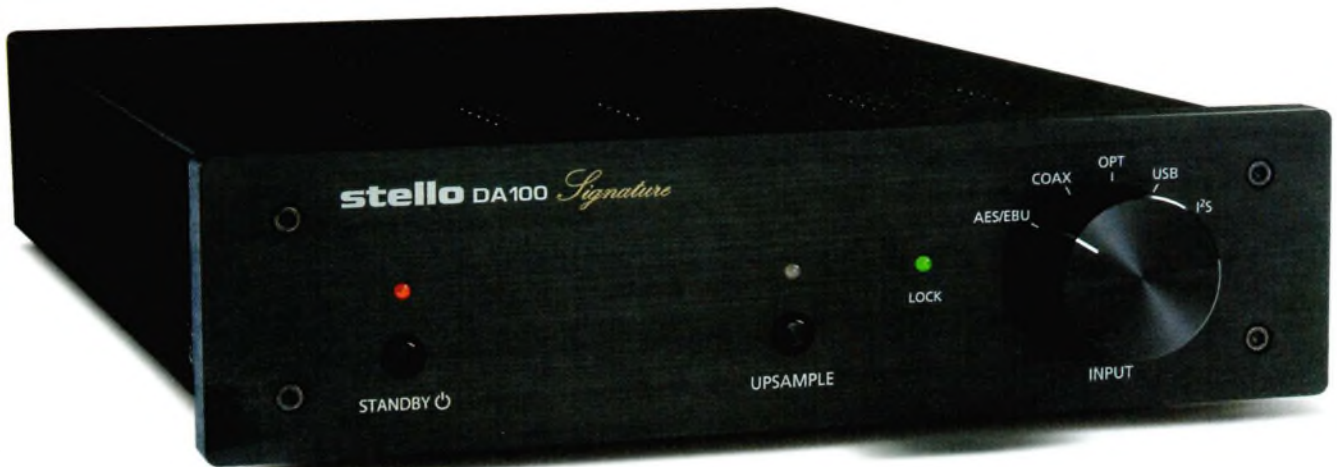
Designers Manufacturers & Suppliers of Custom Built Hi End Hi Fi Audio Cables & Accessories

01623 844478 or 07967 859333

www.the-missing-link.net

info@the-missing-link.net





Digital demon

A high-end DAC, the Stello DA100 Signature is intended for the audiophile who thought he had everything. **Richard Black** investigates

Stello is a brand of April Music, a Korean manufacturer of distinctive audio electronics. The distinctiveness is felt not just in the looks, but also in the features: this is just about the only DAC we can think of with an I2S input. Matched – surprise, surprise – by a Stello CD transport, this is in fact an industry-standard interface, but is normally used within equipment (on circuit boards rather than between boxes).

Its great advantage over the usual serial interfaces is that it carries clock signals separately from data, which should, in principle, make jitter less of a problem. But then jitter has been shown to be a soluble problem, so it's arguably an interesting irrelevance.

Chips with everything

Other features are less remarkable but make up an attractive set, with all four of the usual digital interfaces on offer. Audio outputs come in both unbalanced and balanced flavours, while optional upsampling is offered to 96kHz or 192kHz. Internal appointments are good too, the digital receiver, upsampling and DAC chips all being recent parts of high-specification, while analogue components are through-hole types and include dedicated balanced line

drivers and a Class A mini-power-amplifier. The power supply is generous in capacity and well regulated (and runs surprisingly warm, even in standby) and all things considered, this is quite a lot of kit for the money. It's enclosed in a sturdy case and the front panel controls feel good to the touch (there's no remote available).

Purer sound

So we weren't able to try one of the connection options and only had one transport available with AES/EBU – that still leaves plenty to experiment with. The good news is that the DA100 is not particularly fussy about which connection system one uses and, indeed, when we fed it from a laptop computer (first direct via USB and then interposing a USB-S/PDIF and jitter-reduction unit) and then compared that with a good-quality CD transport feeding the same datastream, we were hard-pressed to hear a difference. We felt the CD gave a slightly purer sound, a little sweeter in the treble, but the difference was not the sort of thing one would get hugely excited about.

Little zing

The bad news... well, there doesn't really seem to be any. That said, this isn't the perfect audio component

DETAILS

PRODUCT: Stello DA100 Signature
ORIGIN: Korea
TYPE: DAC
WEIGHT: 3.5kg
DIMENSIONS: (WxHxD) 212x55x290mm
FEATURES:
• Distortion-free Class A analogue stage
• High-current/low impedance power supply
• Maximum input sampling rate: 96kHz (48kHz USB)
• Low jitter
DISTRIBUTOR: Vivid Audio
TELEPHONE: 01403 782221
WEBSITE: aprilmusic.com

and it does have more than a trace of character, which means it won't be everyone's cup of tea. It is fundamentally honest, we've no doubts about that, but it seems to add just a little 'zing' of its own to recordings. At first, that seems highly attractive and under any circumstances it's arguably very much preferable to the opposite, but it does mean that recordings that are already pretty lively can become a little manic and, of course, if it's combined with very lively components elsewhere in the chain the net result may seem a bit much.

Well judged

Frequency response is a bit flat, but we noted that distortion from the unit is not quite as low as we tend to expect these days. It doesn't, however, do anything to disguise the excellent bass, which has a well-judged combination of extension, precision and tunefulness, nor the cleanly extended treble. Detail and imaging are good, though not quite the most astonishing we've ever heard.

Overall, this is an attractive and informative bit of hi-fi. We actually found it particularly successful with classical music, which is usually more restrained in tone and doesn't excite the DA100's temperament, but we would certainly recommend lovers of any kind of music to give a try. ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Flexible input and upsampling options

VALUE FOR MONEY



DISLIKE: Can be a little too lively; detail good rather than great

BUILD QUALITY



WE SAY: Comparison with the Cambridge DacMagic makes you wonder if it's really worth three times as much money

FEATURES



OVERALL



Point of reference

The CD player we have used as reference for nine years is being replaced by this CD/streamer 'music centre' and **Jason Kennedy** is gripped

Resolution Audio's Opus 21 has been a reference CD player for us since its introduction at the turn of the century. This diminutive two-box unit gives more detail, dynamics and sheer musicality than most and we will be very sad to see it go. Or, at least, we will be, if we can't get our hands on its replacement the Cantata Music Centre. Because not only does this new player look incredible, it also manages to up the sonic ante to an unprecedented

degree. And not just for CDs, plug your laptop in or even your home network and it can do remarkable things for music stored on a PC or NAS drive. Hence the Music Centre soubriquet, this is not just a disc-spinner, it's a fully featured UPnP 'renderer' with an asynchronous DAC that can do for digitally stored media what the Opus 21 did for CD.

Permanent waves

The Cantata came about because Resolution's Jeff Kalt wanted to

build an iTunes client into the XS (extra sources) box that forms part of the Opus 21 series. He ended up being frustrated by the limitations of air tunes – specifically its 16-bit/44.1kHz maximum resolution, so he started working on a streamer, CD player and USB DAC that turned into the Cantata. While this unit retains the same 1704 multibit ladder DAC as the Opus 21 and the same basic circuit design, it doesn't have many other similarities to its predecessor.

The most obvious change is the casework, which is both radical and beautiful. Machined from solid aluminium, it is designed to offer a significant improvement in resonance control over the sheet metal Opus 21, while also offering a large heatsink for the components within the player.

Jeff actually worked with the Neal Feay Company to come up with what he describes as "an aesthetic that is softer, perhaps more organic, than traditional machined designs." The case is one reason why the Cantata is 50 per cent more expensive than its



DETAILS

PRODUCT:
Resolution Audio
Cantata CD player/
streamer

ORIGIN: USA

TYPE: CD player/
USB DAC/streamer

WEIGHT: 6kg

DIMENSIONS:
(WxHxD)
500x430x230mm

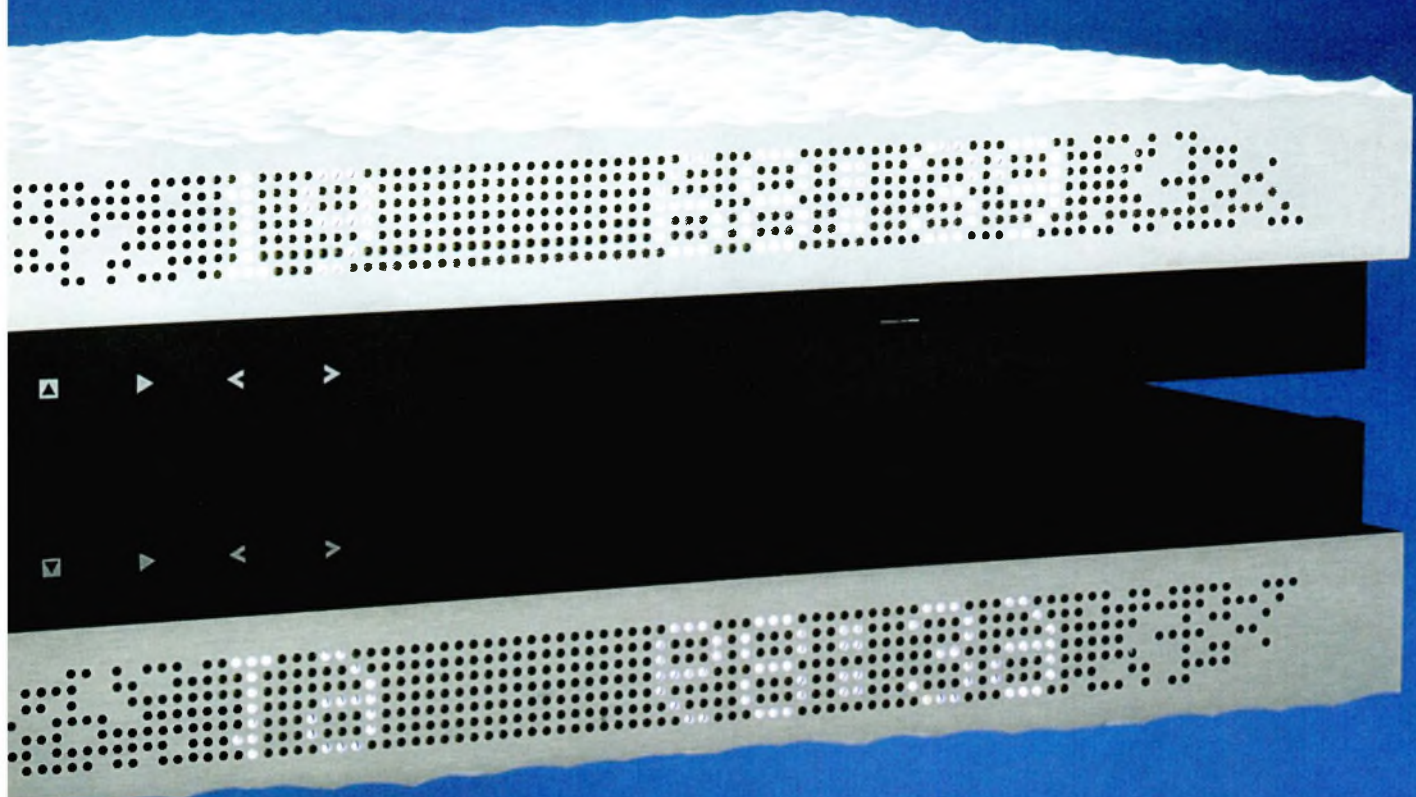
FEATURES:

- Computer inputs: USB, Ethernet
- Linear display
- Burr-Brown DACs
- Cantata link bus system

DISTRIBUTOR:
Redline

TELEPHONE:
01268 858222

WEBSITE:
resolutionaudio.com



predecessor, but the other companies that use metalwork from this source all charge significantly more – just look up Constellation Audio and you'll get the picture.

The significant technology here is the degree of isolation that has been achieved inside this machine. Jeff has effectively floated the DAC, so that it only grounds to the amplifier and is magnetically isolated from the power supply, internal transport, display and all of the digital sources (including USB and the host computer). He has also developed his own asynchronous USB software for connecting computers to the DAC. It works by pulling the signal from the computer rather than the other way around, so the DAC controls the flow of data and provides clocking with its own precision clock. This makes USB a potentially better conduit than S/PDIF because jitter can be virtually eliminated by the interface.

The Cantata's output connections no longer feature a DIN socket, but come in single-ended XLR and RCA flavours, both of which are volume-

“If you want to hear how much effort was put into your favourite albums, then make a date with the Cantata.”

controllable. So you can hook this unit straight to a power amp or active speaker system and use the onboard analogue volume control. Alternatively if you want to use a preamp or integrated amp, then just set the level to 100 and bypass the attenuator.

Inputs are really what the Cantata is about and why it is dubbed a Music Centre. You can hook up external sources via S/PDIF in three flavours, USB and Ethernet which means that any source with a digital output can be accommodated.

Resolution Audio also makes a device called the Pont Neuf, that converts USB to Ethernet and gives you much more range than USB, which Resolution recommends keeping to a maximum of two metres.



TALKING POINT

RESOLUTION AUDIO developed the Pont Neuf or new bridge in order to allow music to be streamed at USB quality over longer lengths than the five-metre maximum that USB cables can be effectively used.

Unlike standard USB to Ethernet converters, the Pont Neuf will stream the output of software players such as iTunes. This signal can be sent wired or wirelessly to the Cantata where it can be converted.

The alternative is to put your music on a NAS drive and connect it directly to the Cantata. This route has the advantage that the PC/Mac does not have to be powered up for the music to be available.

The transport used is a Sony device that slot-loads on the right hand side of the player. It's well hidden, but not hard to find. Jeff did speculate about having the slot emit a white light, but changed his mind (more's the pity). It's a high-speed drive that was chosen for reasons Jeff explains in our interview on the next page, but it's not totally silent – which can be an issue when listening to quiet material late at night. The dot-matrix display is particularly nice in the context of the drilled-out fascia, it tells you the sample rate of incoming signals unless it's spinning a disc, in which case track time and number are shown. It can be dimmed or extinguished, but looks best at its lowest brightness.

Tactile

The quality of machining on this casework has to be seen and fondled to be fully appreciated, it is something else. Whether you like the styling is obviously a matter of taste, but in our view it makes a refreshing change to the ubiquitous cooling fins found on every other high-end

Q&A...

RESOLUTION AUDIO'S FOUNDER AND DESIGNER JEFF KALT TALKS ABOUT THE CANTATA



HFC: *This player produces more of the envelope, more of each note's decay than any we've heard, how did you achieve this?*

JK: There are a number of refinements in the design compared to the Opus 21 circuit, but I believe the largest advance is due to the complete electrical isolation of the converter circuit from the rest of the product. The only ground connection is to the amplifier. This eliminates noise not only from a computer, attached via USB, but also the internal transport, display circuit, etc. In addition, we also miniaturise the physical layout as much as possible, using surface-mount components, multi-layer PCBs and double-sided assembly.

There is no fixed level output, does maximising volume remove the need for this?

When the volume is set to maximum (100), there is an internal relay that bypasses the volume control circuit. We recommend this setting when using a preamp or integrated amplifier.

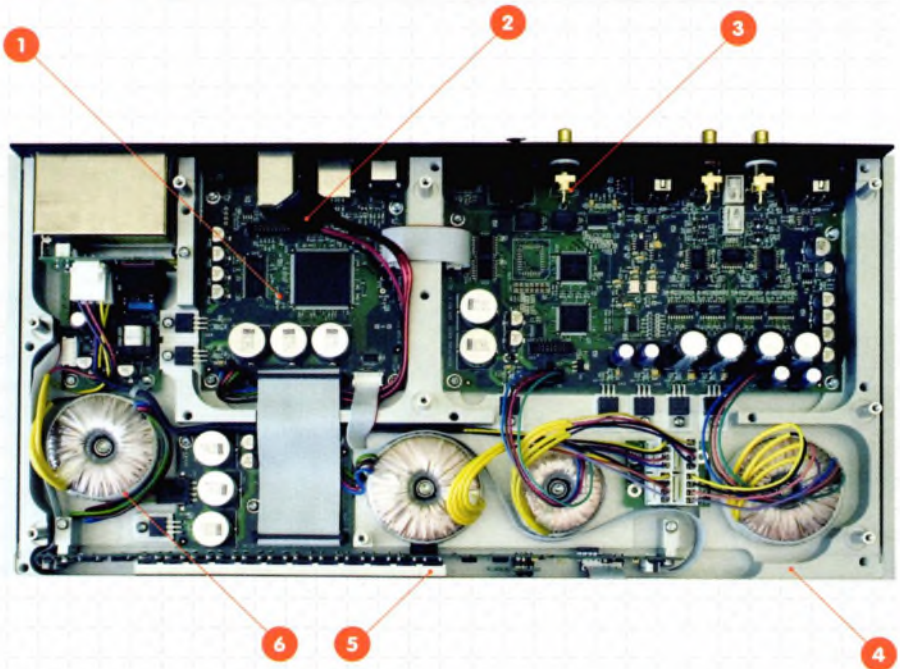
Why is there is a low level whine when playing discs that's audible with quiet music?

In selecting the CD transport, there are several criteria and trade-offs involved. We found the Sony to be the best transport at retrieving bit-accurate data streams on everything from CD-Rs, scratched discs, and copy-protected discs. Part of the transport's performance is based on its high spin-rate.

You mentioned that USB cables should be kept to no more than two metres. Why is this?

The USB specification limits cable length to five metres, but we recommend no more than two metres for audio. The Cantata uses asynchronous-mode USB, which locates the clock at the D/A converter and eliminates upstream jitter. However, cables still matter, including USB cables! We also offer the Pont Neuf, which uses your home network as a USB extension via Ethernet or Wi-Fi.

HIDDEN TECH



1 Digital board with USB and ethernet ports

2 Cable for slot-loading optical drive

3 Audio board with Burr-Brown DACs

4 Machined casework which is a rare addition in modern hi-fi

5 White LED display matrix

6 Toroidal transformers used in power supply

component. It is a solid, but compact piece that's only 230 millimetres deep and fifty millimetres high. This makes it easy to accommodate, but not, perhaps, as beefy as one might hope for the money. This, however, has always been RA's approach, keep the metalwork and the signal path to the minimum and you will get better sound, which is clearly the case here.

The remote is a basic plastic affair, but it's a dedicated device that allows input selection, track select and volume control in an ergonomic if relatively dull fashion. More important is that it has an eject button, something sorely missed on the Opus 21.

It doesn't have a great deal of competition, but the most obvious comes from Naim, whose Naim Uniti and UnitiQute perform in a very similar way – both are also wireless devices. For his part Jeff doesn't like mixing wireless receivers with audio electronics and the sound quality he achieves would seem to make a good case for this argument. That said the Cantata is more expensive than either Naim streamer, so it has its

work cut out in the real world.

The alternative, of course, is to go for a standalone streamer and player but we haven't heard a player of this standard for less money let alone one with a USB DAC.

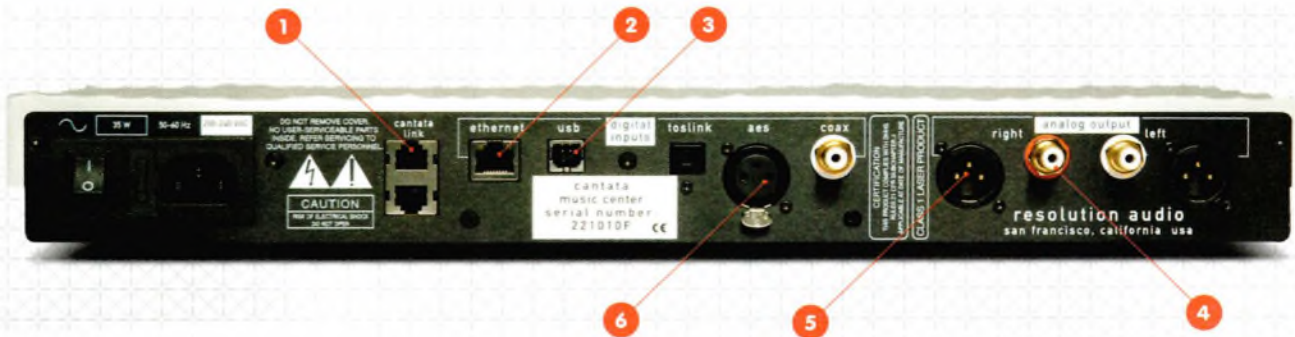
Paradigm shift

That big slab of aluminium takes a while to get up to temperature and likewise, the sound takes a while to reach full formation. But when it does there is no going back. We have never heard a digital source that can deliver as much of the sonic envelope as the Cantata. It reveals all the decay of each note or sound and provides an incredibly three-dimensional picture of the music.

This really is one of those components where you have to start going through your music collection to hear what else is on each disc, something that happens very rarely when you've tried as many top-notch CD players as we have.

There are a few very detailed players around, such as the Moon 750D and Boulder 1021, but neither of these compel you to play as many

CONNECTIONS



- 1** Cantata link for hook-up to forthcoming Cantata amplifier
- 2** Ethernet connection for use with UPnP devices and resolution Pont Neuf
- 3** USB-type B socket for asynchronous DAC
- 4** RCA phono single-ended analogue outputs
- 5** One of two XLR balanced outputs
- 6** AES/EBU input

of your discs as you can in quite the same way as the Cantata. The more familiar an album, the more you appreciate just what it's pulling out of the mix, the end of Genesis' *Supper's Ready* for instance, revealed layers that have never been hinted at by previous machines. This is nothing short of astonishing, given that we've heard the SACD layer plenty of times before and the Cantata is finding even more on the CD layer. That particular revelation was assisted in no small way by a Mark Levinson No.326S preamp, which made quite a useful contribution, but didn't stay long enough (it's coming back though, see next month's *HFC*). Fortunately, the full envelope effect continued after it had gone.

Despite coming from the same mind and DAC chip as the Opus 21, the only similarity between these two players is in their ability to involve you in the music. This isn't quite in Rega Isis territory, but it's unfeasibly gratifying for both head and heart. Zappa's *Sleep Dirt* album

isn't the cleanest of recordings, but there is a lot more grunt, dynamics and timbre to be found on it that is usually apparent thanks to the extra resolution. The title track is a guitar duet with Zappa on an odd sounding instrument that's usually rather clattery but it's not clear why, the Cantata showed that this is because of the way that echo was used in the recording. The considerably slicker *Love Hater* by Outkast, has monster bass that has obviously been laboured over to give it such a distinctive shape and colour and this ability to hear right into the character of each part of the sound (in a way that allows the musical flow to grip you) is very rare.

Given the effort that Resolution Audio has gone to on the USB input, we also gave that a spin using an Apple Macbook running iTunes with the output set to 16-bit/44.1kHz. The result is a bit warmer and slightly softer than with CD, the disc giving greater focus from a drier balance but not necessarily bettering it in all respects. With a lot of

material the USB route is very appealing and musical, it delivers the same quality of timing as the disc and virtually as much detail. This is the best result we've achieved with this approach and quite an ear opener to the possibilities of digital files.

HOW IT COMPARES

THERE ARE NOT many products that offer the same feature count that the Cantata Music Centre does, but there are plenty of CD players at and above this price point to consider.

A particular favourite is Rega's Isis, which is also £6,000, yet offers a wholly different perspective on the music. The Cantata doesn't have quite that degree of pure musicality, but distracts you in a different way by exposing more of the character of each instrument, voice and recording technique which is just as compelling.

The nearest direct competitor overall, is Naim's HDX, which adds a number of features to those offered here, including a touch screen display and onboard hard drive. It wins hands down on features, but does not compete with the outright resolving powers of the Cantata.

Silver lining

In case it isn't abundantly clear by now, we are pretty much smitten with the Cantata Music Centre. It reveals so much more of the music that we have to wonder how it is achieved. Jeff attempts to answer that question in the Q&A opposite, but in an earlier exchange put it more simply "I suppose I have the world-wide slowdown to thank for giving me the space for design work."

The fact that it looks so good and can bring such high standards to music stored on a hard drive is equally relevant for the modern audio enthusiast. If you really want to hear just how much effort was put into making your favourite albums such an unforgettable experience than make a date with the Cantata. ●

Hi-Fi Choice

OUR VERDICT

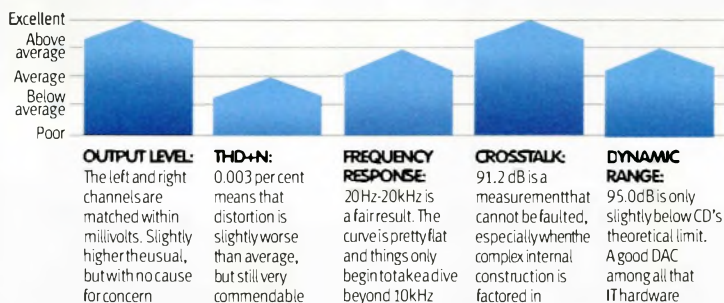
- SOUND QUALITY** ★★★★★ **LIKE:** Hearing so much more music, design, ergonomics, display and tremendous flexibility
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Transportwhine is an issue
- BUILD QUALITY** ★★★★★ **WE SAY:** Revealing to a degree that sets it apart from the competition at way above its price point
- SPECIFICATIONS** ★★★★★

OVERALL



TECH LABS

RESULTS AT A GLANCE



WELCOME TO THE NORTH EAST

ANATEK RESEARCH
APOLLO
ATACAMA
AV INTERNATIONAL
CHORD COMPANY
CHORD ELECTRONICS
CLEARAUDIO
DYNVECTOR
EAR YOSHINO
GOLDRING
GRAHAM ENGINEERING
GRAHAM SLEE
G F HADCOCK
ISOTEK
KOETSU
KUDOS AUDIO
MARTIN LOGAN
LYRA
MAGNEPLANAR
MELODY
MICHELL ENGINEERING
MONITOR AUDIO



NAD
NAIM AUDIO
NORDOST
NOTTINGHAM ANALOGUE
OPERA
ORTOFON
PATHOS ACOUSTICS
PROJECT
PS AUDIO
PURESOUND
REGA
REVOLVER
ROKSAN
SME
STAX
SUGDEN AUDIO
TEAC ESOTERIC
TRANSFIGURATION
TRICHORD RESEARCH
UNISON RESEARCH
USHER AUDIO
VAN DE HUL

HIFISOUND, Castlegate Mill, Quayside, Stockton on Tees

01642 267012

TURNTABLEWORLD

THE UK'S PREMIER VINYL RELATED RESOURCE WILL BE AVAILABLE SOON ONLINE!
If you need us sooner, please call 0845 6019390 or email choice@turntableworld.co.uk

We now stock the beautifully built, beautifully sounding and surprisingly affordable Musical Fidelity M1 & M3 Series.

The Audio Warehouse & Guildford Audio Show, 12th, 13th, 14th November '10
Best Western Moat, House Hotel, Sindlesham, Reading. Just off J10 M4.
Look out for more details on our web site and in future adverts.



The Audio Warehouse

TELEPHONE:
01483 537 577

MOBILE:
07810 546 103

EMAIL:
john@theaudiowarehouse.co.uk

WEB:
www.theaudiowarehouse.co.uk

ABOUT US:

The Audio Warehouse specialises in high quality audio components with on-site installations and customer support - whatever the product.

Based in Berkshire (also cover the surrounding counties) we meet customers needs with free advice, home demonstrations and great after-sales backup.

SPECIALISING IN:

Turntable repair and servicing, Sugden Masterclass, AstinTrew, Audiophile Base, Quadraspire, Custom Design, ATC, Micromega, Musical Fidelity, Pro-ject, Wadia, Sonus Faber, Siltech Cables, Roksan, Plinius, Heed, Audio Origami, Vienna Acoustics, Linn and many more specially selected audio brands (see web site for full details).

No-hum

Mains-generated background noise can ruin your listening. **Richard Black** finds a neat solution

Supra makes cables and accessories associated with cables. This new product is, perhaps, rather more than a mere accessory, but it's something that is designed to sit in the cabling between two items – specifically a desktop computer and a hi-fi. It is, in fact, nothing more or less than a pair of one-to-one audio transformers in a metal box a few millimetres in each dimension, with phono sockets on each end. Its purpose in life is summed up by Supra's nickname for it, the 'HumBuster'.

A problem frequently encountered when connecting mains-powered computers to hi-fi systems is that both are earthed for safety reasons and this causes background hum at a level high enough to be annoying.

This nifty component breaks the hum loop by isolating input from

output – there is no direct connection along either the 'hot' or the ground leg of the signal path and, as a result, there can be no hum loop. One has to be a bit careful with this approach, as in some situations audio transformers can themselves be very sensitive to hum, but these are toroidal transformers, magnetically screened,



▶ DETAILS

PRODUCT: Supra AGS-10kD
ORIGIN: Sweden
TYPE: Audio transformer
WEIGHT: 0.5kg
DIMENSIONS: (WxHxD) 96x53x89mm
DISTRIBUTOR: Wavelength Distribution
TELEPHONE: 01223 441299
WEBSITE: jenving.se

and operated at relatively high signal levels: they do in fact seem remarkably resistant to hum pickup.

And indeed they perform exactly as advertised, making a previously unusable connection between computer and hi-fi not only acceptable but gratifyingly clear and detailed. The sound isn't completely unaltered and under very critical conditions we heard a trace of coloration and congestion, as well as some mild distortion, but in terms of getting good sound out of a computer with a basically decent sound card, this is a neat solution.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
 ★★★★★ **LIKE:** An efficient solution to hum loops, not only with computer audio

VALUE FOR MONEY
 ★★★★★ **DISLIKE:** Not absolutely transparent sonically and a little expensive

BUILD QUALITY
 ★★★★★ **WE SAY:** Its simplicity makes it an attractive way of beating hum with a computer source

FEATURES
 ★★★★★

OVERALL



In isolation

Combatting vibration is important for enhancing hi-fi performance, says **Richard Black**

On HFC 327, we looked at some clever isolation feet from Aurios. Now's the turn of its equally innovative isolation platform.

It looks a lot like any lump of painted MDF, but there's rather more to it than that. It's actually two lumps of MDF, nicely profiled and joined together with special adhesive in an example of what's technically called 'constrained layer damping'. The idea is to use a slightly springy glue, not necessarily uniform over the whole mating surface, which does a lot to break up resonances in the overall structure. This can be incredibly effective, especially with very resonant materials like sheet steel.

In actual fact, MDF isn't that inclined to ring in the first place, so the benefits of CLD are less dramatic. But it's clear from tapping this shelf

that it's got very little intrinsic resonance. Feet aren't provided: you could use Aurios's, or screw feet or spikes into the threads on the bottom face. These threads are imperial, but a metric M6 screw will go in with a little persuasion.

We tried both spikes and sorbothane feet under the shelf, finding the latter



▶ DETAILS

PRODUCT: Aurios Component Shelf
ORIGIN: USA
TYPE: Isolation platform
WEIGHT: 2.4kg
DIMENSIONS: (WxHxD) 355x460x32mm
DISTRIBUTOR: RAM Technology Ltd
TELEPHONE: 020 89581004
WEBSITE: aurios.net

better for analogue sources, but the former generally more successful with digital sources and amps.

Most modern kit (turntables apart) isn't vastly microphonic, but even so there are subtle benefits to be had in combatting vibration and the shelf seems very successful in bringing a touch of extra finesse to the performance of good-quality components. Most noticeably, it improves imaging, giving an extra yard or two of perceived depth and better precision in both dimensions. It's also worth noting that bass seems a touch better defined.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
 ★★★★★ **LIKE:** Adds a little extra refinement to good-quality components

VALUE FOR MONEY
 ★★★★★ **DISLIKE:** A little expensive: differences are not night and day

BUILD QUALITY
 ★★★★★ **WE SAY:** This can add a touch of extra class, typically giving more insight into the sound

FEATURES
 ★★★★★

OVERALL





Whiter than white

Germany's number one speaker brand makes a welcome return to the UK. **Paul Messenger** tries the pick of the bunch

Although black is the fashionable finish in loudspeaker-land, albeit with high-gloss highlights, it's just one of just two alternatives available for this speaker (the other being high-gloss white!) This is such a beautifully styled, finished and presented loudspeaker, it clearly comes from a major brand with plenty of muscle. The Canton name might not be well known here in Britain, but it was founded back in 1972 and is Germany's leading hi-fi speaker brand, with a large collection of different ranges in its portfolio.

The latest contenders

The Chrono SLs are the latest range to join the ranks, effectively upgrading and updating the original Chrono models, bringing much sharper and more modern-looking styling, alongside engineering improvements in enclosure, crossover and drive unit performance.

By virtue of using relatively small bass and midrange drivers, the Chrono SL580 DC has a slim front view, while the enclosure edges are all slightly rounded, avoiding any

sharp edges. Take the grilles off the front and the impressive row of shiny polished-alloy driver trims, that almost fill the front panel, supply plenty of bling. A neat trick is that the grilles can also be fixed onto the back as well as the front, so if you lose the sunglasses or children come to play, you can easily put these back on the front and cover up the drivers.

This three-way design uses twin 160-millimetre bass units, reflex-ported through the base of the enclosure. Shiny shock-absorbing spacers separate the enclosure from a small plinth, providing some mechanical decoupling and allowing the port to function. However, the plinth only barely increases the stability footprint of the enclosure itself, and the 'spikes' are really just blunt studs and are not too good for carpet-penetration.

Moving the metal

All four of the drive units used here have metal diaphragms. The single midrange driver is mounted at the top of the front panel, above the tweeter and in its own 4.1-litre sub-enclosure. The bass and

midrange drivers appear to be identical, with concave dust covers creating dish-shaped diaphragms, roughly 98mm in diameter and using Canton's proprietary S-shaped injected rubber surrounds.

The 25mm aluminium/manganese tweeter dome sits within a shaped and polished alloy front plate, which probably acts as a waveguide to control dispersion. A fixed mesh grille, that protects the dome from accidental damage, appears to incorporate a central 'blocking' annulus which presumably provides some phase compensation.

Fed by two pairs of well-insulated socket/binder terminals, linked when required by brass rods, the necessarily complex crossover

"There's no denying the engineering competence of this Chrono SL580 DC, nor the impressively modern styling."

network splits the audio band into three sections at nominal 300Hz and 3kHz frequencies, using 12dB/octave filters throughout. The bi-wire/-amp option of twin terminal pairs used here separate the bass section from the mid/treble.

Sheer authority

The SL580 was fed primarily from a system comprising a Naim NAC552 preamp and NAP500 power amplifier, driven from a CDS3/555PS CD player, a Magnum Dynalab MD106T FM tuner and a Linn/Rega/Soundsmith vinyl record player.

Clearly best kept well clear of walls, the measurements indicate that the sound might suffer from some excess warmth and richness, but it didn't seem to be the case subjectively. There is ample punch and thump when the program content requires it, but it is invariably clean and free from unwanted enclosure colorations. Even male voices seem impressively free from chestiness or thickening.

However, the Chrono SL580 does seem a little lacking in weight, scale and sheer authority. Since there's always the option to trade off sensitivity for absolute bass extension and since the sensitivity here is unusually high, one might query whether it might have been better to have accepted somewhat lower

DETAILS

PRODUCT:
Canton Chrono SL 580 DC

ORIGIN: Germany

TYPE:
Three-way floorstanding loudspeaker

WEIGHT: 17kg

DIMENSIONS:
(WxHxD)
170x990x290mm

FEATURES:
•25mm aluminium/manganese tweeter
•2x160mm aluminium/wave bass drivers
•160mm aluminium/wave mid driver
•Twin socket/binder terminal pairs

DISTRIBUTOR:
ComputersUnlimited

TELEPHONE:
020 8358 9593

WEBSITE:
unlimited.com



OVERSEAS BRANDS have always found the UK speaker market tough going. Very few manage to get themselves properly established, though as Germany's leading brand, few companies deserve it more than Canton.

Its closest competitors are probably the Opera Seconda, Wharfedale Opus 2-1, Cabasse MC40 Java, and the Rega RS7, all of which are quite similar in size and configuration, though each adopts its own distinctive approach.

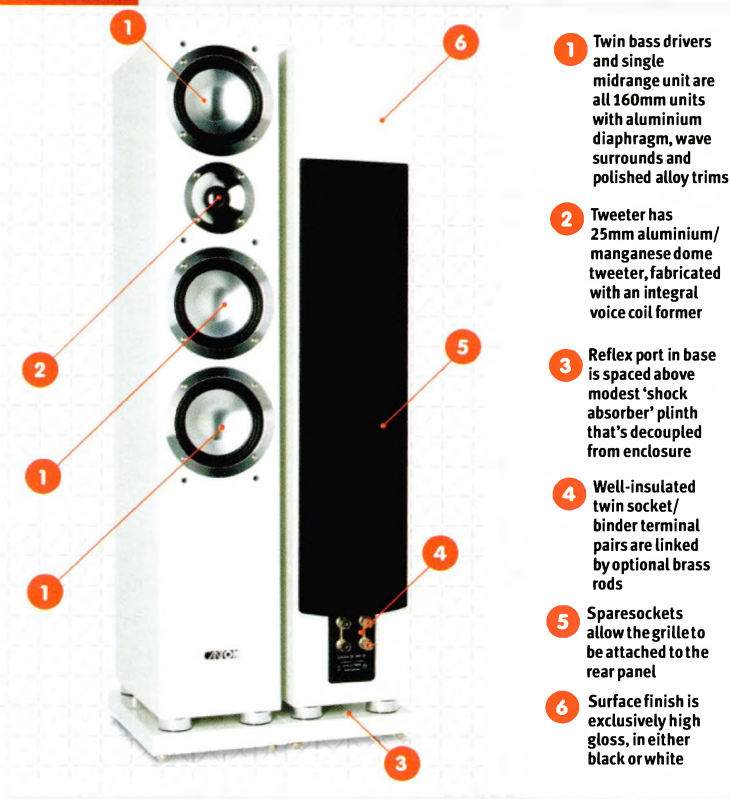
The Canton is arguably the most conventional, with its rectangular enclosure and regular three-way cone driver line-up.

Like the Rega, its bass is uneven and has limited extension; like the Wharfedale, its presence is a little strong; like the Cabasse, the sensitivity is high but the impedance low. On balance, the Canton, therefore, does indeed look fully competitive with others of a similar price.



The Canton's design uses twin 160mm bass units which are reflex-ported through the base of the enclosure

FEATURES



- 1 Twin bass drivers and single midrange unit are all 160mm units with aluminium diaphragm, wave surrounds and polished alloy trims
- 2 Tweeter has 25mm aluminium/manganese dome tweeter, fabricated with an integral voice coil former
- 3 Reflex port in base is spaced above modest 'shock absorber' plinth that's decoupled from enclosure
- 4 Well-insulated twin socket/binder terminal pairs are linked by optional brass rods
- 5 Sparesockets allow the grille to be attached to the rear panel
- 6 Surface finish is exclusively high gloss, in either black or white



TALKING POINT
CANTON'S WHITE paper describes in some detail the proprietary drive unit technology that is the foundation of this mid-price floorstander and the other Chrono SL-series models.

The ADT-25 tweeter has a combined dome and voice-coil former (made of aluminium/manganese alloy), avoiding glue joints. Finite element modeling (FEM) was used to optimise the dome shape for best structural and acoustical properties. It has a 'short coil long gap' motor for best linearity, and computer simulation was used to shape the magnetic poles for maximum symmetry and flux.

Somewhat similar engineering techniques were applied to the design of the bass and midrange drivers. FEM was again a crucial tool in ensuring that breakup modes – traditionally a weakness of metal diaphragm drivers – were moved well out of harms way.

A particular Canton feature is a rubber surround that's sinusoidal in shape, in place of the usual half-roll, for better damping and reduced distortion.

However, the down side is that things can often become a bit edgy, uncomfortable and even aggressive when the volume is turned up. While that explicit clarity at low listening levels is often welcome, this is not the sweetest speaker around and the presence dominance can become uncomfortable and somewhat fatiguing after a time.

The drive units and the tweeter are set somewhat below seated ear height, so the stereo image is rather lacking in both height and room-filling 'airiness'. On the other hand, image focus and lateral positioning is exceptionally precise, though again the focus element seems to be concentrated on the midband and presence. Consequently there is a slight tendency to 'spotlight' features at the front of the soundstage, whereas low frequency and depth positional information seems rather more vague.

Good enclosure control and high quality drive unit design help provide a very wide dynamic range with a notably low 'noise floor'. Dynamic expression and transient 'bite' is less impressive, as the midrange tends to lead the way here and the bass seems to follow in its wake.

There's no denying the engineering competence of this Chrono SL580 DC. Value for money might not be dramatically high, but it still seems respectable enough and pretty much par for the course for a premium brand with premium presentation and proprietary high-class engineering.

The Chrono SL580 DC delivers an exceptionally clean overall sound, though the lack of genuine bass authority remains a pity. The tonal balance might well be a little too upfront for some tastes and although it can certainly be driven hard and loud with confidence, this is a speaker that's happiest when operating at relatively modest volumes. ●

sensitivity in the interests of increasing the bass extension. One might also point out that brands sometimes deliberately opt for high sensitivity, as the 'louder' speaker often sounds more impressive when demonstrated under showroom conditions.

Shiny character

Bass end notwithstanding, the overall character here, though essentially neutral and attractively open, is also a tad 'shiny' and tends to focus the attention firmly and consistently on the upper midband.

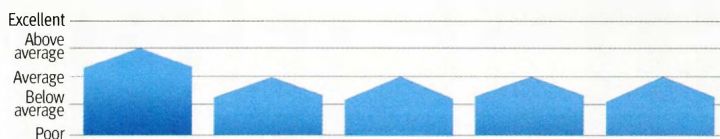
Some try and attribute a 'shiny' character to the use of metal diaphragms, but this is by no means

proven and seems more likely to be merely a myth. In fact, the more likely cause here is the minor unevenness seen in the measurements, especially in the relatively strong presence region (1-4kHz). Rather, metal diaphragms seem to give a clean sound with a notably low 'noise' floor, though fine details like instrumental textures sometimes seem suppressed.

The strong presence band does tend to be the most obvious feature here. It means that voices in general and speech, in particular, sound very clear and articulate, even when the speakers are playing very quietly and that is a worthwhile plus.

TECH LABS

RESULTS AT A GLANCE



- SENSITIVITY:** Delivers a very high in-room sensitivity rating of 92dB across the midband and still more through the upper bass.
- BASS EXTENSION:** -6dB at 28Hz is disappointing for a 3-way speaker, – probably a consequence of high sensitivity.
- EASE OF DRIVE:** Sensitivity is high, impedance is low (3.3ohms at 48Hz) through bass and midrange, so the two cancel each other out.
- FREQUENCY BALANCE:** Well-balanced through the midband and treble. Much of bass and and lower mid uneven.
- RESPONSE SMOOTHNESS:** Under in-room far-field conditions the midband and treble show fairly modest unevenness.

Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Smart modern styling and a very clean sound
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Sounds a bit shiny and forward; lacks bass weight and authority
- BUILD QUALITY** ★★★★★ **WE SAY:** Clean and shiny in both appearance and sound, this smart package leads with its midband and shows plenty of bling
- EASE OF DRIVE** ★★★★★

OVERALL ★★★★★

SEVENOAKS
SOUND & VISION

Save £s throughout August in the Sevenoaks Sale. There are huge savings on a wide range of TVs, home cinema, hi-fi and more! Supply is limited on some products so don't miss the chance to pick-up a bargain!

SALE

ROKSAN

CASPIAN SERIES M-1
PRE / STEREO POWER AMPLIFIER



LESS THAN
HALF PRICE

£1399
SAVE £1469

ALSO CASPIAN M1 PRE / MONO POWER AMPLIFIER (PAIR) £2299
SAVE £2448 - LESS THAN HALF PRICE!

MORE ROKSAN SALE OFFERS AT SSAV.COM

SAVE
£156



TRADE-IN
OFFER

SAVE
£156

ARCAM FMJ

A18 AMPLIFIER CD17 CD PLAYER

£459

PRICE WITHOUT
TRADE-IN £615

£459

PRICE WITHOUT
TRADE-IN £615

PRICES SHOWN AFTER TRADE-IN DISCOUNT

ALSO A28 / A38 AND CD37 - VISIT SSAV.COM

SAVE
£50



SAVE
£50

MARANTZ

CD6003 CD PLAYER PM6003 AMPLIFIER

£249

£249

ALSO NAD AND ROTEL - VISIT SSAV.COM

SAVE
£550



SAVE
£550

LEEMA ACOUSTICS

STREAM CD PLAYER PULSE AMPLIFIER

£749

£749

ALSO LEEMA XERO SPEAKERS £399
(WALNUT OR LIGHT OAK FINISHES) SAVE £311

SAVE
£676



LESS THAN
HALF PRICE

ARCAM

SOLO CD/FM*
MUSIC SYSTEM

£649

ALSO SOLO MINI & NEO
VISIT SSAV.COM

*THIS IS THE FM ONLY VERSION AND DOES NOT INCLUDE A DAB TUNER

MARANTZ

M-CR502DAB
CD RECEIVER

£329

SAVE
£70



LAST
FEW!



DENON

D-M37DAB
CD RECEIVER

£169

SAVE £60

ALSO DENON D-M38DAB - VISIT SSAV.COM

SAVE
£150



CLAIM
QED CABLE
WORTH
£200

SPENDOR

A5 SPEAKERS

£1495

MONITOR AUDIO

BRONZE BR5

£299

BRONZE BR1

£129

ALSO B&W - KEF - MONITOR AUDIO RX / GS RANGES - VISIT SSAV.COM

EX-DISPLAY
OFFER



CYRUS

CD8SE CD PLAYER

£999

SAVE £300

8XPd AMPLIFIER

£1249

SAVE £300

MORE CYRUS EX-DISPLAY
OFFERS AT SSAV.COM

SONOS

BU250 BUNDLE
DIGITAL MUSIC SYSTEM

£ SSAV.COM



OFFER

PLEASE NOTE: SOME BRANDS/PRODUCTS ARE NOT AVAILABLE AT ALL STORES. SALE OFFERS ARE NOT IN CONJUNCTION WITH ANY OTHER OFFER (NICWADO). ADVERT VALID UNTIL 31/08/2010. E&OE

more **OFFERS** at www.ssav.com

SEVENOAKS
SOUND & VISION

SALE NOW ON

CHECK ONLINE OR IN STORE
FOR LATEST PRICES

100s OF
REDUCTIONS

Sale starts 24th June. Subject to stock availability. Some offers will expire sooner than others. Not in conjunction with any other offer, sale price or promotion. E&OE. This ad expires 30th July 2010

Acoustic Energy, Alphason, Apollo, Apple, Arcam, Atacama, Audiolab, B&W, Chord, Creek, Denon, Epos, Grado, Harman Kardon, Humax, JBL, KEF, Linn, Marantz, Mission, MJ Acoustics, NAD, Onkyo, Panasonic, Pioneer, Pro-Ject, Pure, Q Acoustics, QED, Quad, Roksan,

Rotel, Samsung, Sennheiser, Sonos, Sony, Soundstyle, Tannoy, Teac, Technisat, ThemeScene, Topfield, Wharfedale, Yamaha and many more top brands. Not all products are available from all outlets; please call, or check online at www.superfi.co.uk

A FAMILY BUSINESS
SINCE 1929

HI-FI AND HOME
CINEMA SPECIALISTS

HI-FI SEPARATES

SIZZLING SEPARATES SYSTEM MARANTZ CD6003 AND PM6003 AND WHARFEDALE DIAMOND 10.1*

Available separately

WHARFEDALE DIAMOND 10.1
Choice of finishes
£199.95

WHAT HI-FI? AWARDS 2009
★★★★★
SEPTEMBER 2009

MARANTZ CD6003
£249.95
(RRP £299.95, Save: £50)

WHAT HI-FI? AWARDS 2010
★★★★★
JANUARY 2010

RRP: £799.85
SAVE: £199.90
£599.95

MARANTZ PM6003
£249.95
(RRP £299.95, Save: £50)

WHAT HI-FI? AWARDS 2010
★★★★★
JULY 2010



SPEAKERS

BARGAIN HI-FI SPEAKERS WHARFEDALE DIAMOND 9.1

- Brilliant for budget separates and mini-system upgrades
- Also work well in extensions and 2nd rooms
- Multiple award-winner
- Black or walnut

WHAT HI-FI? AWARDS 2004
★★★★★
WHAT HI-FI? AWARDS 2005
★★★★★
WHAT HI-FI? AWARDS 2007
★★★★★
DECEMBER 2007



RRP: £179.95
SAVE: £80
£99.95

"BIG BASS AND BAGS OF DETAIL"
WHAT HI-FI? SOUND & VISION

PROJECTORS & FLATSCREENS

3D READY LED TV SAMSUNG UE46C8000

HD ready
3D ready
WHAT HI-FI? AWARDS 2010
★★★★★
JULY 2010

- Experience amazing full 3D – on demonstration in store from first release
- Gorgeous brushed titanium frame, less than 3cm thin

"HUGE SPEC, INCLUDING 3D, LOVELY STYLING, DETAILED, PUNCHY AND DYNAMIC PICTURES"
WHAT HI-FI? SOUND & VISION

REFERENCE PERFORMANCE
£2199.95



LED TV SAMSUNG UE40B7020

HD ready
WHAT HI-FI? AWARDS 2009
★★★★★
MAY 2009

- Final few

RRP: £1599.95
SAVE: £800
£799.95



PROJECTOR PANASONIC PTAE4000

HD ready
WHAT HI-FI? AWARDS 2010
★★★★★
FEBRUARY 2010

- 3 HDMI inputs, easy to set up

RRP: £2399.95
SAVE: £300
£2099.95



PROJECTOR SOLUTION THEMESCENE HD67

RRP: £799.95
SAVE: £150
£649.95

- HD Ready (720p)
- Including 80" pull-up screen (worth £199.95)



PROJECTOR SYSTEM THEMESCENE HD20

HD ready

- Full HD (1080p)
- 2 x HDMI, VGA, component and composite inputs

BIG PICTURE, SMALL PRICE
£899.95



FREE 84" SCREEN
WORTH
£150

SUPERFI ARE HI-FI AND HOME CINEMA SPECIALISTS

We've specialised in quality home entertainment since 1929. All eight of our stores offer comfortable demonstration facilities and professional installation. From budget hi-fi separates and systems to top-flight home cinema set-ups and configurable custom install solutions, we set out to provide high standards of service and support, without cheap gimmicks or stuffy pretensions.



SUPERFI ONLINE WWW.SUPERFI.CO.UK

Since January 2000 we've worked to develop the most detailed website service available. Online you'll benefit from extensive product specifications and photography plus comprehensive order-tracking, enabling you to track your consignment right to your door. There's a huge range available, enabling you to research before visiting your local Superfi, or to buy quality products securely, online, without having to battle with traffic and parking wardens.



FIVE GREAT REASONS TO SHOP AT SUPERFI...

Free Parking

Spend £100 or more in any Superfi branch and we'll pay for up to two hours parking (see www.superfi.co.uk/freeparking for details)

0% credit available

Pay no deposit and then up to twelve, equal monthly payments (0% APR). Ask in-store for details and a quotation

Official UK models

We are authorised specialists for each product that we sell. We will only offer fully-guaranteed, genuine UK products with full after-sales support

Latest technology

Sophisticated hard disk, Blu-Ray, Freesat, MP3, DAB, PVR and multi-room products – all available to demonstrate

Real HiFi

Quality turntables, CD players, tuners, hi-fi amplifiers and speakers always in stock and available to demonstrate

FREEVIEW HD

HD FREEVIEW SET TOP BOX HUMAX HДФOXТ2

HD READY ★★★★★ JULY 2010

RRP: £179.95
SAVE: £30

£149.95



ACCESSORIES

HEADPHONES GRADO SR80i

WHAT IF IT? ★★★★★ FEBRUARY 2010

Also available

- SR60i: £89.95 (RRP £99.95, SAVE £10)
- iGrado: £44.95 (RRP £49.95, SAVE £5)

RRP: £119.95
SAVE: £12

£107.95



HDMI INTERCONNECT QED QUNEX HDMI-P

- 1m £19.95 (RRP: £49.95, SAVE: £30)
- 2m £24.95 (RRP: £57.95, SAVE: £33)
- 3m £29.95 (RRP: £64.95, SAVE: £35)

WHAT IF IT? ★★★★★ JULY 2007

SPEAKER CABLE QED XT EVOLUTION

£4.50/metre (RRP: £6.50, SAVE £2)

WHAT IF IT? ★★★★★ OCTOBER 2008



FOR OUR VERY LATEST PRICES, ASK IN-STORE OR CHECK ONLINE AT WWW.SUPERFI.CO.UK

Superfi

HOME CINEMA

5.1 SPEAKERS

Q ACOUSTICS 2000 CINEMA

- Choice of black, walnut or beautiful premium high-gloss black or white finishes

Also available

- Q Acoustics 2010: From £99.95
- Q Acoustics 2020: From £124.95

WHAT IF IT? ★★★★★ AWARDS 2009



RRP: £549.95
SAVE: £50

£499.95

AV RECEIVER PIONEER SCLX82

HD READY ★★★★★ NOVEMBER 2009



RRP: £1999.95
SAVE: £500

£1499.95

AV RECEIVER ONKYO TXSR608

HD READY ★★★★★ FEBRUARY 2010



RRP: £549.95
SAVE: £50

£449.95

5.1 SPEAKER SYSTEM B&W MT30

WHAT IF IT? ★★★★★ JULY 2010

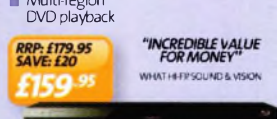


BLACK, SILVER OR WHITE

£1574.95

BLU-RAY PLAYER SONY BDPS370

HD READY ★★★★★ JUNE 2010



RRP: £179.95
SAVE: £20

£159.95

"INCREDIBLE VALUE FOR MONEY"

WHAT IF IT? ★★★★★ SOUND & VISION

CENTRE SPEAKER EPOS M8i

RRP: £384.95
SAVE: £235

£149.95

- Realmaple veneer



5.1 SPEAKER SYSTEM CANTON MOVIE 60CX

RRP: £249.95
SAVE: £50

£199.95



MULTIROOM & MULTIMEDIA

MULTIROOM SYSTEM SONOS BU250

SET YOUR MUSIC FREE

£799.95

WHAT IF IT? ★★★★★ AWARDS 2009



MULTIMEDIA SPEAKERS HARMAN KARDON SOUNDSTICKS II

RRP: £139.95
SAVE: £20

£119.95

WHAT IF IT? ★★★★★ FEBRUARY 2010



SPEAKERS

EPOS BARGAINS EPOS M22i

- Real red-cherry wood veneer
- Also available
- Epos MSI Maple: £199.95 (RRP £489.95, Save £290)

RRP: £174.95
SAVE: £575

£599.95



SPEAKERS B&W 685*

- Choice of four finishes
- Full range on demonstration

AWARD WINNING SOUND

£379.95

WHAT IF IT? ★★★★★ MAY 2010



BOOKSHELF SPEAKERS Q ACOUSTICS 1010i

- Cherry finish

RRP: £109.95
SAVE: £60

£49.95



SUBWOOFER WHARFEDALE DIAMOND SW150

"THE BEST OF THE BUDGET BASSMASTERS"

WHAT IF IT? ★★★★★ SOUND & VISION

RRP: £249.95
SAVE: £100

£149.95



HI-FI

MICRO HI-FI ARCAM SOLO MINI WITH WHARFEDALE DIAMOND 10.1 SPEAKERS*

RRP: £949.90
SAVE: £199.95

£749.95

WHAT IF IT? ★★★★★ AWARDS 2009



MICRO SYSTEM DENON DM38

- Denon have improved their Award-Winning DM37

DIRECT DIGITAL FROM IPOD

£229.95

WHAT IF IT? ★★★★★ AWARDS 2009



AMPLIFIER NAD C315BEE

- Quality design from the budget-amp experts

RRP: £249.95
SAVE: £92

£157.95

WHAT IF IT? ★★★★★ AWARDS 2007



TURNTABLE PROJECT ESSENTIAL

- Includes cartridge

BRILLIANT VALUE

£149.95

WHAT IF IT? ★★★★★ JUNE 2010



HOME CINEMA SYSTEM PRICING GRID

Choose your AV receiver from the column on the left, select your desired speaker package from the top row, and use the grid to discover the combined price.

	CANTON MOVIE 60CX 5.1	Q ACOUSTICS 2000 5.1	MISSION M-CUBE 5.1	WHARFEDALE 10 HCP	QUAD LITE II 5.1	KEF HNT500S.2/ KUBE 2	B&W MT25	B&W 685 THEATRE	B&W MT30
ONKYO TXSR308	£399.95	£694.95	£749.95	£849.95	£899.95	£999.95	£1153.95	£1405.95	£1774.95
ONKYO TXSR508	£499.95	£794.95	£849.95	£949.95	£999.95	£1099.95	£1253.95	£1505.95	£1874.95
ONKYO TXSR608	£649.95	£944.95	£999.95	£1099.95	£1149.95	£1249.95	£1403.95	£1655.95	£2024.95
DENON AVR1911	£649.95	£944.95	£999.95	£1099.95	£1149.95	£1249.95	£1403.95	£1635.95	£2024.95
DENON AVR2310	£899.95	£1194.95	£1249.95	£1349.95	£1399.95	£1499.95	£1653.95	£1905.95	£2274.95
PIONEER SCLX82	£1599.95	£1894.95	£1949.95	£2049.95	£2099.95	£2199.95	£2353.95	£2605.95	£2974.95
YAMAHA RXV2065	£899.95	£1194.95	£1249.95	£1349.95	£1399.95	£1499.95	£1653.95	£1905.95	£2274.95



MAIL ORDER AND WEBSITE

MAIL ORDER HOTLINE
0800 731 821

BUY ONLINE NOW AT
WWW.SUPERFI.CO.UK

STORES – EACH BRANCH OFFERS EXPERT DEMONSTRATION AND INSTALLATION

Birmingham
67 Smallbrook, Q'way
0121 631 2675

Derby
22 Sädler Gate
01332 360303

Leeds
105 Vicar Lane
0113 244 9075

Lincoln
271a High Street
01522 520265

London
2-4 Camden High St
020 7388 1300

Manchester
54 Bridge Street
0161 835 1156

Nottingham
15 Market Street
0115 941 2137

Stockport
68-70 Lower Hillgate
0161 429 9080

4 the record

Mark Prendergast assumes the role of a 21st century Knight's Templar in his search for the Holy Grail of recorded music – the unreleased album

part1





Months, possibly years, have been spent in the planning stages. Groups as diverse as Pink Floyd and The Byrds, names as illustrious as Pete Townshend, John Lennon and Paul McCartney have all worked on incredible ideas, only to see them and the resulting album shelved at the last moment.

But then what's really fascinating about unreleased albums is the way they work their way into popular consciousness. First there's the rumour, then wild stories of what the music probably sounds like. Sometimes, bootleggers even manage to get a hold of fragments, bits of studio sessions or even complete master tapes. All this speculation is further fuelled by early samples of album cover artwork.

Get back

Sometimes a track can almost make it to disc. Take, for instance, The Beatles' *Carnival Of Light*, which was actually completed in 1967, but has never been released due to

the fact that that George Harrison disliked its overtly avant-garde nature.

McCartney had been taken with a proposed electronic festival at London's Roundhouse Theatre, with people like VCS3 synthesiser inventor Peter Zinovieff and the BBC Radiophonic Workshop's Delia Derbyshire. Both McCartney and Lennon went crazy in the studio, mixing up all kinds of sounds for a truly psychedelic feel. The sound included distorted organs and drums, a wiggled-out electric guitar, water effects, pounding piano and a litany of vocal experiments from whispers to screams. Random conversations were also dropped in before the entire 15-minute collage ground to a halt. An entire album's worth of such material was scheduled, but to this day only those in The Beatles' inner sanctum have heard the results!

At one stage in The Beatles' career talks even ensued between John Lennon and the German avant-garde composer Karlheinz Stockhausen about a possible collaboration. An aborted meeting, due to a snowstorm in New York, was slated to work up ideas for what would happen in 1969. One quickly

abandoned idea was that Stockhausen would conduct the band in a floating Chinese junk in New York harbour, playing a brand new joint composition that would even out-do *Sgt Pepper!*

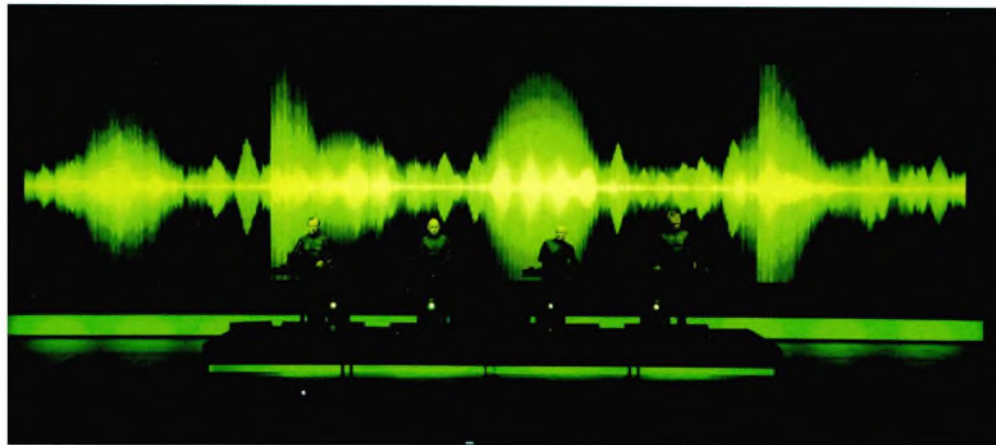
The Beatles disc which did emerge from the early 1969 Stockhausen collaboration, however, was *Get Back* – the most famous and controversially unreleased album in history. To this day it spawns innumerable bootlegs, discussions and endless speculations as to what it would have sounded like. But once The Beatles had performed live on the rooftop of their Savile Row studios on January 30th 1969, the game was up for their elaborate daydreams.

All the tapes from the *Get Back* recording sessions in Twickenham and London were given to engineer Glyn Johns to make an album. The record was to be full of raw material, rough and ready takes of Buddy Holly, Carl Perkins and Little Richard songs, including tracks like *High Heel Sneakers* and *Yakety Yak*, as well as impromptu snatches of chat with people like Peter Sellars (who wandered into the studio during a session) and finished performances of new songs.

There was enough for a double LP – up to 35 tracks of different songs. But, by May 1969, The Beatles were fed up with *Get Back* and rejected Glyn Johns first mix.

“John Lennon and Paul McCartney have worked on incredible ideas, only to see them shelved at the last minute”





Johns then spent eight more months tinkering (during which The Beatles recorded *Abbey Road*). The band even shot the famous Manchester Square balcony photo for the *Get Back* sleeve, but by January 1970 none of the revised Johns' mix or track listing would suffice. Instead, Lennon and Harrison would a mountain of tapes to Phil Spector, yet it would be another 33 years before the track *Don't Let Me Down* appeared on a Beatles album. As for the rest, that was consigned to history.

Musique non-stop

Kraftwerk's slick, stripped-down electronic pop music made them superstars between 1977 and 1978, during which time they launched *Trans-Europe Express* and *The Man Machine*. By 1981, the German band's metronomic beats, conceptual genius and catchy tunes had attracted the interest of David Bowie, Elton John and even Michael Jackson.

Arguably, the most advanced music group of their time, the sounds that emanated from Ralf Hütter, Florian Schneider, Karl Bartos and Wolfgang Flür, were nothing less than a slice of the future.

By 1983 a new Kraftwerk album called *Technopop* was about to emerge from Dusseldorf's Kling-Klang studio and EMI were instructed by Hütter to allot it a catalogue number. A tour of the UK was arranged, artwork was designed, but after Hütter was seriously injured in a cycling accident *Technopop* was cancelled, forever. The band's biographer Pascal Bussy, opined that perhaps the album was cancelled because Hütter heard some of the material Michael Jackson's was preparing for *Thriller*

“Furious arguments broke out over the seamless mess that *Lifeshouse* was becoming.”

and realised that Kraftwerk were no longer the leaders in the creation of electronic rhythms!

Byrds flock to Nashville

By the end of 1967, The Byrds were in tatters. Only two of the original members were left, Roger McGuinn and Chris Hillman. In January 1968, McGuinn, with typical chutzpah announced that he would write an album entitled *The History Of American Music* – a chronicle of music from the 13th Century onwards and including Celtic folk music, Appalachian music, country music, bluegrass, raga, psychedelic rock and a side of Moog synthesizer and electronic sound. He and Hillman decided that rich country musician Gram Parsons would be the perfect man for the job and, with producer Gary Usher, they set out to record it.

However, once in the studio they balked at an idea which would take forever, involve string sections and complicated electronics. Instead they upped their LA sticks, went to Nashville and recorded *Sweetheart Of The Rodeo* on two 8-Track machines.

The full results of these sessions can be gleaned from the sumptuous two-disc remastered Columbia Legacy edition which appeared as late as September 2003. But back in the late 1960s,

McGuinn was full of concepts including *Gene Tryp*, a musical based on Grieg's *Peer Gynt* suite which was planned for a Broadway production and subsequent multi-disc release. This was, unfortunately, eventually shelved due to time and the enormous expense involved.

Lifeshouse Family

After the enormous success of his 1968 rock opera *Tommy*, Pete Townshend set about writing a 24-song cycle, 21st Century opera entitled *Lifeshouse*. Inspired by Indian spiritualist Meher Baba, the idea would be a multi-disc album, a feature film and a complete interactive concert scenario with The Who's music pounding out through a new Quadrophonic sound system. Moreover, new Arp synthesizers would produce a one-note finale that would euphorically sweep away all the bad vibes of late 1969.

In the spring of 1970, Townshend went to New York to record *Lifeshouse*, but the session was fraught with problems. Once back in Britain, Townshend then hired The Rolling Stones Mobile Studio and went to work on the project at Stargroves with Glyn Johns. He then re-convened The Who to perform some of it at The Young Vic in April 1971. Happy with the results, he went to Olympic Studios in Barnes to begin recording. As time went on furious arguments broke out between Johns and Townshend over the seamless mess that *Lifeshouse* was fast becoming. On top of that, Universal Studios refused to bank roll a movie version as they still had *Tommy* to promote.

Defeated, Townshend eventually gave up the idea. The album *Who's Next* was made from eight of the best tracks from *Lifeshouse*, before the project was shelved indefinitely. The Who became superstars the world over and in 1999, Townshend finally broadcast a version of *Lifeshouse* on BBC Radio 3, followed by a 10-CD box set in 2000. But it's not the original idea played by The Who, which for years has circulated as a bootleg. Next Month: The Rolling Stones, The Beach Boys, Jimi Hendrix, Pink Floyd and Neil Young. ●



SEVENoaks
SOUND & VISION

Save £s throughout August in the Sevenoaks Sale. There are huge savings on a wide range of TVs, home cinema, hi-fi and more! Supply is limited on some products so don't miss the chance to pick-up a bargain!

SALE

DENON

AVR-1910

AWARD-WINNING A/V RECEIVER



£329
SAVE £120

LAST FEW!

ALSO AVR-1911 - VISIT SSAV.COM

MORE DENON SALE OFFERS

LAST FEW!

- AVR2310 A/V RECEIVER £549 SAVE £250
- AVR3310 A/V RECEIVER £799 SAVE £420
- DBP1610 BLU-RAY DISC PLAYER £269 SAVE £130
- DBP2010 BLU-RAY DISC PLAYER £399 SAVE £200

ONKYO
TX-SR608 A/V RECEIVER
£449

CLAIM HDMI CABLE WORTH £50

MORE OFFERS AT SSAV.COM

SAVE **£356**

ARCAM
FMJ AVR500 A/V RECEIVER
£2199

TRADE-IN OFFER

PRICE WITHOUT TRADE-IN £2555
PRICE SHOWN AFTER TRADE-IN DISCOUNT

ALSO FMJ AVR600 - VISIT SSAV.COM

SAVE **£550**

PIONEER
SC-LX82 A/V RECEIVER
£1349

LAST FEW!

ALSO SC-LX72 £999

DENON
DBP-1611UD BLU-RAY DISC PLAYER
£ S S A V . C O M

OFFER

ALSO DBP-2011UD - VISIT SSAV.COM

SAVE **£40**

PANASONIC
DMP-BD65 BLU-RAY DISC PLAYER
£139

ALSO 3D READY DMP-BDT300 - VISIT SSAV.COM

SAVE **£120**

PIONEER
BDP-320 BLU-RAY DISC PLAYER
£179

LAST FEW!

ALSO BDP-LX52 £299

KEF
KHT2005.3 5.1 SPEAKER PACKAGE
£ S S A V . C O M

OFFER

ALSO B&W & MONITOR AUDIO - VISIT SSAV.COM

SAVE **£70**

Q ACOUSTICS
CINEMA 2000 5.1 SPEAKER PACKAGE
£479

GRAPHITE ONLY

ALSO B&W & MONITOR AUDIO - VISIT SSAV.COM

SAVE **£150**

YAMAHA
YSP4100 SOUNDBAR
£1099

ALSO B&W & MONITOR AUDIO - VISIT SSAV.COM

PLEASE NOTE: SOME BRANDS/PRODUCTS ARE NOT AVAILABLE AT ALL STORES. SALE OFFERS ARE NOT IN CONJUNCTION WITH ANY OTHER OFFER (NICWAO). ADVERT VALID UNTIL 31/08/2010. E&OE

more **OFFERS** at www.SSAV.com

SEVENoaks
SOUND & VISION



Wood you?

aircoustic
BY VIVANCO

Wood is good

for some things at least

The greatest speakers and instruments in the world are crafted from wood; this is of course due to its renowned acoustic properties.

In striving to create perfection, we chose not to ignore this natural choice.

aircoustic BY VIVANCO Wood is good

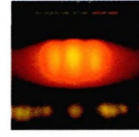




85 - Kilimanjaro
The Teardrop Explodes



85 - Mahler
Symphony No 9



86 - William Orbit
My Oracle Lives Uptown

Music reviews

Hi-Fi Choice's pick of the latest high-quality music releases

ALBUM OF THE MONTH



HOT PICK

Steve Winwood

Revolutions: The Very Best of Steve Winwood

islandrecords.co.uk

★★★★★

Island

4 CD box set

Of all the 1960s original British rock superstars who remain active, Steve Winwood is by far the most low-key and enigmatic. Seldom, if ever, mentioned in the gossip columns or found consorting with his fellow celebrities, he exudes an admirable attitude which says "it's not about me, it's all about the music". And he has made some extraordinary music in a career lasting 45 years, the highlights of which are presented here.

What is most striking about these 58 remastered tracks, is the sheer diversity of Winwood's *oeuvre*. We begin with the teenage boy wonder, singing with the Spencer Davis Group over a pneumatic, Motown-influenced beat on a series of ecstatic hits, including *Keep On Running*, *Somebody Help Me*, and *Gimme Some Lovin'*.

Then comes the meat of both this set and Winwood's career, with 29 selections from Traffic, a band whose airy cross rhythms encompassed not just psychedelic-rock but jazz, folk, latin, soul and world music. Three tracks from Blind Faith – the supergroup Winwood formed in 1969 with former Cream pair Eric Clapton and Ginger Baker – show the unfulfilled promise of that particular teaming.

It then gets slightly more problematic with the solo years, a promising start lost in the 1980s, as Winwood chased the fashionable but bland cul-de-sacs of the decade on disco-friendly hits such as *Higher Love* and *Back In The High Life Again*.

His powerful renaissance of recent years on high-class albums such as *About Time* (2003) and

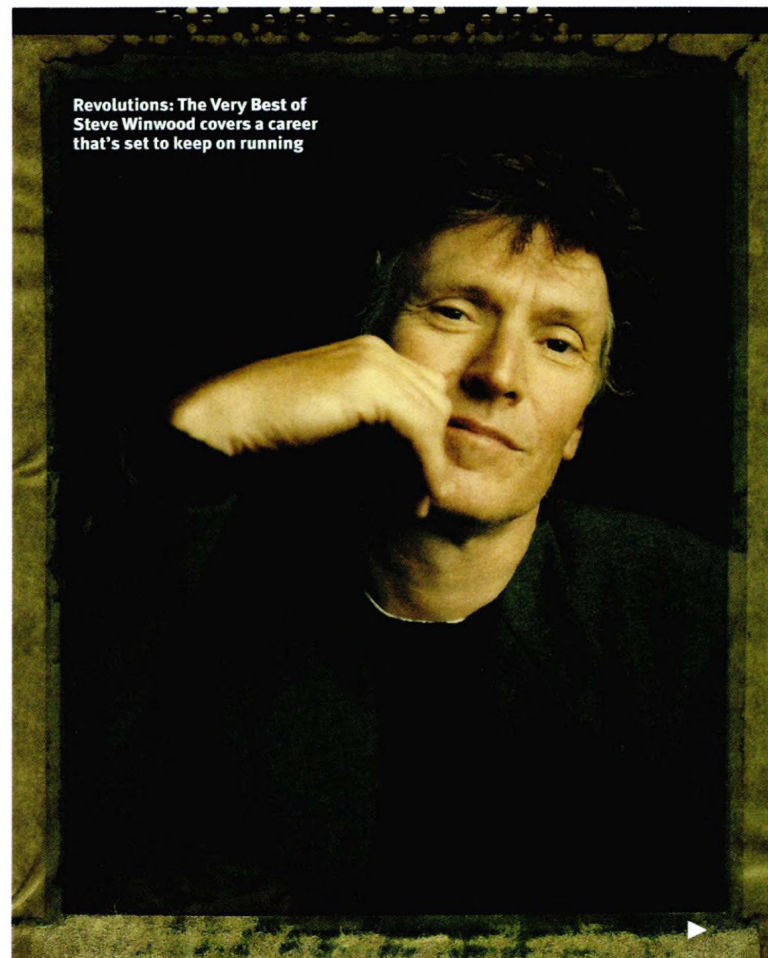
"What is most striking about these 58 remastered tracks, is the sheer diversity of Winwood's *oeuvre*."

Nine Lives (2008), is under-represented. But overall, it's an impressive representation of one of the most remarkable careers in rock music.

When you remaster 45 years of music simultaneously, the results are bound to be interesting and

this 2010 remastering certainly throws up some mixed results. In places, it sounds bass-heavy and weighs down the airborne melodies. On the jazzier, funkier tracks the effect can be felicitous. Elsewhere, the result is a coarsening of the original sound, almost to the point of distortion.

The tracks that benefit most from the remastering process are the three songs from Blind Faith's lone album. Tracks such as *Well All Right* and *Can't Find My Way Home*, sound fuller and more rounded. **MW Stand-out tracks:** Gimme Some Lovin'; Low Spark Of High-Heeled Boys; Dear Mr Fantasy; Glad



Revolutions: The Very Best of Steve Winwood covers a career that's set to keep on running

HOT PICK



The Teardrop Explodes Kilimanjaro

umusic.com

★★★★★

Mercury/Universal

Deluxe 3 CD box set

Originally released in 1980, the debut album by The Teardrop Explodes put them at the head of the post-punk groups coming out of Liverpool at the time, alongside Echo & The Bunnymen.

Three decades on, their lysergic electro-pop has lost none of its fractious thrill and surreal excitement. They occasionally sound a little self-conscious, but the colourful splash of tracks such as *Bouncing Babies* and *Sleeping Gas* remains irresistible.

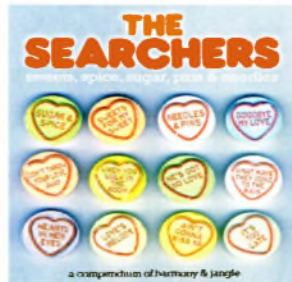
The original album is augmented here by a second essential disc of non-album singles and B-sides, including their finest moment and only top ten hit *Reward*.

There was something about record production in the 1980s that means almost everything recorded in the early part of the decade benefits from remastering and the Teardrops are no exception. The characteristically brash eighties' drum sound has been cleverly clipped, allowing the clanging guitars, staccato organ bursts and Julian Cope's singular voice and idiosyncratic lyrics to emerge more forcefully.

The blazing trumpets on *Reward*, in particular, benefit from greater punch. The compression that has become almost *de rigueur* in modern remastering isn't always to everyone's taste. But here it works a treat. **NW**

Standout tracks:

Sleeping Gas; *Bouncing Babies*; *Reward*; *Treason*



The Searchers

Sweets, Spice, Sugar, Pins And Needles: A Compendium Of Harmony 'n' Jangle

umusic.com

★★★★★

Sanctuary/Universal

4 CD box set

IT HAS TAKEN more than 40 years for this first complete career retrospective to appear. And although they could never match that other Merseybeat group, as this collection shows, their string of 1960's hits were far less disposable than it seemed at the time.

The digital retooling can't quite disguise the slightly tinny quality of the originals – but then to do so would arguably detract from the period charm. A total of 120 tracks might just be too much of a good thing however, while the audio quality of some of the unreleased demos and live recordings is variable, to say the least. **NW**

Standout Tracks:

Sugar and Spice; *Needles and Pins*; *What Have They Done To The Rain*



John Mayall

So Many Roads: An Anthology 1964-1974

umusic.com

★★★★★

Universal

4 CD box set

THE FIRST TWO DISCS devoted to Mayall's Decca recordings made between 1964-68, include Bluesbreakers alumni Eric Clapton, Jack Bruce, Peter Green and Mick Taylor. The second half of the set features his recordings for Polydor between 1969-74, by which time he was living in LA and working with American musicians.

Many of the earliest of the 71 tracks are presented in their original mono sound, including the legendary recordings that made Clapton's name from the 1966 Bluesbreakers album. By the time of the American recordings studio techniques had improved dramatically. The remastering also smooths-over some of the variation. **NW**

Standout tracks:

Steppin' Out; *Looking Back*; *The Supernatural*; *California*



Mahler

Symphony No 9

signumrecords.com

★★★★★

Signum

SACD/CD 5.1/2 channel hybrid
2 discs

MAHLER'S LAST completed symphony, with its four movements and no vocal elements, marks a return to the past in some ways. In others it is strikingly original, from its rough hewn Rondo Burlesque, to the hints of a new era of music in the first and third movements – not forgetting its unbearably poignant and valedictory final *Adagio*.

The 9th has had its share of great recordings over the years, and this is definitely one of them. The recording is completely believable and musically compelling, in every aspect – combined with excellent (multi channel and stereo) sound. Its bargain price, makes it a release and an event not to be missed. **AG**

Standout track:

Rondo-Burlesque

AUDIOPHILE VINYL

Keb' Mo Peace... Back By Popular Demand purepleasurerecords.com



★★★★★ Okeh/Pure Pleasure

180g vinyl

THIS COLLECTION of protest songs includes *For What It's Worth*, *The Times they are a Changin'*, *Imagine* and seven other favourites of the anti-war/pro brotherhood

movement. Mo isn't quite the singer that Dylan or Lennon were, which is hard to ignore, but he's earnest enough about the causes – even if the message can sometimes get lost in the polished production. The strongest tracks are those where the arrangement makes for a great tune in itself, rather than depending on the quality of the tune is (*What's so funny 'bout*) *Peace*, *Love and Understanding*, which seems totally ironic in the context of the smoothness of delivery.

This is a slick and powerful, full-fat production with muscular bass and precise yet smooth playing. The sound is somewhat at odds with the originals for the most part, but certain tracks really leap out, like Marvin Gaye's *What's Happening Brother*, where the voice is a little closer to Mo's than the alternatives here. The instruments really jump out of the speakers and inhabit the space in the room in a substantial manner, whether the message makes itself so clear is another matter. **JK**

Standout track:

What's Happening Brother



J.S. Bach

Goldberg Variations

linnrecords.com

★★★★

Linn

SACD/CD hybrid, 2 discs

ANOTHER WINNER from the Linn stable, this Bach set includes the deservedly popular *Goldberg Variations*, with two of his other works (*Sarabanda Con Partite*, *Aria Variata*) in performances that are measured and free of histrionics, but completely at ease with the technical challenged involved.

The *Partita* was probably not written by Bach himself, but this version of the *Goldberg* is one of the best available recordings not played on piano. The sound is fittingly percussive, but the ambience of St Giles, London, perfectly complements the harpsichord's rich sustain, which makes this performance very easy on the ear. **AG**

Standout track:

Disc 1: Aria (track 17)



The Pretty Things

S.F. Sorrow

snappermusic.com

★★★★

Snapper Music

CD/DVD Book Edition

AT LAST, A DECENT EDITION of one of the great British rock albums. A 1968 psychedelic rock opera recorded at Abbey Road with The Beatles on one side and The Pink Floyd on the other from late 1967 to 1968.

Its cornucopia of sounds and driving rock aesthetic, made it an instant classic that went on to inspire The Who to create 1969's *Tommy*.

After years of iffy editions this stupendous version includes superb out-takes, singles and an acetate version of the legendary *Defecting Grey*. Spruced-up sound finally reveals the subtleties of Norman Smith's production including greater definition to Mellotron, sitars, tone generators and effects. **MP**

Standout tracks:

Private Sorrow; Balloon Burning; Baron Saturday



Ozzy Osbourne

Scream

ozzy.com

★★★★

Columbia

CD

WOW! Didn't see this coming. Yes, with his new solo album, Ozzy has managed to transcend his latter day, bumbling reality TV star persona and deliver one of the strongest records of his career. With new guitarist Gus G in tow, Ozzy sounds revitalised, re-energised and unstoppable. Throughout, the guitars are massive and the choruses even more so. Heavy? Yes. Melodic? And then some.

Scream will give your speakers a serious run, the thunderous bass and relentless drums providing the perfect bedrock for Ozzy's wall of sound. Cheeky squeaks and squelches nestle in the mix, while Gus G's guitar soars high. Our advice is, play it loud. **SL**

Standout tracks:

Let Me Hear You Scream; Latimer's Mercy

HIGH-RESOLUTION DOWNLOADS

William Orbit

My Oracle Lives Uptown

linnrecords.com

★★★★

Linn

24-bit/44kHz stereo



ORBIT'S MUSIC is an eclectic, strange but ultimately winning mix, that frequently sails close to

ambient and then saves itself with an injection of animation, often with vocal textures layered on top of the instrumentation. This is not the sort of 'album' that immediately grabs you, it surreptitiously works itself into your psyche with repeated plays.

The 24-bit recording and production are well suited to exposing the way this music has been so beautifully engineered and skilfully assembled. It lifts this predominantly synthesised music way above the mundane Jean Michel-Jarre level, by the sheer elegance of its construction. **MS**

Standout tracks: Drift So Far; Purdy

Aurelio Martinez

Garifuna Afro-Combo

bowers-wilkins.co.uk

★★★★★

Bowers and Wilkins

24-bit/44.1kHz stereo



AURELIO MARTINEZ'S musicoozes an unmistakable joy and passion with its life-affirming cross-

cultural grooves that blend African and Latin beats. The band has a warm, sophisticated sound and the arrangements are strikingly original: Yurumei, for example, shows a distinct retro sensibility with its wah-wah guitar intro before the bass and horns thunder in alongside the equally effusive percussion

This recording brings out Martinez' vocals and guitar splendidly, as well as the voices behind him, which add that extra dimension to the busy soundstage. As a result the music displays all its natural animation and verve throughout. **MS**

Standout tracks: Ineweyu; Yurumei

BLU-RAY AUDIO

The Moody Blues Threshold Of A Dream www.eagle-rock.com



★★★★

Eagle Vision

Blu-ray stereo LPCM, Dolby Digital, DTS HD Master

THE SUBTITLE for this disc is *Live at the Isle of Wight Festival 1970*, which gives you a better idea of what to

expect. It consists of eight chapters of documentary with commentary from various Moody's and the 12 songs they performed at the event. The band were at the peak of their powers, yet they still look scared in front of the 600,000-strong audience.

The video is taken from 16mm footage which is as inferior as the sound, but is entirely authentic.

So audio quality is inevitably limited by the circumstances of the event and while there's no shortage of live atmosphere, there's a woeful lack of bandwidth and dynamics

by today's standards. However, with the DTS HD-master track, you can hear what's going on and appreciate the tone of the mellotron, an instrument that the band pioneered to great effect. The surround track is derived from a stereo original and, unsurprisingly, it's not really an improvement. Yet, with enough joss sticks and the right trousers, it should be possible to drift back in time to the most eventful British festival of the era. **JK**

Standout track:

Tuesday Afternoon

European union

Jimmy Hughes samples a distinctly different system where exotic Italian electronics meet the clean lines of homegrown Finnish flair

Italy didn't do terribly well in the 2010 World Cup, while Finland didn't make it all. But they're doing much better when it comes to hi-fi.

Italy meets Finland in the final of this month's *Beautiful Systems*. The electronics hail from Italian expert Audio Analogue, while the speakers were supplied by Finnish style gurus Amphion.

While style is very-much a matter of personal taste, all three items look good with smooth lines and simple clean presentation. In particular, the electronics have an almost monolithic appearance, with large areas of blank metal and minimal controls.

This creates a crisp, clean appearance – no protruding heatsink fins from the amplifier, for example. The latter also features electronic volume and input selection via a micro-processor and both knobs spin freely.

The speakers have comparably smooth lines, too. The bass unit is covered by a mesh-type grille, but the tweeters (and their metal domes) are left uncovered. As a result, this is not (perhaps) the speaker for those with young children who have inquisitive fingers!

Striking a balance

Audio Analogue has used the Maestro name for past amplifiers and CD players. The Maestro Settanta REV2.0 amp here is similar to one of its earlier offerings, but the REV2.0 version now includes a set of balanced line inputs and an RS-232 Serial Port.

Power output is conservatively rated at 70 watts per channel (from 20Hz to 20kHz, both channels driven into an eight-ohm load) which increases to 125 watts per channel into four ohms. There are four unbalanced line inputs and one set of balanced inputs via XLR sockets.

There's also a built-in MM/MC phono stage, preamp and record

outputs, plus the RS-232 serial port previously mentioned. Loudspeakers connect via a single set of binding posts that accept spade terminals, bare wires, or four-millimetre plugs.

The Maestro 192/24 CD player matches the amplifier in terms of size and features a 24-bit/192kHz DAC, with a choice of balanced/unbalanced analogue audio outputs, plus a S/PDIF digital output via a phono socket and RS-232 Serial Port.

Technical features include the use of two mains transformers (one toroidal) with eight separate power supply sections and a high-quality 24-bit/192kHz DAC with a low-jitter sampling rate converter.

Unusually, the disc transport is entirely enclosed in a metal box within the player – you can't see the CD mechanism even with the top panel removed. Track access is speedy, but fast search is slow – and then too fast! – like an '80s Philips CD player.

**“This month's
Beautiful System is
for those who like
a pure, clean,
neutral sound.”**

Interestingly, Audio Analogue says nothing about the transport used – perhaps the company wants to keep it a secret? It would seem to be a very high-quality device and its solid construction creates a rigid platform that should ensure a clean stable drive.

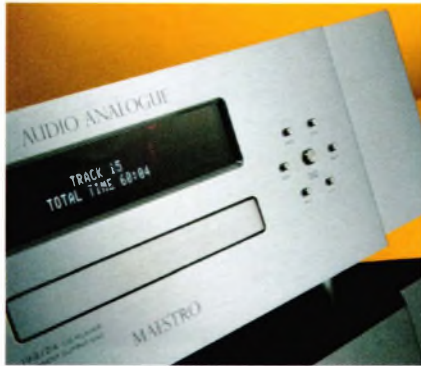
The amplifier features a large toroidal power transformer and each channel is powered by its own separate tap. The volume control is electronic, featuring a 50-step buffered resistor network with settings shown on the electronic display. The circuits feature high-quality discrete components throughout

and these include close-tolerance military-spec, metallic-layered resistors and non-polarized polyester/propylene capacitors. The makers claim these capacitors were individually auditioned for the best sound quality.

Aluminium casework (front/top/sides) on a steel chassis is common to both items, while build quality is substantial. The front panel is around



COMPONENTS



1 AUDIO ANALOGUE MAESTRO 192/24 CD PLAYER
£2,299

Includes a 24-bit/192kHz DAC; low jitter Sample Rate Converter; balanced and unbalanced analogue outputs; RS-232 interface; aluminium casework



2 AUDIO ANALOGUE MAESTRO SETTANTA REV2.0 INTEGRATED AMPLIFIER **£2,499**

4x unbalanced line inputs; 1x balance line input; MM/MC cartridge input; RS-232 interface; aluminium casework; 70 watts per channel



3 AMPHION ARGON 3 LOUDSPEAKERS
WHITE/BLACK £1,850; BIRCH/WALNUT £1,995

6.5-inch aluminium cone bass/mid driver; 1-inch titanium dome tweeter. Sensitivity 86dB; frequency response - 40Hz to 40kHz (claimed)





LEFT: Argon 3 speakers have also found their way into professional recording studios

RIGHT: Minimal controls and 70 watts per channel, the Maestro Settanta is the perfect companion

BELOW: The Maestro 192/24 CD player is especially good on the 'human voice'

1.2kHz, Amphon has tried to avoid the 3kHz region where the ear is very sensitive to irregularities.

Both drivers have substantial magnets and the bass unit has a 'long-throw' coil with metal phase plug. Amphon claims special care is taken to control dispersion – so you hear more of the speaker and less of the room.

It's something it calls Uniformly Directive Dispersion, or U/D/D for short. The aim is to reduce spurious reflections from walls and ceilings. The tweeter's gently recessed front is part of this – and looks super-cool into the bargain!

Music, Maestro!

Auditioning began with the Maestro 192/24 CD player being used solo in our regular system set-up. First impressions are of a smooth, open, well-balanced sound that was spacious and clean.

Now superficially it isn't what you might call an impressive sound, but this was deceptive. Certainly, the Maestro CD player sounds very cultured and refined. It's extremely natural and smooth, with no hint of harshness or aggression.

It proves especially good on human voice – the absence of added 'edge' and false brightness created a very truthful end result. Some reviews

10mm thick, though the 30mm thick centre portion is not actually solid.

The case measures 445x380x120mm. With feet, height is about 135mm and the front/back dimensions of the amp (including knobs) are around 420mm. The weight of the amp and CD player is 18 kilograms and 15kg respectively.

Heavy metal

Talking of weight, the little Amphon Argon 3 loudspeaker is surprisingly heavy for such a small enclosure – some 11kg. A two-way ported design using metal cone drivers, it measures 388x191x305mm and is available in a black, white, birch, or cherry finish.

The cabinet is very solidly made, with internal bracing and feels extremely inert. A hard-wired crossover is employed using air-cored inductors. The tweeter also has a one-inch titanium dome, while the 6.5-inch mid/bass cone is aluminium.

Crossover point is a low 1.2kHz, and the maker claims medium/low sensitivity of 86dB per one watt. By pitching the crossover frequency at





have criticised this CD player for lacking urge – implying it's too smooth and refined.

Maybe for some tastes it is, but the human voice is a good litmus test. Exaggerations that enhance rock music sound plain wrong on an unamplified voice. Playing Kurt Weil's *Street Scene*, the spoken dialogue sounds totally natural.

But what impresses more is the way subtle inflections of tone colour and fine dynamic shadings are revealed. *Street Scene* has quite a lot of spoken dialogue and the Maestro reveals spatial placement of voices and head movements very clearly.

Playing the same recording on a different CD player, these qualities are much less apparent. While each voice sounds nicely forward and clear, placement seems much the same at all times – as though each singer were rooted to the spot.

In many ways, the Maestro Settanta REV2.0 amplifier offers similar sonic qualities. It's also very smooth and clean, producing natural unexaggerated results. The amp always sounds solid and very powerful, subjectively punching well above its weight.

In the interests of balance

Sonically, best results were obtained using amp and CD player via their balanced inputs/outputs. However, for some reason, the improvement with balanced over unbalanced was not as significant as it can be – and usually is.

There's a slight increase in gain and a marginally bigger/fuller sound with

balanced, but it's not a 'night and day' difference. So, before investing in expensive XLR balanced cables, make careful comparisons.

The volume control has a smooth 'feel', and operationally the amplifier is a pleasure to use. Disappointingly, your input and volume settings are not remembered after switch off.

The Amphion Argon 3 loudspeaker produces very smooth controlled results. They're well balanced, being clear and open, but not too bright. Bass is fairly extended given the size of the cabinet, but tonally the sound lacks richness/warmth.

The combination of a rigid well-damped cabinet, metal cone drivers and big magnets seems to have resulted in a sound that is clear, detailed and precise, but slightly over-damped and tonally a shade cold.

Now you could, of course, argue that the 'warmth' of other loudspeakers is false and comes from cabinet resonances and the 'mellow' qualities of plastic cones. Certainly the Argon 3's precise clean sound is refreshingly neutral.

A reflex design, the rear-facing port is supplied with a removable foam bung. Taking this out gives a slightly fuller/looser bottom end. If, however, the low frequencies need tightening up, use the bung.

The manufacturers suggest partnering these speakers with one of its subwoofers and this would definitely address some of the tonal issues raised – giving greater heft to the bottom-end, while making the treble sound more airy and spacious.



DISTRIBUTOR:
Audio Futura srl
TELEPHONE:
(Audio Analogue)
+39 0572 954513
(Amphion)
+358 17 2882 100
WEBSITES:
audioanalogue.com
amphion.fi

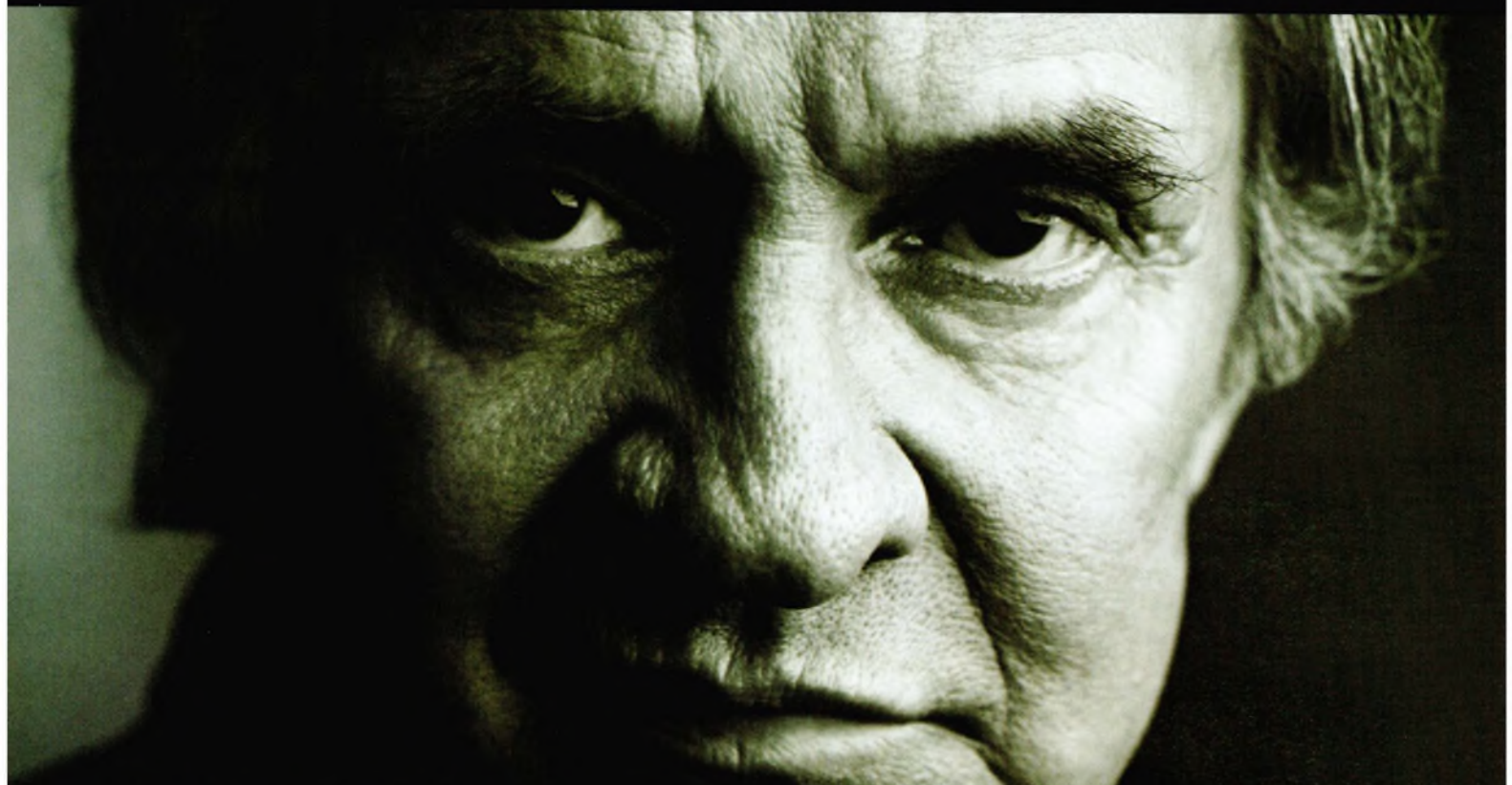
These speakers would also seem to be at their best for nearfield use – that is, with the listener sat, say, 2m (or less) away. Successful Nearfield listening depends on the speaker creating a soundstage by phase coherence, rather than things like scale, dynamics, or projection. It's akin to creating an acoustic hologram that only exists when your ears are in a certain zone.

By sitting close to the speakers, your ears detect subtle phase relationships in the recording and this recreates a sense of depth and width that mirrors the placement of the musicians, as well as the ambience of the venue where the recording was made.

Being a small speaker, the Argon 3s don't produce a big sound and given that we're dealing with a speaker costing a little under £2k (more, when you factor in the cost of stands) the results were mixed.

Although 'only' 70 watts, the Maestro Settanta REV2.0 has sufficient power to drive the Argon 3s to satisfactory volume levels. However, partnering a 70 Watts amplifier with an 86dB efficient speaker is somewhat borderline – you haven't got power to spare.

This month's *Beautiful System* is ideal for those who like a pure, clean, neutral sound. And the nature of the Argon 3s favours listeners who sit fairly close to the loudspeakers in a small/medium sized room. For those listening further away, it can still work well but you might want to consider adding a subwoofer. ●



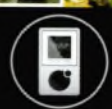
FROM THE MAN IN BLACK TO THE BLACK KEYS.

True originals know no boundaries.
It's like that at eMusic. Give this a listen:

50 FREE TRACKS, on us.
Go to: www.emusic.com/HiFiChoice



Get up to 50 free downloads free with a 7-day eMusic trial subscription. Offer available to first-time eMusic customers only. Internet access, registration, and credit or debit card required. Limited time offer. Offer and eMusic's prices are subject to change and are subject to eMusic's terms of use. eMusic and the eMusic logo are either registered trademarks or trademarks of eMusic.com Inc. in the United Kingdom or other countries. All rights reserved. eMusic is not responsible for products, services or claims made by Future Publishing.



mp3 100% COMPATIBLE

Help & advice

We've got the answers to everything you've ever wanted to know about hi-fi and weren't afraid to ask. Email us now at hifichoice@futurenet.com or write to: **Hi-Fi Choice Q&A, Future Publishing Ltd, 2 Balcombe Street, London NW1 6NW**

YOUR EXPERTS



PAUL MESSENGER

EXPERTISE: LOUDSPEAKERS

HAVING WORKED on both sides of the audio industry for over 30 years, as loudspeaker designer and reviewer, Paul is ideally placed to offer thorough, in-depth analysis of every speaker reviewed, as well as cutting-edge developments in the field.



JIMMY HUGHES

EXPERTISE: SYSTEM OPTIMISATION

AS EVERY audiophile knows, there's so much more to getting a system to sing than merely throwing components together. Jimmy Hughes has spent 40 years tweaking and optimising systems, as well as voraciously collecting records.



RICHARD BLACK

EXPERTISE: TECHNOLOGY

WRITING EXCLUSIVELY for HFC, Richard brings his experience as a successful musician and recording engineer to bear in our rigorous *Blind-Listening Group Test*. As our technical consultant, Richard is the authority on HFC's test and measurement.



JON MARKS

EXPERTISE: DIY AND VINTAGE KIT

FORMER EDITOR of *Hi-Fi World* magazine, Jon has a wealth of reviewing experience, as well as a passion for high-end vintage audio gear. Handy with a soldering iron, Jon also enjoys bringing classics back to life and pitting them against modern gear.



ALVIN GOLD

EXPERTISE: SEASONED REVIEWER

HAVING WRITTEN for a huge range of magazines, both internationally and in Britain, Alvin has a very full 30 years of reviewing under his belt. A guru of all component types, he's now extending his expertise by building PCs for audio too.



JASON KENNEDY

EXPERTISE: TURNTABLES

ANOTHER EDITOR, Jason opted to become a freelance contributor when he relinquished the helm of HFC after 17 years on the magazine. A hi-fi addict since his twenties, Jason fell for the beauty of vinyl and has never looked back.

ASK US A QUESTION TODAY!

Our experts are on hand to answer your questions. Whether you're looking for future-proof upgrades, advice or help with your current set-up, our two-channel Einsteins have all the necessary expertise and several hundred years of combined audio knowledge to slake your thirst and support your passion for perfect sound. Email your questions now: hifichoice@futurenet.com

QUESTION OF THE MONTH



Q My CD player is a 1999 Thule Audio 150B Spirit (with Digit 1 upgrade). Since the Thule was, and still is, a very good player, I'm wondering if either a DacMagic or a Musical Fidelity V-DAC would be a considerable upgrade for my good, but ageing player?

Oscar Vermeulen, via email

A Answering this question will take an audition, I'm afraid. Your Spirit is not so old as to be a genuine has-been, so the upsampling DacMagic should be tried before buying. We would, however, expect the

Cambridge to at least sound smoother and more revealing.

The DacMagic has ruled the DAC roost for years, but NuForce's Icon HDP DAC/head phone amp/pre also sounds good and is more flexible than the Cambridge.



Three-way upgrade on £3,500

Q My system consists of a Michelle Orbe SE with Origin Live Silver tonearm, Ortofon Kontrapunkt B cartridge and a Tom Evans Microgroove Plus. Amplification is provided by a Primare I30 integrated. Speakers are Epos 12s on dedicated stands. Finally, my CD is an ageing Marantz CD-63 MkII KI-Signature.

I listen mainly to jazz, classical, 60's and 70's R&B and the Beatles. My listening room is approximately 14ft square, with bare floorboards over a cellar.

I would like to upgrade the tonearm, CD player and speakers. My budget is a maximum of £3,500. Your advice would be most welcome. Great magazine by the way.

G Andrew, via email

A This is a slightly vexatious question, as the Origin Live is an excellent performer for the money and will be difficult to better without spending considerably more money than it originally cost. Personally, we'd be tempted to postpone the arm upgrade and split your budget between CD and speakers,

First amongst equals: Primare's classy I30



particularly as the Primare is eminently capable of working with high-grade sources and speakers.

The Marantz is a true classic of a player and is wonderfully musical, but will be left trailing in terms of transparency, detail and refinement by more modern machines such as the Leema Stream III at £1,400, Naim CD5 XS at £1,750 or Cyrus CD 8SE with PSX-R (£1,825). Of course, you could always buy the Cyrus sans PSX-R, expand your speaker budget and upgrade the Cyrus at a later date.

The calibre of the Primare gives you plenty of room for manoeuvre when it comes to loudspeakers, though you've not mentioned if your listening room will accommodate floorstanders. If it won't, add the Neat Momentum 3i and ATC SCM 19 to your list. If it will, try ProAc's Response D18, Spondor's A6 and Gamut's Phi 5 (though the latter will stretch your budget).

HØRNING

by Tommy Hørning



Ending the endless search...

Discerning music lovers and critical reviewers the world over have praised the uniquely natural, effortless and tangible musical illusion created by Hørning speakers with just a few watts of amplifier power.

High efficiency is a major priority in a Hørning loudspeaker, for it allows us to fully exploit the superior sound quality of today's low-powered, single-ended valve amplification.

They are three-way but musically coherent, true full-range emotional communicators. The Aristoteles uses two pairs, the Eufrodite four pairs, of isobarically loaded 8" woofers per cabinet for a fast, tight bass. Definitely no need for subwoofers.

Uncanny natural musical reproduction is the result of 25 years of intensive research into the acoustic properties of horn speakers. This groundbreaking research led to the creation of transducers with unique, true to life dynamics, unsurpassed tonality and 3D soundstaging, allowing the music to live and breathe in your room like never before.

Tommy Hørning with his world patented H.D.A.Q.C.S. (Hørning Double Asymmetric Quarter Wave Cabinet enclosure System), where every driver has its own, tailor-made, rear-loading chamber that ultimately feeds in to a shared hyperbolic horn output with port, has rewritten the rules. Unnatural colourations of any description become a thing of the past...He also believes in stiff drivers with big magnets and short throws. In other words, speed. With speed comes transparency and immediacy. Any type of music is reproduced faithfully at lower or higher volumes with both micro and macro dynamic contrasts intact. And all this comes with no drawbacks or penalties whatsoever.

Hørning loudspeakers really have to be heard to be believed!

A Turntable, a Phonostage, an Integrated Amplifier, a CD Transport & DAC, designed to compete with the world's best, complete the range, which is as unique as it is rare in the way it brings music to life.

To find out more contact 'Real hi-fi' on 01257 473 175 or visit www.realhi-fi.com

Real hi-fi

Importers/distributors for Shanling, 3D sonics, Musical Laboratory, Hyperion, Duevel, Horning, Supravox, Metaxas, Heart, Bias King.

Tel: 01257 473 175 · info@realhi-fi.com · www.realhi-fi.com

To find your nearest 'Real hi-fi' Dealer visit www.realhi-fi.com or call us today.

How many amps make the perfect upgrade?

Q After around 15 years with a system consisting of an Arcam Alpha 5 CD player, Alpha 5+ integrated with preamp out and an Alpha 9 power bi-amping Castle Severn speakers, I decided last year that I really wanted more bass for my organ music. (I listen exclusively to classical music, especially organ and choral music and like a very transparent and accurate sound).

I auditioned most of PMC's floorstanders and, perhaps predictably, opted for the OB1i which were at the very top of my budget. I have been very pleased with the upgrade from the Severn, which is not surprising as the OB1i cost around six times as much!

My Arcam amps seem to be holding their own in this lofty company and I have been surprised at how good they are, but I suspect I really ought to upgrade them too now to get the best out of the new speakers and the DS. My budget is around £3,500 and I have some questions on how best to spend this money.



One amp or two, sir? Finding the perfect amplificatory recipe for upgraded speakers

Should I bi-amp with cheaper hardware, given that I currently drive the tweeter and midrange from the integrated and the woofers from the power amp? Alternatively, should I go for a more expensive integrated? I am quite keen on the Leema Tucana II, which is a bonus as I am Welsh! Leema also makes a power amp which I could add later to bi-amp, but that takes me way over my budget.

My dealer will suggest other options to match my budget from Linn, Naim, Bryston and Arcam. Obviously with the organ side of things I'm looking for strong but well-controlled bass. Any advice or suggestions you might have would be very welcome!

Jeremy Honeybun, via email

A When you're thinking of spending a considerable amount of money on a single component type like an amplifier, we always advise caution and audition, as buying cheaper hardware could

lead to disappointment due to the unpredictable results of bi-amping.

The brands mentioned by your dealer are all worth investigating, though unfortunately Arcam no longer makes the C31 preamp. Plinius makes some very capable integrations too, as does Moon.

If you did finally plump for bi-amping, how about ATC's CA-2 preamp followed by a pair of the company's P1 power amps? They'd push your budget over the top by around £200, but might well be worth it as they offer superbly extended and controlled bass.

Optimising CD replay – DAC/transport or an integrated?

Q I have an Arcam DiVA CD192 CD player, a Naim NAC 202 preamp and NAP 200 power amp going through a pair of Bowers and Wilkins CM7 floorstanding speakers. I wish to upgrade the CD player and wondered which route I should take. Do I add a Naim DAC to the Arcam and use the 192 as a transport, or would a Naim CD X2 give far superior quality. If I were to buy the DAC, I suppose I could replace the Arcam at a later date with, perhaps, a Cyrus CD Xt ES. Would that work well with the Naim DAC? Many thanks for any advice you can offer me.

David Nevitt, via email

A It's been some time since Richard Black and his listening panel last encountered the likeable DiVA CD192, but the lab test revealed extremely low levels of jitter, which suggests it could work well as a transport to an external DAC.

You don't mention whether a computer forms part of your system, but even if you only have a basic machine, with the right software, a PC, laptop or netbook can make a very effective transport. Small machines like Acer's Aspire netbooks are tough and portable, though the ones with solid-state drives are best avoided, as SSDs have lower storage capacities than hard disks in the same price range.

On the other hand, if you'd rather stick with a traditional player, Naim's CD X2 would indeed be a very major upgrade over the Arcam.



Whither CD replay? A netbook, or a player from the mighty Naim stable?

THE HI-FI CHOICE GUIDE TO: SYSTEM HARMONY WITH CABLES

EXPERT ADVICE



WHILE THE PERFECT dish will doubtless include the best possible ingredients (or the best f**king ingredients, if you're Gordon Ramsay), everything else will be for naught if skillful seasoning is absent. So it can be with audio equipment, where the careful, considered choice of cabling can make a very good system great.

Perhaps a helpful way of thinking about cables, is to imagine them as a form of subtle 'glue' with which to bring the parts of a system together into a cohesive whole. Assuming you've chosen components which are complementary (or opted for an attraction of the opposites, if you're after a particularly strong 'flavour' to your set-up), cables can subtly tweak the overall balance of a system to match your aural tastes. What they can't do is make wrong choices right.

Perceiving differences to the sounds of cables is a topic sure to stir debate on many fora. Less contentious are the sorts of approaches which represent good cabling habits: for example, with monoblocs, keep the amps close to the loudspeakers to minimise cable resistance and never, ever coil your mains leads – it might look tidy, but it turns them into inductors! ●

Minitest

HFC's Technical Consultant **Richard Black** looks at the latest cables for keeping digital data true

Atlas Mavros (electrical)

PRICE: £285 (1M) CONTACT: 0800 731 1140
WEBSITE: ATLASCABLES.COM

THIS IS RIGHT at the upper end of what we would normally include in a MiniTest, but it can be interesting occasionally to test high-end kit side by side with more prosaic stuff: does the money buy real improvement? In terms of materials, this cable is not vastly more esoteric than some cheaper ones, with high-purity, long crystal copper and PTFE insulation. However, the extra care and attention to detail in a more esoteric cable, along with the inevitable increased cost per unit of development (because they're going to sell less!) probably explains the rest. Atlas has chosen to use Ohno Continuous Casting copper, which has unusually long crystals (hundreds of metres long, apparently), dramatically reducing the number of crystal boundaries a signal current must traverse. We've never seen any direct evidence that crystal boundaries are a problem, but still...

About nine millimetres in diameter, this cable is reasonably flexible, with some very sexy phono plugs fitted (an AES/EBU version with XLRs is available at the same price). As befits its price, we put it between some upmarket components, including Chord and dCS DACs, as well as transports from Wadia and Meridian. We found it to be a very fine performer, giving a superbly polished sound with oodles of detail. On the other hand, its benefits compared with cheaper alternatives are much more obvious through cheaper DACs. This is a key irony of digital cables: most upmarket DACs are less cable-sensitive. Still, if money's not tight and you want to feel you've turned every available stone then it's a valid purchase.

VERDICT BENEFITS ARE most apparent in systems that probably don't naturally aspire to such cables, but by any reckoning this is a very revealing wire.

★★★★★



van den Hul The Wave (electrical)

PRICE: £65 (0.8M PAIR) CONTACT: 01235 51166
WEBSITE: VANDENHUL.COM

WE'VE REVIEWED this cable before as an analogue interconnect (HFC 312). Its electrical characteristics, however, make it just right for digital duty, too. In fact, any cable suitable to digital interconnect service is likely to make a decent analogue link (in pairs!), though the reverse is not by any means true. As ever, van den Hul makes much of the materials in this cable, including silver-plated copper for all conductors and triple screening. The insulation is made of a foamed material and the overall jacket is 'Hulliflex', the manufacturer's proprietary, halogen-free, material. The overall diameter is just under seven millimetres, which suits the company's collet-fixing phono plugs, resulting in better radio frequency termination to the screen than the usual types.

With all that attention to RF detail, one would hope that this cable gives better performance in the presence of interference than most. And indeed, in our electrically noisy set-up with a PC source, it did seem very confident, producing clear, detailed sound from any of the test DACs. In all our systems, except the high-end one, it seemed to have a very slight tonal character, something one wouldn't necessarily expect in a digital link. It's subtle, but the upper bass seems just slightly more prominent, gently accentuating percussion, low melodic instruments and so on. It's not at all unpleasant and we're not sure we would have spotted it in anything other than side-by-side comparisons, but it's there. Otherwise everything seems excellent, with very good resolution.

VERDICT VERY SLIGHT coloration detracts slightly, but the general results this cable achieves are excellent and it scores highly for value in any context.

★★★★★

QED Profile (optical)

PRICE: £18 (1M) CONTACT: 01279 501111
WEBSITE: QED.CO.UK

PROFILE IS pretty much a budget range from QED, aimed just as much at the home cinema market as the full-on audiophile. All the same, we're inclined to give it some time, if only because QED has a good track record with budget audio links. It's an unpretentious item, thin and very flexible, with small plastic-bodied connectors that give a snug fit to equipment. Described by QED as 'medical grade' quality, it's possible to see the care with which the internal fibres have been prepared, while the company has achieved a good standard of finish on the cable ends – which bodes well.

In such a diverse group as this, it was interesting to compare this lead, not only with the other optical examples, but also with the two electrical connections. Under the most interference-prone conditions (PC to a budget DAC), we felt this was more successful than the (much dearer!) electrical links, proving the value of optical connection. It didn't quite give the detail of the Optichord, we felt, but it came very close. In our midrange set up it slightly lost out all round, its sound showing some lack of focus and precision compared to the others. But once again, in a high-end context, it was only marginally less revealing than the others. And, of course, a simple, low-cost link like this is absolutely all one needs for connections to anything that is recording, rather than replaying, audio, where jitter is pretty much irrelevant (within sensible limits) and data integrity is all that matters. We tried very hard to persuade ourselves that there was any difference between this and the expensive Mavros when feeding a digital recorder, but really... there isn't!

VERDICT **AT HOME** connecting computer-based systems, it also does a decent job in more upmarket settings, though resolution does lag behind dearer links.



Chord Company Optichord (optical)

PRICE: £50 (1M) CONTACT: 01980 625700
WEBSITE: CHORD.CO.UK

THE MOST OBVIOUSLY upmarket feature of this optical lead are the connectors, which have a metal body. As the optical fibre simply passes through them, they have no effect at all on the signal-passing properties, but they do make handling a bit more reassuring and, as Chord has taken care over the accuracy of the plastic mating parts, they fit nice and snugly into any of the various Toslink sockets we tried. A Mini-jack on one end is an option (for portable players) and lengths up to 10 metres are available for a relatively modest premium. Each end of the fibre has been carefully shaped into a domed profile and then polished, giving optimum transmission of the light signal, even if the plug is inserted a little askew.

Chord pointed out that our results would most likely vary, depending on interference levels in the vicinity and the susceptibility of the connected equipment. Complete insensitivity to electrical interference is, of course, the great advantage of optical links – that, and the lack of hum loops and the like. And sure enough, we found this lead highly advantageous in connecting the digital outputs of a PC to a Cambridge Audio DacMagic. It was superior to a giveaway optical link, producing much clearer images. At the other end of the spectrum, the excellent jitter rejection of our dCS DAC made differences between this and other optical and electrical connections much less obvious. Between a midrange CD player and DAC it was just slightly less successful than a good electrical link. ●

VERDICT **IN BASIC** and midrange units this lead performs well, offering fibre optic's advantages with little sonic compromise compared to electrical connection.



HELP & ADVICE

It's evident from this and previous experiences with digital interconnects that relative performance is rather dependent on application, with high-end systems often rather less critical than

midrange ones. We've no doubt that anyone spending five figures on a DAC will want a fancy digital lead, but the most critical applications are likely to be rather more modest, where DACs don't

have such good rejection of jitter and incoming noise. Optical links shouldn't be discounted, as their complete freedom from interference has distinct benefits, especially around computer audio.

iChoose quality?

Are widely accepted music formats undermining the quality of the music we listen to on a daily basis?

The Music Chain

Much is written about music and the musicians who entertain us, and we rightly exalt great musicians. But there is an interlinked chain of participants, two of which are I believe are crucial to our music scene in today's world. For centuries the music chain was a very short one – composers or songwriters, musicians and listeners, and the judgement on quality was immediate. Recording technologies have changed all this exponentially.

Today, we listen to most of our music from a recording and this gives recording engineers the opportunity to avoid poor acoustics, duff notes and off days. This, of course, means the chain has grown to include the recording engineers, the music distribution system (retailers or downloads), hi-fi manufacturers, hi-fi sellers and the hi-fi purchasers, the latter being the listeners. I should start by saying that hi-fi has become an adulterated term that no longer has its original meaning because it's applied to much equipment that certainly should not be termed high-fidelity.

It's said that a chain is only as strong as its weakest link. However, I believe there are two particularly strong links that, if removed from the chain, would seriously damage the quality of recorded music. These are the audiophile, or hi-fi connoisseur, and the specialist hi-fi retailer, the latter in nearly all cases also being the former because it's their interest that has driven them into their particular business. These are the people who most appreciate how exciting and involving music can be and how it can deliver an emotional experience.

Hi-Fi Connoisseurs

So why is the hi-fi connoisseur so important to the music industry? By their nature, audiophiles are generally avid music lovers who enhance their enjoyment through listening to music at its very best quality level, which means playing great recordings through hi-end hi-fi to achieve the most outstanding results. Without the audiophile, the main driver for quality would probably be removed from the chain. Let's be honest, over recent years the majority of music listeners now settle for MP3 convenience and, therefore, mediocre sound quality. If the pendulum ever swings so far that all but a few listen to highly compressed formats such as MP3, music producers will not waste their resources on producing high quality recordings because it would be commercially unnecessary, even if their recording engineers wanted to achieve the best they could. After all, an MP3 or AAC file, the iTunes default format, downloaded at 128 kbps (the most popular download speed), is about one-eleventh the size of a full resolution CD track, 1411 kbps, so the quality is inevitably far inferior. Information is irretrievably lost and the full dynamic range is lacking. Using an iPod while jogging does not really raise a quality issue but playing low-resolution tracks through an iPod docking station that feeds into a decent hi-fi system, is a disaster area. It's rubbish quality made louder. Fortunately, there is still significant demand from audiophiles committed to sound quality to sustain the production of high quality recordings, but it would be a tragedy if there weren't. For example, most classical recordings downloaded as an MP3 or AAC file are a complete waste of time because there is so much information missing that they are reduced to just the essence of a tune.

Specialist Hi-Fi Retailers

Just as essential a link in the chain as the hi-fi connoisseur is the specialist hi-fi retailer and the two are rightly dependent on each other. Without the specialist retailer the hi-end hi-fi manufacturer would have to rely on the internet and hi-fi magazine reviewers to try and assess the relative merits of different brands for their potential customers – a notoriously unreliable decision making process. Specialist hi-fi retailers are constantly being offered new products for assessment and potential stocking and, as it is also their hobby as well as their livelihood, they are greatly interested in achieving the best performance and seeking out the most outstanding combinations. More than that though is their relationship with audiophiles for, if they are to stay in business, they must satisfy the most discerning customers in the industry. The reality is that audiophiles and specialist hi-fi retailers are essential to each other.

LISTED BELOW IS OUR SELECTION OF THE BEST HI-FI DEALERS IN THE UK.

They have been selected because they are known to do an excellent job in guiding customers towards hi-fi that will give years of musical enjoyment and total satisfaction.

Future of Recorded Music

What are the future prospects of maintaining high quality music recordings? We must hope that audiophiles, or hi-fi connoisseurs, or perhaps most accurately described, music lovers, will continue to drive the demand for quality. But another important reason for hope within the mass-market is that there is no longer any over-riding reason for MP3 and AAC to have such a following. These formats were designed to overcome very slow download speeds pre-broadband and small, expensive memory capacity but the trade-off has been quantity at the expense of quality. Download speeds and memory capacity are not significant factors for most people now and will be increasingly irrelevant with time. Full resolution, CD quality, downloads are already available and should become the norm as long as the general public can be made aware of the tremendous quality benefit. This has happened with HD TV so we know this awareness can grow rapidly. In the meantime, we must highly value hi-fi connoisseurs and specialist hi-fi retailers, of which the ones listed on this page represent the UK's finest. Specialist dealers know how to choose the products that combine as a superb system and how to get the best out of it by expert installation in the home. If there's a price premium over an internet purchase, it's probably a small one, but it's unquestionably worth the difference.

STAR QUALITIES

VALUE FOR MONEY



SERVICE



FACILITIES



VERDICT



OUR TOP 20 UK HI-FI DEALERS

SOUTH

Ashford, Kent

SOUNDCRAFT HI-FI
40 High Street.
01233 624441

Chelmsford

RAYLEIGH HI-FI
216 Moulsham Street.
01245 265245

Colchester

RAYLEIGH HI-FI
33 Sir Isaac's Walk.
01206 577682

East Grinstead

AUDIO DESIGNS
26 High Street.
01342 328065

Kingston-upon-Thames

INFIDELITY
9 High Street,
Hampton Wick.
020 8943 3530

Maidenhead

AUDIO VENUE
36 Queen Street.
01628 633995

Rayleigh, Essex

RAYLEIGH HI-FI
44a High Street.
01268 779762

Southend-on-Sea

RAYLEIGH HI-FI
132/4 London Road.
01702 435255

Southampton

PHASE 3 HI-FI
37 Bedford Place.
023 8022 8434

LONDON

Ealing

AUDIO VENUE
27 Bond Street.
020 8567 8703

N1

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

SW11

ORANGES & LEMONS
61/63 Webbs Road.
020 7924 2043

SOUTH WEST

Bath

AUDIENCE
14 Broad Street.
01225 333310

Exeter

GULLIFORD HI-FI
97 Sidwell Street.
01392 491194

MIDLANDS

Banbury

OVERTURE
3 Church Lane.
01295 272158

Birmingham

MUSIC MATTERS
363 Hagley Road,
Edgbaston.
0121 429 2811

Coventry

FRANK HARVEY
163 Spon Street.
024 7652 5200

Leicester

CYMBIOSIS
6 Hotel Street.
0116 262 3754

Nottingham

CASTLE SOUND &
VISION
48/50 Maid Marian
Way.
0115 9584404

NORTH

Cheadle

THE AUDIO WORKS
14 Stockport Road.
0161 428 7887

Chester

ACOUSTICA
17 Hoole Road.
01244 344227

York

SOUND ORGANISATION
2 Gillygate.
01904 627108

SCOTLAND

Aberdeen

HOLBURN HI-FI
441 Holburn Street.
01224 585713/572729

Edinburgh

LOUD & CLEAR
Bonnington Mill,
72 Newhaven Road.
0131 555 3963

Glasgow

LOUD & CLEAR
520 St Vincent St,
Finnieston.
0141 221 0221

Glasgow

GLASGOW AUDIO
135 Great Western Road.
0141 332 2200/4707

For sale / Wanted

Hi-Fi Choice

Reader Classified

Welcome to *Hi-Fi Choice* Reader Classified, the UK's first and best free private ads service for buying and selling second-hand hi-fi components.

These pages are a must-read if you're thinking about buying used kit, and if you want to sell something it's definitely the place to be. It's free to place an advertisement – simply submit your ad of up to 30 words, remembering to include your email, phone number and county.

The simplest way to send your ad is via email to: hifichoice@futurenet.com. 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.*



Above: Mordaunt Short Performance 6LE loudspeaker

FOR SALE

ROBERTS MP23 CD/radio sound system unit, under warranty, boxed, only four months old. (£250) £145. **01304 360230 (Kent).**

DUNLOP SYSTEMDEK transcription turntable (the original one) finished in charcoal nextel, hinged lid, new RB350 arm and Goldring 1042 cartridge. Excellent condition. **07771 508444 (day) or 01205 722000 (Lincs).**

OPERA SECONDA loudspeakers finished in cherry (£1,800) £750, Unison Research Valve/Mosfet Secondo 120 watts integrated amplifier (£1,800) £750, Unico valve, FM/RDS/AM tuner, (£1,100) £450. All mint. **02380 738935 (Southampton).**

NAD 315 B66 amp, NAD 515 B66 CD player, QAcoustics 1020 speakers, as new, A1 condition, all boxed, can be demonstrated. £250 ono. **01255 553774 or email: peter.p.webb@btopenworld.com (Essex).**

GRADO SR 60 headphones, boxed, mint. **07891 533084 (Swansea).**

MILLER AND KRIESEL V.125 powered subwoofer, 12-inch driver, mint condition, £195. NAD preamp £15. **01722334694 or 07979 705644 (West Yorkshire).**

KIMBER KABLE Select KS 1011 1m interconnect, WBT-0110cu, termination, (£765) £475 onvo. **01656 653976 (Mid Glam organ).**

Mana Base table wall shelf, 3 levels, £400. Tom Evans Micro Groove Lithos, £250. Foundation Audio 18-inch four column stands (20kg). **020 8898 3383 (Hounslow).**

ATC 20-2 active loudspeakers, under warranty, with boxes, £1,995. HNE granite stands polished with leather, £375. **01766 781211 (Gwynedd).**

REGA R5 loudspeakers, good condition, £440. Ixos bi-wire cable, 2X 3m, £25. Two Cambridge P.500 power amps, 55 watts, £150. **0161 9020719 (Manchester).**

LINN KAN speakers, immaculate condition, black four column stands, spiked, £195. **07737 471547 (South Yorkshire).**

MERIDIAN 504 tuner, no marks, no box, £300. **07956 236764 or 0191 4171669 after 6pm (Tyne & Wear).**

MORDAUNT-SHORT Performance 6LE, mint condition, (£4,000) £2,500 onvo. **07866 727448 (Southend-on-Sea).**

MARANTZ amplifier PM 6002, Marantz CD 6002, Monitor Audio RSI speakers with stands and cables, all boxed as new, £550. **01943 467859 (West Yorkshire).**

TRICHORD DIABLO with NCPSU phono stage £600, Audio Synthesis DAX Decade £700 (stored for four years), Audio Alchemy DDS3 with Trichord clock modification £400. **0118 9760756 (Berkshire).**

TRANSPARENT AUDIO Reference phono to phono interconnect (1m) £850,

Mana 4-tier rack £600. **0118 9761257 (Berkshire).**

CHORD DAC64 Mk II, two years old, unmarked condition, dual outputs, (£2,300) £1,095. **07788 504037 (Kent).**

KEFRDM2 speakers (cherry), original boxes £395. MFX10D Tube Buffer £85. Ixos Gamma XHA806 RCA 0.5m pair £20. QED Qorum, Reference speaker cable (terminated) 2x4m £35.

01684 290581 (West Midlands).

CAMBRIDGE AUDIO DAC Magic boxed, mint £150. Arcam FMJ CD23, original ring DAC, light use, £150. **07889 951316 or allan.robbs@tiscali.co.uk (Hampshire).**

CARLSSON 0A-50.3 £300, Proton power amp £250. Also supra cables. **07545 313889 (London).**

AUDIO RESEARCH LS-1 preamp, mint condition £495. Meridian M1 active speakers, immaculate condition £495. **02380 224003 (Southampton).**

REGA SATURN CD player, boxed. (£1,250) £500. **07899 721899 (London).**

MARTIN LOGAN Vantage hybrid electrostatic loudspeakers (dark cherry), two years old, A1 condition; (£5,000+) £2,500. Jackcrawley@btinternet.com (West Yorkshire).

SILVER MAINS power cable, voodoo cables, Germany. With silver-plated Marinco and mains plug.

(£250) £85. **07981 025698 (Bristol).**

THIEL CS 2.4 loudspeakers, 14 months old (natural cherry). Easy to position. www.thiel.com for the outstanding reviews, (£3,900) £2,100. **01296 437314 or jez@btinternet.com (Bucks).**

RUSS ANDREWS Torlyte equipment shelf under half price, £45. **01794 514916 (Hants).**

TEAC Z5000 cassette deck (£800) £150. Mission 700LE speakers £35. Pioneer PL115D £40. Technics STG 55AL tuner £55. KEFCoda 3 speakers £35. Marantz 50SE CD £50. **01708 457691 (Essex).**

MONITOR AUDIO PL300 speakers (Ebony finish), brand new, unused, (£6,000) £3,500. **079201 24888 (London).**

MUSICAL FIDELITY A5 CD player (VS), boxed, manual, remote. Valve output stage £650. **07812935242 (Surrey).**

ESOTERIC X03SE CD player (one-year warranty) £3,500, ATC SIA-2-150 amp (five-year warranty) £1,500, ATC SCM 40 speakers (five-year warranty) £1,500, all mint condition, boxed, manuals, remotes. **07970 012450 (Hants).**

KIMBER D-60 digital interconnect 0.5 metre, hyper-puresilver, Ultraplatté phonos (a superb cable that ensures a clean and clear,

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!

sweet and natural sound), boxed as new in hardcase, (£240) £120 ono. Musical Fidelity KW DM-25 DAC, mint, boxed (bought new last year, little use, fantastic-sounding DAC), Valve and solid-state Class A outputS (£2,000) £600 ono. ATC SCM50 ASL active towers in walnut (only six months old, absolutely mint, barely run in), Class A amps (amazing sound, superlative build), boxes etc. (£9,500) £5,500.

07876 705266
(Huddersfield).

MARANTZ MA500 mono blocks x4, 380 watts (superb sound), mint condition. Boxed with manuals £650, Kingsound Queens electro static speakers (six months old). (£2,000) £950. **02380 224003** (Southampton).

KEFRDM2 speakers (cherry, excellent, original boxes) £395, MF X10D tube buffer £85, Ixos Gamma XHA806 RCA 0.5 metre pair £20, QED Qorum Reference speaker cable (terminated) 2x 4 metres £35. **01684 290581** (West Midlands).

LIVING VOICE OBX-R speakers (premium Yew finish). Outboard crossovers, Townshend Audio Isolda DCT 4x 1 metre cable and original packaging £2,200. **01737 246968** or **deakin04@btinternet.com** (Surrey).

RUSS ANDREWS silencers, 3x £35 each, or £90 for all three, two QED Qunex1 interconnect, one metre cables £17 each or £30 for two. **01902 884694** (Wolverhampton).

AUDION SILVERNIGHT Integrated pure Class A, seven watts of real quality sound. Drives most speakers with ease (genuine reason for sale), £725 ono, Michell Gyro SE (mint condition, still under guarantee with box). Tecno Arm mounting (genuine reason for sale). £725 ono **07896 206056** (Sussex).

PRO-JECT RECORD deck and Pro-Ject phono amp, Music Fidelity XA-1 preamp, Arcam Alpha 9 CD player, Arcam P60 power amp, Rogers Studio 5 speakers. Includes Russ Andrews power cords and

cables/speaker stands and equipment stand. (£3,700) £1,800 ono. **00353 87 637 6623** (Ireland).

PROAC TABLETTE 2000 shielded speaker (maple), excellent condition (£690) £320, Atacama sand-filled speaker stands. (£120) £40. **07966 347787** (Surrey).

SUGDEN MASTERCLASS integrated, pure Class A, mint and boxed – four months use – (£3,870) £1,800. **07899 721899** or **yatestherapy@googlemail.com**. (London).

MARANTZ SA KI Pearl, as new with anniversary book and certificate of authenticity, £1,900. **07809 383556** or **neilmacmillan36@hotmail.com** (Dumfries & Galloway).

MUSICAL FIDELITY 3.2CR amp, preamp and CD player £1,500, JAS Orsa speakers (birds eye maple) £600. **07797 732147** or **paul.camara@moorestephen-jersey.com** (Jersey CI).

NAIM SBL MK2 model (black), boxed, £670, Naim IBL (black) £280, ProAc Studio 150 (yew) £570, Rega XEL (rosewood) £350, Monitor Audio R852MD (teak) with matching stands £180. **01252 668000** (Hampshire).

MONITOR AUDIO RS6 speakers (cherry finish), excellent condition, £350. **07940 659384** (East Sussex).

QUAD QC 24-VALVE preamp, 2x Quad 11 valve monoblocks (superb condition, boxed with instruction books). £2,995. **01202 481 386** (Dorset).

GAMUT D200Mk3 power amplifier 200WPC (eight ohms), boxed with manual. As new £2,500. **07803 969706** (Scotland).

STANDS UNIQUE Sound Tower in natural ash, five shelves, plus base plate and isolation platform. (£500) £175, plus p/p. **07738 467556** (West Yorkshire).

NAIM CD3.5 cd player £495, NAIM Nac102/522 preamp £550, NAIM 90.3 power amp £250, NAIM flatcap x2, £200 each, Sennheiser HD570 headphones £60 (all mint and boxed). **07738 761299** **mike_jeffers@btinternet.com** (Lancs).

MARANTZ CD 63 KI

Signature, excellent condition, remote, original box, instruction book and KI Certificate. £200.

01772 717492 or (m) **07887 687343** (Lancs).

PIONEER CD player PD7700, complete with remote and instructions £50 and SX5560 tuner amplifier with instructions £30. **01189 732777** or **emailian@ikyle.freeseve.co.uk** (Berkshire).

ISOTEK TITAN mains power conditioner (silver), £1,100, Titan six-way Multiway (incl wall bracket) £325, Meridian M1 interactive speakers (black ash) £495, Audio Research LS-1 line stage preamp (silver) £495, Sony videocassette recorder/player SLV16 (black), £250, Meridian 602 / 606 CD transport/DAC (black), £995 (All excellent condition). **01962 711800** (Evening) or **01252 620644** (day) (Winchester).

WITA AUDIO R4 CD DAB, FM radio with USB, iPod dock, remote, 80-watt amp (piano black) nine months old, boxed (£600) £395. **01634 255168** (Kent TR)

ROTEL RCD-06 CD player (£350) £175, boxed and mint in black (See pics at hifi-forsale.co.uk). **01384 412234** or **07984 576531** (West Midlands).

QED QONDUIT MDH2 two-way mains conditioner (£150) £75, QED Qunex 3 interconnect one-metre (£50) £25, QED Performance

digital cable, one-metre (£30) £15. Free postage! All boxed as new. **01384 412234**

(West Midlands). **KIMBER FOUR** pair speaker cables, 2x 3 metres £25, Atacama speaker stands 16-inch high (black) £30, Apollo speaker stands 24-inch high, bronze £25. **024 76 711668** (Coventry).

RUARK CL20 floorstanders, in very good condition, five-star reviewed. Approx seven years old. Six ohms/87 decibelsensitivity. (£1,650) £525. **07896 206056** (Sussex).

THE CHORD COMPANY Chameleon Silver Plus, one-metre £60, Nordost Super Flatline Gold Mk 2, two metres, bi-amp/bi-wire £90, Kimber Silver Streak 0.5-metre £90. All boxed, **01482887409** (East Yorkshire).

SONY MDR-CD1700 headphone. Musical sound is outstanding. Excellent condition. (£200) £120. **01707 657801** (Herts).

TOTEM loudspeakers (cherry). Includes standard and custom-made granite plinths. Still under warranty. Excellent condition. (£1,695) £795. **07725 072878** or **jason-watson@sky.com** (Leicestershire).

PURE EVOKE 1XT in cherry wood, DAB radio, boxed, £40. Marantz CD63 Mk11

KI Signature CD player, boxed, £150. Both perfect working order. Monitor Audio Monitor 3 speakers, £80 (slight damage). Ecosse MS2.3 speaker cable, £60. **07939 588777** (East Yorkshire).

NAKAMICHI CR-7E cassette deck. £995, IsoTek Titan power conditioner (silver) with six-way Titan Multilink, professionally hardwired with 1.25-metre Acrolink 6N power cord, £1,500, IsoTek Orion four-way mains filter (silver), as new, £250. (Day) **01252 620644** or (eve) **01962 711800** (Hampshire).

AUDIOLAB ORIGINAL British Q & P, F&D Serials. No remote. Local drop off or collection offered. £625. **07900 603525** (Leeds).

MONITOR AUDIO RS6 speakers, (cherry), £350. **07940 659384** (East Sussex).

WANTED: Top quality hi-fi separates and complete systems: Naim, Linn, Cyrus, Meridian, Arcam, etc. Fast, friendly response and willing to travel/pay cash. **0781 5892384** (Essex).

WANTED: Marantz ST6001 tuner (black), good condition with manual, will pay good price or swap with Marantz ST7001 (new). **0117 9650311** (Bristol).

WANTED: 2UAD 44/FM4, preamp, grey finish, must be unmarked. **01772 322673** (Preston). £1,900 **01527 876514** or **b2bc@btinternet.com** (Worcestershire).

HOW TO SUBMIT YOUR FREE AD

YOUR DETAILS

Name

Address

Email address

Daytime telephone number

Date

YOUR ADVERTISEMENT

SEND YOUR ADVERTISEMENT TO

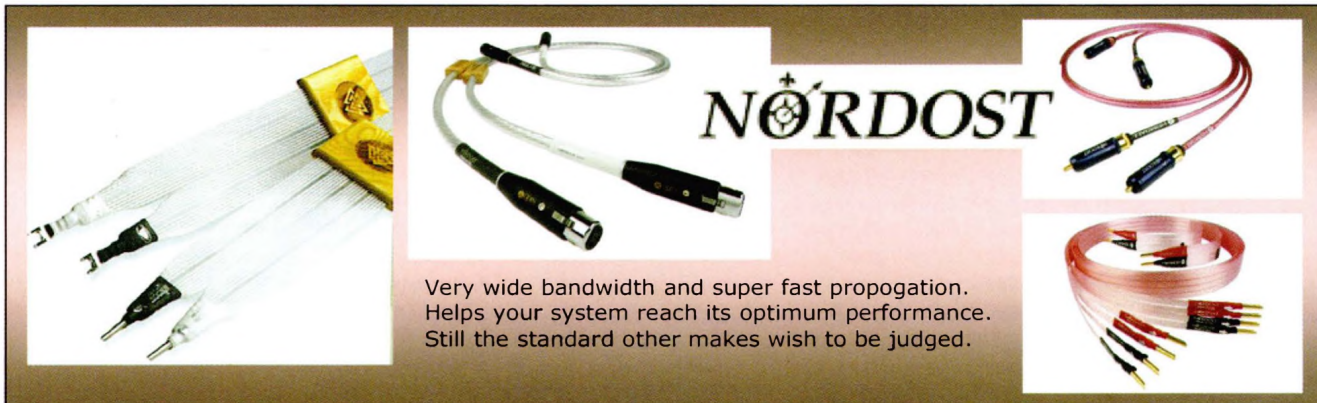
Hi-Fi Choice, Future publishing, 2 Balcombe Street London NW1 6NW

To submit your advert to us, please email **hifichoice@futurenet.com** or alternatively, use the postal form below. Please limit ads to a maximum of 30 words, ensuring all details, model names etc are correctly stated. Kindly also include your email, telephone number and home county. We regret that we cannot take adverts over the phone.

High End Cable

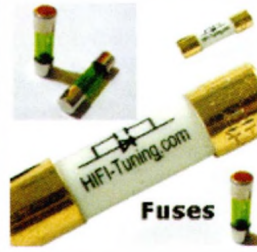
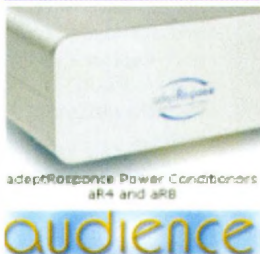
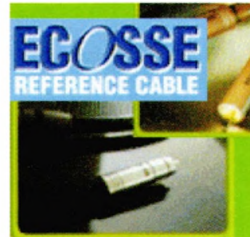
www.highendcable.co.uk

For best prices talk to Dave Jackson on 01775 761880



NORDOST

Very wide bandwidth and super fast propagation.
Helps your system reach its optimum performance.
Still the standard other makes wish to be judged.



ayra by Raidho



C3.0

Great trade in deal on offer if you wish to upgrade to the Ayra range.

The superb range of Ayra Speakers now on demonstration.

Designed from the bottom up, all drivers and ribbon tweeters are built in house. Ayra use ceramics drivers, superb cross-overs, unique magnet technology and Nordost Valhalla internal wiring. Offering frequency extension to 50khz these speakers are among the best in the World.

Please visit the High End Cable website for call for more information.



C2.0

C1.0 and stand



hi-fi+

Product of the year 2008

C1.0 was Hi-fi plus Product of the year 2008

We offer fabulous trade in deals, up to 40% when we take in your old speakers in part exchange. So your old speakers could be worth more than you think.

Hi-Fi Choice

PASSION FOR SOUND

EDITORIAL

Editor Dan George, dan.george@futurenet.com
Art Editor Corin Skeggs, corin.skeggs@futurenet.com
Production Editor Richard Holliss, richard.holliss@futurenet.com
Editor-in-Chief Steve May, steve.may@futurenet.com
Staff Writer Libby Plummer, libby.plummer@futurenet.com

CONTRIBUTORS

Technical Consultant Richard Black
 Alvin Gold, Jason Kennedy, Paul Messenger,
 Dave Oliver, Nigel Williamson, Malcolm Stewart,
 Ed Selley, Dominic Todd, Mark Prendergast

Photography Rob Monk, Kevin Nixon, Will Ireland
Group Senior Editor Nick Merritt
Group Art Editor Rodney Dive
Creative Director Bob Abbott
Design Director Matthew Williams
Editorial Director Jim Douglas

ADVERTISING

Advertising Sales Director Rob Elms,
 020 7042 4272 rob.elms@futurenet.com
Advertising Sales Manager Tech Charlie Said
 020 7042 4142 charlie.said@futurenet.com
Senior Sales AV Group Michael Carrington
 020 7042 4206 michael.carrington@futurenet.com
Senior Sales Executive Julian Tozer,
 020 7042 4273 julian.tozer@futurenet.com
Sales Executive Tony Martin,
 020 7042 4253 tony.martin@futurenet.com
Inserts and Direct Marketing Manager Nick Weatherall
 020 7042 4155 nick.weatherall@futurenet.com
London Sales Director Malcolm Stoodley,
 malcolm.stoodley@futurenet.com

MARKETING

Marketing Manager Libby Brook,
 libby.brook@futurenet.com
Brand Marketing Director Matt Woods,
 matt.woods@futurenet.com

CIRCULATION

Circulation Manager John Beeson,
 john.beeson@futurenet.com
Circulation & Trade Marketing Director Rachael Cock,
 rachael.cock@futurenet.com

PRINT & PRODUCTION

Production Manager Ralph Stringer,
 ralph.stringer@futurenet.com
Production Coordinator Roberta Lealand,
 roberta.lealand@futurenet.com
Senior Ad Production Coordinator Gemma O'Riordan,
 gemma.oriordan@futurenet.com
Head of Production Richard Mason,
 richard.mason@futurenet.com

LICENSING

Head of International Licensing Tim Hudson,
 +44(0)1225 442244 tim.hudson@futurenet.com

FUTURE PUBLISHING LIMITED

Group Publisher Pat Eggington
Chief Operating Officer Simon Wear
Chief Executive Robert Price

SUBSCRIPTIONS

UK hotline on +44 (0)844 848 2852
 Subscribe online at www.myfavouritemagazines.co.uk

BACK ISSUES

+44 (0)844 848 2852 **Prices:** UK £5.95 per issue, Europe
 £6.95 per issue, rest of the world £7.95 per issue

Distributed in the UK by Seymour Distribution Ltd, 2 East
 Poultry Avenue, London EC1A 9PT. Tel: 020 7429 4000

Future produces carefully targeted special-interest mag-
 azines, websites and events for people who share a pas-
 sion. We publish more than 170 magazines and websites
 and 100 international editions of our titles are published
 worldwide. Future plc is a public company quoted on the
 London Stock Exchange (symbol:FUTR).
 @ www.futureplc.com



Chief Executive Stevie Spring
Non-executive Chairman Roger Parry
Group Finance Director John Bowman
 +44 (0)20 7042 4000 (London)
 +44 (0)1225 442244 (Bath)

Want to work for Future?
 Visit www.futurenet.com/jobs

techradar.com

©Future Publishing 2010. All rights reserved. No part of this magazine may be reproduced without the
 written permission of the publisher. Future Publishing Ltd (company number 2008885) is registered in
 England and Wales. The registered office of Future Publishing Ltd is at Boulevard Court, 30 Woodhouse
 Street, Bath BA2 2BN. All information contained in this magazine is for information only and is, as far
 as we are aware correct at the time of going to press. Future cannot accept any responsibility for errors
 or inaccuracies in such information. Readers are advised to contact manufacturers and retailers directly
 with regard to the price of goods or services referred to in this magazine. If you submit unsolicited
 material to us, you acknowledge that Future is free to use your submission in whole or in part in
 all editions of the magazine, including licensed editions worldwide and in any physical or digital format
 throughout the world. Any material you submit is sent at your own risk and, although we take every care
 to ensure that your material is handled securely, neither Future nor its employees, agents or subcontractors shall be liable for loss or damage.



recycle
 When you have finished with
 this magazine please recycle it.
 We are committed to only using magazine paper
 which is derived from well managed, certified
 forestry and chlorine free manufacture. Future
 Publishing and its paper suppliers have been
 independently certified in accordance with the
 rules of the FSC (Forest Stewardship Council).

Next month

WORLD'S FIRST TEST...



B&W 802 DIAMOND

Exclusive! The speaker that defined a decade is back for 2010 and beyond

If you can't always find a copy of this magazine, help is at hand! Complete this form and hand in at your local store, they'll arrange for a copy of each issue to be reserved for you. Some stores may even be able to arrange for it to be delivered to your home. Just ask!

Subject to availability

Please reserve/deliver my copy of
 on a regular basis, starting with issue _____

Title _____ First name _____
 Surname _____
 Address _____

 Postcode _____
 Telephone number _____

Just ask!

If you don't want to miss an issue

PLUS: Our regular round-ups of accessories and music, our unrivalled six-way *Blind-Listening Group Test*, the most trustworthy hi-fi reviews on the planet, not to mention the latest news, views and features from UK's most reliable guide to high-performance audio.

ISSUE 337 ON SALE THURSDAY 19 AUGUST 2010

BACK ISSUES & REPRINTS

YOUR DETAILS

Name _____
Address _____

Email address _____
Card Number _____
Expiry date _____
Signature _____

ISSUES REQUIRED

Month	year	Issue

PAYMENT

Make cheques/POs payable to Future Publishing Ltd.
 (PLEASE TICK RELEVANT BOX)

- Cheque
- Mastercard
- Maestro
- Visa
- Postal Order

COST

United Kingdom £5.95
European Union £6.95
Outside the EU £7.95
 (price per issue)

SEND YOUR ORDER TO

uk readers:
 Hi-Fi Choice Back Issues,
 10 Waterside Way, Northampton
 NN4 7XD

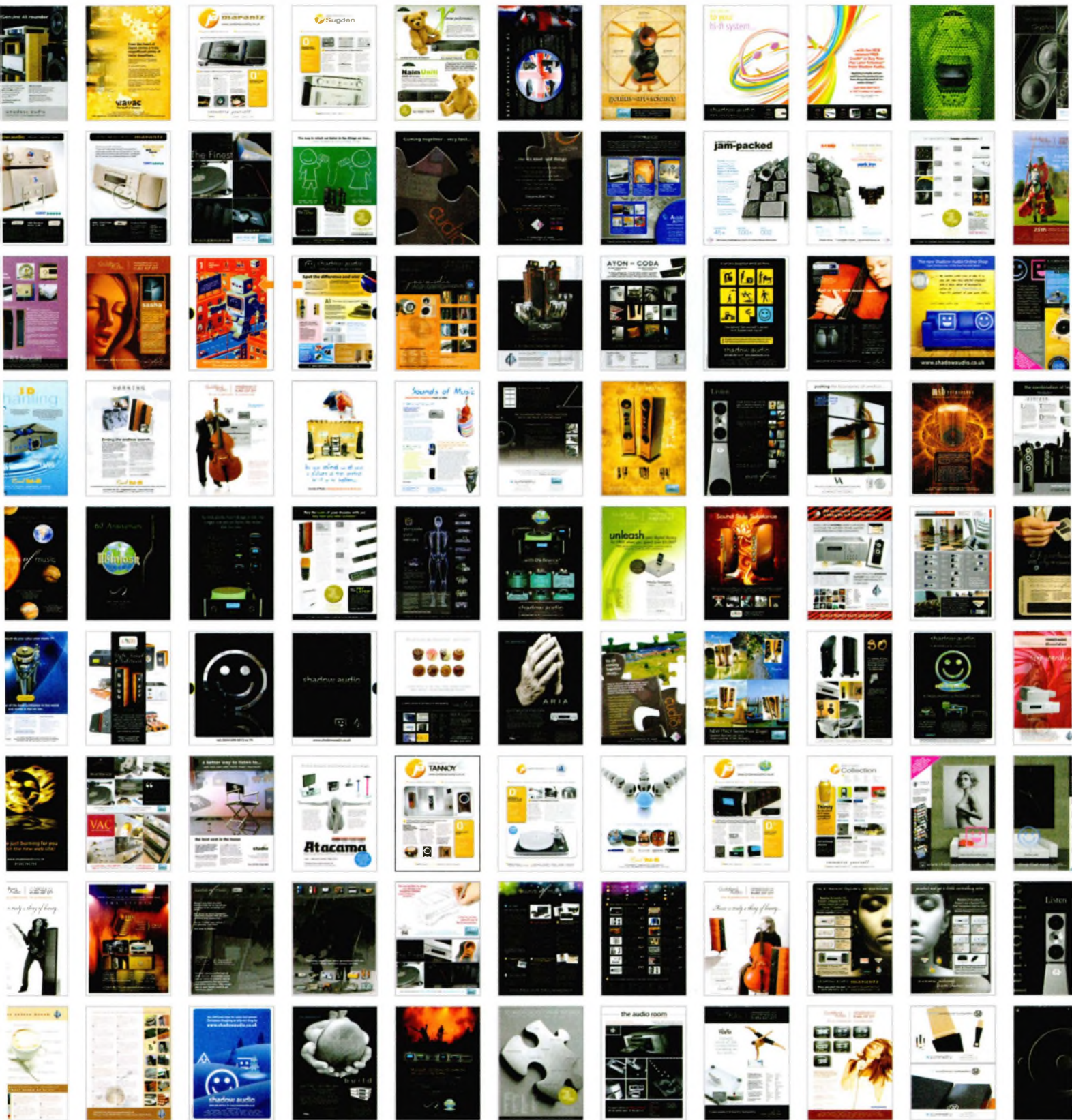
overseas readers:
 Hi-Fi Choice Back Issues,
 Cary Court, Somerton,
 Somerset, TA11 6TB UK

How to order a back issue

Back issues are available by post and from www.myfavouritemagazines.co.uk. They cost £5.95 (UK), £6.95 (Europe) or £7.95 (rest of the world). All prices include p&p. You can also order by phone on 0844 848 2852 or +44 1604 251045 (overseas). We accept MasterCard and Visa credit cards, and Maestro debit cards. Alternatively, send a cheque or PO made payable to Future Publishing Ltd. For back issues only, please use the form on the left.

How to order a review reprint

If you're interested in an *HFC* review of an older component and the back issue has sold out, we can usually send photocopies of individual reviews to any UK address for a flat fee (inc p&p) of £5 per review. You must know in which issue the original review appeared; we are unable to search back issues for old reviews, sorry. Please send a written request, enclosing a cheque for £5 made payable to Future Publishing Ltd, to: **Hi-Fi Choice Reprint Service, Future Publishing, 2 Balcombe Street, London, NW11 6NW.**



did you know that many of the adverts you see in the 'uk hi-fi magazines' are created by us? we arguably design more hi-fi adverts than any other design agency in the uk. above you will see a small selection of our advert designs - 99 of them in fact...

audiography

email. design@audiography.co.uk web. www.audiography.co.uk
 tel. +44 (0)1273 394 184 mobile. 07590 900 320

Hi-Fi Choice

Buyer's Guide



Welcome to the *Hi-Fi Choice Buyer's Guide* – the ultimate directory to the very best high-performance hi-fi gear that you can buy. Here, you'll find our favourite current products listed under easy-to-use categories, with up-to-date pricing and trustworthy verdicts.

Reviews you can trust

Hi-Fi Choice test results are the most reliable in the business. We employ the UK's most respected hi-fi journalists 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 disc players, amplifiers, tuners and loudspeakers.

Reviews online

We've also included *techradar* listings where our reviews appear online.

To access selected *Hi-Fi Choice* reviews, simply type: techradar.com/ into your browser, followed by the six-digit number printed in the first column of our *Buyer's Guide*.

How to use this guide

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

BADGES EXPLAINED

OUR AWARDS



EDITOR'S CHOICE: Awarded to those products that are judged to deliver reference-standard performance



RECOMMENDED: The products we feel meet a certain high standard of performance



GROUP TEST WINNER: Comparative tests can only have one true winner, and this badge says it all

TECHRADAR

For an online review of the hi-fi listed in our *Buyer's Guide*, we have included a unique URL number next to selected tests. Go to techradar.com and simply add the number printed in the column: ie techradar.com/625025

SOURCE COMPONENTS

110 _ CD players

Whether CD or SACD, we list the very best players for the job



111 _ Turntables

Everything is listed here, from a £190 Pro-Ject to a £115k Continuum



111 _ Phono cartridges

The best in both magnetic and moving coil cartridges

113 _ Radio tuners

Surf the airwaves with any one of these carefully selected tuners

113 _ Headphones

Badge-winning headphones for your personal listening pleasure



AMPLIFIERS

115 _ Stereo amplifiers

Our pick of the world's best one-box integrated amplifiers



115 _ Pre/power amps

For those occasions when two boxes seem better than one



CABLES

117 _ Interconnects

Our favourite cables for transferring delicate signals are all here

117 _ Speaker cables

Priced per metre, these are our top recommendations for home use



LOUDSPEAKERS

118 _ Stereo speakers

An invaluable guide to the best loudspeakers for your electronics

STANDS & SUPPORTS

121 _ Equipment supports

Our selection of the best equipment supports for your precious kit

121 _ Speaker stands

Stands come in all shapes, sizes and prices, so take your pick from our list



DEALER CLASSIFIED

124 _ Dealer guide

A veritable *pot pourri* of hi-fi dealer classified advertisements

129 _ Dealer directory

For all your hi-fi wants, check our index of independent hi-fi dealerships



BADGES KEY: RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

CD players



Any one of these fine players will make sweet music for years to come

www.techradar.com
SACD compatible
ELEC dig output
OPT dig output
CD-RW compatible
Bal. analogue out
Headphone socket
Variable output
CD text
Issue number

Up to £1,000										
Badge	Product	Price	Comments							Issue number
●	Arcam CD17	700	Civilised sound, with a positively deluxe treble. Bass is clear, if not the weightiest ever							315
●	Audio Analogue Crescendo	599	Simple player that's clear and communicative with the appropriate partnering equipment							329
●	Cyrus CD6 SE	900	A combination of detail and sheer musical energy with a hint of high end to the performance							318
●	Denon DCD-1510AE	900	If the SACD format is what you're into, then this player is capable of some impressive sounds							335
●	Harman/Kardon HD990	550	Highly detailed with excellent extension at both extremes and impressive resolution	/594818						323
●	Marantz SA7003	600	Highly civilised sound may not be to all tastes, but there's plenty of detail to be heard							323
●	Marantz SA8003	830	Classic Marantz sound in a classy and attractive package. Our favourite sub-£1,000 player	/456022						315
●	Micromega CD-10	799	The cheapest in the range, the CD-10 has been fine-tuned to please the audiophile							328
●	Moon CD.5	999	Admirably energetic music-maker from this very well-built player							335
●	NAD C545BEE	350	Apart from slight lack of bass control, sound is very fine indeed – treble is beautifully detailed							322
●	Naim CD5i	895	Its competent musical performance exceeds the expectations of an entry-level player							307
●	Pioneer PD-D9	850	A mostly well-balanced player that's arguably at its best with classical music	/636734						326
●	Roksan Kandy K2	899	State-of-the-art technology and precision engineering produces a fine CD performance							335
●	Rotel RCD-1520	695	Lacks optical digital output, but feature-count is fine and sound quality is expressive and open	/608305						323

Above £1,000										
Badge	Product	Price	Comments							Issue number
●	Arcam CD37	1,300	Excellent detail and imaging, neutral tonality and above-average bass resolution	/395096						318
●	Audio Research CD5	5,055	Audibly better than most CD players on the market – assertive and very dynamic	/455309						312
●	Consonance Droplet CDP3.1	1,995	A CD player which gets to the nub of what music is about. Engages the listener every time							322
●	Copland CDA 825	3,985	This a highly revealing player that delivers music in a realistically engaging form							332
●	Creek Destiny	1,400	This player presents the music and nothing but the music and is thoroughly recommended							328
●	Cyrus Audio CD 8 SE	1,200	A highly civilised player which can, nevertheless, deal convincingly with raw music	/399370						323
●	Denon DCD-2010AE	1,700	Well equipped, finely detailed and with good support for compressed audio and iPod							328
●	EMM Labs XDS1	18,995	Very high-performance two channel only player with the option of a standalone D/A converter							327
●	Esoteric X-05	3,995	Superb resolve of fine detail with a perfectly judged balance and an ability to draw you in	/478365						314
●	Leema Antilla II	2,735	Great build and multiple DACs give this a fast, revealing and totally engaging sound	/612396						323
●	Meridian G08	2,400	Advanced digital processing with special apodising filter that gives a very clean sound	/455040						312
●	Micromega CD-20	1,249	No SACD, unfortunately, but without doubt one of the better mainstream players							332
●	Mimetism 20.1	5,107	An impressive player that produces a very convincing and musical sound							330
●	Moon CD3.3	2,200	Excellent detail and a fine choice for those who like their music straight from source	/594609						328
●	Moon 750D	7,950	Very few CD players can extract as much information off the disc as the 750D							331
●	Naim CD5 XS	1,790	Its composure and openness results in a musical performance that is extremely seductive							334
●	Rega Isis	5,998	A magnificently musical CD player at a realistic price. USB input is a useful addition							329
●	Shanling CD-T1000SE	1,700	This player's valve/direct option gives a choice in terms of performance							328
●	Sony SCD-XA5400ES	1,199	Elegant, refined control system and very strong CD/SACD performance	/465933						313
●	Unison Research CDE	2,495	Valve CD player with interchangeable DACs doubles as a standalone DAC that oozes musicality	/483759						318

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



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.

Trichord Research

Tel: +44 (0)1684 311600
sales@trichordresearch.com

Fax: +44 (0)1684 311928
www.trichordresearch.com

Dino Phono Amplifier



BEST BUY
HI-FI CHOICE
magazine

Turntables

The best record players money can buy



Badge	Product	Price	Comments	www.techradar.com	Switchable speed change	Suspension subchassis	Supplied with arm	Supplied with cart	Issue number
●	Clearaudio Emotion	1,185	Beautifully built with open and clean sound emphasising mid and top, nice timely bass		33/45		●	●	309
●	Continuum Caliburn	125,000	Luxury turntable with state-of-the-art design includes Cobra tonearm and Castellon stand	/587169	33/45/78		●	●	320
●	Dr Feickert Woodpecker	2,995	Offers superb bass, excellent build quality and range of arm choices		33/45		●	●	335
●	The Funk Firm Funk V2	1,390	Not only as beguiling as those that preceded it, this turntable is also more substantial to boot		33/45		●	●	324
●	The Funk Firm Saffire	2,450	Individual design and a sound that's refined and neutral with strong timing and dynamics		33/45		●	opt opt	309
●	Hanss Acoustic T-30	3,600	The only multi-armbase deck in its price range, it boasts image stability and precise bass		33/45		●	opt opt	331
●	Lumley Heliosphere	2,495	A distinctive-looking turntable with a unique sound and a performance that reflects your vinyl	/560765	33/45		●	opt opt	319
●	Michell Tecnodec	608	Needs careful partnering but can deliver a very sophisticated result for the money		33/45		●	opt	309
●	Michell Gyro SE/RB250	1,565	A marriage of shut-putter-strength, build quality and robust audio (including arm substitute)		33/45		●	●	324
●	Pro-ject RPM-1 Genie 3	190	The Genie is that rare thing of a product with good looks, fine build and excellent sound		33/45		●	●	332
●	Pro-ject RPM 6.1	750	With its huge platter this is a steady design that's capable of fine results with a decent cartridge		33/45/78		●	●	294
●	Pro-ject X-Pack	1,000	Combines very strong elements (Ortofon Rondo Red) a killer package with top sound and value		33/45		●	●	309
●	Rega P3-24	390	Very competent, uncoloured and musical, improved by £148 outboard electronic power supply		33/45	opt	●	●	298
●	Roksan Radius 5/Nima	1,375	Sophisticated design with accomplished sound quality, excellent imagery and good isolation		33/45		●	●	248
●	SRM Arezzo	699	The Arezzo is an excellent source component for those wanting a superb turntable for vinyl replay	/625025	33/45		●	●	325
●	Townshend Rock 7	1,720	Has the ability to pull detail out of a vinyl groove, making it the most resolute turntable at its price		33/45		●	●	324
●	Townshend Rock V/Excalibur II	7,000	If you want to hear everything that's on a record then there's no better machine for the job		33/45		●	●	307

Phono cartridges

MM and MC recommendations



Badge	Product	Price	Comments	www.techradar.com	Replacable stylus	MM	MC	Issue number
●	Dynavector Karat 17D3	699	One of the most thrilling-sounding cartridges on the market				●	334
●	Goldring Legacy	595	An MC cartridge better suited to the smoother-sounding turntable, it unearths a mountain of detail				●	328
●	 Grado Prestige Gold	149	Produces rich, open and expansive music with the minimum of fuss			●	●	235
●	Ortofon Rondo Red	385	Delivers detail, power and resolution and makes a good case for its price				●	307
●	Ortofon Cadenza Red	750	There's much to admire in this cartridge's fine detail and unfussy presentation				●	330
●	Sumiko Blue Point Spec Evo III	239	High-output MC with refinement at high frequencies and a nimble, articulate and revealing sound				●	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
●	van den Hul Condor XCM	2,400	A stunning cartridge with stereo imaging, dynamics and resolution to die for				●	265

Phono stages

Make your turntable sing



Badge	Product	Price	Comments	www.techradar.com	MM phono inputs	MC phono inputs	Adj impedance	Adj gain	Issue number
●	Cambridge Audio 640P	100	An outrageously good bargain that suits budget systems, but can confidently survive upgrades						305
●	Lehmann Audio Black Cube	335	This phono amp is a very distinguished performer with an MM source						335
●	Linn Uphorik	1,850	Exceptional sound quality, the Uphorik could easily win over the next generation of LP enthusiasts						334
●	Pro-ject Tube Box SE II	435	The big picture is the most evident thing here, but the finer details are there, too						335
●	Soundsmith Strain Gauge	6,100	Revolutionary kit assembly that rewrites the rules about vinyl playback	/618387					324

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

HFC TOP PICKS



Cambridge Audio 640P £100

If you need a low-cost way to get your turntable talking to your amplifier, this is by far the best option, just pop into your local Richer Sounds



Dynavector Karat 17D3 £699

The 17D3 gets very close to the results achieved with MCs at twice the price and few can touch it in terms of sheer musicality and resolution of detail



Townshend Rock 7 £1,720

A great turntable for those upgrading from an entry-level deck. Sound engineering at a bargain price sets this deck apart from the competition

WIN A BIKE!

MotoGP 2010 COMPETITION

**YAMAHA
YZF-R125
WORTH £3,999!
OFFICIAL ROSSI
FIAT REPLICA 125cc
SPORTSBIKE**



**TO ENTER: TEXT
HFC4 TO 87474,
OR VISIT:
futurecomps.co.uk/
yamaha-yzf**

PLUS THESE GREAT PRIZES

All texts cost £1, plus your standard network rate.

**WIN! A PAIR OF
VIP HOSPITALITY
PASSES TO MOTOGP
AT SILVERSTONE
FIVE PAIRS TO GIVE AWAY!**



SILVERSTONE 17-20TH JUNE 2010

**WIN! AN XBOX
360 + CAPCOM'S
MOTOGP 09/10
PLUS: 9 MORE GAME PRIZES**



**WIN! TRAINING
WITH CALIFORNIA
SUPERBIKE SCHOOL
2 LUCKY WINNERS WILL
GET ONE LEVEL - FOR FREE!**



**TO ENTER: TEXT HFC1
TO 87474, OR VISIT:
futurecomps.co.uk/motogptickets**

**TO ENTER: TEXT HFC2
TO 87474, OR VISIT:
futurecomps.co.uk/xbox**

**TO ENTER: TEXT HFC3
TO 87474, OR VISIT:
futurecomps.co.uk/CSS**

TERMS AND CONDITIONS

By taking part in a Competition, you agree to be bound by the Competition Rules which are summarised below but can be viewed in full at futurecomps.com. Late or incomplete entries will be disqualified. Proof of posting (if relevant) shall not be deemed proof of delivery. Entries must be submitted by an individual (not via 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, the Competition is open to all GB residents of 18 years and over, except employees of Future Publishing and any party involved in the competition or their households. By entering a Competition you give permission to use your name, likeness and personal information in connection with the Competition and for promotional purposes. All entries will become the property of the Company upon receipt and will not be returned. You warrant that the Competition entry is entirely your own work and not copied or adapted from any other source. If you are a winner, you may have to provide additional information. Details of winners will be available on request within three months of the closing date. If you are a winner, receipt by you of any prize is 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 you in connection with your use and/or possession of any prize.

BADGES KEY: RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

Radio tuners

Surf the airwaves with these carefully selected tuners



FM tuners

Badge	Product	Price	Comments	www.techradar.com	Wavebands	Presets	RDS	Rot-tuning knob	Sig. Strength Meter	Remote control	Issue number
●	Creek Audio Evolution	350	Sound is detailed, cohesive and extended both tonally and spatially – very classy		FM, M	80	●	●	●	●	308
	Rega Radio 3	390	Strong bass, clear treble and a high enjoyment factor makes this an appealing FM performer		FM, M	20		●			283
●	T+A T1210R	1,200	High-end looks are matched by the sound, which is detailed and sophisticated		FM	100	●	●			283

DAB/FM tuners

●	Arcam FMJ T32	600	A highly cost-effective way of optimising the airwaves. iPod functionality is a bonus	/559242	DAB, FM	100	●	●	●	●	319
●	Onkyo T-4555DAB	400	Admirably free of grain or obvious tonal blemishes, this tuner achieves a high standard		DAB	40	●	●	●	●	298

DAB/FM portables

●	Monitor Audio Airstream 10	225	The range of features on this DAB/FM/Internet radio is certainly impressive	/636713	DAB, FM, Web	4	●			●	326
●	Pure Move	80	A feature-packed, beautifully built DAB/FM radio that is a pleasure to use	/608367	DAB, FM	20	●				323
●	Pure Evoke-2S (portable)	170	Attractive and well thought-out. Many useful features and enjoyable with classical music	/516285	DAB, FM	100	●				318
●	Pure Sensia	250	One of the smartest table radios around, offering wireless computer-sourced music		DAB, FM, Web	40	●	●			331
●	Pure Avanti Flow	280	One of the best standalone solutions for internet radio with a tonality that's good for voices		DAB, FM, Web	40	●	●			322
●	Vita Audio R2i	300	Very smartly built with a sound that's full-bodied, neutral and detailed	/611865	DAB, FM	30	●	●		●	323

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.

Headphones

Audiophile solutions for home and travel use



Badge	Product	Price	Comments	www.techradar.com	Electrostatic	Supra-aural	Circumaural	Open/Closed back	Weight (grams)	3.5mm jack adaptor	Issue number
●	Audio Technica ATH-AD500	100	Bulky, but comfortable, this headphone offers a generous spread of virtues						260		333
●	Audio Technica ATH-W1000X	649	Fine advert for the virtues of closed-back headphones, with great bass and background noise reduction					●	350		334
●	Beyerdynamic DT770	179	One of the most tonally satisfying closed-back headphones around with excellent detail					●	270	●	333
●	Beyerdynamic T1	880	A characterful, enjoyable music-maker with a detailed, weighty sound					●			331
●	Bowers and Wilkins P5	250	A superb headphone with B&W's sound and build quality sealing the deal					●	195	●	333
●	Grado SR60i	100	A strong contender with out-of-class sound in most areas: a brilliant budget all-rounder	/603478	●			●	210	●	322
●	Grado SR80i	120	A beautifully neutral and open-sounding headphone that's lively and energetic too					●			322
●	Grado GS1000i	1,100	A superb transducer, capable of astonishingly high performance standards	/624782						●	325
●	Grado PS1000	1,795	Offer excellent detail and effortless dynamics, but they can be heavy to wear after a while					●	500	●	329
●	Sennheiser HD380	140	This model offers good sound and is a worthy alternative to in-ear monitors					●		●	327
●	Sennheiser HD650	330	Clear and detailed, with very natural tonality through bass and midrange with just a little coloration					●	275	●	312
●	Sennheiser HD800	1,000	These headphones will convert loudspeaker listeners to the delights of personal stereo performance	/619269	●	●	●	●	350		324

SPECS KEY **ELECTROSTATIC** Uses electrostatic film instead of more common cone or dome dynamics. **SUPRA-AURAL** Earpads sit on ear rather than around it. **CIRCUMAURAL** Earpads rest on the head around the ears. **OPEN BACK** Vented capsules let sound in and out. **CLOSED BACK (-)** Sealed capsules. **WEIGHT** In grams. **3.5MM JACK ADAPTOR** Allows connection to personal stereos, computers etc.

HFC TOP PICKS



PURE Sensia £250

PURE's ground-breaking touch-screen DAB radio has changed the way we interact with radio forever and sets the standard for innovation



ACS T2 £500

For regular travellers, the ACS T2 with its custom-moulded earpieces is an obvious choice, thanks to all-day comfort and a perfect fit for any ear

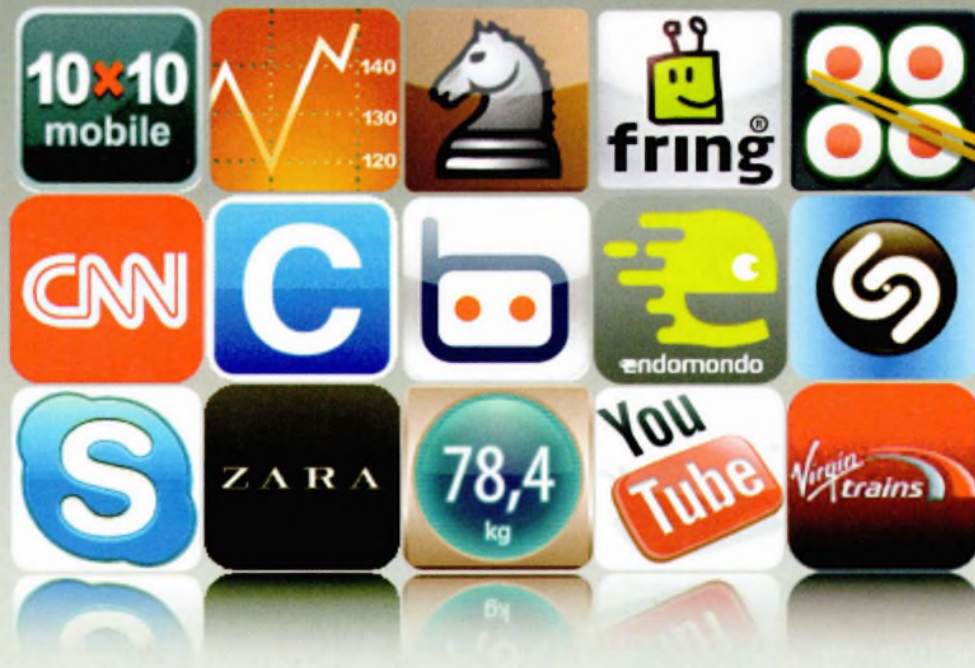


Sennheiser HD650 £330

An easy recommendation – Sennheiser's HD650 should really cost more than this – it's simply fabulous and a genuine bargain



**Check out the latest and
greatest apps, whatever
your device**



**Over 500 apps reviewed, rated and
updated every month, only at
www.t3.com/appchart**

T3 APPCHART

FOLLOW **T3**
@T3DOTCOM
FACEBOOK/T3MAG



BADGES KEY: RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

Amplifiers



Our pick of the best one-box amps out there

Up to £1,000

Badge	Product	Price	Comments	www.techradar.com	Line inputs	Phono input	Remote control	Headphone socket	Power output (watts)	Issue number
●	Audio Analogue Crescendo	599	In a room of appropriate dimensions, this amplifier has real musical presence		5				50	329
●	Cambridge Audio 840A v2	800	A chunky powerhouse with features aplenty, this amp offers detail and delicacy (silver finish)		8				120	327
●	Denon DCD-1510AE	900	Offers a taste of high-end excellence at an affordable price		5	MM/MC			70	335
●	Moon 1.5	999	A likeable amp in many ways, with admirable bass, treble and imaging		5				60	321
●	NAD C3226BEE	320	Unusually confident into awkward loads and very assured especially in bass. Treble a touch recessed	/603281	7				50	322
●	Puresound A10	685	A superbly involving valve amp at a very competitive price and with genuinely excellent results		2				10	331
●	Roksan Kandy K2	895	Superior design and high-performance credentials makes this amplifier a must-have bargain	/483722	5	MM			125	315

Above £1,000

●	Arcam A3B	1,480	A winning combination of sonic virtues including highly developed detail and musicality		7	opt			100	332
●	Astin Trew AT2000PLUS	1,740	If you prefer timbral and timing qualities of music to its bone-crunching potential, this is a contender		4				65	332
●	Audio Analogue Puccini Setanta	1,450	Detailed and lively, particularly in the upper octaves, but lacks a little bass extension		5	MC			160	320
●	Creek 5350 Evolution	1,075	One of the most attractive amps in its price range, with a sound that's immediately satisfying		5	MM/MC			120	334
●	Denon PMA-2010AE	1,700	High-class, well-equipped integrated, with a performance that is muscular, refined and detailed		6	MM/MC			80	328
●	Electrocompaniet PI-2	1,600	A superb all-rounder, with insight on one hand and effortless musical flow on the other		6				100	327
●	Electrocompaniet ECI-3	1,650	This is an impressively resolute and powerful integrated amplifier for the money	/618304	5				70	324
●	Gryphon Atilla	6,995	Exceptional subtlety and definition, has enough power to cope with just about anything musical		5				100	328
●	Harman/Kardon HK 990	1,000	Very clever, with built-in DSP room correction – but most importantly a powerful and revealing ampl	/594820	7	MC			160	321
●	Leema Pulse	1,270	Admirable bass which combines extension, tautness and clarity. Higher frequencies are highly detailed		5	MM/MC			70	327
●	Leema Tucana II	3,425	Highly featured, well-built and not short of power, this is a highly resolute and organic amp	/612396	7				148	323
●	Luxman L550A-II	3,000	An accomplished all-rounder that's able to handle virtually any system		4	MC			20	335
●	Micromega JA-100	1,125	Fast and fluid performer that brings a touch of panache to its role		5	MM			100	332
●	Mimetism 15.2	5,415	A powerful amplifier with great dynamics and high resolution that's rare even at this price		6				180	330
●	MSB Platinum M200	13,656	This amplifier's devastatingly good all-round sound quality sets a benchmark that few will approach	/603452						322
●	Myryad MX12080	1,200	Sound is more assured at the top of the frequency range, though bass is melodious and detailed		8				80	327
●	NAD 375BEE	1,000	A good, solid amplifier that is fundamentally musical and gives a great bang for your buck	/625323	7				150	325
●	Naim Audio NAIT XS	1,250	Its spellbinding, refined musical performance is a challenge to all integrated amplifiers	/498536	6				60	317
●	Rega Osiris	5,998	Very solid all-round performer has massive power reserves and splendid stereo imaging		6				162	329

Pre/power amplifiers

Separate boxes can bring clear advantages



Up to £2,000

Badge	Product	Price	Comments	www.techradar.com	Line inputs	Phono input	Remote control	Headphone socket	Power output (watts)	Issue number
●	Cambridge Audio Azur 840E/840W	2,000	Enterprising technology delivers a pre/power combo that always sounds detailed and controlled		8	opt			200	309
●	NAD C165BEE/C245BEE	1,190	An alternative to the usual integrated route and one that offers flexibility and fine sound		6				35	331

Above £2,000

●	Arcam C31/P3B	2,450	Very civilised sound in the best possible way. Well featured and smartly built		7	opt			100	308
●	Border Patrol Control Unit	3,995	Bluff-looking valve preamp, with one of the most neutral yet dynamic sounds around		5	opt				277
●	Bryston BP16/ 2B S5T2	5,700	Preamp and power amp combo offers superb sound quality	/608649	6	opt			100	323
●	Bryston BP26	3,670	Cracking preamp brings detailed results		8	opt				308
●	Chord Prima/Mezzo 140	7,135	Small, muscular, beautifully made and styled, and sounds like a dream		5				120	269
●	Classe CP-700/CA-M400	9,200	Pre plus mono power combo with superb build, huge power and enormous flexibility.		6	opt			400	293
●	Cyrus DAC XP (preamp/DAC)	2,275	A DAC/pre with naturalness and resolution to die for and six digital inputs for signals up to 96kHz		2					266
●	Digital Do Main Ba-1	6,495	By recreating the V-FET, DDM has built one of the most thrilling amplifiers on the market		4				300	327
●	Hovland HP-100/RADIA	18,900	Uncommonly musical valve/transistor hybrid transcends stereotypes, one of the genuine high achievers		9	opt			125	250
●	Naim NAC 152XS/NAP 155 XS	1,920	Preamp and power amp duo offers excellent performance and classic Naim virtues		6				60	324
●	Roksan Caspian M Series-1	2,800	A powerful and enjoyable-sounding amplifier combo that brings out the strengths of its CD player		5				85	307
●	Trilogy 909/990	10,390	Extremely musical valve-based pairing with hybrid power and beautiful finish	/625226	6				100	325

SPECS KEY **LINE INPUTS** Input sockets for source components with a line level output: CD players, DVD players, tape decks, tuners, phono stages etc. **PHONO INPUT** Input sockets and on-board phono stage or 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.

THIS MONTH IN TOTAL FILM

OVER
200 PAGES,
OUR BIGGEST
ISSUE EVER!



THE 100 COOLEST THINGS IN MOVIES EVER!

...and one of them's our new look!
See for yourself on 8 July



THE NEW LOOK TOTAL FILM. CHECK IT OUT NOW WWW.TOTALFILM.COM

BADGES KEY: RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

Cables

Cables really can make a difference, especially our top recommendations

Analogue interconnects

Badge	Product	Price	Comments	www.techradar.com	Stranded	Solid core	Copper	Digital cable type	Issue number
●	Audioquest Sidewinder	45	A detailed cable, with fine tonality and excellent rhythm		●		●		297
●	Black Rhodium Prelude	90	Practical and sensibly priced all-rounder that seems happily compatible with a wide range of kit		●		●		293
●	Black Rhodium Coda	150	Superb bass with neutral and detailed midrange, treble sweet with occasional slight constriction		●		●		298
●	Black Rhodium Polar Illusion	250	A good all-rounder, with clear and purposeful bass and particularly fine treble		●		●		321
●	Cambridge Azur Reference	50	Performance wouldn't shame a cable at twice the price: especially adept in the treble		●		●		296
●	Chord Co. Indigo Plus	995	Costly, and high-class cable needs running in, but this is a finely detailed design overall	/608313	●				323
●	Clearer Audio Silver-line	283	Complex, well-screened cable which offers good sound all round with exceptional bass		●		●		279
●	CrystalCable Piccolo	348	Thin, tougher than it looks, has some qualities of a solid-core type – resolution, focus and articulation			●		●	294
●	Kimber Timbre	145	A very neutral cable that will complement even very upmarket systems			●		●	312
●	Monster M350i	45	Few cables at this price reveal so much about the recording space.		●		●		281
●	Monster M1000i	230	Very capable, with only a hint of bass dryness to set against excellent results elsewhere		●		●		284
●	Nordost Wyrewizard Dream	110	Slight lack of precision in extreme treble, otherwise detailed and neutral with authoritative bass			●	●		303
●	Oehlbach NF214	63	The bass is a matter of taste, but suits many smaller speakers with good mid and treble		●		●		281
●	QED Signature Audio 5	190	Mellifluous and rounded, this cable is a great choice for lovers of the human voice			●		●	332
●	Supra EFF-IX	77	Lively sounding which maintains a high level of detail and neutrality, musically, a great all-rounder		●		●		306
●	Townshend Isolda DCT100	99	Particularly enjoyable cohesion and naturalness that makes for great listener involvement			●	●		312
●	van den Hul The Wave	125	Neutral, with a hint of upper-bass richness: images seem to reside slightly further away than most		●		●		312

Digital interconnects

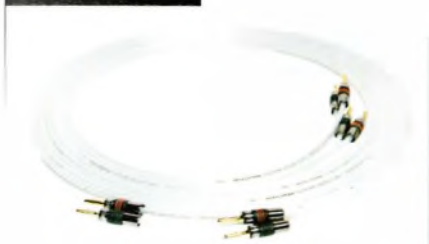
●	Kimber DV-30	98	A superb performer that lacks very little, even when compared to Kimber's high-end models		●		●	E	317
●	Merlin Scorpion Digital	130	Reduces distortion, making sound clear with unusually revealing low frequencies		●			E	317
●	Supra AnCo	30	This cable can give a useful fillip to a good transport/DAC combination, even in a high-end context		●		●	E	304

Speaker cables (price per metre)

●	Atlas Hyper 1.5	12.5	Don't look to this cable to beef up the bass, but at higher frequencies is revelatory at the price		●		●		299
●	Atlas Ascent 2.0	60	A highly analytical cable and very fine detail across the board		●		●		294
●	Chord Co. Silver Screen	6	Screened speaker cable with excellent treble, but just a little light in the bass at times		●		●		310
●	CrystalCable Piccolo	1,395	A chip off the old block, has a similarly fast, fluid and subtle sound (price - 3 metre pair)			●		●	302
●	Kimber 4VS	155	In the right system, this cable is a good choice (price reflects 2.5 metre terminated pair)		●		●		329
●	Monster MCX-1s	5	Notable for its bass, perhaps a touch overdone at times but could be a good foil to small speakers		●		●		280
●	Nordost Heimdall	185	Alternative to Valhalla, silver-plated, micro-monofilament construction, suitable for exacting systems		●		●		278
●	QED X-Tube XT300	12.5	A natural and controlled-sounding cable that's cost-effective for mid-priced systems			●	●		310
●	QED Revelation	15	Sensibly priced, this cable offers a performance which is a step-up from budget types		●		●		318
●	Townshend Isolda DCT	50	Cryogenically treated 'impedance-matched' cable with stabilising components added			●	●		241
●	van den Hul The Wind	50	Separate conductors provide room for experimentation, conductor quantity keeps resistance low			●	●		318
●	Wireworld Solstice 52	25	Rather bulky and awkward, but performance amply justifies it with superb bass solidity		●		●		310
●	Wireworld Oasis 6	40	Excellent bass with tunefulness and extension all first-rate. Awkward to handle, though	/617560	●				324

SPECS KEY **STRANDED** Cable has a number of (usually) twisted strands to conduct the signal. **SOLID CORE** Cable has one or more individually insulated strands to conduct the signal. **COPPER** Material used to form the conducting element of the cable. **SILVER** Alternative material used to form the conducting element of the cable. **DIGITAL CABLE TYPE E** – electrical, O – optical. Cables are one metre length unless otherwise stated.

HFC TOP PICKS



QED Revelation £15 (per metre)
Giving a consistent result with a wide range of amplifiers and speakers, the Revelation speaker cable boasts a good performance in all areas.



Kimber DV-30 £59 (0.5 metre)
A superb performer that lacks very little, even compared to Kimber's high-end models. Tonality, detail and imaging are really very fine.



Black Rhodium Polar Illusion £250
This super-cooled, unshielded interconnect with solid, silver-plated copper insulation, delivers a treble performance that's admirably clear and crisp.

BADGES KEY: RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

Stereo speakers

The most influential link in the chain



Size - width, height, depth (cm)
 Floorstander
 Bass from (Hz)
 Ease of drive
 Close to wall
 Issue number

Up to £1,000

Badge	Product	Price	Comments	Size	Floorstander	Bass from (Hz)	Ease of drive	Close to wall	Issue number
●	Acoustic Energy Aegis Neo 3	363	Pretty, neutral floorstander sounds open with wide dynamic range and good bass weight	20,90,5,24	●	A	24	●	294
●	Acoustic Energy Radiance 1	600	Limited bass, power handling and dynamics, but exceptional mid-to-treble voicing	18,5,32,25	●	A	33	●	325
●	Amphion Ion L	900	Sharp styling, fine mid/treble coherence a sweet treble, but less happy bass alignment	16,2,326,26,5	●	A	40	●	310
●	ATC SCM11	867	A very fine little speaker t-at its best with natural recordings where it adds little	21,38,25	●	A-	55	●	293
●	AudioPro Avanti A.10	350	A tough and effective little speaker – overall balance is quite smooth and even	19,29,26	●	A+	38	●	319
●	Bowers and Wilkins CM1	488	Luxury miniature has laid-back sound, low coloration and fine imaging, but weak dynamics	16,5,28,28	●	A-	40	●	279
●	Bowers and Wilkins 684	699	A fine all-rounder at a realistic price, has a smooth, even and nicely open balance	/483503 20,91,30	●		22	●	315
●	Bowers and Wilkins 683	879	High-class drivers and a great price makes for a warmly recommended speaker	20,99,34	●		20	●	304
●	DALI Ikon 6	999	Needs care with setup, impressively transparent and obsessively detailed sound	19,100,33	●	A	37	●	271
●	Dynaudio DM 2/10	880	Has fine dynamics, grip, bass and headroom and is well mannered	27,5,45,35	●	A	22	●	299
●	Focal Chorus 706V	389	Advanced drivers deliver an even, healthy dynamic expression and tension	22,39,25	●	A	27	●	319
●	Focal Chorus 726V	950	Compact and realistically priced, the Chorus 726V is a good all-round performer	2,299,37,5	●	A	25	●	325
●	JBL Studio L880	700	Good value floorstander with neutrality, massive headroom and plenty of punch	2,299,37	●	A	25	●	275
●	KEF iQ50	599	Looks cute and very discreet, with spacious imaging, good balance and a sweet treble	/483527 17,5,81,5,26	●	A	23	●	315
●	Monitor Audio BR2	230	Good-looking standmount has a muscular sound with superior coherence	18,5,35,25	●	A-	30	●	294
●	Monitor Audio BR5	450	Not the best dressed in its class, but detailed, bold-sounding and good value	17,85,25	●	A-	36	●	293
●	Monitor Audio Silver RS8	850	Bold, dynamic sound, it's an easy load that works well in larger rooms	90,18,27	●	A	33	●	276
●	Monitor Audio GS10	900	More neutral tonally than some recent MAs, the GS10 is easy to drive	20,36,27	●	A-	40	●	284
●	PMC DB1i	985	Could be more neutral, but a very effective musical communicator	15,5,29,23,4	●	A+	30	●	334
●	ProAc Tablette Ref Eight	704	Stunning standmount with electrostatic-like imagery. Its brother is even better!	15,27,23	●	A+	40	●	267
●	Q Acoustics 1010	110	Neatly styled miniature has limited bass and power handling, fine midband voicing	15,21,5,19,5	●	A	48	●	286
●	Q Acoustics 1020i	140	Outstanding value, t smooth well-balanced and lively sound makes a fine communicator	/516273 17,5,25,26,5	●	A+	60	●	318
●	Rega RS1	390	Clever close-to-wall speaker has a fine coherence and good communication skills	15,32,2,36	●	A	23	●	319
●	Russ Andrews SP-1	352	This tweaked Focal 705V RA has a sound that is immediate, engaging and, and great fun	19,2,31,5,24,8	●	A+	65	●	309
●	Spendor S3/5R	750	Lacks dynamic muscle and loudness potential, smooth neutrality and g bass extension	16,5,30,5,190	●		25	●	310
●	Tannoy Revolution DC4T	599	Ultra-compact, lacks bass weight and dynamic tension, but sounds open and coherent	488857 15,85,16	●		40	●	316
●	Tannoy Revolution DC6	900	Pretty compact standmount, delivering a lively bass and smooth, coherent midband	23,36,5,23	●	A	40	●	307
●	Wharfedale Diamond 9.1	150	Superior shape and finish. Sound is laid back, but free from boxiness	19,5,30,28	●	A-	45	●	307
●	Wharfedale Diamond 10.5	480	Despite the price, the 10.5 ticks many of the boxes, with superior voice band coherence	/636778 22,88,30	●	A-	50	●	326

Above £1,000

●	Adam Audio Tensor Delta	8,400	This active loudspeaker brings a powerful range of capabilities to its performance	33,56,34	●	A	50	●	329
●	AE Energy Radiance 2	1,000	This speaker boasts fine neutrality, sweet top, fine imaging and wide dynamic range	18,5,92,25	●	A	30	●	334
●	AE Energy Radiance 3	1,500	This speaker's effective enclosure ensures a wide dynamic range and a very clean sound	/587236 23,92,29,7	●	A	27	●	320
●	Amphion Argon2 Anniversary	1,200	Notably superior coherence, focus, fine neutrality and dynamic range with low coloration	19,38,31	●	A	24	●	317
●	Amphion Argon 3L	2,300	Solid build ensures an impressively clean sound with loads of bass and fine neutrality	19,92,5,30,5	●		26	●	322
●	Aspara HL6	4,300	Acoustic material sounds great and there are many strengths in design and performance	18,5,93,34,5	●	A		●	332
●	ATC SCM16A	2,376	Makes a great case for the active speaker. Includes built-in amps and is good value	27,45,33	●	ACT	42	●	300
●	Audioplan Kontrapunkt IVB	2,898	Boasts exceptional stereo imaging and mid-through-treble coherence	16,35,26	●	A	45	●	329
●	Audiovector S3 Super	2,600	Useful ability to upgrade, offers good musical communication and stereo imaging	19,103,31	●	A	50	●	328
●	Aurousal VS	1,650	Fine coherence and imaging of a single driver system, extra help at the frequency extremes	/479149 21,5,107,5,26,8	●		20	●	314
●	AVI ADM9	1,125	Active mini-monitors that are exceptionally accurate and dynamic sounding	20,30,26	●	ACT	60	●	301
●	Bowers and Wilkins CM9	1,760	Tall, elegant, expressive midband and expansive, but well-controlled bass	/597244 20,10,25,32	●	A	60	●	321
●	Cabasse MC40 Java	1,360	This large and handsome speaker has a notably smooth and even handed neutrality	25,110,35	●	A	20	●	325
●	Cabasse Bora	2,200	A real enthusiast's choice with high sensitivity, strong bass and powerful dynamics	/618354 33,27,50	●	A	52	●	324
●	Dynaudio Focus 220	2,630	Cleverly tapered floorstander has a brilliantly smooth, neutral balance and very sweet treble	20,5,98,29,5	●	A-	20	●	281
●	Focal Chorus 816 V	1,099	Fine, warm balance, superior dynamics and a sweet top end, but could be smoother	28,100,37,5	●	A+	20	●	288
●	Focal Chorus 826 V	1,349	Times nicely, goes loud with ease and will produce precise imaging if appropriately set up	28,104,37,5	●	A	45	●	287
●	Focal Chorus 816WSE	1,499	The W cone makes some qualities associated with Focal's high-end models more competitive	99,8,28,2,37,5	●	A+	39	●	308
●	Focal Chorus 826W LE	1,879	Focal has turbo charged the 826 resulting in lots of energy, excitement and fine detail	28,2,103,8,37,5	●	A		●	330
●	Focal Electra 1027 Be	4,399	Outstanding mid and top with fine delicacy, low coloration, but lacks some bass grip and drive	26,5,111,35	●	A-	25	●	276
●	Free FS1	3,500	An elegant design with the minimum of wiring. Wireless with Sonos or Airport Express	16,87,27	●	ACT	35	●	301
●	Gamut Phi5	3,040	Lovely discreet floorstander has excellent sound and several very clever engineering touches	17,100,24	●		20	●	305

Stereo speakers (continued)

Shapes and sizes for every budget

Badge	Product	Price	Comments	Size - width, height, depth (cm)	Floorstander	Ease of drive	Bass from (Hz)	Free space	Close to wall	Issue number
●	Green Mountain Audio Rio	2,000	Fabulously tight timing and coherence makes for a very expressive and musical performer		20,840,6,34,9	●	A	80	●	332
●	Guru QM10	1,595	A very clever close-to-wall standmount with fine imaging, that sounds a lot bigger than it looks	/465869	30,25,2,23,2	●	A	26	●	317
●	Jamo R 907	6,600	Arguably the more 'chummy' of Jamo's dipole flagships, powerful bass and open midrange	/498515	44,118,9,7	●	A	30	●	317
●	JBL Everest DD66000	44,000	Awesome performance in the true meaning of the word & exceptional musical communication		111,96,5,4,7	●	A	50	●	331
●	Kudos Cardea C2	1,950	This floorstander is a fine all-round performer with fine voicing and neutrality		20,92,5,2,7	●	A	23	●	322
●	Kudos Cardea C30	5,250	An absolute honey that fully justifies its hefty pricetag, lacking only a little dynamic tension	/394973	20,112,2,7	●	A	22	●	310
●	Magico V2	18,000	High pricing derives this speaker's superb painstaking engineering & impressive performance	/624700	25,5,115,3,0	●	A	32	●	325
●	Magneplan Magneplanar 1.6	2,500	Great with acoustic and classical material, this dipole panel speaker has superb sound quality		48,165,5	●	A	43	●	329
●	Mission 796	1,300	Clean, open and detailed, smooth, relaxed loudspeaker does exactly what it says on the box	/594834	20,6,99,8,31,8	●	A	25	●	321
●	Monopulse 42A	1,995	Oddball styling, fine bass-to-mid balance and dynamics and superb voice coherence		26,110,2,5	●	A	25	●	302
★	Monitor Audio PL200	4,750	A costly, but beautifully presented loudspeaker with outstanding voicing and character		25,5,100,28,5	●	A-		●	330
★	Mordaunt-Short Perf 6 LE	4,799	Striking moulded enclosure minimises coloration, overall balance is smooth, neutral and open		24,115,4,3	●	A	22	●	308
●	Neat Momentum 3i	1,790	Sounds bigger than it looks, with good coherence and an impressively wide dynamic range		22,38,2,7	●	A-	23	●	302
★	Opera Callas	3,195	Technically innovative multi-tweeter system, this is a grown up and articulate performer	/429144	23,375,3,4	●	A	32	●	311
●	Opera Seconda	1,995	Fine styling and finish, plus very superior voicing, if a shade lacking in warmth		24,102,5,3,1,5	●	A	20	●	314
●	Pioneer S-2EX-W	5,200	This speaker offers superb midband neutrality and exceptional clarity	/587272	29,1,56,5,4,2,5	●	A	37	●	320
●	PMC FB1i	2,100	A floorstander that boasts impressive bass extension and a smooth sweet top end	/429594	20,100,3,0	●	A	20	●	329
●	PMC OB1i	3,600	This floorstander delivers a smooth overall balance with wide bandwidth and dynamic range	/429697	20,102,5,3,2,5	●	A	20	●	311
●	PMCfact. B	4,600	Beautiful styling, alongside a superb all-round sound with a notable wide dynamic range		15,5,105,38	●	A	55	●	327
●	PMC IB2i	8,900	Delivers a top-class sound quality, fine imaging and exceptional dynamic grip	/617595	33,74,4,6,5	●	A	25	●	324
★	PSB Synchrony One	3,500	Slim and discreet floorstander that delivers superb sound quality and flexible bass	/516267	22,109,3,2,5	●	A	45	●	318
●	Revel F32	3,200	Meticulously balanced, tonally neutral design makes for a taut, well disciplined sound		22,105,3,9	●	A	20	●	256
●	Revolver Screen 3	2,799	Visually dramatic and very successful in delivering genuine high-quality hi-fi sound		50,140,1,1	●	A	35	●	329
●	Roksan Caspian FR-5	2,475	Sharp-looking speaker sounds exceptionally open and lively without aggression		20,100,2,5	●	A	22	●	290
●	Sonus faber Luito Monitor	1,690	Subtly designed, elegant-sounding package, especially with good recordings	/603221	185,35,3,3,5	●	A-	55	●	322
●	Sonus faber Minima Vintage	2,490	Easy, graceful-sounding compact, a natural for acoustic material at moderate volume levels	/455417	20,33,2,7,5	●	A-	55	●	312
●	Sonus faber Cremona Audit.	3,350	Open, exciting and with surprisingly good bass, this is 'The Little Speaker That Could'		20,35,3,7	●	A	50	●	305
●	Spendor SA1	1,295	Very high-quality sub-miniature with notably superior sound		16,5,30,5,1,9	●	A	30	●	334
●	Spendor SP3/1R2	1,600	Conservative styling, superb neutrality and coherence with unusually low coloration		22,40,2,8	●	A	37	●	317
●	Tannoy Definition DC10T	5,000	Classy speaker has massive base, high sensitivity and precise image focus	/608326	34,112,5,3,2	●	A+	35	●	323
●	Triangle Genese Quartet	2,775	Great material value and a solid all-round sonic performance with great loudness potential		23,117,3,7	●	A	25	●	302
●	Triangle Magellan Concerto	16,250	New 'sw2' version is less immediate than its predecessor, but it remains highly entertaining		60,160,4,5	●	A-	32	●	290
●	Teufel Ultima 800	2,498	Exceptional value for money due to direct sales and easy system-matching		22,98,3,7	●	A	42	●	335
●	Vivid Audio K1	14,495	With a subtle, fast and wide bandwidth, this speaker is one of the finest on the planet	/625361	28,130,4,5	●	A	35	●	325
●	Wilson Benesch Curve	5,383	Much (but not all) of the ACT's performance in a much more compact and affordable package		23,91,3,7	●	A	28	●	254
●	Wharfedale Opus	1,500	Great material value and a solid, if bright and forward sound. Has great loudness potential		26,100,5,4,1	●	A	23	●	314
●	Yamaha Soavo 2	1,200	Cunningly crafted with a beautiful balance that always sounds lively, open and involving		22,38,3,5	●	A	28	●	296
●	Zu Essence	3,750	Realism and communication skills are more than compensation for balance shortcomings		30,5,125,30,5	●	A	25	●	327

SPECS KEY **SIZE W,H,D (CM)** Width, height and depth of one cabinet in centimetres. **FLOORSTANDER** Speakers that don't require stands. **EASE OF DRIVE** How much power the amplifier needs (approximately) to drive the loudspeaker effectively. **A+** 25 watts plus **A** 50 watts plus **A-** 100 watts plus **ACT** Active - the speaker has its own in-built amplifier. **BASS FROM** How low the speaker goes - the smaller the number the deeper the bass. **FREE SPACE** The speakers work best away from wall(s). **CLOSE TO WALL** The speakers will work best when up against a wall (but avoid corners).

HFC TOP PICKS**Amphion Ion L £900**

A great-looking loudspeaker that also boasts a superb mid/treble coherence and a super-sweet treble, some positioning care needed

**Opera Seconda £1,995**

Classy, sealed-box, two-and-a-half-way Italian floorstander with a very fine fit and finish and a superior voice band for acoustic work

**Audioplan Kontrapunkt IVB £2,898**

It's small, it's expensive, but this German floorstander contains the finest ingredients and delivers a smooth sound with some of the best imaging around

T3

Gadget Awards 2010

OFFICIAL AWARDS PARTNERS

QUALCOMM

SAMSUNG

TURN ON TOMORROW

What will YOU choose?

From smartphones to satnavs to tablet computers,
vote for your pick of the year's hottest kit
in the **T3** Gadget Awards 2010

The shortlist is now open – vote for your favourites
and win £2,000 worth of must-have tech



Vote now
and win a
MacBook Pro,
HTC Legend
and much
more

Vote now at www.T3.com/awards

OFFICIAL MEDIA PARTNERS

SKY NEWS
First for Breaking News

msn

BADGES KEY: RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

Equipment supports

Hi-fi equipment supports come in all shapes and sizes



Badge	Product	Price	Comments	Top plate size (Cm) Height (Cm)	Number of shelves Welded	Shelf type	Issue number
	Atacama Equinox	409	Stable, modular design with style and excellent bass transients	81	50,50	● 4 Glass	217
●	Audiophile Base Std Supp't	1,200	Expensive and quite bulky, but sound is unusually detailed and resonance-free	57	46,35	3 MDF	302
●	Blok Stax 300	180	A simple and effective design that gives some useful isolation across most of the audio band	40,46	3	MDF	334
●	Custom Design Inert Matt	70	Isolation platform can improve the sound of hi-fi components, but is a bit small for most kit	40x25		Metal	311
	Custom Design XL4	380	Simple construction pays off in smart looks. Sound contribution is minimal	60,42	4	Glass	293
	Custom Design Milan	509	Good-looking stand with nothing more to complain of than slight muddying of detail	57	48,39	4 Glass	302
●	Hi-Fi Racks Podium	500	A keenly priced piece of high-class furniture that also happens to sound great	59.5		Wood	320
●	Isonoe Isolation feet	98	A set of four isolation feet that are ideally suited to microphonic kit like turntables			Alloy	327
	Partington Minim	470	Adds its own character to rock, but to the detriment of acoustic sounds	78	45,37	● 5 Glass	302
●	Quadraspire QX25 Support	25	Beautifully simple design, cheap and easy to use. Excellent with CD players			Acrylic	327
●	Quadraspire Sunoko-Vent T	800	The sound is detailed and largely uncoloured, while the design is rigid and beautifully veneered	59,47	4	MDF	334
	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
●	Townshend VSSS	1,380	This attractive Seismic Sink retains the same excellent vibration-killing sound quality	76	35,50	4 Glass	273

Speaker stands

Not all stands are made equal - try one of our top buys



Badge	Product	Price	Comments	Top plate size (Cm) Height (Cm)	Number of shelves Fillable	Welded	Issue number
	Anvil Sound Display Stand	229	A variety of smart looks available - sound is clear and precise	50	20,17	● 1	293
●	Custom Design RS300	110	An attractive stand whose lack of coloration suits it to high-resolution systems	56	16,5,18	● 1	281
●	Custom Design SQ404	220	Robust four-pillar design gives very low coloration and maximises performance	61	18,16,3	● 4	283
●	Partington Ansa 60	119	Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent	62	18,15	● 4	232
●	Partington Dreadnought BS	299	Sound is better defined in almost all areas than cheaper, slimmer stands can offer	62	17,23	● 5	309
●	Partington Heavi II	499	Robust to the nth degree, this stand helps produce very precise bass and upper frequencies	53	31,22	● 6	287

SPECS KEY **HEIGHT (CM)** Height of equipment support and speaker stand (not including spikes) in centimetres. **TOP PLATE SIZE (CM)** Width by depth of the supporting platform(s). Single figures indicate a square platform (Speakers generally overhang top plates). **FILLABLE** The stand can be mass-loaded with sand and/or lead to stop ringing. **WELDED** As opposed to bolt-together construction. **NUMBER OF SHELVES** To put your kit on (different configurations are often available). **NUMBER OF LEGS** That support the stand. **SHELF TYPE** Material that shelves are made of.

HFC TOP PICKS



Quadraspire QX25 Support £25
Fashioned from two identical pieces of acrylic sheet that slide together, these feet create a very impressive degree of isolation



Partington Dreadnought BS £300
Probably the best speaker stand you can buy for the money - heavily engineered and backed up with sound theory, the Dreadnought is real class



Townshend VSSS £1,380
Although not cheap, Max Townshend's skillfully engineered rack nears the ideal in terms of isolation and spending more doesn't really bring big gains

- THE AUDIO BARN FROM ROCK SOLID SOUNDS -



VIVID AUDIO
ELECTROCOMPANIE T
AUDIO PHYSIC
CABASSE
AYON
CODA
MUSIC TOOLS
NEOTECH

ASTIN TREW
LUMLEY
AUDIOSTONE
BELLES
ORACLE
AURA
STELLO
HI FI RACKS



Rock Solid Sound
Systems

The Old Barn, Rosier Business Park, Coneyhurst Road, Billingshurst
West Sussex. RH14 9DE. **tel. 01403 782221 or 07950 274224**
info@rocksolidsounds.co.uk - www.rocksolidsounds.co.uk

- Please telephone for an appointment -

Subscribe to Hi-Fi Choice and get a pair of Vivanco aircoustic earphones!

Subscribe to *Hi-Fi Choice* for £11 per quarter by Direct Debit and not only will you save 15% off the cover price, you'll also receive a pair of Vivanco aircoustic earphones



GIFT
WORTH
£50!

vivanco

www.vivanco.com



SAVE
15%



“Vivanco has done a fine job in combining great sound quality with a timeless look in a tiny package”
Dan George, Editor

How to order

www.myfavouritemagazines.co.uk/hfc/hfcP14

Call **0844 848 2852** quote code **HFCP14**

Lines open Monday to Friday 8am-9.30pm, Saturdays 8am-4pm

Or fill in the form opposite and return by Freepost

Why subscribe to Hi-Fi Choice?

- Receive a pair of Vivanco aircoustic earphones worth £50!
- Save 15% off the cover price
- Never miss an issue
- All 13 issues delivered straight to your door

About the Vivanco aircoustic earphones...

Due to its acoustic properties, wood is used to craft some of the world's greatest speakers and musical instruments. Striving for perfection, Vivanco chose this natural material for its aircoustic 'ear speakers'!

- Frequency: 18 Hz-23kHz
- Sensitivity: 98dB
- Cord length: 1.2 metres

Visit vivanco.com for more information about Vivanco's products

Overseas subscriptions

If you live outside the UK, please call **+44 1604 251045** for our latest prices

SUBSCRIPTIONS

UK PRICING

- I'd like to pay £11.00 per quarter by Direct Debit and receive my Vivanco aircoustic earphones

PERSONAL DETAILS

Title Forename
Surname Address
Postcode

Telephone
If you'd like to receive emails and SMS from Hi-Fi Choice and Future Publishing and its group companies containing news, special offers and product and service information, please include your email and mobile no. below.

Email

Mobile no.
Please tick here if you are happy for us to pass your details to carefully selected companies so they can send you relevant information about their products or services by email or SMS

PAYMENT DETAILS

- I would like to pay by Direct Debit (UK only) and receive my Vivanco aircoustic earphones (please complete the Direct Debit form below)
(I understand that £11.00 will be debited from my account every quarter)

	Originator's Identification Number 768195	
--	---	---

Instruction to your Bank or Building Society to pay Direct Debits

To the Manager (Bank name)

Address

Postcode

Name(s) of account holder(s)

Branch sort code

Bank/Building Society account number

Ref No (Office use only)

Signature(s)

Date

Please pay Future Publishing Direct Debits from the account detailed on this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with Future Publishing and if so, details will be passed electronically to my bank or building society.

POST YOUR ORDER

RETURN THIS FORM FREEPOST TO:
HI-FI CHOICE SUBSCRIPTIONS
FREEPOST RSHB-JSCH-ZUST
FUTURE PUBLISHING
10 WATERSIDE WAY
NORTHAMPTON
NN4 7XD

OFFER CODE HFPC14 **OFFER ENDS 17 SEPTEMBER 2010**
Direct Debit and free gift offer only available to UK subscribers

TERMS AND CONDITIONS: This is a UK-only offer open to new subscribers paying by Direct Debit only. You will receive 13 issues per year. Minimum subscription term is 12 months. Gifts are subject to availability. We reserve the right to send you an alternative gift of a similar value if this gift runs out. Please allow 28 days for delivery of gifts. Your subscription will start with the next available issue. If at any time during the first 60 days you are dissatisfied in any way, please notify us in writing and we will refund you for all unmailed issues. Please tick here if you do NOT wish to receive relevant information about products or services from Future Publishing or any of its group companies by post or telephone . Please tick here if you do NOT wish us to pass your details to carefully selected companies to enable them to contact you about their products or services by post or telephone . Details of Direct Debit guarantee available on request.

Donate your computers to charity

www.computeraid.org/donate

- Free Blancco data destruction
- WEEE compliance guaranteed
- Zero % materials end up in landfill
- Legal liabilities covered



Computer Aid
International

Email: enquiries@computeraid.org
Tel 020 8361 5540

Registered charity no. 1069256

>try
before
you
buy...



because cables are highly system dependent, **soundlocation** has a wide portfolio of cables from **Siltech** and **MIT**, which you can try before you buy.

soundlocation offers a **trial service** by mail, home demonstration or in our own studio on systems at different price levels from **Accuphase**, **Amphion** and **Astintrew**.

visit our website or phone to find more details.

07973-253136
www.soundlocation.co.uk

VICKERS HI·FI



High Fidelity Specialists

Since 1967

8 Concorde Park, Clifton Moor, York. YO30 4WT. Tel: 01904-691600

Chord
Cyrus
Dali
Marantz
Michell
Monitor Audio
Mordaunt Short
Pathos
Pioneer
ProAc
ProJect
Quad
Sugden
TEAC
Wharfedale
& Many More...

- ▶ Quality HiFi Separates from £100 to £10,000
- ▶ York HiFi Specialist for over 40 Years
- ▶ New Store with Free Customer Parking
- ▶ Widest Choice in the Area - Most items from Stock
- ▶ Qualified Staff - Independent Advice
- ▶ Open 10:30am - 5:30pm Monday to Saturday
- ▶ Up to 3 Years Interest Free Credit* (20% Deposit)

*Subject to status

S
A
L
E

www.Vickers-HiFi.co.uk

Email: VickersHiFi@Hotmail.com





Outstanding music and video systems from a retail shop established for over 40 years.

Come and enjoy your favourite discs and a cup of coffee with our relaxed team.

Every brand we sell is chosen for its spectacular quality, performance and reliability.

O'Brien Hi-Fi

60 Durham Road - London - SW20 0TW
020 8946 1528 or shop@obrienhifi.com
Tuesday to Saturday from 9am until 6pm
www.obrienhifi.com



senso
SYSTEMS

Crescendo at Senso



Italian Hi-Fi from Audio Analogue

Tel: 01872 273215 | www.senso-systems.co.uk
Norfolk House, 16-17 Lemon St, Truro TR1 2LS

PURE POWER

YOUR CLEANEST, MOST ACCURATE POWER SOURCE

PUREPOWER™ MAINS REGENERATION



» How much power does your hi-fi / AV system consume? Visit our website for your FREE POWER AUDIT.

PurePower 2000

- 1400 Watts Continuous Load
- 2100 Watts Short Duration
- 4200 Watts Peak

Our price: £2495

"This is the best, most performance-oriented AC power device we have ever tested."
Ken Taraszka, AVRev.com

Units start from just £1595, including full battery back up.

audioemotion
www.audioemotion.co.uk

e info@audioemotion.co.uk
t 01333 425 999

Music is our Passion



acoustic
audio
preference

Beyond Perfection!

Exclusive, hand built speakers.

Available at:



Mayflower Sounds
Pete Dunstan
Scrooby
South Yorkshire
Tel: 01302 711528
www.mayflowersounds.co.uk



AngelSound Audio
Keith Cheal
Kings Langley
Herts
Tel: 01923 352479
www.angelsoundaudio.co.uk

Analogue Seduction
where music is our passion



Analogue Seduction are dedicated towards two channel Hi-Fi, specialising in vinyl replay.

As well as our on-line shop we have dedicated demonstration retail facilities based in Peterborough, Cambridgeshire and we can offer our customers home demonstrations.

We stock the finest in amplification, analogue, digital replay and speakers. We also specialise in a cable termination and cable burn in service.

Please visit our website www.analogueseduction.net to browse or purchase products that are not easily available elsewhere.

New vinyl records now stocked

Tel: +44 (0)1733 344768

www.hifichoice.co.uk

Get Cash
for your **Old Hi-Fi!**

PAYMENT WITHIN 5 DAYS

We pay up to
£10,000
for a used **Hi-Fi!**

For a FREE valuation visit:
www.trading4u.com/sell-home-audio



Front End Problems?
contact:

The Cartridge Man

It doesn't have to cost an arm and leg to get the best
- listen to my Koetsu - and - Decca - eater.
Also agents for Croft, Moth, Haddock & Mitchell & E.A.R. Graham Slee projects.
Valve equipment re-build service available.
- Plus cartridge re-tipping service

020 8688 6565
Website: www.thecartridgeman.com

- atc
- arcam
- dynavektor
- epos
- epson
- focal
- grado
- isoblu
- kudos
- lyra
- naim audio
- neat acoustics
- nottingham
- ortofon
- pmc (including fact)
- stax
- sumiko
- trichord
- well tempered







hi-fi for grown-ups

ipswich (01473) 655171
www.signalsuk.com

Oranges & Lemons
www.orangesandlemons.info

Audio-Visual
 Hi-Fi
 Multi-Room

020 7924 2040
 61-63 Webbs Road London SW11
shop@orangesandlemons.info





Hi-Fi, Home Cinema & Multi-room AV

Ceritech
 AUDIO

...where music stirs the soul



www.ceritech-audio.com
Tel: 0844 7365719
Monmouthshire & Gloucestershire

sound cinergy

37 High Street, Aldridge
 01922 457926

exposure
 focal linn marantz michell
 monitor audio okki nokki
 onkyo optoma ortofon
 project rel roksan trichord

Ample Parking Tue-Sat 10 - 5.30pm
www.soundcinergy.co.uk

REVOX SERVICE **THE MANUFACTURERS' APPOINTED SERVICE COMPANY** **REVOX SERVICE**

<p>Correct Revox Spare Parts Pricing 24 Hour Estimation procedure Manufacturer Upgrades and Advice Delivery and Collection Service Comprehensive Guarantees</p>	<p>Factory Trained Engineers Rapid Response Turnaround Full Revox range serviced Written Technical Reports Late Evening Opening</p>
---	---

THE AR TECHNOLOGY LIMITED
 TTL House, Sheeptick End, Near Lidlington, Bedfordshire, MK43 0SF
 Telephone 01525 841999 Facsimile 01525 841009


IAN HARRISON HIFI SALE!
Tel: 01283 702875

SPECIALIST SUPPLIER OF TURNTABLES, TONEARMS, CARTRIDGES AND PHONO STAGES
 INCLUDING: MICHELL, CLEARAUDIO, THORENS, SME, REGA, MOTH, HADCOCK, WHEST AUDIO, GRAHAM SLEE, TRICHORD, HEED, GOLDRING, GRADO, ORTOFON, DENON, KOETSU, SUMIKO, CARTRIDGE MAN, ZYX, TRANSFIGURATION, BENZ MICRO, AUDIO TECHNICA, LEHMANN AUDIO, PRO-JECT AND ROKSAN.

All goods are brand new and fully guaranteed. Goods are not supplied on approval. Free UK delivery

Details and prices from: Ian Harrison,
 7 Mill Hill, Repton, Derby DE65 6GQ, UK.
 Tel: 01283 702875 9am-9pm inc Sundays


Is this your problem? Here's your answer



loud too loud way too loud

It's a common problem. The usable range on the volume control is all down at the bottom end and fine control at low listening levels is either difficult or impossible. The noise floor may be audible, too. There is a simple and effective solution - the **Rothwell In-Line Attenuators**. They can be used with pre/power or integrated amps to cure the problems of excess gain and bring sonic benefits with even the most expensive equipment.

£39/pair - post free
 01204 366133 www.rothwellaudioproducts.co.uk



"this accessory is heartily recommended"
 Gramophone

To advertise here please
 call Richard Jewels on
0207 042 4265

News with a **view** _

TechRadar.com covers the stories you want to talk about _

So come along and talk. If you're passionate about technology, you'll find lots to keep you interested and plenty of ways to have your say.



ASTLEY AUDIO LTD

SE

3 Marketplace, Wallingford,
Oxfordshire OX10 0EG

☎ 01491 839305

🌐 www.audioimages-hifi.com

DIVINE AUDIO

EM

The Courtyard, Bennett's Place, High Street,
Market Harborough, Leicestershire LE16 7NL

☎ 01858 432999

🌐 www.divineaudio.co.uk

ACOUSTICA LTD

NW

17 Hoole Road, Chester, Cheshire
CH2 3NH

☎ 01244 344227

🌐 www.acoustica.co.uk

GRAHAMS HI-FI

GL

Canonbury Yard, 190a New North Road,
London N1

☎ 020 7226 5500

🌐 www.grahams.co.uk

BADA

NOTTINGHAM HI-FI CENTRE

EM

120-122 Alfreton Road, Nottingham,
Nottinghamshire NG7 3NR

☎ 0115 9786919

🌐 www.nottinghamhifi.co.uk

BADA

AUDIO COUNSEL

NW

26 High Street, Cheadle, Cheshire
SK8 1AL

☎ 0161 491 6090

🌐 www.audio-counsel.co.uk

BADA

INFIDELITY

GL

9 High Street, Kingston-upon-Thames,
Surrey, KT1 4DA

☎ 020 8943 3530

🌐 www.infidelity.co.uk

BADA

STUDIO AV

WM

44 High Street, Eton, Berkshire,
SL4 6BL

☎ 01753 631000

🌐 www.studioav.co.uk

DOUG BRADY HI-FI

NW

Kingsway Studios, 15a Kingsway North,
Warrington, Cheshire WA1 3NU

☎ 01925 828009

🌐 www.dougbradyhifi.com

AUDIOBOFFS

GL

338 Shenley Road, Borehamwood,
Herts WD 1TP

☎ 020 8177 4095

🌐 www.audioboffs.co.uk

SOUND CINERGY

WM

37 High Street, Aldridge, Walsall, West Midlands
WS9 8NL

☎ 01922 457 926

🌐 www.soundcinergy.co.uk

SYNERGY AV HI-FI

NW

12a West St, Congleton, Cheshire
CW12 3JB

☎ 01260 280017

🌐 www.synergyav.co.uk

ALTERNATIVE AUDIO

SW

Brompton Ralph, Taunton, Somerset

☎ 01984 624242

🌐 www.alternativeaudio.co.uk

VICKERS HIFI

NE

24 Gillygate, York,
YO31 7EQ

☎ 01904 629659

🌐 www.vickers-hifi.co.uk

ACTON GATE AUDIO

W

4 Ruabon Rd, Wrexham,
Clwyd LL13 7PB

☎ 01978 364500

🌐 www.acton-gate-audio.co.uk

SENSO SYSTEMS

SW

Norfolk House, 16-17 Lemon Street,
Truro, Cornwall TR1 2LS

☎ 0870 458 4438

🌐 www.audio-cinema.co.uk

SE - South East, GL - Greater London, SW - South West, E - East,
EM - East Midlands, WM - West Midlands, NE - North East,
NW - North West, W - Wales.

THE RIGHT NOTE

SW

56 High Street, Saltford, Bristol
BS31 3EJ

☎ 01225 874728

🌐 www.loissoftware.co.uk/rightnote/index.asp

AUDIO IMAGES

E

128 London Road North, Lowestoft, Suffolk
NR32 1HB

☎ 01502 582853

🌐 www.audioimages-hifi.com

BASICALLY SOUND & VISION

E

Calveley Court, Southburgh Rd, Reymerston
Norfolk NR9 4QD

☎ 01362 820800

🌐 www.basicallysound.co.uk

HI-FI CHOICE

To advertise in the dealer directory,
Please contact

Tony Martin +44 (0) 207 042 4253
tony.martin@futurenet.com



Web of lies

Is the internet an Information Super Highway or an Information Wrong Turning? asks a slightly cynical **Malcolm Steward**

The internet seems to be the obvious place to garner information about all things related to computer audio. To some extent that is true but it contains, as always, a host of 'resources' of highly questionable value. Do a bit of reading between the lines on some websites and forums and it soon becomes blazingly apparent that they have not-so-well-hidden agendas and axes are being ground furiously. One such site that I found seems clearly to be run or sponsored by a highly opinionated loudspeaker/electronics manufacturer and fuelled by posts from his equally narrow-minded acolytes.

Many self-appointed computer audio experts on passive/aggressive sites such as this appear to me to be completely single-minded and obsessed by one hang-up or another. For instance, some are convinced that Apple's iTunes is a divine gift bestowed upon the world by the Almighty. In my opinion, it is no such thing. I think of it as good enough for controlling compressed files stored on your iPod, where sound quality is not really a major consideration. I certainly would not use it for music on my NAS, for example, where precious sound material is going to be played back on my home system, either through an analogue or digital connection to software such as Media Monkey, or transmitted over Ethernet to UPnP media players.

Since converting my main storage box to hold only FLAC files (see HFC 334 and 335), I have rebuilt the music library using illustrate's Asset UPnP server software. Asset regularly rescans the disk looking for changes and additions to the content being stored. Ultimately, it knocks iTunes – and the necessary bridging software it requires – into a cocked hat if one is looking for a straightforward transport mechanism that will function with the widest variety of media players on the market.

And are the quality differences between CD rips blindingly obvious only to one or two manufacturers and me? Have we all become so 'time-poor' that nobody is able to spend an afternoon, as a pal and I did a while ago, comparing around 20 rips of the same track? It is not a fun experience, let me tell you, but that does not mean that it was not worthwhile. Similarly, one needs to listen to a hard disk player both when it is playing while connected to the network but not using that connection and when it is not, i.e. when the network cable is disconnected. Then one should really repeat that test with the connection galvanically

isolated. And with both shielded and unshielded cables. Yeah... accept that computerised audio does not mean saying goodbye to tweaking if that is what turns you on. If it does not, just buy yourself a Mac'n'DAC combo and some active bookshelf speakers and start downloading MP3s... which some people will have you believe sound identical to hi-res 'audiophool' recordings!

Motherboard

No, computer audio can be as audiophile a pursuit as you wish, or as finely graded in quality terms as your ears are prepared to believe. I recently received a military-specification SATA cable: a hard disk to motherboard 'interconnect' that carries not an audio signal but raw digital data: ones and noughts. I will not tell you that it made the system sound better when I used it in place of the 'standard', grey or red-plastic sheathed SATA cable that came with the hard disk in my ripping NAS unit. I know that would be difficult to swallow. It is sheer craziness when you think about it logically... but your ears might tell you a different tale.

So, the next time some internet 'expert' tells you that MP3s played from a Mac through little active speakers are as good as reproduced music gets, tell them you know that they are deaf, dim, deluded, and disingenuous, and that they are trying to lead you up the garden path... to their e-commerce site, most likely. ●

Although great for switching people onto music, iTunes has rivals where audiophiles are concerned

Self-appointed computer experts are convinced that Apple's iTunes is a divine gift bestowed upon the world by the Almighty...it is no such thing



MALCOLM STEWARD
is the former editor of *Hi-Fi Review* and one of the most outspoken reviewers around
He writes exclusively for *Hi-Fi Choice*

WHAT DO YOU THINK?
Do SATA, USB and PC cables sound different?
Email us now: hifichoice@futurenet.com



audioemotion

www.audioemotion.co.uk

e info@audioemotion.co.uk

t 01333 425 999

Music is our Passion

- > Loudspeakers
- > Amplification
- > Digital
- > Analogue
- > Cables
- > System Infrastructure
- > Accessories
- > Pre Owned

PURE CLASS A

Hi-Fi Choice
OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Extensive features include an excellent phono stage, lively and natural sound.
VALUE FOR MONEY ★★★★★	DISLIKE: Huge size, some limitations with insensitive speakers.
BUILD QUALITY ★★★★★	WE SAY: An accomplished all-rounder that's able to handle virtually any system.
SPECIFICATIONS ★★★★★	
OVERALL ★★★★★	



Luxman L550A II Integrated Amplifier

The gorgeous texture and three-dimensional performance of the original Class A amplifiers have been retained and further refined. A most elegant and intuitive-to-use player. Truly lasting satisfaction.

Our price: £3450.00

"There is no doubt about it, the Luxman is a genuine superstar."

Ed Selly, HiFi Choice August

LUXMAN

PEACE OF MIND CHARTER

- 5 year first owner warranty on all new and pre-owned equipment*
- 14 day no quibble exchange plan
- 'Industry best' part exchange prices
- Free room optimisation consultation using our proprietary software
- Finance available on all products

* terms & conditions apply

- > Please ask about our unbeatable part-exchange programme.

ESL Electrostatic Loudspeakers

A single 'point-source' driver, so incredibly linear and cohesive that nothing can prepare you for the revelation it will unfold...

"I have to say that this is the finest speaker on the planet"

- Ken Kessler, *Hi Fi News*

"I know of no other speaker I'd rather own, regardless of price"

- Sam Tellig, *Stereophile Magazine*

"One of hi-fi's true classics redefined: this is the best Quad electrostatic design ever, and a truly world-class speaker"

- *What Hi-Fi? Sound and Vision*

"By the highest standards, the 2905s get everything right to a degree that had me shaking my head in awe"

- Noel Keywood, *Hi Fi World*

QUAD

QUAD II *Classic Integrated*

QUAD

* The Quad ESL loudspeakers are best paired with the Quad II Classic Integrated Amplifier

"Truly a Quad for the 21st century, and in a more convenient package than you can imagine, it's a triumph."

- Ken Kessler, *Hi Fi News*