INN MAJIK LP12

IX £2,000 LOUDSPEAKERS

EXCLUSIVE!

MUSICAL FIDELITY A1 CD PRO

EXPOSURE MCX
high end system

EXCLUSIVE!

COMPETITION
WIN A FABULOUS MUSICAL FIDELITY A1 P&P PREAMP
WORTH £1,500!

- CAMBRIDGE AUDIO 840E/W PRE-POWER AMPLIFIERS
- CONSONANCE CYBER 10 INTEGRATED TUBE AMPLIFIER
- KEF REFERENCE 203.2 FLOORSTANDING LOUDSPEAKERS
Those who appreciate good sound will prefer the tighter “S.”

New 3010S series:
Tighter bottom-end, livelier sound, more drive...same price

**CD player £1200**
- Brand-new “CD solution” – custom-made transport mechanism, servo units and control mechanisms
- Twin Burr-Brown PCM 1704 mono DACs and a discrete output stage
- Low jitter clock and a large toroidal transformer with separate windings for the transport mechanism and audio stages.

**Integrated Amplifier £1000**
- Larger power supply
- 110 watts RMS (as compared to 100W for the previous model)
- 6 line inputs, bi-wiring and bi-amping compatible
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- Remote control

**Power Amplifier £800**
- Larger power supply
- 110 watts RMS (as compared to 100W for the previous model)
- Capable of driving sophisticated speaker systems, in bi-amping mode or monoblock mode
- Clean and extended low frequency response
As house prices crumble, credit crunches and confidence quivers, there’s never been a better time to buy hi-fi. Why? Because instead of buying on image, hype or name, shoppers begin to care about how much ‘sound per pound’ a product gives them...

Value is something we at Hi-Fi World have always paid attention to, focusing on what we call “affordable audiophile” gear, rather than slickly marketed designer kit with ‘telephone number’ price tags...

This issue is a case in point. Actually, we kick off with a true high end system with price to match, but unlike so many flagship one-make packages, Exposure’s £15,000 MCX [p10] really delivers the sonic goods. Although expensive, it’s still a wise investment.

Following on from this, we test six of the best £2,000 floorstanders [p5]. All these speakers offer dramatic improvements in clarity, refinement and natural musicality over cheaper, supposedly better value designs - our supertest shows how spending less can be a false economy.

On p29, yours truly compares the latest contender for £1,500 CD player crown – Musical Fidelity’s AI CD Pro. This is a key market sector because the very best designs at this price start encroaching on true high end products in performance terms. The worst however, struggle to better some £300 silver disc spinners. Without giving the game away, I’ll just say that the new MF is an important product at the price!

Continuing the value theme, we’ve Consonance’s £795 Cyber-10 integrated tube amplifier [p36], offering single ended operation which is normally the province of products five times the price. Contrasting this is Cambridge Audio’s brand new 840E/VV solid-state pre-power combination, offering more power than most people will ever need for £2,000 [p59].

For the same money, you can also buy Linn’s new Majik LP12 turntable package - complete with a fine arm and cartridge, it makes ownership of this high end vinyl spinner more affordable than ever. Read all about it on p100.

So, although money might be too tight to mention, October’s Hi-Fi World shows that if you’re in the market for an upgrade, hi-fi has never been better value.

David Price, editor
Six of the best loudspeakers — top £3,000 floorstanders tested.

Consonance Cypix 10 integrated amp — Single ended on a budget!

Linn Majik LP-12 — an affordable new path to Sondok ownership...

Monopulse 42A loudspeaker — unconventional but excellent.

Exposure's stunning new flagship MCX separates system.

KEF Reference 203 2 - superlative high end floorstanders.
Adam Smith auditions six pairs of £2,000 floorstanders.

KEF REFERENCE 203.2
KEF’s brand new high end floorstanders are reviewed by Noel Keywood.

Monopulse 42A
Adam Smith checks out these intriguingly different floorstanders.

Audiaz ETA
These expensive German designs get the Adam Smith ear...

Musical Fidelity AI CD Pro
David Price scoops Musical Fidelity’s brand new retro-look CD spinner.

Consonance Cyber 10
Noel Keywood can’t resist this charming single-ended valve integrated.

Cambridge Audio 840E/840W
David Price checks out Cambridge Audio’s new flagship pre/power amplifiers.

Yamaha DSP-AX863SE
Noel Keywood gets the measure of Yamaha’s latest feature-packed A/V receiver.

DIY Feature Part 20
Peter Comeau investigates the behaviour of open-baffle loudspeakers in the listening room.

Showtime
Noel Keywood pays a visit to the Malaysia AV show in Kuala Lumpur.

Vinyl Section
Paul Rigby with all the latest black plastic releases.

Linn Majik LP12
David Price checks out Linn’s affordable new Sondek turntable package.

Adjust+
Noel Keywood continues his exploration of the features offered by Dr. Feickert Analogue’s new LP measurement system.

Olde Worlde
Haden Boardman celebrates Ortofon’s classic SPU moving coil cartridge.
G WHIZ!
Meridian Audio Limited has announced details of a newly upgraded and extended range of G Series components, described by company founder Bob Stuart as “both broader and deeper”. It introduces advances such as a new slot-load drive and USB audio connectivity to enhance both quality and versatility. The range now includes the new G68 Surround Processor which is extended into two versions, the G68 AXD and the G68 XXD. The former £4,995 design includes full analogue and digital I/O, with 4 channels of balanced analogue outputs plus 10 unbalanced outputs and a USB audio input. Also fitted is Meridian’s powerful proprietary DSP engine, which implements Meridian Room Correction as well as the firm’s surround and ambience-recovery processes. The XXD is a fully balanced version of the same. There’s also the new £3,500 G61R Surround Processor, implementing Meridian Room Correction processing and adding USB audio connectivity to the model’s flexible analogue and digital I/O facilities.

The £3,895 G92 DVD Player/Controller/Tuner is described as “the world’s only legitimately high-end system in a box”, featuring much of the functionality of the G61R with a fully integrated optical disc drive and Faroudja video processing offering HD 1080p output. It’s also available with a DAB radio option for £4,250. The G96 DVD Transport is a new slot-loading optical disc drive that plays DVD-Video and Compact Discs, and features HDMI video output at £3,350. The G96.2 Compact Disc Player (£1,695) also uses Meridian’s new slot-load disc-drive mechanism, as does the new (£2,395) G08.2 which is evolved from the acclaimed Meridian 800 design. This sports fully balanced, professional-grade Class A analogue outputs and Meridian’s exclusive digital audio upsampling to 176.4kHz/24bit.

Meanwhile, F80 fans will doubtless love the new £195 i80 Universal iPod Dock. It connects to the F80 simply, allowing complete control of the music library stored on the iPod through the F80 remote control or its front panel buttons. Its physical design echoes the curve of the F80 in miniature, with a heavy diecast zinc alloy base and moulded shell available in standard gloss black, but with clip-on red or yellow trims to match your particular F80 model. For more details, click on www.meridian-audio.com.

C HEAR
KEF’s new C Series is the famous loudspeaker marque’s new entry level range, “engineered to uphold the company’s long-held tradition of making speakers that provide the most accurate response possible at the price point”. Power handling is said to be excellent and, as with all modern KEFs, they are easy to drive. They employ stiff, internally braced cabinets and dense, two-layer front baffles with contoured front slot ports and a ‘Tangerine’ waveguide for the tweeters, as used on the latest KEF Q range. All models are available in either classic Black Ash or a fine-grained European Walnut finish. Prices are £139.99 for the C1 bookshelf, rising to £479.99 for the C7 floorstander. For more information, click on www.kef.com or call +44(0)1622 672261.

ASSISTANT EDITOR FOR HI-FI WORLD WANTED
Hi-Fi World is looking for a talented Assistant Editor. Candidates will have an understanding of electronics, a love of music, and an interest in hi-fi. Excellent communication and writing skills are an absolute must. This is a demanding role in every respect. Enthusiasm and dedication are essential, as are organisational skills. I.T. skills are also required. There is a need to travel to shows, press conferences and manufacturers, not just in the UK but around the world.

The job is based in our main office in Kilburn, London, so applicants must be within reasonable commuting distance. If you are interested, please send your CV to publisher@hi-fiworld.co.uk.
**DEJA VIEW**

Denon's latest £300 D-M37DAB micro system has been specifically tuned for the UK market. The remote controlled design features a CD player driven by a 60W amplifier with DAB radio and a USB port for MP3 playback from portable audio devices. Denon's optional dedicated ASD-IR dock gives full remote control over your iPod. Adding the finishing touches is a bespoke pair of loudspeakers for an additional £70. For details, click on www.denon.co.uk or call 01234 741200.

**SPECIAL ONE**

An evolution of the classic Acoustic Energy standmount loudspeaker, the new AEI Mk III SE is strictly limited to just 250 numbered pairs. Using the latest technologies and materials, the AEI Mk III SE design has been honed to create the best small standmount speaker AE has ever created, says the company. It is made in a strictly limited quantity of just 250 pairs for worldwide distribution, and offered in three finishes; eight-layer, hand-finished Piano Black or Pearl White, and Cherry real wood veneer. Alternatively, the AEI MkIII SE can be custom painted in any high-gloss colour for a premium. UK designed and built, the AEI Mk III SE uses a heavily braced 18mm MDF cabinet lined with 4mm steel plate using a specially manufactured damping glue. The 12mm thick baffle plate is milled from a solid aluminium block, providing the sturdiest mount for the custom woofer and tweeter assemblies. The bass driver couples AE's signature spun-alloy cone with a diecast magnesium alloy chassis. The motor assembly uses twin neodymium magnets and a 32mm voice-coil for speed and power handling. This is coupled to a 38mm ring-radiator tweeter with a frequency response out to over 40kHz, chosen for its low distortion throughout its operating range. The AEI MkIII crossover has been completely redesigned for the SE model, the number of components being reduced from 13 to just 6. This has allowed AE's engineers to specify "some of the very best components available", including ferrite-core and air-core inductors, Welwyn wire wound resistors and polypenylene film capacitors. Internal wiring is all PTFE-coated multi-strand silver cable, terminated in a single pair of gold-plated WBT binding posts. Prices start at £2,500 per pair. For more information, click on www.acoustic-energy.co.uk or call +44(0)1285 654 432.

**SCALE MODEL**

Onkyo's new DV-SP406 is described as a "high quality 1080p Upscaling HDMI-equipped DVD player" with USB connectivity. A low-profile, entry-level design, this £100 machine is designed to partner to Onkyo's award-winning range of home cinema receivers. It upconverts 1080p allowing a genuine one-cable HDMI digital connection to a high-definition display. Meanwhile its front-panel USB interface allows easy transfer of digital music files for playback, including DivX. There's an 192 kHz/24bit audio DAC and a 108 Mhz/14bit video DAC, and it's possible to send a two-channel, PCM audio signal via the DV-SP406's HDMI output (multi-channel audio is delivered via the DV-SP406's digital outputs). For more information, click on www.onkyo.com.

**Ciao Bella!**

After no small amount of success with radios of the analogue and digital varieties, Tivoli have now entered the Wi-Fi radio market with the premium Tivoli Audio 'NetWorks' global radio. It works via a wireless router or from an Ethernet cable, and functions as a standalone unit, but can also be expanded with a stereo speaker, CD player or subwoofer. It comes in a choice of furniture-quality hardwood cabinets finished in Walnut, Cherry and Wenge with gold-toned faceplates. There's an analogue AM/FM radio built in, with a choice of five presets, but through its exclusive 'Global Portal' users can add an unlimited number of Internet stations stored to a 'Favourites' list. These would include many HD Multicast and DAB stations, previously only available from expensive HD or dedicated DAB receivers, says Tivoli. NetWorks even has the ability to stream music files from a computer via an Ethernet or Wi-Fi connection, in MP3, WMA and Real Audio. Also included is a USB input to connect a compatible MP3 player or memory stick. Additional features include a virtual analogue clock, dual independent alarms with sleep timer and snooze function, compact remote control, and easy-to-read four-line by sixteen character backlight display. Price is a hefty £500. For more details, click on www.armourhe.co.uk.

**Oops...**

The typesetting gremlins struck again last month on P39, so for those of you who have been desperately trying to contact Clearer Audio for some cables, you'll have more luck on +44(0)1702 543981. Our apologies to all concerned!
SEE FOR MILES

Pro-Ject’s new £1,000 6 PerspeX turntable “sees the introduction of new technologies which help establish new levels of performance for record playing systems”, claims UK importer Henley Designs. The turntable and arm are mounted on a subchassis machined from a granite-like Conan substrate which ingeniously floats above the transparent acrylic plinth on three magnetic suspension points. The substantial record platter is made from a non-resonant sandwich of materials and rotates upon an inverted ceramic bearing. The platter is driven by a belt from a quiet AC motor with two pulleys; allowing easy speed adjustment between 33 and 45rpm. The 6 PerspeX also features the new Pro-Ject 9cc Evolution tonearm in which the headshell and armtube are formed from a single piece of conical carbon fibre. For more details, click on www.henleydesigns.co.uk or telephone +44(0)1235 511166.

BLACK CELEBRATION

Calling Linn DS, Naim HDX or Sonos users, plus any other computer audiophiles! If there ever was a sexy data storage device, the new Verbatim Premium Black Edition 2.5 inch HDD is it. This small 150g external hard drive sports 250 GB of storage space for around £64.99. A 2.5inch affair with a black protective rubber coating, it measures just 84.5x134x16mm, so it fits into the palm of the hand. It runs at 5,400rpm, and data is transferred via the USB ports at speeds of up to 480 MBit/s. The USB port also supplies the HDD with power, so no further power connection is needed. For more information click on www.verbatim.com.

BEAT THIS

Monster has announced the “first ever product to be endorsed by legendary hip hop music producer/artist Dr. Dre”. The new Beats cans are said to be “mutually designed” with the good doctor, “with ground-breaking and inventive engineering by Monster”. Dr. Dre, Jimmy Iovine (Chairman of Interscope Geffen A&M Records) and Monster teamed up to create these phones, sporting a unique and new look with glossy extra wide headband, hinged ear cups and high-quality Monster cable internal wiring. A push-to-listen Mute button adds to the flexibility and convenience. The £280 phones come in a smart carrying case with anti-microbial cleaning cloths, a special Monster headphone cable, a mini-stereo cable adapter, as well as Monster’s iSoniTalk, a microphone/headphone adapter for iPhones. For stockists contact +44(0)1923 693766.

COLOURFIELD

Creative’s new Zen Mozaic digital portable is said to be “inspired by the artistic expressions of mosaic art”. Available in vivid pink, chic black or cool silver, it comes in 2GB and 4GB models (with 8GB and 16GB coming soon) and sports a built-in speaker, 1.8-inch LCD colour screen, FM radio and voice recorder. Weighing just 43g and measuring 79.5x40x12.8mm, the super compact Creative ZEN Mozaic provides up to 32 hours of audio playback with a single charge of the battery. Prices start at around £50. For more information, see www.creative.com/zenmozaic.

HIGH ENERGY

MIT Cables’ new Z-Powerbar is said to be a unique modern approach to an old problem. It uses special noise filtration circuits to remove sound degrading AC line noise. The multiple patented, parallel tuned filters operate over the widest bandwidth, it is claimed, and it sports four “hospital grade” duplex outlets with patented stabiliser circuitry. There’s also a single red duplex outlet to indicate power is always on. Its power factor correction reduces transmission losses and improves voltage regulation, and there’s surge and spike protection for noise-free A/V performance and improved service life. Said to be “excellent for silent A/V power distribution near fluorescent lights and low voltage lighting”, it costs £1,599. For more information, click on www.mitcables.co.uk or call +44(0)1870 777299.
nticipation can be a wonderful thing. It is said that "everything comes to those who wait" and the excitement that builds up prior to an event that we are looking forward to can be highly satisfying. The problem comes if the event fails to materialise resulting in disappointment. In case you’re now wondering what all this has to do with Exposure, allow me to enlighten you – taking an item from first show to production is not a speedy process, but the MCX system here was actually unveiled at the Bristol Sound and Vision Show 2007; hence my anticipation has been building for almost eighteen months. Still, the arrival of a huge and heavy pallet at World Towers finally heralded the readiness of the MCX system and, as my anticipation had reached fever pitch and was in danger of plummeting into an Eeyore-esque sense of 'it's never going to arrive', I was immensely relieved.

Exposure itself has a lengthy history stretching back to 1974, and keen students of eighties hi-fi like myself know them well for their amplifiers which, at that time, came in cute black boxes with that typical slight cottage-industry look. Underneath though, were excellent amplifiers that were highly rated both at the time and still today, as reflected by their continuing high demand and healthy second hand values. Although the original amps were up into Naim Audio territory, this is Exposure's first foray into the 'ultra high-end' arena, with the complete MCX system lightening your wallet to the tune of £15,000.

At the top of a stack of separate components designed to fit together sits the CD player. This is a top-loading item with a delightfully solid sliding lid and weighty CD puck; it incorporates some fine technology. Internally, the player uses 4 separate DAC boards with PCM1704 multi-bit DACs, and each board has separate regulated power supplies for the DAC and audio circuits. These PSUs

"it was as if the MCX had dragged an invisible subwoofer in to the room..."
are fed from a large toroidal power transformer with separate windings for the mechanism, display, DAC and audio outputs. The analogue outputs are available in balanced and unbalanced form and the unit has optical and coaxial digital outputs, the latter through both D/N and phono sockets.

The unit can also act as a DAC and digital switching centre, with AES balanced, USB, coaxial phono, coaxial BNC (x2) and optical (x2) inputs. The brochure and website also make mention of FM and DAB radio, and our sample had an empty hole on the rear marked 'antenna' so this would appear to be an upcoming option, although pricing and availability are as yet unconfirmed. The player measures 104x490x414mm (HxWxD) and weighs an impressive 20kg.

Going down, we find the MCX preamplifier, which is identical in size and weight to the CD player. This is also a comprehensively specced item, utilising dual mono construction and featuring seven inputs, with a switchable x1 gain AV option. The CD input is through balanced XLRs, as is one of the auxiliaries, but this latter item can also be configured for an MM or MC phono stage with either XLR or phono input sockets, for £300 extra. The remaining inputs are unbalanced line level items.

Three sets of outputs are fitted, one unbalanced, two balanced, so if the huge power output of one pair of MCX monoblocks isn't enough, you can always tri-amp!

Input switching and volume operation are via high quality reed relays, but the control volume is a bit odd. Firstly, it operates over a peculiar range of -53 to +18 on the display, and -53 is not a full mute either - this is only achieved by pressing the mute button. Also, the volume operates swiftly and precisely through the remote control, but is tortuously slow when the front panel rotary control is used, requiring a ridiculous amount of twiddling for an appreciable difference in level.

Finally, lurking at the bottom of the stack are the two MCX monoblocks. With a rated power output of 300W into 8 Ohms and 600W into 4 Ohms [see MEASURED PERFORMANCE], these are as big in nature as they are in stature. Their height is 238mm and they weigh no less than 35kg each so it's best to decide on a position for them and then leave them there! Each amp uses a vast 1.400VA mains transformer with separate windings for the power circuits and the low level signals, and have two outputs for loudspeaker bi-wiring. Both balanced and unbalanced inputs are provided.

Additionally, each component features RJ45 input and output sockets for system synchronisation, and the amplifiers also have 12V trigger sockets for control from an external A/V integration system. Finally, the MCX system comes with a remote handset with solid buttons for control of all items. These buttons are not grouped together by component or function, and are all the same in appearance, so it takes a little acclimatisation to remember where the important ones are. However, as the handset is a wonderfully solid lump of cast metal that's ideal for assailing burglars (Hi-Fi World does not, of course, condone this), I am prepared to forgive it virtually anything...

**SOUND QUALITY**

Big boxes, big weight, big price tag - but does this mean big sound? Now, I am never immune to the charms of a low-powered valve amplifier but somehow, when I find myself sat in front of a really good solid state amplifier with a serious power output, then everything in the world seems right. Connected up to our reference Spendor S8e loudspeakers, it was as if the MCX system had dragged an invisible subwoofer into the room, as these not unduly large transducers suddenly sounded around eight feet tall and appeared to have grown several extra bass drivers.

The amplification side of the MCX system has that rare ability to make everything absolutely effortless. "the amplification side of the MCX system has that rare ability to make everything absolutely effortless."

The MCX system is a musical experience. Its abilities are immeasurable and no shoutiness or compression as the volume increased, just a steady but relentless increase in sonic intensity. Feeling obliged to fully examine the range of the MCX's abilities, I first popped Propellerheads' 'Take California' into the CD player. This is a pounding slice of dance music and the Exposures loved it. Once again, the bass line was capable of loosening teeth, but was spry and beautifully controlled, and the horrific mess of lyrics contained in the track's samples were easily distinguishable. Moving to the other end of the spectrum however, 'Spanish Harlem' from Rebecca Pidgeon's 'The Raven' is a virtually recorded track at the best of times, but through the Exposures it simply stepped free of the boundaries of the recording and left the result laid out in the listening room with an almost alarming scale. Rebecca's voice was vivid and positively swept aside the listening room to pull me right into the studio, the backing double bass seemed to be within inches of my right ear and, when the hand-held shaker started up later in the track, I nearly stood up to check I hadn't dropped something.

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The Exposure MCX CD player has a perfectly flat frequency response from 2Hz to 21.1kHz, so should offer a well balanced and even nature without any artificial brightness or smoothness added. Distortion-wise it is a bit of a mixed bag, turning in some fine figures for the higher 0dB and -6dB signals, but worsening with reducing test signal level. At -60dB the player returned a result of 0.6%, whereas around 0.2% is a more common result for a high performance player. This has the effect of reducing dynamic range which, at 105dB, is a good enough result, but a little off the best players which can better 110dB. Channel separation was fine at 86dB and noise levels were low, at -102dB.

The unbalanced phono sockets gave an output figure of 2.1V, in line with standard CD specifications, and the balanced XLRs doubled this to 4.2V. Jitter from the digital output showed a result of 90PS in program related terms, with random jitter hovering around 6pS—a very good result.

The MCX preamplifier offers a fine, balanced performance across all inputs. Frequency response is wide from 1Hz to 50kHz and distortion low right up to full output. The gain figure on offer is fairly conventional at x3.6 across the unbalanced inputs and outputs, but this does double if the balanced outputs are used. Equally, output overload occurred at 10V through the phono outputs and 20V through the balanced XLRs, so the preamplifier can swing plenty of voltage and should work well with pretty much any power amplifier, as well as the matching MCX items. Channel separation was good at 88dB and noise was impressively low at -103dB, so the MCX preamp should turn in a well balanced and capable performance, as the test results suggest a well designed unit.

The monoblock power amps offer a hefty power output of 338W into 8 Ohms, rising to 676W into 4 Ohms, so they are certainly not short of grunt. Combined with a damping factor of 0.0015, there is unlikely to be any loudspeaker that these items will not drive and control well, without even breaking into much of a sweat. Distortion figures were equally impressive across the board, peaking at a low maximum of 0.008% for full output at 10kHz. All in all the whole MCX system measures very well indeed, although the CD player does have a small amount of room for improvement in distortion terms. That said though, the system as a whole should turn in a highly impressive and dynamic performance. AS

CONCLUSION
The MCX system is an important product for Exposure and needed to be nothing less than stunning in order to succeed—particularly as it was first unveiled so long ago. I cannot help but wonder how many of those people who heard it, loved it and were willing to spend £15,000 on it eighteen months ago might have become fed up with the wait and spent their money elsewhere.

Well, it's their loss, because the MCX is truly one of the finest complete systems I have ever had the pleasure of auditioning. The CD player is the sort of unit that shows even the most fanatical nut like myself that the little silver disc can deliver the goods, and the amplifiers can drive absolutely anything with ease and the sort of grace and poise that usually accompanies the word 'Bentley'. They say that patience is a virtue and, in this case, my anticipation has been totally justified; this could well be the last hi-fi system you ever need to buy.

MEASURED PERFORMANCE

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<th>CD PLAYER</th>
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<tr>
<td>Distortion</td>
<td>0dB</td>
<td>0.001%</td>
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<tr>
<td>Noise</td>
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<td>-60dB</td>
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<tr>
<td>-80dB</td>
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<td>Separation (1kHz)</td>
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<td>Noise (IEC A)</td>
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<tr>
<td>Dynamic range</td>
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<td>Output (Unbal/ Bal)</td>
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<th>PRE-AMPLIFIER</th>
<th>Frequency response (1Hz - 50kHz)</th>
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<tr>
<td>Separation</td>
<td>88dB</td>
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<td>Noise</td>
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<tr>
<td>Distortion</td>
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<td>Gain (Unbal/ Bal)</td>
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<td>Input Overload</td>
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<td>Output Overload (Unbal/ Bal)</td>
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<tr>
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<th>Power</th>
<th>338 Watts</th>
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<td>Frequency response</td>
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<tr>
<td>Noise</td>
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<tr>
<td>Distortion</td>
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<td>Sensitivity</td>
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<tr>
<td>Damping Factor</td>
<td>103</td>
<td></td>
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- odd volume control

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World Radio History
Grander Designs

As our group test of £1,000 loudspeakers in the June 2008 issue of Hi-Fi World showed, you can buy some highly impressive transducers for this nice, round number. By the time the budget has hit four figures, manufacturers have started to pour their engineering expertise into such designs, thanks to the loosening of the cost constraints that afflict budget items. The trouble is, we're a naturally curious lot here, and no sooner had the ink dried on the review, we started wondering how things would change if you were to double the budget...

Naturally, it would be reasonable to assume that everything would get better again but we wondered by how much, and in what way? A further doubling of budget allows manufacturers to get really serious - cabinets become larger and sturdier still, drive units become more advanced, crossover components and internal wiring improve and connectors become chunkier and more expensive.

Some makers also take the opportunity to add more drive units and make true three-way designs, such as seen by the Dynaudio and Dali models in this test; others, such as PMC and Totem, stick resolutely with two way and divert their expenditure elsewhere.

Whichever route is taken, the results give a notable step up in quality over the £1,000 mark, as this supertest shows...

**THE CONTENDERS**
- Monitor Audio GS20
- PMC FB1i
- Dynaudio Excite X36
- KEF X1140
- Totem Hawk
- Dali Mentor 6

**REFERENCE SYSTEM**
- Scheu Analog Black Diamond/Cantus turntable
- Ortofon Rondo Bronze cartridge
- Emilie Labs KPE-2AS phono stage
- Yamaha CD-S2000 CD player
- Anatek A50R amplifier

Budget loudspeakers are all well and good, but spending more really opens up your musical experience - as Adam Smith finds when he compares six £2,000 floorstanders...
GROUP TEST

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maller brothers to the Hi-Fi World favourites, and runners up for our loudspeaker of the year in 2006, the GS60s, Monitor Audio’s GS20s have heritage. As part of the ‘Gold’ series, which were MA’s flagships until the unveiling of the Platinums, the GS models benefit from the ultimate evolution of Monitor Audio’s gold dome C-CAM tweeter, plus the use of the ‘HiVe II’ port design, which uses a “straight rifled construction to aid air flow”.

The GS20s are a two and a half way design, in which the bottom driver covers the bass frequencies up to 250Hz, and the upper driver the bass and midrange up to the 2.7kHz crossover point with the tweeter. The bass/midrange driver is not actually rolled off at the low end, like a three way design would be, hence the ‘two and a half way’ description.

In the case of the GS20s, driver lineup comprises two 6.5in (165mm) C-CAM (Ceramic-Coated Aluminium/Magnesium) drivers featuring RST (Rigid Surface Technology) cones. Above these is a gold dome 1in (25mm) tweeter. The two bass drivers work into separate enclosures, tuned to different frequencies which Monitor Audio claim “provides improved power handling and delivers faster, more dynamic bass and greater transparency through the midrange”.

The GS20s measure 924x206x280mm (HxWxD), weigh 20.6kg each and are available in Lacquered Silver or Black, plus Walnut, Rosewood, Oak and Cherry real wood veneers. Finish is superb, and frankly, several other loudspeaker manufacturers could do with a visit to Monitor Audio for a masterclass in stylish, solidly made and easily adjustable spikes and accessories!

SOUND QUALITY
Most notable on unpacking the GS20s was the vile smell emanating from them - presumably the veneer! However, with a widow opened and a CD cued up, my olfactory concerns were soon forgotten, as the GS20s are mightily impressive.

Most interesting is that nothing initially appears to stand out in particular because they seem to do everything so well. At the low end bass is solid, detailed, well controlled and clean thanks to those careful designed ports, and at the top MA’s gold dome tweeter continues to be one of the finest metal domes designs I have heard. As a result, the treble is sweet, mellifluous and insightful, but with a perfectly judged sense of crispness without ever sounding splashy.

Even better is the way in which the two ends of the spectrum are joined. Across the mid, the GS20s project the image well out into the listening room, but back it up with a spread of sound across their width that makes placing instruments’ positions a breeze. Add in stunning vocal rendition that positively caresses the earlobes with the right artist (yes, I’m thinking Diana Krall here!) and you have the recipe for the sort of loudspeaker that you just do not want to stop listening to.

As if this wasn’t enough, the GS20s have one final trick up their sleeve. They are, like many Monitor Audio designs, impressively feet of foot, rhythmic and dynamic, but so many designs like this tend to be somewhat lacking when the pace is turned down and it’s time to be more considered and detailed. Not so the GS20s – they can switch from fast and furious to smooth and cosseting in the blink of an eye and never miss the slightest hint of anything lurking in the background.

VERDICT
First class loudspeakers that successfully combine detail, emotion and atmosphere with pace and dynamics. Brilliant.

MONITOR AUDIO GS20
£1,700

FOR
- dynamic alacrity
- fabulous treble
- overall even-handedness
- detail and insight
- build quality

AGAINST
- smelly!

MEASURED PERFORMANCE
It is not uncommon to engineer a peak into a loudspeaker’s output these days, but that of the GS20s is fairly subtle, so it should add top end presence and detail but without making things ugly or hazy. Across the rest of the band, the Monitor Audios have a well balanced and flat response with no large undulations of concern. At the low end, the main drivers run down to 70Hz and the front and rear ports augment this down to around 40Hz. Also noteworthy is the cleanliness of the port output traces - Monitor Audio’s HiVe II profiled ports are clearly effective in this area, as they will add no unwanted artefacts. Electrically, the GS20s offer a well balanced impedance response and turn in a good average measured impedance of 6.5 Ohms, dropping down to a minimum of around 5 Ohms, so they are not a challenging load. Sensitivity was fine at 88dB, so the GS20s should be quite content on the receiving end of around 45 Watts and upwards. AS

FREQUENCY RESPONSE

Green - driver output
Red - front port output
Blue - rear port output

IMPEADANCE

around 45 Watts and upwards. AS
like the PMCs is far from it. Initially, one might even consider them bass-light until you realise that you are not listening to a struggling drive unit, or a chuffing port, but a loudspeaker with a proper sense of control and ease across the low end. Bass detail was impeccable and really low notes came across as unforced and solid.

Further up the frequency range, I did notice a hint of chestiness, I suspect as a result of the driver/crossover design disparity measured at around 150Hz. This did seem to boost some instruments in a slightly artificial manner, for example, the low end of the piano keyboard was a little indistinct sounding. Moving further up the scale, however, the piano was very vivid, and vocals were absolutely superb. The FBI is captured the innate nuances of each singer with the sort of precision that usually commands a much higher price tag. Lead vocals held the attention perfectly, sat right between the cabinets, allowing the backing instruments to fill the outer edges in a most capable manner.

Additionally, the new tweeter fitted to the PMCs removes any vestiges of spit that occasionally lurked in the older models, to offer a fine ambience to the treble. Hi-hats sounded crisp, cymbals rang out beautifully and the FBI is came across as lively yet smooth.

Finally, after the nasal assault that was the Monitor Audios, I have to just mention that the PMCs' veneer was the Monitor Audios, have an equally noticeable odour, but this time it was fantastic.

**SOUND QUALITY**

Many people think transmission lines are all about soggy, wallowy bass, but a good design

**MEASURED PERFORMANCE**

PMC's FBI loudspeakers exhibit a gently upward rising trend in their response, above 4kHz. This is likely to give them a bright top end, but the actual curve is smooth so they should not be unduly hard, although a modicum of care with partnering equipment might be a wise move. Other than this, their response is very smooth and flat across the bass and midrange, which should bode well for a well balanced performance. Bass-wise, the main drive unit takes care of things down to around 70Hz, being augmented by the transmission line that takes over and keeps everything pretty much flat down to 30Hz. As a result, the PMCs should have a very healthy low end for such a slim cabinet design.

Electrically the FBI is have something of an inductive rise at 2kHz but this is not unduly large and should not worry the sort of amplifier that are likely to be used to power the PMCs. Average measured impedance was 8.8 Ohms, barely dropping to a minimum of 7 Ohms, so the FBI is are unusual in being a genuine, friendly $1,850

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**PMCs**

- **FOR**
  - superb vocal performance
  - subtle, yet deep bass
  - superb vocal performance

- **AGAINST**
  - upper mid chestiness

**FERDICT**

Stylish loudspeakers that show the benefits of a well designed transmission line. Fine value for money.
Dynaudio are another company with their fingers in more than a few transducer pies, with an impressive range of professional, domestic and in-car items to their name. The Excite range is the next up from the entry level Audience items and promises "high end audio performance and pure musical fun!"

The X36 floorstanders sit at the top of the range and are a full three-way design utilising four drive units. From the top, these comprise a 27mm tweeter with coated soft dome and, below this, a dedicated 4in (110mm) midrange unit comes in below 2kHz. This unit uses Dynaudio's Magnesium Silicate Polymer (MSP) cone material, allied to a lightweight rubber surround.

Below these are a pair of 7in (180mm) MSP-coned bass drivers, working in a tandem below 500Hz and loaded by a suitably large rear-firing bass port. This should bode well for good extension, when allied to the large cabinets, which tips the tape measure at 1040x205x310mm (HxWxD).

The Excite X36s are sturdy items, weighing in at a solid 23.5kg each, and are available in four real wood veneers: Maple, Cherry, Rosewood and Black Ash. Only a single pair of terminals are fitted for connection duties, as Dynaudio remain unconvinced of the benefits, or otherwise, of bi-wiring or bi-amping their loudspeakers.

Sound Quality

The first bars of the opening track that I chose had me pricking up my ears, as things got off to a highly promising start. Having an impressively large-scale performance, the soundstage spread itself out very well in front of me and offered the sort of authority that only comes from some good-sized drivers in a sturdy cabinet. Instruments and performers were lined up in a highly cohesive whole across and well beyond the width of the loudspeakers and the main focus of the music was easy to follow. The Dynaudio's top end rang out well with confidence, but without any harshness, adding a pleasing crispness to proceedings and making sure that all finer details were well revealed.

Next, the bass line kicked in and the surprise turned into a firm grin, as the Dynaudios pulled every last detail from the depths of the frequency range, resulting in impressive extension and pace. Bass guitars were tuneful and vivid, and acoustic basses were blessed with a fine sense of body and precision.

Finally, the vocals then came into play and everything went a little awry. On the positive side, the main performance projected very well into the listening area, still offering a fine sense of scale and spread of action across the width of the enclosures. Unfortunately the vocals themselves were decidedly forward in nature, rather too much so in fact. The dulcet tones of Norah Jones were strident, making the lady herself sound rather off cross, and the studio atmosphere around Diana Krall was overblown to such an extent that she sounded like she was singing in a village hall.

Instrumentally, things were a little better, with the Excite X36s adding good tonality to both electric and acoustic instruments. However, when these all came together, such as in an orchestral crescendo, the overall effect was too overblown for my tastes and, when combined with the bright balance of the loudspeaker, made things rather grating to listen to.
KEF XQ40 £2,000

KEF’s XQ40 loudspeakers sit at the top of their recently revised XQ range, which slots in between the affordable Q series and the high end Reference models. The revisions involved increasing the number of models in the range, making improvements to the cabinets and optimising the drivers.

In terms of the XQ40, the result is a three-way loudspeaker that utilises KEF’s Uni-Q driver: in this case a 6.5in (165mm) design, with a 0.75in (19mm) aluminium dome at its centre. This operates above 2.5kHz and is loaded by KEF’s new ‘tangerine’ waveguide to optimise the tweeter’s output and reduce adverse effects of the natural horn loading provided by the bass/mid cone.

The twin bass drivers are also 6.5in (165mm) designs, paper-coned and sited in their own dedicated, port-loaded enclosures, augmenting the Uni-Q driver below 400Hz. All units are linked by a new crossover that uses high quality components from the Reference series, and two pairs of terminals permit bi-wiring or bi-amping.

Cabinet finish is superb and available in high gloss Piano Black, Birdseye Maple and Khaya Mahogany, although I personally find the styling a little dumy. Vital statistics are 1020x231x302mm (HxWxD) and 24.3kg. Both stylish rounded feet and basic spikes are provided for the rounded-bottom cabinet but, to level the speaker using the spikes, the front pair had to be screwed fully in and the rears barely engaged in the thread which did not make for a secure support.

SOUND QUALITY

The KEFs offer a pleasingly even handed performance across the board. Most notable is that they image in a stunning manner, and maintain this solidity as you move around over a surprisingly wide area. It may have taken time to perfect, but KEF really do have their Uni-Q drive unit superbly sorted in this respect.

Instrumental and vocal detail was highly impressive, and the XQ40s’ top end is a tidy yet spry affair, making high frequencies ring out into the listening area with alacrity. Far less patchy than some older KEFs I can recall, the XQ40s maintain their even-handed nature across a wide range of music, and only start to become a little flustered when the music becomes densely recorded.

In this situation, they never sound distorted or muddled, but just give a slight sense that everything is crowding out of the drive units at once; in these situations it becomes a little hard to pick each individual item out.

At the low end, which has been something of an area for reservation for me with some other KEF designs such as the iQ9, the XQ40s performed with flying colours. Bass lines were weighty, solid, tuneful and blessed of fine timbre and pace. The only small gripe I had was that a little more grunt wouldn’t have gone amiss with certain dance tracks, but the XQ40s are not lightweight and never sounded boomy or uncomfortable. All in all, their low end is very well judged and blends well with the rest of the frequency range.

MEASURED PERFORMANCE

KEF’s new XQ40 loudspeakers show just how much development the company has put into its Uni-Q drive unit and turn in a fine measured performance as a result. The overall frequency response trend is flat and even with only a couple of undulations towards the top end as a result of the horn-loading effect of the main drive cone on the tweeter at its centre. These drops are very narrow however, and much smaller than older Uni-Q designs, so the resulting sound should be good.

It was also noticeable during measurement that the microphone could be moved quite a distance vertically and horizontally away from the main axis with little effect – the XQ40s that have excellent off-axis performance, making positioning easier.

At the bottom, bass rolls off below 70Hz and is augmented by the ports to around 35Hz, so the XQ40s will have a solid low end. Impedance-wise, the XQ40s have a flat electrical response and an average measured impedance of 5 Ohms, dropping to 4 Ohms in places. Their sensitivity was good however, at 90dB meaning that they should be happy with 40 Watts or more from a matching amplifier. AS

FREQUENCY RESPONSE

GROUP TEST

VERDICT

The obvious choice for imagery fans, the XQ40s are a well balanced and enjoyable pair of loudspeakers.

KEF XQ40

FOR

- fabulous imagery
- overall integration
- fine bass detail and pace

AGAINST

- can become jumbled
- poor spike arrangement

www.kf.com

£2,000

KEF

+44(0)1622 672261

www.dealierecords.com
Hi-Fi World will be at the Park Inn Hotel Heathrow, from Friday 19th to Sunday 21st September. We’ll have a stand where you can meet us and chat with members of the team. World Design will also have a room, which as always is an essential venue for DIY valve amplifier and loudspeaker fans alike. See you there!

For more information see p87 or visit www.chestergroup.org
Another two way design like the PMCs, Totem's Hawks are a little different to the other candidates, and definitely none the worse for it! Totem was founded in 1989 and specialises in developing loudspeakers that are "capable of reproducing a truly musical and involving performance".

The Hawks are the third model up in Totems' floorstanding range, above the Arro and Staf, and below the Forest, Wind and highly impressive flagship Shamans. They make use of a 5.5in (140mm) "extreme long throw" bass driver, allied to a 1in (25mm) alloy dome tweeter, and these two items are united by a first order crossover operating at 2.5kHz.

The Hawks are surprisingly light, but their cabinet is cross-braced and veneered both internally and externally, and a layer of borosilicate damping is sprayed on the internal surfaces to eliminate the storage of unwanted internal energy. An empty chamber at the cabinet's base allows for mass loading if required.

The Hawks do not come with spikes but rather, Totem's 'Claw' support system. For this, three metal brackets screw to the underside of the loudspeakers and a ball bearing sits in a recess on the underside of these that then sits on the floor.

The Hawks are occasionally turn strident and project a little too far at times, for which I personally blame the port peak at 850Hz, but the Hawks never stray anywhere near becoming harsh, and remain a joyously upbeat musical companion no matter what you feed them with.

SOUND QUALITY

Totem's blatant disregard for the laws of physics are well in place with these loudspeakers as, like most of their other models, they sound far bigger, more solid and bassier than they look! This means an astonishingly weighty low end but coupled with the sort of speed and pace that is generally only found with a small driver. The Hawks' bass driver can be clearly seen to be working hard but, unlike one or two of the even smaller models, they never sound strained or compressed as the volume rises, just fast, taut and astoundingly rhythmic.

Combined with the crisp but well judged treble, this means that the Totems remain utterly musical at all times and really do offer a surprisingly 'out of the box' performance, particularly with the addition of some mass loading to the rear chamber, as this adds the last missing hint of focus to the upper bass.

Across the board, I feel the Totems are the best of the group in one key respect. They may not have the widest soundstage around, although they are certainly not narrow in lateral image terms, but the way in which they can layer and position items in the mix in depth terms, is quite astounding. Backing instruments and singers hang back as they should whilst lead vocals project superbly into the room.

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VERDICT

Small of stature but big of sound, the Totem Hawks are dizzyingly spry, detailed and dynamic performers.

FOR

- surprising bass
- superb depth perspective
- taut rhythmicity
- diminutive stature

AGAINST

- occasional vocal stridency

GROUP TEST

The Totem Hawks have a good, flat trend to their response, with the exception of a ripple around 850Hz which appears to be due to the port. This is a very simple tube with no flaring or attempt at air noise minimisation, and the lack of these aspects can be clearly seen by its huge output peak at this frequency. The port is on the rear panel, so any extraneous noises should not be obvious, but it may have an effect on vocals; this is a little disappointing.

At the low end, the 5.5in driver operates down to a useful 60Hz, with the port adding wanted reinforcement down to 30Hz. This is mightily impressive for such small units and the Hawks are highly likely to belie their dimensions with a properly 'grown up' bass performance.

In impedance terms, the Hawks are once again a mixed bag. On the plus side, they are a very easy load, averaging 10.8 Ohms and not dropping below 7 Ohms. Sadly this does impact sensitivity, which measured a low 83dB, and they are not as well damped as other designs, so an amplifier with a high damping factor and around 63W will be required. Partner carefully, however, and they should turn in a highly capable performance.

MEASURED PERFORMANCE

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Dali's Mentor range of loudspeakers sit in the middle of the company's lineup, above the Concept and Ikon ranges, and below the Helicon and Euphonia items, and incorporates design and technological aspects taken from the more expensive ranges. The main model lineup is five-strong, with two standmounting designs and three floorstanders, the Mentor 6s coming in one from the top, below the 8s.

The Mentor 6s are described by Dali as a "two and a half plus a half-way" design. This means both low end drivers cover the full bass range, with the lower unit rolled off at 800Hz, and the upper continuing up to the tweeters at 3.4kHz. Unusually though, the dome tweeter rolls off naturally at the top end, with the ribbon coming in at 12kHz to augment it (hence the extra half way). The bass drivers are a pair of 6.5in (160mm) paper/wood fibre cones loaded by twin rear-firing ports, and the top end is covered by Dali's Hybrid tweeter module, comprising a 28mm soft dome and a 17x45mm ribbon.

Connection is via two pairs of Dali's chunky 'Vice Grip' terminals and the crossovers are mounted directly to these to minimise the signal path length. The Mentor 6s are at the other end of the size spectrum from the Totems, measuring 1030x200x390mm (HxWxD) and weigh 22kg each. The cabinets are available in Cherry and Black Ash real wood veneers, plus Satin White and Satin Black painted finishes.

SOUND QUALITY
One could quite rightly be concerned that a loudspeaker with two bass/mid drivers and two tweeters might well be all boom 'n' tizz but fortunately this is not the case when they are set up as advised, slightly off-axis and not pointing directly at the listener.

The step in response at 6kHz does mean that the treble is quite dominant, and has a certain hissy quality at times. This gives superb levels of clarity and real attack to cymbal strikes, but does mean that gently brushed cymbals, for example, tend to blur into one sound rather than being easily distinguishable strokes.

Lower down, the lift in response in the vocal region works wonders in bringing singers well forward from their backing tracks and the Mentor 6s turn in an emotive and spacious performance as a result. Electric instruments such as guitars were handled with equal aplomb, and the Mentor 6s revealing treble picked up on fretboard hand movements. The Dalis were also impressive in the way in which they were able to reveal the inadequacies of poorer recordings but without making the result unlistenable.

At the bottom, those twin drivers and ports do a sterling job of providing a highly impressive low end performance. Bass lines were punchy, detailed and pleasingly fast without descending into boom or overhang. The Mentor 6s are quite sizeable units and their sound reflects this in the way in which they offer a commanding presence in the listening room.

MEASURED PERFORMANCE
The Dali Mentor 6 loudspeakers have a frequency response that is a little less even than some, but not disarmingly so. The lift in the response in the 500-800Hz region will add presence and scale to vocals, and the lift in response above 6kHz will add plenty of top end detail and sparkle. Note that these measurements were taken at 15 degrees off axis, as this is how Dali design their speakers to be used. The response was a little more uneven directly on-axis, which suggests that the Mentor 6’s will indeed perform best when not toed-in.

At the low end, there is slight lift around 100Hz, before the main drivers drop off in output at around 60Hz. The rear ports are tuned to around 35Hz, so the Dalis should have a healthy low end.

Electrically, the Mentor 6s measure well, with an even electrical response and an average measured impedance of 5.8 Ohms, dropping to around 5 Ohms as a minimum so they will not place undue demands on a 4 Ohm amplifier tap. Sensitivity was fine at 89dB.

FREQUENCY RESPONSE

IMPEDANCE
Once again, a test like this throws up some interesting results. Firstly, the question postulated in the introduction, namely, whether £2,000 loudspeakers are better than £1,000 ones, can be quickly despatched - yes they are. Obviously, there are relative degrees of improvement but generally, the extra budget is spent on the important parts of the loudspeaker and this brings changes that are sometimes quite surprising.

Another interesting aspect of the increase in budget is that you start to see designs creeping in with their own 'Unique Selling Points'. In this case, we have the PMCs with their transmission line, the Dalis with their Hybrid Tweeter Module and the KEFs with their Uni-Q driver. It can be seen that designs are starting to diversify at this point, whereas a collection of, say, £500 loudspeakers, say will all tend to be fairly similar in terms of basic topology. Still, for a group test, the result is the important thing, so whose technology triumphs this time around?

The only contenders I would actively discount would be the Dynaudios, I'm afraid. On the plus side, they are well built and offer a lot of cabinet and drive units for the money, with a resulting large-scale sound. The problem is that their midrange is decidedly forward and verges on being unpleasant at times, especially in terms of vocals, which end up rather coloured and overblown, and this is a dominant characteristic. If your system lacks life and presence in this area then they may be just what it needs but in this company, the Dynaudio Excites failed to excite me.

Of the other contenders, the KEF XQ40s are magnificent performers in soundstage terms. They are unfussy about positioning and hold a solid stereo image over an impressively wide area. The whole sound melds together very well and they are never less than enjoyable from top to bottom. Their only problem appears when complex material is played, and they start to fall over their own feet a little, muddling the music's aspects all together somewhat. All in all though, impressive and definitely worth shortlisting...

Next to consider are the PMCs, which offer an eye-openingly good rendition of vocals, and have the lovely, effortless but subtle bass that you only get with a good transmission line design. I still think they are the most handsome loudspeakers in the test and they are

only that very slight top end hissiness wasn't so distracting on occasion, these could well have won, but strong competitors mean they come a very close runner up.

So that leaves us two contenders, the first of which are the Totem Hawks. I can't help feeling that if Albert Einstein were still with us, he would be on the phone to Totem asking them to kindly stop bending the laws of physics, as this can be the only explanation for how the company manages to extract such bass and such sheer gusto from a small driver in a compact cabinet! The Hawks look lost alongside the likes of the Dalis and Dynaudios and each cabinet can be picked up with one hand, yet power them up and they leave you in no doubt that they mean serious business. I still have a slight concern over the port behaviour, and its effect on vocals, but the Hawks are always fun, always dynamic and always totally impressive. I feel they are a mandatory audition at this price point.

So how do you top two five-globers with very minor foibles? Easy - with a five globber that does not appear to have any! The Monitor Audio GS20s are the cheapest loudspeakers in the test at £1,700, yet to my ears they are convincing winners. When you consider that they love to rock, with a deep, tight and well controlled bass, a beautifully open and emotive midrange and a crisp and insightful top end then this pushes them right to the top of any audition list.

Consider then that they also easily capture the filigree detail of more subtle source material, have an encompassing soundstage that fills any room with ease, are a friendly and efficient load to drive, are superbly finished and packaged and come with a beautifully made, chunky set of feet and spikes. As a result, they virtually sell themselves and are a worthy winner. If only they didn't whiff so much - but I'm sure that will pass with time!

"the extra budget is spent on the important parts of the speaker, bringing changes that are quite surprising..."
Few manufacturers attempt to design a proper reference loudspeaker. Noel Keywood listens to one that deserves the title, KEF's new Reference 203/2...

Most loudspeakers are too 'characterful' for me. When I designed our own World Audio Design loudspeakers, I deliberately gave them a neutral tonal balance in the interests of fundamental accuracy.

I had high hopes that KEF's new Reference 203/2 floorstanding loudspeaker reviewed here would fulfil the same promise of good basic accuracy, as expected from a true reference design, because the market sorely needs such loudspeakers. Too many have raised treble these days, making vocals sound hard and spitty, cymbals lacerative and long term listening a chore.

I started listening with some confidence, because KEF loudspeakers usually appeal to me, and was happy to find the Reference 203/2 is a thorough exercise in modern day loudspeaker engineering able to banish my general disappointment in modern designs. It is possible for a truly accurate loudspeaker to sound exciting, but poised at the same time, and happily this is what you get from the 203/2.

Sitting at the bottom of the KEF’s Reference range, it’s a floorstander of reasonable dimensions, standing 1,100mm high, 250mm wide and 450mm deep. It’s heavy though, weighing in at 26.5kgs, or nearly 60lbs - not an easy lift.

What you get in this package is interesting: KEF have taken a full range Uni-Q unit and modded it into a dedicated midrange/treble unit by discarding the compliant surround, unnecessary when large bass excursions aren’t required. This improves the cone’s edge termination and cleans its sound. At the centre of the cone lies a 25mm titanium dome tweeter, protected by a grille. This is the single Uni-Q drive unit – two drive units in one – you can see at the top of the loudspeaker and it does most of the work, covering the audio band from 300Hz right up to and beyond 20kHz. It acts as a point source, providing a highly focused and consistent sound.

Below it are two bass units, each loaded by its own rear chamber, ported on the front. It isn’t
usual to put ports on the front of a cabinet, because they fire internal cabinets ‘noise’ straight at the listener — definitely a bad idea. I suspect KEF do it for visual effect, but there’s a price to pay — more later. I suspect it would be possible to pipe these down to the floor; a good solution, or vent at the rear.

Removable grilles are fitted but the top one is best not used if possible, to allow surface waves to smoothly propagate around the front cabinet face, removing equivocation from imaging. The lower bass unit grille is less critical in this respect from imaging. The lower bass unit vent at the rear.

down to the floor, a good solution, or the price to pay — more later. I suspect do it for visual effect, but there’s a

You also get a polished wooden box full of goodies (like chrome plated spikes, a spanner and electrical plugs) with this loudspeaker. The latter are for adjusting frequency response — and I found a use for them, more of which later. Bass is set flat as standard, but a -2dB shelf can be selected for use close to a rear wall, to reduce room modes that rise as a wall is approached.

High frequency output from the tweeter (above 3kHz) can be set flat, lifted or set to two levels of cut, both relatively mild at -0.75 or -1.5dB. KEF recommend listening 15 degrees (slightly) off axis and I always place Uni-Qs facing straight down a room, to meet this criterion.

**SOUND QUALITY**

The Reference 203/2 snapshots as a large confident loudspeaker, with obvious deep bass and a clear midband graced with a sense of glassy clarity that comes from the metal dome tweeter, which also brings speed and incision to the picture, plus obvious extension to the top of the audio band. As you’d hope for the price it comes across as large and muscular; this is not a sound with restraint. But let’s look at the picture in more detail.

The Uni-Q coaxial drivers I know well and respect greatly. Putting the tweeter at the centre of the shallow midrange cone does indeed give very consistent images that lack the vertical smear of the usual tweeter-above-woofer arrangement. Phil Collins’ opening drum sequence on ‘Do You Know, Do You Care’, from a 200gm ‘Hello I Must Be Going’ LP sounded all-of-piece and on ‘Do You Know, Do You Care’, from the centre of the same CD.

Better, this album waved a green flag for the 203/2’s bass, which I was initially worried about as potentially able to lose the plot when thrown inflated bass lines. Far from it; driven by our Quad II-Eighty amplifiers with which I carried out most listening, the KEFs remained in perfect control, making no attempt to over-egg what has already been pumped up during studio mixing. The 203/2s sound fulsome at the bottom end, bass lines striding along with an obvious power and bounce, but also with goody amounts of time domain grip, well demonstrated by a moody Robbie Shakespeare bass line on ‘Make ‘Em Move’, from the album of the same name. The eerie closeness of a gun being loaded and cocked at the start of ‘No Name On The Bullet’, reverb echoing across the stage, reminded me how beautifully detailed the KEFs are too, in an unforced manner.

That I was experiencing a level of resolution that said ‘look I can mean you off electrostatics’, was really saying something. The 203/2s dig deep and retrieve much more than most boxes, and here I sense a lot of work in finessing the drivers and crossover. As this track suddenly changed tempo the KEFs tracked the changes beautifully, with not a hint of hesitation. They follow a tune well.

Now that KEF have rediscovered the relevance of a flat impedance characteristic, something explained long ago by founder Raymond Cook, the 203/2s can be partnered with a valve amplifier. KEF have been tardy on this one; valve amplifiers now rule the roost and, for the last few years, other manufacturers have been able meet their requirements, as I always did long ago with World Audio Design loudspeakers. The 203/2s could still be flatter impedance wise, but they matched our in-house Quad II-Eighty nicely all the same (four ohm output), with neutral Greek OBH-22 in-front, fed from a Yamaha CD-S2000 CD player.

"the Reference 203/2 snapshots as a large and confident loudspeaker...".

To see how they partner a solid-state amplifier I used our favoured Anatek AS0R, which offers a pleasingly open and even sound, if a little obvious at the top, favouring detail. With this and a NAD M3, bass became a little too heavy and emphatic for my taste, with the ‘speakers three feet from a rear wall in a 28ft square room which
Each year the European Imaging & Sound Association (EISA) assembles a panel of expert judges from some of the continent's leading hi-fi press to investigate the world's finest technology. After rigorous evaluation they return to vote on one product in each category that they believe offers not only exceptional levels of performance but also provides incredible value. This year they chose the Cambridge Audio Azur 840A Class XD integrated amplifier.

"...a genuinely novel approach... a highly sophisticated, efficient and attractive-sounding amplifier" EISA citation

Cambridge Audio

To find your nearest approved Cambridge Audio specialist, read extensive reviews and more, visit: www.cambridge-audio.com
The major feature of the Reference 203/2’s frequency response is its sheer flatness, at a time when loudspeaker manufacturers have collectively abandoned any notion of accuracy in favour of showroom shine - aural that is. Granted, KEF have plenty of lower priced loudspeakers able to shoulder this role, the XGs in particular fighting their corner with speed and incision. Make a loudspeaker accurate, like the Reference 203/2 here and you risk being pushed aside in the showroom. But when it comes to long term listeners who like a bass heavy amplifier is a bit more of a night and day experience than usual.

With the rather well recorded SACD of Lang Lang playing Rachmaninov’s Piano Concerto No.2, strings were vivid yet easy on the ear. I could hear a little cappiness if too far off axis and toed the 203/2s in slightly to avoid this. Piano notes were ringing clearly and each as solid as a rock. Lang Lang’s precise playing being made very apparent by the KEF’s super clean nature. Strings were nicely differentiated, cellos clearly leading violins on one introduction, and crescendos were firm and uncluttered. I enjoyed the highly concise nature of the 203/2s, the body they gave instruments, the focus and their supremely even nature.

The interplay of short sequences from strings and wind instruments in the Overture of Wagner’s ‘Reinzi’ was handled beautifully, again I suspect thanks to the excellent midrange Uni-Q unit, definitely a case of “less is more” here. Horns blared out strongly, whilst strings answered back with vigour. The Reference 203/2s brought life to classical performances and I enjoyed them greatly.

**CONCLUSION**

My hopes weren’t dashed by KEF’s 203/2s. They are a true Reference design, unfraid to be totally accurate. At the same time KEF have maintained the dynamism of their other models. The result is a lovely blend of musical excitement and a great evenhandedness that makes all forms of music thoroughly enjoyable. The Uni-Q midrange/treble unit really does work very well, digging deep to throw out a massive amount of detail: it is an aural delight. For medium sized lounges like my own (17ft x 14ft) where room modes contribute strongly to bass quality and balance, the bass cut facility will be just what the doctor ordered. That makes the 203/2s one of the best-judged loudspeakers I have encountered for a long time and they should be required listening if you’re looking for a super high quality floorstander.

**VERDICT**

Beautifully balanced, highly accurate and detailed floorstander that’s a true reference. Superb!

**KEF REFERENCE 203/2 £4,000**

**FOR**

- supremely accurate
- excitingly dynamic
- great detail retrieval

**AGAINST**

- ‘boomph’ from ports
- little cuppy with strings

**MEASURED PERFORMANCE**

The review includes a frequency response chart showing the performance of the KEF Reference 203/2s.

**FREQUENCY RESPONSE**

![Frequency Response Chart](chart.png)

**IMPEDANCE**

![Impedance Chart](chart.png)
WDKEL84 Valve Amplifier Kit

"The quality that can be gleaned from this amp is a fine introduction to the joys of the valve sound"

The WDKEL84 features a pair of EL84 valves in Push Pull configuration per channel, providing two channels each 18 Watts into an 8 Ohm load. Described by users as a 'Giant Killer' this kit is available as a 5 input integrated amplifier with ALPS volume control.

WDKEL84 kit £449  
WDKEL84 built & tested £599

WD88VA Valve Amplifier Kit

"It proved itself to be an engaging valve amplifier that measured well and sounded superb. Quite simply it plays music, and plays it extremely well."

Adam Smith, Hi-Fi World Dec 06

Often described as a 'sweet sounding' valve, our implementation of the KT88 makes sure that it is driven to its ultimate performance. Available as a 35W stereo power amplifier with single input volume control, or as a relay switched integrated with five inputs.

WD88VA Integrated Amp kit £949  
WD88VA built & tested £1249

WDHD3 Headphone Valve Amplifier Kit

"Headphone 3 is a single-ended design with the power pentode wired up in triode configuration for added purity and is as quiet as a mouse"

A beautifully simple stereo headphone amplifier design using Mullard ECL83 valves. It works directly from any source. The circuit uses twin high specification E/I output transformers that can be wired to drive any headphones between 16 to 300 Ohms.

WDHD3S kit £349  
WDHD3S built & tested £479

WDPre3 Modular Preamplifier System

"So there we have it, a preamplifier capable of driving any load and maintaining its linearity no matter what cables or partnering equipment you prefer to use."

This 5 input line level preamp is essentially an SE triode power amplifier in concept. WDPre3 uses an ECC82 double triode arranged as input voltage amplifier and power output amplifier stages, the latter driving oversize 20:1 output transformers.

WDPre3 kit £369  
WDPre3 built & tested £494

WDPhono3S MM/MC preamplifier

"...only a few designs meet the requirements of tonal accuracy and maximum retrieval of musical detail."

Twin input preamp with MM and MC relay switched inputs, passive RIAA equalisation and wide bandwidth MC step-up transformers.

WDPhono3S kit £399  
WDPhono3S built & tested £524

WDPSU3 Power Supply

Can be used to power either WDPre3 or WDPhono3 units individually or together.

High performance choke power supply with separate HT and Heater feeds for both WDPre3 and WDPhono3 preamplifiers.

WDPSU3 kit £199  
WDPSU3 built & tested £299
As we’ve often said in these pages, the importance of the transport to a CD player’s overall sound cannot be underestimated. Tragically though, with so much talk of 24bit DACs, upsampling and valve output stages, this is precisely what has happened. If you believe some of the hyperbole coming from certain manufacturers, it’s almost as if sticking the latest DAC in the box, or whistling up a simple tube buffer in the analogue section, is a guarantee of performance. Well, it isn’t.

As I explained last month in my review of Cyrus’s new CD8 SE, everything begins with the quality of the read that the laser does on the disc. If this particular part of the chain is wrong — or to be more specific, not right enough — then no manner of re-clocking, fancy DACs or glowing bottles under the bonnet will properly compensate.

The key point here is that CD’s way of reading the disc is such that it masks its errors at a very early stage – the robust Reed Solomon code makes it hard to tell the difference between the laser misreading the data and interpolating (“guessimating”) what’s on the disc, and it actually getting it right. Well, it’s hard to tell from a crude measurement point of view, but the most finely tuned measuring instruments (our ears) still know when all is not well. Cyrus’s solution to the riddle, as we saw last month, was to design their own bespoke transport. Musical Fidelity have taken a different route – to buy in one of the very best commercially available ones. Both companies are to be applauded for taking the issue of CD mechanisms truly seriously. Either could have saved sizeable amounts by specifying the cheapest OEM mech in their parts catalogue, then taking the money and running — but then neither would be the beasts that they are. Musical Fidelity say the Philips CD Pro2 mech “recovers more data, reads a wider variety of discs and has no apparent shortcomings... whilst this is the best available, regrettably it is also the most expensive”.

This said, Musical Fidelity’s Antony Michaelson is effusive about the Burr Brown 1792 DAC and 4392 sample rate convertor used in the AI CD Pro. He claims it gives this £1,499 machine generally superior numbers to the £8,500 Nagra CDP [see MEASURED PERFORMANCE], what he calls “state-of-the-art measurements”. This, in conjunction with the “fanatically careful detailed implementation of the printed circuit board design” and the aforementioned mechanism form basis of the AI CD Pro’s appeal.

This may be, but I’d have to add this machine’s industrial design. It is truly odd to see that iconic shape re-emerge from the shadows some twenty plus years after it last graced dealers’ shelves, but there it is. The build quality is just as good as it ever was, although, as with the excellent matching A1 FBP preamplifier reviewed last month, we have to draw attention to the tiny, fiddly buttons which won’t be for everyone. As for me though, this machine worked very nicely — once again we have a top loading machine appearing at this price point, which is no bad thing.

SOUND QUALITY
Regular readers will know that I’ve endeavoured to personally review almost every new £1,000 to £1,500 CD player released over the past couple of years. This came about thanks to me foolishly nominating myself for a group test of the darned things, on the grounds that being a vinyl junkie I was well suited to critically assess digital disc spinners! Oh well – since then I’ve heard some fifteen or so designs around the
just for your musical bliss

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price of this new Musical Fidelity, and have used Astin Trew's AT3500 as my yardstick. This isn't the very best in every way, but is still arguably the most musical of the breed, making it a fine reference.

The AT3500 was duly pressed into action against the new AI CD Pro, and the latter acquitted itself very well indeed. So it should at over £300 more you may say – and you'd be right, but its price tag hasn't stopped the AT inflicting body blows on a good number of more expensive designs! The Musical Fidelity however, was not to be the Astin Trew's latest victim – showing the reference machine a clean pair of heels in a number of respects.

The most distinctive facet of the new machine is its clarity; strings on 4hero's 'Morning Child' were almost supernaturally tangible, as if the song itself had been remixed. The AT gave its usual fulsome and expansive rendition, pushing the soundstage out wide left and right, while the MF was a little narrower and deeper (being directly comparable to Michell GyroDec and SME 10A turntables in this respect). Within the recorded acoustic however, the AI CD Pro offered dazzling insight, telling me more about the timbre and location of the strings, whereas the reference CD player merely obfuscated.

Sometimes this extra detail wasn't welcome; a recent remaster of Steely Dan's 'Doctor Wu' showed the remastering work up a little via the MF; the soundstage was very detailed and dry but tonally a little thin whereas the AT garnished the proceedings somewhat, making for a more palatable listen. The opposite was true on Soul II Soul's 'Keep on Moving': here was an cavernous recorded acoustic, the soundstage falling back further than I've heard from any other similarly priced player. It displayed superlative violin timbre, and imparted the shimmering harmonics of the accompanying recorders. Female voices weren't harsh, but had an appropriately icy quality for the music. Meanwhile, the cellos bowed away broodingly in the background, the player unswayed by the demands placed on it by this dense, complex recording. Indeed it is excellent at letting individual strands of the music play by themselves, completely unsullied by what's going on in close proximity.

CONCLUSION

No syrupy sounding valve outputs stages for the Musical Fidelity A1 CD Pro; instead it sets out to be – and succeeds at being – a high resolution digital player, playing it straight and telling it as it is. For this reason, it will appeal strongly to a certain constituency of buyers who want a gripping, direct and upfront sound with forensic amounts of detail – as if there's a hotline to the music. What you don't get is a warm, euphonic or stylized presentation; this means it doesn't artificially blunt sharp or substandard recordings, or editorialise about what you should be hearing.

Normally, this sort of design resides at a higher price point – many manufacturers regarding such a device as too extreme for the sub-£1,500 sector. As such, you'll need to partner this machine carefully; meaning clean and highly capable amplification and neutral (non-peaky) loudspeakers with suitably 'dark' and smooth sounding interconnects. This done, such is the AI CD Pro's clarity that you'll struggle to find anything comprehensively better until you spend considerably more.
Exquisite

The "how?" is easy to explain. With KEF's latest Uni-Q® point source® driver array, featuring a new segmented "tangerine" waveguide for even cleaner HF response, off-axis dispersion is literally unrivalled, creating a breathtaking, 3 dimensional, immersive soundstage. The new XQ Series also adopts technology normally reserved for the Reference Series, such as the independently loaded, ultra-low distortion low frequency drivers that provide tuneful, articulate bass, and a cross-over that delivers inaudible transitions with discrete bass/midrange and HF circuits to eliminate coupling effects seamlessly.

The range features elegant slim floorstanding and bookshelf models and an outstanding three-way centre channel. Choices of high gloss finishes in Piano Black, hand-matched Khaya Mahogany, Birds-Eye Maple or new Warm Cherry wood veneers make for unlimited ability to blend these furniture grade cabinets into the finest environments.

Simply stated, the stunning exterior is promise of sonic bliss.
RINGMAT CDI BLUE STATMAT £32.50

Ringmat’s latest offering for silver disc spinners is the CDi Blue Statmat. The theory behind it being that during play, a Compact Disc revolves at a very high speed in a closed and dry environment, and this, combined with the heat generated by the CD player itself, causes a gradual build-up of electrostatic fields on the disc. The static does not cover the CD evenly, but rather appears in the shape of low-voltage hot spots randomly spread over the surface. The fields rapidly change as the CD is played and this, it is claimed, has a detrimental effect on the all-important timing of the digital signal.

The purpose of the Statmat, then, is to dissipate this static and hence eliminate signal phase distortion by dispersing the low-voltage hot spots while a CD is being played, says Ringmat. Although we only tested it with CD, Ringmat claim similar improvements with DVD, SACD and other similar media too...

All well and good in theory, but does the Statmat make any difference in practice. Well, surprisingly perhaps, the answer is yes — it’s one of those unfathomable gadgets that clearly make an audible difference. The soundstage become more open, while image placement gets a little more precise. Instrumental timbre becomes subtly more authentic, especially the piano. The other area where the CDi Statmat scores is in its ability to unclutter the soundstage. On pieces of music where there’s a lot going on such as with a full orchestra, instruments can merge together, particularly in the louder passages — but the Statmat reduces this tendency, seeming to tighten their positioning up. At just under £35, the CDi Blue Statmat is a great value for money tweak for digiphiles. NR

[Contact: +44 (0)1277 200210, www.ringmat.com]

PHILIPS GOGEAR £30

For the same money as an iPod Shuffle, this large postage stamp-sized cube gives you twice the storage capacity (2GB). Like the iPod, it comes with basic in-ear earphones and a USB connecting lead — and there’s also a CD containing the instruction manual and the Philips Device Manager. Although the instructions insist that you load this before connecting the device for the first time, the software is essentially a firmware upgrade manager; it checks the internet to see if any upgrades for the GoGear are available. So the player will actually work perfectly well without the Device Manager installed on your PC, as it appears as another drive on your computer. You load music by simply dragging and dropping files and folders in the usual way.

That said, it was worth installing the bundled software in the end, as it upgraded the unit’s firmware from v2 to v4.01. It only supports MP3, WAV and unprotected WMA — so very regrettably for some, your purchases from iTunes or Napster will not work...

One nice feature is the ability to make voice recordings via the built-in microphone and store them as WAV files on the device, and the sound quality of these is surprisingly good. The tiny dot matrix OLED screen is extremely clear, bright and easy to read, and all-in-all the GoGear is a very easy-to-use device with intuitive menus. The supplied earphones aren’t really up to the job, but via a pricier set of Sennheisers the Philips player gave very good results considering its cost, with a clean and musical character that’s superior to the similarly priced iPod.

The only criticism is that they are still a bit quiet and could do with some more drive — the ‘Volume Limit’ feature of the GoGear ‘to protect your hearing’ is completely redundant! The player includes an equaliser for “optimised sound to suit your music style”, but as is so often the case, the ‘Off’ position is the best. Overall, an easy to use, top value gizmo if you’re not worried about its modest file format repertoire. DP

[Contact: +44 (0)1293 776675. www.consumer.philips.com]
There are many different schools of thought when it comes to loudspeaker design. Some believe that the drive units are the be all and end all, others say that the cabinet is most important, a different group point out the crossover as the make or break item and a few individuals on the lunatic fringe believe that none of this matters as long as the drivers are strung together with cable that costs as much per metre as crude oil does per barrel currently!

No matter which school of thought you subscribe to however, there is a general trend towards using one or all of these ideas to set up and modify a desired frequency response, with the general idea being to get it as flat as possible, maybe with the odd spot of judicious tweakery here and there according to the design requirements, or the designer’s preference. One or two designers take a slightly different approach, however...

Allan Hendry of MonoPulse is such a designer: a hi-fi enthusiast since his early days. Allan worked in the aerospace industry for years designing phased-array radar systems, and it was this work that made him think about loudspeaker design and in particular, the necessity for phase coherence from the drive units. Allan investigated the impulse response of a wide range of loudspeakers in a variety of situations and came to the following conclusions; firstly, that it was vital to time-align the treble and bass drivers in order that an impulse sent to both drivers would arrive simultaneously at a measurement microphone set in front of each unit (and therefore, at the listener’s ears); secondly, that the connection of tweeters out of phase to compensate for the phase inversion of a second order crossover network causes more problems than it solves and, finally, that maintaining phase coherence in a loudspeaker becomes more difficult the more drive units you add.

With this in mind, he picked up pen and paper and the result is the MonoPulse range of loudspeakers, with the name being a nod towards the impulse-correct designs he intended to create. At the moment, there are four models on offer (plus matching...
centre channel and rear surround items) – two in the S series and two in the 'Audophile' A series, of which the 42A is the smaller. Both this and its bigger brother, the 82A, use an 8in (200mm) main driver with a 28mm tweeter claimed to extend to 30kHz but the 82A is slightly bigger physically, with higher power handling and deeper bass courtesy of a main driver equipped with a Kevlar cone and a four layer voice coil.

The 42A's driver is an Audax paper-coned design that crosses over to the tweeter at 4kHz. In keeping with the time domain accuracy, the crossover uses a second order filter on the bass driver, but a fourth order design on the tweeter. Most interesting however is the cabinet, which is an MDF case fitted inside a rolled steel 'hoop' and isolated from it using a 'high-hysteresis-loss polymer'. The tweeter is suspended separately from the top of the hoop, isolated from the main driver and cabinet, and set back by the required amount to maintain the time alignment. A steel damping bar is fitted to the front of the cabinet, and can be located outside as a styling feature, or tucked away inside if you prefer.

The cabinet itself is covered in cloth which is available in ten different colours, including Black, two different Blues, Red, Green and Burgundy. The steel hoop can also be specified in Gunmetal, Black, Sand, Bronze or Burgundy. Build quality is very good and I personally rather like the styling but am less sure about the Dark Chocolate/Metallic Bronze colour combo that editor DP requested for the review (albeit unsurprising if you've seen his shirt collection). The rear of the main cabinet and the tweeter are covered with black foam and two pairs of terminals allow for bi-wiring duties.

Finally, the 42As are supplied with spikes that fit into the feet and are sufficiently long to allow some experimentation with spacing to the floor, which will alter the behaviour of the down-firing port. MonoPulse point out that setting them shorter gives more emphasis and less extension, which will alter the behaviour of the down-firing port, MonoPulse point out that setting them shorter gives more emphasis and less extension, and vice versa, which is useful for taking different flooring materials and thicknesses into account. Vital statistics are 1080x230x250mm (HxWxD) and 22kg per loudspeaker.

**SOUND QUALITY**

A decently sized main drive unit usually means a decently large soundscape and this is indeed the case with the MonoPulse 42As. Their eight inch bass/mid unit endows them with a lovely, properly grown up sound that gives the bass and midrange a great sense of depth, ease, warmth and detail. That is not to say that the 42As are all soft, warm and fluffy at the low end as they certainly are not – bass lines were deep, confident, pacy and blessed with fine rhythmicity. However, whereas some designs with smaller drive units can give a similar effect with an underlying sense of 'see how hard I'm working to give you all this!' the 42As never seemed under duress.

Another most notable feature of the 42As' performance was their transient response. Allan's work on the phase coherence of the design has resulted in a loudspeaker with no hesitancy or wobble. Big-sounding, unstressed loudspeakers can often be rather flabby in timing terms but not so the 42As: drum strikes are swift and snappy; bass guitars are detailed and well defined, and every instrument stands out from its cohorts. Although the image generated by the MonoPulse does not quite envelop the listening area from side to side in the way that some designs can, they still have a fine sense of spaciousness between them, and order everything very neatly in this space. Additionally, they do give front to back depth to proceedings.

Mating a larger unit to a single tweeter can often be a hit and miss affair but MonoPulse has done well here. There is no sense of disjointedness between the two drivers and the 42As have a well defined and crisply spry top end. The only problem I found here was that the dip and peak combo above 6kHz means that the likes of cymbals and hi-hats are pleasingly strong and sharp, but tend to lack form and can sound a little spiky as a result. Each strike is a snappy event, but the necessary detail that tells you the size and nature of the item being struck is a little lacking.

**CONCLUSION**

In a world of loudspeakers populated by the equivalents of high-revving four cylinder engines, the MonoPulse 42As are a relaxed and smooth V6. They have a fabulously well integrated and big, relaxed sound that is also well defined, yet one that times with positively metronomic precision. These are rare qualities to find together in one loudspeaker and, as a result, the 42As are something of a breath of fresh air into the loudspeaker market. Combine this with their easy load and wide range of interior-friendly finishes and they make a very strong case for themselves. Well worth checking out.

**MEASURED PERFORMANCE**

The MonoPulse 42As have a generally even trend to their frequency response, but with a couple of undulations. One is at around 50kHz which is fairly narrow and should go unnoticed, but the other, in the 5.1kHz region may rob some treble detail. The corresponding peak towards 16kHz should help to disguise this, but the 42As' top end may not be quite as even as that of some competitors as a result.

At the low end, the 42As perform well, the main 200mm driver extending down to 75Hz or so, with the port coming in below this, down to its tuning frequency of around 40Hz. This should bode well for a good low end and weight and the down-firing nature of the port should absorb its upper output peak at 200Hz. Electrically, the 42As are a very easy load, only dropping down as far as ±7 Ohms in the high frequency region where current draw is minimal. Other than this, they do not dip below 10 Ohms and give a very high average measured impedance of 14 Ohms, meaning that they are a very easy load. An unfortunate downside of this, however, is a sensitivity rating of 85dB, which is low for a floorstander and a long way short of MonoPulse's claimed 90dB. As a result, an amplifier with at least 50 Watts will be required for decent listening levels. In addition, the large inductive peak at 2kHz may upset the output stages of some amplifiers - careful partnering would be wise.

**VERDICT**

Quirky yet excellent loudspeakers with an expansive and unstressed sound, plus fine timing and pace.

**MONOPULSE 42A**

£1,495

MonoPulse
+44 (0)1778 558238

**FOR**

- bass weight and detail
- superb timing
- 'big' sound
- build and finishes

**AGAINST**

- treble unevenness

**FREQUENCY RESPONSE**

- Green - driver output
- Red - port output

**IMPEDANCE**
A Single-Ended amplifier with a USB connection to the outside world? Puzzled, Noel Keywood investigates Consonance's new Cyber-10 integrated...

USB port on a valve amplifier? Surely not I thought, unable to conceive why any such thing could usefully coexist with something thermionic. The nearest anyone got to managing this in the UK was the Colossus computer with its 2,400 valves - but it didn't have a USB port I'm sure!

Slowly the light dawned as to what fiendish arrangement of old and new could be in mind here. I fired up my portable MacBook and connected its USB port to the Consonance Cyber-10 using their supplied cable. With YouTube running, courtesy of a wireless link to the internet, and the Mac's audio set to 'USB Audio DAC' - an option that appears in System Preferences only when the Cyber-10 is connected - I soon had Sam and Dave crooning through the hi-fi. So the Cyber-10 can act as a self contained computer sound system.

Obviously, iTunes suggests itself as a great source of music, using AAC compressed files or quality Apple lossless. I must confess though that I didn't rush to try it. I once had an iTunes account, lost all my music when the computer's hard drive expired and never bothered again. Since hard drives are less reliable than an Austin Allegro running on diesel, I stick to LPs...

Tacking a USB input on to a valve amp means the Cyber-10 is equipped with a DAC, able to convert digital to analogue. It isn't what I've learnt to expect within a small, specialised Single-Ended valve amplifier, but as valves and the internet are popular for enjoying music I suppose there's good commercial logic behind this marriage.

Otherwise, the Cyber-10 is a reasonably conventional valve amplifier of the Single-Ended (SE), pure Class A variety. This means it should have great sound quality, guaranteed free of crossover distortion, but power output of little embarrassment to a gnat. Measurement showed the figure to be 8 Watts in both Ultra Linear and Triode mode, against 12.5W and 8W claimed (see MEASURED PERFORMANCE).

Eight Watts is a perilously low amount of power for lesser loudspeakers and I wheeled out my tweaked Revolver R45s for listening, as they are always complimentary to valve amps and need little power. Complicating the issue further is the fact that the Cyber-10 suits only 8 Ohm loudspeakers, when most are 4 Ohms these days - and it delivers just 4 Watts into 4 Ohms. So loudspeaker matching is difficult, with little leeway to hit a sweet spot.

Getting some focus on all this, the Cyber-10 is really a super high quality valve amplifier for restrained listening. You don't need deafening volume to enjoy music and a good valve amplifier like this one shows why. Whilst it didn't go loud it did have a compelling dynamic that grabbed my attention and was great to hear. So the Consonance Cyber-10 is focused more on quality than quantity. Eight watts for £795 may seem a little less than obvious as value, but Single Ended amplifiers have a dedicated following and small,
The rear carries a pair of sturdy gold plated loudspeaker outlets able to accept 4mm plugs, spades or bare wire. The mains power switch sits here too, not especially convenient but routing mains to the front panel on a small, tightly packed valve amp like this sets up an induction field that injects hum into the first preamp grid, making rear panel switching preferable, especially as the Cyber-10 has a lot of gain (giving it a usefully low input sensitivity). The Cyber-10 was quiet and hum-free as a result.

The front carries two headphone outlets, old style quarter inch and more recent 3.5mm. There are three switched line inputs, all input sockets being on the left side panel. The Cyber-10 is well made and finished, and is safely wired inside, mains input terminals being screened. The remote control is a solid metal box fitted with plus and minus volume buttons, somewhat different from the usual button fest!

**SOUND QUALITY**

Small SEs always put a smile on my face, and this one did too. It was as punchy and dynamic as a really good valve amplifier can be, and I was constantly aware of the surreal impact of drum kits considering the low power output, but then power doesn’t really equate to dynamic contrast. Maracas cracked out of the little Cyber-10 all but flying into the room at the start of The Eagles’ ‘Last Good Time in Town’. With an ability to keep vocal and instrumental strands clearly separate and ringingly clear, the Cyber-10 put life into the track. It also produced a sound lacking the slightly compressed soundstaging and dynamics that solid-state seemingly suffers by way of contrast.

Spinning Angelique Kidjo’s bass heavy ‘Aye’ had bass lines sounding spry and lively, if not with gut wrenching depth. But with a midrange so delightfully able to illuminate each and every instrument in the complex percussion work of tracks like ‘Adouma’, this wasn’t especially consequential. Good amplifiers like the Cyber-10 often do give a conspicuous performance and SEs have their adherents for this reason; there’s a rightness about them that’s difficult to put a finger on, other than music sounds sweetly clear, natural and unprocessed. I suspect this is partly a product of circuit simplicity; the challenge with an SE is to ensure that potential weaknesses are not allowed to spoil the party.

**CONCLUSION**

Although its output transformers could usefully be better, the Consonance Cyber-10 still managed to give super sound. I still worry about the general applicability of amps with just 8 Watts, yet I never ran above 4V (2W) according to my ‘scope, and I got plenty of volume. So this little USB-equipped beastie sounds wonderful - if not as precise as the Almarro 318B. Although expensive at £795, match it with suitably sensitive floorstanding loudspeakers and it’s fine value all the same - for hi-fi and computer use alike.

**VERDICT**

Quirky yet characterful amplifier with superb sound at moderate volumes - but power and control are limited.

**CONSONANCE CYBER 10**

Alium Audio

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**FOR**

- spectacular clarity
- exciting dynamics
- small size

**AGAINST**

- little power
- poor speaker matching
- unemphatic bass

**MEASURED PERFORMANCE**

Quoted as matching 6-8 Ohm loudspeakers the Cyber-10 produced just 9 Watts from 6550s working into 8 Ohms. Output figures were identical in either Triode or U.L. (Ultra Linear) mode. With a 4 Ohm load output, it fell to just 4 Watts so modern 4 Ohm loudspeakers are not suitable (there is no 4 Ohm output). This suggested the output was load-matched to more than 8 Ohms, and sure enough 10 Ohms gave 9 Watts, so the output transformers are way from optimal. S.E. working means there is no crossover between valves working in push-pull and none of the distortion that arises from it. The distortion figures were therefore free from this influence and distortion at 1kHz was identical in both U.L. and Triode mode. However, contrary to expectations, U.L. produced more distortion than Triode mode, making Triode mode preferable. Input sensitivity (gain) fell a little, from 0.6% down gently above 20kHz.

The Cyber-10 measures like many low power S.E.s. It has a stable distortion pattern in which second harmonic dominates. It will need large, sensitive loudspeakers for best results, and with a high impedance. NK

**Power**

6 Watts

**Frequency response**

12Hz-18.5kHz

**Noise**

-92dB

**Distortion (1W, 1kHz)**

0.6%

**Sensitivity**

184V

**Damping factor**

1.6

**DISTORTION**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>THD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20Hz</td>
<td>0.005</td>
</tr>
<tr>
<td>200Hz</td>
<td>0.013</td>
</tr>
<tr>
<td>1kHz</td>
<td>0.035</td>
</tr>
</tbody>
</table>

**CONCLUSION**

Although its output transformers could usefully be better, the Consonance Cyber-10 still managed to give super sound. I still worry about the general applicability of amps with just 8 Watts, yet I never ran above 4V (2W) according to my ‘scope, and I got plenty of volume. So this little USB-equipped beastie sounds wonderful - if not as precise as the Almarro 318B. Although expensive at £795, match it with suitably sensitive floorstanding loudspeakers and it’s fine value all the same - for hi-fi and computer use alike.
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Adam Smith listens to AudiaZ's stylish Eta loudspeakers...

As I mentioned in my column in the July 2008 issue of Hi-Fi World, one of the delights of my first trip to the Munich High End Show earlier this year was stumbling on a number of manufacturers that we simply do not hear of in the UK. Whether the manufacturers in question feel Britain is not a suitable market for their products, or they lack the funding to initiate a suitable distribution network I do not know, but the fact remains that there are many products that we are unlikely to ever see, officially at least, in this country.

However, thanks to the UK distributors and dealers doing the rounds at the show, some of those elusive names are starting to appear. For one of the first, we have to thank John Sampson of JS Audio Consultancy and also JS Audio Repairs, a company specialising in hi-fi repairs, servicing and modifications. The manufacturer in question is AudiaZ, a German loudspeaker manufacturer with a current lineup of three models in their range. The history of AudiaZ dates back to the founding of Hartl & Weber Audio-Design GbR in 2000, by Helmuth Webers and Gunter Hartl. Webers is an audio enthusiast with knowledge of electronics and a background in the build and repair of loudspeakers, initially for musicians. In 1995 Webers met Hartl, a fellow enthusiast and a craftsman, well versed in the complexities of cabinet design. Pooling their resources, AudiaZ was the result, with the aim of "designing and crafting exclusive loudspeakers".

All three of AudiaZ's current models are handmade and make use of high quality drive units, such as Accuton's ceramic-coned bass and midrange drivers, allied to Heil AMT, diamond dome or ribbon tweeters. All models are resplendent in stylish and very well crafted handmade cabinets.

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The Eta under review here is the base model in the range, something of a surprise considering its starting price of £10,500. For this, your money buys you a three way floorstanding loudspeaker featuring a pair of 150mm Accuton bass drivers, a 100mm Accuton midrange unit and a single Air Motion Transformer tweeter. These are mounted in a heavily braced and beautifully finished ‘multiplex’ cabinet connected by cable that uses surface polished solid core silver conductors in a Teflon dielectric and using nothing but the highest quality components in the crossover.

Further options are available however, firstly a ‘Silver Edition’ which costs £3,800 extra, upgrades the internal crossover components to solid silver types; secondly the tweeter can be substituted for a 20mm Diamond done unit (also £3,800 extra) and, finally, the driver cones themselves can be supplied with a black finish instead of silver at no extra cost, although this latter change is purely cosmetic and does not alter the sound.

The Etas are neat and compact, being based on a simple box that measures 1070x210x210mm (HxWxD) and weighs in at 22kg, although they are a little wider given that the front face is actually a diagonal formed by slicing a portion of the box off. Consequently their ‘real’ width and depth dimensions, if my Pythagoras is right, are actually around 270x270mm. Standard finishes are Walnut and Maple real wood veneers, but other veneers, Piano Black finish instead of silver conductors in a Teflon dielectric are available for an extra £1,070.

The Audiaz Etas are tricky loudspeakers to measure as a result of the different mounting configurations. These drivers integrate well, with just a gentle dip in the 1-3kHz region that will assure any harshness in the ear’s most sensitive region, along with a rise around 5-10kHz which will lift the balance of the loudspeaker towards the top end. There are no sharp peaks or dips though, which is their price and, more specifically, the competition they face at this level, such as the Esoteric Cassianos and the B&W 801Ds. The Etas are ultimately no less capable than these models but I feel that they cannot quite match either of them for that instant “Wow - where’s my cheque book?” effect. In pure sonic terms then, firmly recommended, but they are up against strong competition.

**VERDICT**

Well designed and beautifully finished loudspeakers with a dynamic and sophisticated sound.

**FOR**

- superb top end
- fine imaging
- low end detail and pace
- build and styling

**AGAINST**

- occasional sibilant hiss
- price & competition

**MEASURED PERFORMANCE**

The Audiaz Etas are tricky loudspeakers to measure as a result of the different directions in which their drivers face, but all measurements were taken directly facing the midrange and treble units. These drivers integrate well, with just a gentle dip in the 1-3kHz region that will assure any harshness in the ear’s most sensitive region, along with a rise around 5-10kHz which will lift the balance of the loudspeaker towards the top end. There are no sharp peaks or dips though, which is their price and, more specifically, the competition they face at this level, such as the Esoteric Cassianos and the B&W 801Ds. The Etas are ultimately no less capable than these models but I feel that they cannot quite match either of them for that instant “Wow - where’s my cheque book?” effect. In pure sonic terms then, firmly recommended, but they are up against strong competition.

**FREQUENCY RESPONSE**

Green - driver output
Red - port output

**IMPEDANCE**

![](https://www.hi-fiworld.co.uk/OCTOBER_2008/hfworld_0810_41.png)

**REVIEW**

The Audiaz Etas are a very stylish and well designed pair of loudspeakers that turn in a fine performance across a wide range of music. Some care does need to be taken with partnering equipment in order to fully appreciate their top end, and in terms of positioning to optimise bass performance, but they offer a vivid, crisp and detailed sound that I can see winning them many fans.

I feel that their only real problem is their price and, more specifically, the competition they face at this level, such as the Esoteric Cassianos and the B&W 801Ds. The Etas are ultimately no less capable than these models but I feel that they cannot quite match either of them for that instant “Wow - where’s my cheque book?” effect. In pure sonic terms then, firmly recommended, but they are up against strong competition.

**SOUND QUALITY**

Having already heard more than a few pairs of loudspeakers using the Accuton ceramic drive units and having liked pretty much all of them, I had a feeling I was unlikely to dislike the Etas, and this did indeed turn out to be the case. AudiaZ have come up with a loudspeaker that performs with a real sense of dynamism and authority, that offers a fine blend of resolution, speed and detail. The Etas’ overall balance is quite a forthright one, and the slight lift in output towards higher frequencies [see MEASURED PERFORMANCE] makes itself known by the way in which they add a pleasing crispness to performances.

I have to say that I’m rapidly becoming a big fan of AMT drive units, and the Etas’ tweeter adds a superb sense of air and spatiality to proceedings that makes many other loudspeakers at or near the price sound rather half-hearted. Finer details from the back of recordings are pulled out well, but without making the ‘front of house’ action becoming overblown or harsh. The result is an all-encompassing whole that offers a fine sense of depth to proceedings, stretching nicely back beyond the listening area but focusing the main action beautifully right in front of you.

Nicki Holland’s piano on “Ladykiller” from her eponymous debut CD was vivid and full of detail, and the lady’s vocals were a delight, being strongly centre-stage and nicely emotive. Moving on through the disc I did start to detect a hint of upper treble harshness at times on sibilants, however. That is to say that the Etas never actually sounded overly sibilant as such, but seemed to turn the occasional ‘s’ into a longer drawn-out ‘ss’. This was most obvious on poorer quality source material and was exacerbated further by more strident-sounding partnering equipment, so care in matching such items is a wise move...

Lower down, the Etas offer fine upper bass and midband resolution. Instrument character was easy to discern and orchestras were fanned out with pleasing effectiveness. Sometimes lesser loudspeakers make it difficult to easily discern the difference between the likes of a violin, viola or cello, but the Etas captured the innate timbre of each of these items with ease, making orchestral material a vivid experience.

At the low end, things continued well, with fine bass detail and pace. Bass lines were confident and impressively tuneful but, as might be expected, those twin 150mm drivers did not dig thunderously deep. I also had to carry out a certain amount of experimentation with regard to spike height in order to optimise the down-firing port’s performance. Initially, with the spikes screwed fully in, the low end had something of a ‘bloom’ to it; unscrewing them to lift the ‘speakers up helped greatly but did remove an element of extension. Experimentation is the key here.

**CONCLUSION**

The AudiaZ Etas are a very stylish and well designed pair of loudspeakers that turn in a fine performance across a wide range of music. Some care does need to be taken with partnering equipment in order to fully appreciate their top end, and in terms of positioning to optimise bass performance, but they offer a vivid, crisp and detailed sound that I can see winning them many fans.

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WIN A SUPERB MUSICAL FIDELITY A1 FBP PREAMPLIFIER WORTH £1,499 IN THIS MONTH'S GREAT GIVEAWAY!

Hi-Fi World gives you the chance to win a Musical Fidelity A1 Fully Balanced Preamplifier worth £1,499 in this month's competition! Here's what David Price said about it in the September issue:

"The A1 FBP is generously specified, boasting a number of inputs including two fully balanced ones. It also has a proper MM/MC phono stage, a tape monitor, a USB input (meaning it has an internal DAC), a home theatre bypass mode and the standard auxiliary input, and between moving coil and moving magnet.

This is a very open sounding device - even by the standards of my reference £2,500 preamplifier. I was quite surprised by its transparency and general lack of character. Indeed, if you can ascribe any particular 'nature' to it, it is rhythmic 'get up and go', which on many similarly priced rivals has already got up and gone! Effectively then, we have a light, open and spacious sounding device with a propulsively musical sound...

Strings were vividly etched, the Musical Fidelity showing fine instrumental timbre. Indeed, this preamp managed to be both light and bright in the upper mid and treble and strong in the bass. I found myself enjoying the crisply etched hi-hat cymbals and the sparkling harmonics of the violins, and at the same time being impressed by a strong and expressive bass line. The A1 FBP demonstrated a vice-like grip on the low frequencies without stifling the emotion out of them. This prowess with timing was evident right up the audio band. On price grounds alone, I hadn't expected the Musical Fidelity A1 FBP to do quite as well as it did...

I have to say that I was genuinely surprised by how capable it was - especially in balanced mode. It has a strong and grippy sound, but with plenty of passion and poise - plus a fine tonality and excellent dynamics. A hearty recommendation as an excellent do-it-all affordable high end preamplifier."

It is a nice bit of kit to look at, and is certainly well made. This reviewer liked the very sturdy and cleanly labelled back panel, making switching interconnects easy. It also has tiny switches for small presets like toggling between home theatre bypass mode and the standard auxiliary input, and between moving coil and moving magnet.

For a chance to win this superb preamp, just answer the following four easy questions. Send your entries on a postcard only by 30th September 2008 to: October 2008 Competition, Hi-Fi World magazine, Unit G4, Argo House, The Park Business Centre, Kilburn Park Road, London NW6 5LF.

QUESTIONS

1] What does 'FBP' stand for?
   [a] fairly big preamplifier
   [b] fiendishly burlesque preamplifier
   [c] funky brother preamp
   [d] fully balanced preamplifier

2] How many fully balanced inputs does it have?
   [a] 5
   [b] 4
   [c] 3
   [d] 2

3] How expensive was DP's reference preamp?
   [a] £5,200
   [b] £250
   [c] £52
   [d] £2,500

4] DP described its nature in terms of what...
   [a] "timbral acuity"
   [b] "tonal dexterity"
   [c] "temporal exactitude"
   [d] "rhythmic get up and go"

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Use Ringmat cables for the cleanest transfer of signals, from power source to speakers
DIGITISING VINYL

Thanks David, for your recent article on iTunes for beginners. Much appreciated, as I have finally succumbed to the charms of an iPod classic 160GB.

However, you didn’t cover what I would have thought must be an issue for a lot of your more mature readership: recording their LP collection.

My intention was to transfer a proportion of my LPs to it losslessly, to keep my second system box-count down in the more presentable bits of the house (WAF), although if I’d known beforehand the mess I was going to get into, I don’t think that I’d have bothered! What was intended as a minor purchase is increasingly looking like a major one, as in addition to the iPod itself, I have had to buy a dock, and now it seems a new computer, as my existing laptop is too old with too small a memory. My children informed me (!) that if I start on one computer I have to stick with it, as a new one will wipe everything already loaded onto the iPod. This alone would have given me pause for thought!

Therefore, I’d like to know what I’ll need to achieve this in addition to my iPod, the dock, a Mac (?) and hi-fi system, especially as I want to achieve a result that mirrors the quality of my main system front end (Technics SP10 Mk2, SME 312S, Van den Hul Colibri XCM). Is the Mac soundcard up to the job, or do I need something better, and how much do I need to spend to beat its quality and on what?

I’ve done some research and there seems to be only “pro” gear out there, that may or may not be appropriate as they’re mostly for microphones. Hi-fi gear seems limited to Lyngdorf preamps with ADCs and room-correction (to try to fix two problems at the same time, but without another letter altogether!). They’re expensive as a consequence, and I have to admit that I haven’t understood the (subtle?) differences between them despite some effort.

Perhaps there’s a stand-alone ADC that’s cheaper/better? Any suggestions?

Ross

Hi Ross. Well, this is one of those how long is a piece of string-type questions, isn’t it? There are so many ways of digitising your music, and it all depends on your budget and your commitment to the project. One possible way might be this; buy yourself an old PowerMac G5 with a big hard drive in. They’re expensive, but not as pricey as you’d think considering most Mac anoraks have already upgraded to the new MacPro. Fit an M-Audio Audiophile 192 PCI soundcard, which offers up to 24-bit/192kHz operation, with two balanced analogue inputs, along with S/PDIF digital. This will let you get your vinyl on to hard disk, along with Audacity software (free to download from http://audacity.sourceforge.net). You can then burn them to CD or convert them to Apple Lossless for your iPod. This will give you what it is by any standards a very good sound, but the weak link is the analogue to Digital converters, so ideally you should invest in a Benchmark ADC1 which is a superb A-D (look out for a review by Patrick Cleasby very soon). Unfortunately, you’re looking at the thick end of £1,000 here, though...

A sneaky trick would be to buy a good, ageing DAT machine such as a Sony DTC-77ES and use its internal ADCs to output digital via its S/PDIF into your soundcard or direct into the PowerMac. Simply put it into Record mode with no tape in and it will work as an A-D; considering you can pick one up for £150 or so it’s a fine working compromise and sounds very good indeed at 16/48 resolution, which you should use in preference to the CD stock 16/44.1kHz setting.

There are a few limiting factors you should consider here. One hour of music converted to 24/96 PCM will occupy 2GBs of disc space. Lossless compression commonly halves the value, so expect 1GB. An LP usually runs for 40mins, so now we are looking at 650MBs or so storage space per LP. You will get 230 LPs onto your 160GB iPod Classic, or...
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Adam Smith, HiFi World 07/2008

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460 if you encode at 24/48. However, your new computer will have to process and archive all this material, so you will need a sizeable drive and it’s usually best to run either a second internal drive or an external Firewire drive, as you don’t want this material jamming up a PC’s main C: drive.

Apple itunes runs on PC as well as Mac and a 24/96 soundcard like the Creative Sound Blaster Audigy SE, costs £40 or so and will do initially, although better is available. David’s suggestion of a second hand G5 is fine. However, if you swap from PC to Mac you will need to buy all new software, unless the excellent OpenOffice suite (www.openoffice.org), free for PC and Mac, will do.

Migrating itunes from one computer to another is a well covered topic on the internet. Google Macworld and “How to shift iTunes libraries”, or go to the Apple website. Doing this shouldn’t wipe the tunes from your Classic; I suspect your children are trying to frighten you! Remember to back up though. I have just lost the entire contents of a 1GB Olympus XD camera card full of Kuala Lumpur Show shots to a dodgy card reader, reminding me how fragile solid-state storage can be. Luckily, I had downloaded them to a Macbook whilst on the road as I strictly don’t trust computers. Vinyl LPs are a much more reliable storage medium! NK.

LOST IN SPACE
Something like fifteen years ago, a friend and I visited the Buxton Hi-Fi Show and listened to a demonstration being given by AudioAcoustics of their valve amplifiers. They were nice looking bits of kit, and I said to my friend at the time that they were probably the only amps at the show that I could live with (i.e. that I would want in my home to listen to on a day to day basis). As a student at the time, my pockets were very shallow and couldn’t stretch to the £1,000+ price. Since then, though, the brand appears to have evaporated. Do you have any idea what happened to them?

Steve Reece

Hi Steve. In a word no, but I suspect that someone, somewhere reading this will have! Here’s hoping he writes in and your mystery will be solved. In the meantime, Icon Audio and Prima Luna have some very amenable budget valve amplifiers out now I suggest you see if you can live with them too. DP

LEAD ASTRAY?
I recently bought a Musical Fidelity X-CANS v3 headphone amplifier and Sennheiser HD-650 headphones. However, in your May 2008 review of the Sennheiser PXCs450s, you state that the HD650s give “superlative performance when suitably upgraded with premium connecting cables”: As a result of this, I asked my local specialist dealer, who stated that they did not do such upgrades but believed that there were American companies who did and were expensive - but he had no further information. Have you any details of the possible cable upgrade and the companies that are providing the service, please? Also, how about a comparative test of LP cleaning machines?

Graham Adams

There are two Sennheiser cables I’ve tried. Stefan AudioArts Equinox was reviewed in the June 2004 issue, and Russ Andrews HCl in August 2005. Both are similarly priced at around £250 which is a lot of money considering the price of the HD650s but both yielded serious improvements. I found the Stefan AudioArt to be better on balance, with a more lucid midband and spacious treble, but either is good enough to show you just how bad the stock Sennheiser cable is (thin, hard and shouty sounding).

As for the LP cleaning machines, well we actually do have a plan in motion, but like many of our grand schemes, it does take some time to realise. Watch this space! DP

AS IF BY MAGIC
Oh dear, my Ringmat CD1 Blue has decided to stay inside my Alchemist Forsetti transport! The CDs are playing okay and everything seems to be alright; what should I do? As it happens, I was tentatively considering purchasing a new transport. You clearly have three or four favourite players in the £1,200-£1,500 price bracket but I am looking for a transport only for around this price, or may stretch a little further if necessary. I am using a Musical Fidelity A3 upsampling DAC. What would you suggest?

Colin

The first thing to do is to whip off the Alchemists bodywork (or just its top plate), which should give you easy access to the mechanisms innards. At this point, make sure the power is switched off of course, so you can go in and fish the errant Ringmat out. This done, your Alchemist can be offered for sale, to part finance a Cyrus CD-XT SE transport (£800) and matching PSX-R (£500) power supply. I got tremendously impressive results from the new Cyrus CD8 SE CD player last month, which uses

Cyrus CD8 SE gave “tremendously impressive results” says Editor David Price. The CD-XT is the transport-only version.
Accessing the Source,
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With a list of awards that would fill this page and more, this new system offers amazing synergy across HIAudio's portfolio to present a truly symbiotic whole.

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the new Servo Evolution mechanism found in the XT SE. Aspirating this new Cyrus transport with the PSX-R will give it a super-clean power feed, bringing breathtaking results I expect. Next month I’ll be assembling a system around precisely this front end, so keep your eyes peeled. DP

ENIGMA CODE
I always look forward to my copy of the magazine arriving in the post, and enjoy every bit of it. Especially the reviews such as your CD player group test in the July 2008 issue. I recently purchased the Cambridge Azur 640C v2 as a replacement for my 1999 Arcam Alpha 7SE; it isn’t broken, just relegated found in the XT SE. Aspirating this serve to illustrate the old saying ‘one man’s meat is another’s poison.’ It always amuses me when people tell me, but Hi-Fi Whatsit? said this amp’s no good, or that player is their Award winner. Very interesting I’m sure, but to our ears, with our systems, tastes and review methodology, we think otherwise. I am not casting aspersions on other magazines or reviewers, but I can confidently say that with ours at least, all review kit gets a good long auditing period, usually in two different systems (and rooms/locations) with several pairs of ears involved, plus our own very informative measurements as a precursor to the review. I would also draw attention to the fact that, on several occasions since I’ve been editing this magazine, we’ve had review kit direct from other magazines that upon measurement proved partially faulty (i.e. not to spec!) So there is at least the possibility that others have reviewed state of our review sample, although I mentioned it, to dock marks for a dent here and there, most likely inflicted by a courier, seems a little perverse. Fair enough, if all units leave the factory like this then there would be genuine cause for complaint, but Rotel assure me this is not the case!

Clearly if all magazines are unanimous that something is brilliant then there’s a reasonable chance that they are all right, but a glowing review from one magazine and a rather muted one from another can well be down to the differing tastes of the reviewers and the music/system/listening room that each one uses. Excellent though the Cambridge is (and it really is) I felt the Rotel bettered it in a couple of significant areas, hence why I picked it as the winner. Why not go out and have a listen to one! You might just find yourself agreeing with me. AS

“How did the Rotel RCD-06 get to win?” asks Gerald Smith.

Arcam replaces a Marantz CD5400, which has been passed on to my brother.

So much for the preamble, the main reason for writing is that the CD Group Test surprised me in that the Azur 640C v2 is £100 cheaper than its rivals, and the fact that it performed so well against the others is a tribute to Cambridge Audio. I am very happy with mine, which is running with my Quad 306/34 preamp and FM4 tuner, plus Cambridge DAB300 and Tannoy Revolution R3 floorstanders. But how did the Rotel RCD-06 get to win? I had previously bypassed this machine having read the ‘What Hi-Fi Sound and Vision’ review in January 2008 when they said, once it was a good player, but newer rivals have turned it into an also ran? I am even more surprised because you have made it the winner despite it not being in very good shape (a battered review sample!)

Well, you pay your money according to your own ears, in the end though, it is not always possible to review a product personally, which is why magazine reviews are helpful. This is not a complaint by the way, but it does serve to illustrate the old saying ‘one man’s meat is another’s poison’.

Gerald B. Smith

FINDING VINYL

Having only become interested in hi-fi in the past couple of years I was quite surprised by the amount of space your magazine devotes to turntables and vinyl LPs. After all, wasn’t this technology made obsolete by CDs more than twenty years ago? However, by the sheer volume of people with far more knowledge and experience in these matters than I do, advocating that vinyl potentially offers a far better sound than CD, it’s started me wondering whether I should consider purchasing a turntable. There are number of factors that put me off this idea, namely inconvenience (the time taken to clean and maintain styli and LPs, and the time needed to set up and tune turntables to get the best from them) and cost. By this I mean having to replace cartridges on a regular basis, building a collection of LPs (I haven’t purchased a vinyl LP in over two decades and have maybe twenty five in questionable condition), plus the fragility of both turntables and vinyl LPs, especially with my rampaging six year old son around.

So the improvements in sound from any turntable I purchase would have to more than make up for the downside. My current system includes an Arcam CD737, Denon AVR 2807 with

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**TO RECEIVE A FREE GIFT AT YOUR NEAREST VENUE**
The Marantz TT15S1 offers real value for vinyl playing, says David Price.

Orpheus Aurora 3 Signature edition (v2) speakers. As you may well not know, the Orpheus Aurora 3 are a 2.5 way floorstanding speaker with two 6 inch woven KEF bass/midrange drivers and a 1 inch silk dome tweeter. A nominal 4 ohm speaker with a claimed frequency response of 37Hz to 20kHz +/- 2d8 and sensitivity of 92dB. As to how they sound, I don’t think I can put it any better than Greg Borrowman from Australian Hi-Fi magazine who concluded they were “excellent loudspeakers, with a gorgeously rich, beautifully detailed and a highly musical sound”. The signature edition simply offers an upgraded crossover to the standard edition.

Would you please recommend any turntables (must be complete with arm and cartridge) for around the price of the Arcam CD73T that I should audition. My preference is for something fairly simple to set up and maintain but with some leeway to upgrade if I get the urge. My musical tastes include rock, pop, blues and jazz.

Jeff Tacey

Hi Jeff. There’s one turntable that’s just right for you and yours – Marantz’s TT15S1. At around £1,000 it comes with a tonearm and high quality cartridge preinstalled, and the whole package is beautifully finessed, takes a master of minutes to set up and works brilliantly from the off. You’ll find it has a very musical and spacious sound with a delectable quality that’s easily good enough to work with speakers even better than your prized Orpheus Aurora 3 Signature editions (v2)! Of course, there are better turntables at the price than the Marantz, but none comprehensively outclass it and none approach its user friendliness. Indeed, to be frank the TT15S1 might even stretch that Denon AV receiver of yours. So when funds permit, I’d go for a Leema Pulse integrated amp and cartridge (model unknown) and it sounds okay but I imagine it’s well past its use by date. My question is simply this: would you like to try a quality moving coil (Rondo series for instance) or a high quality moving magnet such as the Ortofon 2M Black but are my turntable and amplifier phono stage up to the task? If not, would you suggest some other cartridges that you feel may be more suitable, please?

Garry Meier

Luxman PD284 - an Ortofon Rondo MC might be stretching it a little far.

NEEDLE TALK

I am an avid reader of your fine publication and one of my favourite pastimes is reading your magazine while listening to my music and drinking an Australian red. I especially enjoy the World Classics and Vinyl sections and this prompted me into slowly building a system of my own from old components found on the Internet. I have now reached a point where I feel I am close to completion (if that is ever possible in this magnificent obsession of ours) except for one last important thing: a new cartridge for my turntable.

The turntable I run is in great condition and is a Luxman LV104U. Direct Drive that uses the standard tonearm. I currently run this through my Luxman LV104U Hybrid Amplifier and am told that its phono stage (MM and MC) was reasonable for the period. The cartridge I currently have is a Shure M250 or 300 arm. I say this because it offers great dynamics and a wide, well defined sound stage, even at low frequencies where more traditional tubular designs tend to lose definition and contract stage width. The Goldring cartridge is fundamentally accurate and also has real impact; it’s a fun listen. These two do LP justice, at low cost.

Then you’ve got to sort yourself some LPs and here both the fun and expense can start. There are a lot of new re-issues around, often re-cuts from original master tapes on 200gm vinyl - and they sound fantastic. Then there’s the new stuff from Amy Winehouse, Goldfrapp et al. and finally many people buy second hand. Whatever, with a modern turntable and cartridge you are in for a treat.

The Luxman LV104U was one of the classic Luxman items with a couple of cheeky valves peeking from behind its front panel, lulling you into the sense that it had some serious thermionic trickery going on inside it. Actually, it was just a simple buffer between preamp and power amp but the unit was pretty decent for all that and the phono stages were also more than capable, so you have a good building block to start with. Equally the PD284 is a fine deck, although not...
**Blackburn MicroTech Solutions**

is located on the former Mullard Radio Valve production site in Blackburn Lancashire and can trace its Company origins back to the laying of the foundation stone by Captain Stanley Richard Mullard founder of the Blackburn Radio Valve Corporation back in 1938.

The last true Mullard radio valve was made on the Blackburn site back in 1984. Since then the Company has made many other products relating to cathodes and emission technologies.

2008 sees the start of a new valve technology production TechTube and appropriately it comes from the original Mullard factory buildings.

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launches the E813CC planar valve based on the ECC83 specification as the first of an intended Blackburn Legacy Series having E811CC E812CC along with the E813CC.

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52 HI-FI WORLD OCTOBER 2008 www.hifiworl.co.uk
Consonance Forbidden City Ping - able to drive a wide variety of loudspeakers.

The sound I am listening to has leaped forward since the acquisition of these amplifiers.

However, in the past week or so, there has been a series of clicking noises coming from the left loudspeaker. I have switched the cables connecting the preamp and the amplifier and the problem moved as well, to the right hand speaker. This seems to prove that the problem arises in the preamp, particularly as it is present on both vinyl and CD, but the sound quality seems unaffected. The next step I am not sure of. How do I identify which valve is at fault, as I do not wish to ship a heavy and delicate item back to the manufacturers for what may prove to be a simple and easy valve change?

Do I need to replace valves in matched pairs, and where is the best place to buy good ones? Your advice would be greatly appreciated as it is likely to be affecting a growing number of readers due to the valve "baby boom" that is very much in vogue at present.

Alan Robson

Hi Allan. There's not too much to worry about here. The B64 uses four ECC83s and one ECC82, none of which are too expensive - around £8 apiece - unless you fancy NOS (New Old Stock) Mullard or Black Sable treated. As valves from different manufacturers can sound quite different from each other it is best to buy in matched pairs or, in your case, in complete sets.

The ECC82 is a low noise design prone to microphony in standard form, but modern versions have added stabilising elements to suppress this. As this is a small signal amplifier I suggest you splash out on a decent cryogenically treated type, which will cost £20-£30. For the ECC83s two matched pairs of Mullard new production would be a sensible choice. The bill will total £75 or so.

If you want to spend less, get one matched pair of ECC83s and hope the ECC82 is OK. If it isn't the popping noise will continue after substitution and you will then have to get a new ECC82. You could of course find which valve is noisy simply by moving ECC83s from one channel to another, one at a time. When the noisy one is moved, the noise will swap channels. If the noise does not move then it is the ECC82. Have fun! NK

ROLL WITH IT

Regarding the article in the June issue of Hi-Fi World, experimenting with bi-wiring makes me mindful of countless other things to do I have read in various magazines over the years. I recall reading in one of Gilbert Briggs' books on loudspeakers, at about the time on music industry...
when stereo was new, that bass has no stereo imaging qualities. He wrote of
having a pair of affordable 3 cubic foot loudspeakers spaced apart as normal,
but adding a central large bass speaker in a solidly built cabinet, with left and
right cable pairs feeding a transformer that summed the channels to feed the
boss speaker.

So I have a long-standing aim to put my 15in unit to use, but do
you have any idea of the transformer specifications? I am willing to undertake
forming one and do the winding too, but can you or someone offer some
information with regards to possible

Fig. 10/7. One bass speaker and various
treble units.
A Goodman's Bowl.
B Multi-speaker array for wall mounting.
C 5" unit with diffuser.

From Gilbert Briggs 'Stereo Handbook' (Wharfedale 1959), a
single centre loudspeaker with a selection of satellites.

I presently have a Wharfedale 15in
bass driver with roll surround, lying
unused for 26 years after I removed it
from the 9 cubic foot corner enclosure.

How it was done in the past: low frequencies were
tapped off with a transformer. Nowadays, just use a sub-
woofer or a BK crossover.

that I built over forty years ago This
monster had a sand filled baffle with
two back panels that were also sand
filled the spacing for the sand was
two inches, so there was a lot of sand!
Gilbert Briggs' findings were that there
was no noticeable stereo effect at
low frequencies using a pair of these
enclosures and he then wrote about just

spics for such a device that would no
doubt have to cope with a good few
watts of audio power, please?

Thanks to you chaps, now at least
newcomers to the vinyl world and hi-fi
general have a good place to start.
I have looked around for quite some
time for a magazine with useful 'real
world' information in it and yours is
outstanding in its field.
R.W. Scarbro

From the article you are referring to,
it is interesting to note that Gilbert
Briggs was basically postulating the
'2.1' system - something that is a
very well known configuration today,
which just shows how ahead of his
time he was! Things have moved
on a little since then however, and
modern technology can bring you
something a little more effective than
a transformer to generate your '.1'
channel.

The most obvious route to
take is to purchase a dedicated
subwoofer amplifier from the likes of
BK Electronics (www.bkelec.
com), who will sell you an amplifier
module from 50 to 500 Watts
and complete with the necessary
frequency filtering controls - without
these you would need to come up
with a passive crossover to roll the
top end of the Wharfedale unit off
at a suitable point to match your
main loudspeakers. If you don't mind
making such a crossover you could
actually use virtually any normal
amplifier that has a mono button,
although these will only accept line
level inputs from a spare preamp
output, and not a speaker-level input.
Personally, I'd go with the dedicated
sub amp - it's a lot easier and will
give plenty of power to give you solid
and well controlled bass. Remember
to adhere to Briggs' enclosure design
specification for good extension,
though. AS

The original Briggs article is to be
found in a Stereo Handbook of 1959,
a time when speakers generally lived
in corners, and if very lucky, had
sand filled baffles! There clearly were
domestic thoughts going on here in
the mind of Briggs: "we are not going
to get away with two that size"

The recommendations in the
article (co written with KEF founder
Raymond Cooke) were for three
different, and frankly rather odd
arrangements, all crossing over at
around 400Hz. The actual experiment
used a Wharfedale "W2" loudspeaker
system as a common bass unit for
each channel, with a selection of
random unidirectional "tweeter"
boxes, including a Goodmans "bowl"
speaker! The article also included
details of how to construct an
isolating transformer – 1in. Silicon
core iron, with two windings of 200
turns of 18 s.w.g. copper side by side.
With modern amplifiers and power,
that would simply not be big enough,
as we are talking power handling of a
few watts only.

In theory our "heads" cannot
localise sounds below about 330Hz
as, at this frequency, the length of the
sound wave would mean it hitting
both of our ears at the same time, and
it is roughly the same size as our
heads (unless like me, you have a
big head!). Sadly speakers produce
distortion, both harmonic and simple,
extraneous noises plus we have
timing issues due to our rooms,
none of which fool anyone. Crossing
over this high means you will be able
to spot the bass is coming from a
different direction...

90Hz would be a great place to
crossover, but that means having a
wee small set of satellite speakers
and a common bass unit and, with
a good clean bass unit, it can really
work (my very own ÜBER Project
uses a similar concept to supplement
a pair of Tractrix horns – but two for
stereo).

To make the system work, I
Michell Technodec with Rega RB250 was the final choice of John Belcher. Is a GyroDec next?

TECNO TALE
Following your advice in the February edition of Hi-Fi World magazine, I listened to a Rega P3 24 with Ortofon 2M Blue and found it to be a pleasant listen, but without being really captivating. One of your recommendations was the Technics SL-1200 and I thought long and hard about this. After mentioning my thoughts to a local dealer, I was put off by the disparaging remarks from one of the assistants who had one and was adamant that it could in no way be used as a hi-fi unit.

At the Bristol Show, like Patrick Cleasby, I visited the Henley Designs room but was put off by the sheer quantity of decks on display, with no ongoing demonstrations, which I found most discouraging. Next door however, were Michell Engineering and I had a long chat with them a completely different attitude and lovely vinyl playing in the background. I was impressed by the sound coming from the GyroDec, but noticed that the simple Technodec was built on the same principles and employed the same motor. I ended up buying one, complete with Rega RB250 and at discount with a free UniCover thrown in for good measure. I have been using it since then sited on an Asda granite block and running on Ortofon 2M blue, as I wanted a more up to date sound than the Goldring 1042.

I now have some forty records, including some bargains like Dire Straits’ ‘Love Over Gold’ and Oscar Peterson’s ‘Mellow Mood’ for £2; and Art Pepper’s ‘Gain’ Home and Billie Holiday’s ‘Lady in Satin’ for £5. All sound great after a good clean with the Disco Antistat and replacing the inner sleeves with new high quality items. I also purchased eight new records at the Bristol Show but, of these, two had to be returned because they were badly warped. Of these purchases, however, I can highly recommend ‘The very best of Diana Krall’.

However, I am already wondering about upgrades! The TecnoArm A is the obvious one, although I’d love an SME: would the Series IV be over the top? As for the cartridge, the Ortofon 2M Black seems the way to go but I do have the notion to try a Moving Coil, even though this would probably necessitate an MC preamp. To remind you, the rest of my system is an Eastern Electric MiniMax CD, Musical Fidelity TriVista 2i DAC, Sony E77ES tuner, Musical Fidelity Tri Vista 2i DAC, Sony E77ES tuner, Musical Fidelity A3.2 amplifier and Dynaudio 1.3 Mk2 loudspeakers.

John Belcher

Some things are just meant to go together. John – fish and chips, Mark and Lard and, of course, toast and Marmite. To that list I would personally add Michell and SME, as I have always found their products to complement each other perfectly. A Gyro with Series IV is a stunning setup and an Orbe with Series V is still right up the top of my turntable wish list! That said, though, I would say that a IV is slightly overkill for a TecnoDec and would personally go for the TecnoArm/Ortofon 2M Black Combo. I find that the TecnoArm needs careful cartridge matching to give of its best and that it really does work superbly with the 2M Black. This will give you a great setup, especially for around forty LPs!

AS

Quite right. A good school friend of mine often found himself on the receiving end of my sarcasm for having a Linn LP12/Ittok/Karma back in the nineteen eighties, precisely because he only owned about ten LPs at the time. Now then, we don’t want to be silly, do we? With this in mind, I’d counsel that TecnoArm for your TecnoDec. If you have enough cash for a SME IV, then buy a GyroDec - simple as that. Still, if you’re going to upgrade your turntable fairly soon after, it wouldn’t be a cardinal sin to go for a Lyra Dorian MC first. I know that Noel isn’t a fan, but I’ve found it suits the fairly warm sounding Gyro platform very well indeed, giving a very spary, dynamic and detailed sound. Oh, and for the record, any dealer who pooh-poohs a Technics SL1200 either hasn’t heard one properly set-up or rather wishes it wasn’t as good as the £1,000+ designs he’s trying to shift off his shelves! DP

WIRELESS WORLDS
That was a very interesting article by Steve Green on internet radio this month’s edition. The three sound cards he mentions are all for PCs, I think, which makes sense but I can’t integrate my PC with my hi-fi - different rooms. Can he recommend anything for a laptop, please?

Also did you review a wireless interconnecting device a while ago as your gadget of the year?

My reaction on hearing that the BBC was not going to invest in DAB+ was to go out and buy a secondhand Creek T50 as back up for my Leak Throughline. It might also allow me to get my Quad AM tuner serviced too!

William Comery

Hi William. It is still possible to listen to Internet radio on your hi-fi system even though it’s in a different room...
When Linn told us they were releasing the DS line of products we were skeptical to say the least. We were wrong.

We took delivery of our Linn Majik DS demonstration model on the 16th of June 2008. We took our time, listened carefully before jumping to any conclusions.

We can honestly say we have never been so constantly amazed at the quality of music coming from such an affordable product.

We think this component will beat any CD player.

Simply ripping our CD's, listening to the radio, or downloading "higher than CD quality" 24bit music, is just so easy.

We love music, we own thousands of CD's, but I now know I will never buy another CD Player.

If you also love music, you owe it to yourself to experience this wonderful product.

Please call in to Peter Tyson or Newcastle HiFi.
to your computer. The easiest way to connect your hi-fi to your broadband connection would be to use Wi-Fi, and for that you would need to buy a wireless router and a Wi-Fi media adaptor. Wireless routers combine an ADSL or cable broadband modem, a Wi-Fi transmitter/receiver, plus a few Ethernet sockets. So you would plug your broadband telephone wire into the router to provide the wired connection to the Internet, you would typically connect your main desktop computer to the router via an Ethernet cable, and other devices, such as laptops and Wi-Fi media adaptors or Wi-Fi Internet radios, would connect to the router via Wi-Fi. All of the devices that are connected to the router via Ethernet or Wi-Fi would then be able to connect to the Internet or to other devices on the network. The Wi-Fi media adaptor would plug into your hi-fi system via phono leads or S/PDIF digital audio output, and it can connect to Internet radio stations directly, so you don’t need to have your computer on when listening to Internet radio on your hi-fi system.

Also, because wireless routers allow devices on the network to communicate with one another, Wi-Fi media adaptors also allow you to play music on your hi-fi system that’s stored on a computer. Wi-Fi Internet radios work in the same way.

Two highly rated Wi-Fi media adaptors are the Slim Devices Squeezebox 3 (also known as the Squeezebox Classic) and the Terratec Noxon 2, which both cost around £150. The Squeezebox has the edge, though, as it provides the added benefit that it supports ADSL2+.

I'm afraid I don't have much experience with sound cards for laptops, but a couple that might fit the bill are the Creative Labs X-Fi Xtreme Audio, although that uses the ExpressCard interface that is only available on newer laptops, or the Echo Indigo, which is a PCMCIA card.

On the subject of the BBC using DAB+, they will still switch to using it eventually, although I wouldn’t bother waiting for them to do so. The quality of the BBC’s Internet radio streams should overtake DAB in September again.

In the same edition, Chord’s QD76 (canny name - not) USB input has its rates and sound quality ignored again. As for the Bluetooth capability, the rates and sound quality were ignored. In fact, maybe it only handles 16/44? This is what I would assume if I wasn’t aware of the magazine’s tendency to omit such information. Just to show that its not just digital facts you like to keep secret, turn to (some edition) the Cantus tonearm.

A very interesting arm - wouldn’t it be great to know if it has VTA adjustment, and if so, how easy this is to operate.

So here’s a chance for you to redeem yourselves. I would be very grateful if you could answer the following three questions:

1. Can you tell me of a good sounding USB to S/PDIF converter? Should handle stereo 16/44, 24/192 & 24/96 at least, and preferably have a coaxial output. Ideally it will cost less than £500.
2. Can you tell me of a good sounding A/D converter? It should handle stereo 16/44, 24/192 and 24/96 at least. Ideally it will cost less than £1,000. (I'm aware of the several professional recording' boxes that usually come with a lot of features I don’t need. In fact I have an E-MU 4040 (c. £120) but it seems to hide the differences between data rates - everything sounds like CD.
3. When are you going to review the Linn Sneaky? (NB. I already know what its data rates it handles - but does it show up the differences?)

Nick Pledger

I am afraid that, in some instances, we cannot cover all the bases - simply because of the lack of page space in the review. When space is short, and we're cramming an extra review or two in to the magazine as was the case in the September issue, I elected to concentrate on the review unit's primary functionality - i.e. how it sounds doing the thing it's most likely to be used for. Of course, in both those instances you cite, it would have been nice to go over every feature in forensic detail, but then that would have meant one less Soundbites review, and/or a one-page review of something else instead of a two. It's a tricky balance, Nick, and I

Benchmark USB DAC, fitted with digital USB input.

You state "it also has a USB input (meaning it has an internal DAC)". I was interested at once, as I'm thinking of concentrating on a computer/music server hi-fi (as well as LP's of course). I wondered what it sounded like and whether it will accept 24/96, but still don't know as it was never mentioned before.
appreciate your concern, but we can’t please all of the people all of the time – more’s the pity. As for those specific points – rest assured we will come back to them: I will be using the Chord as a long-term reference and we will try every last bell and whistle. As for DAC sampling rates – it’s unusual to find one that doesn’t do 24/192 now, so we’re tending not to list them just as we don’t now remind you in every CD player review that the format is only 16bit, 44.1kHz oversampling.

know why you want one – I take it you want to listen to music on your computer via its USB out. In which case, the most elegant option will be using the Benchmark ADC1 USB fits the bill perfectly, and lo and behold has a USB interface (answering your first question) and works to 24/192; I haven’t tried one but have heard great things about it from industry professionals, and we loved the DAC. [3] Haha! That’s a good question – we’re on to it. Patrick Cleasby is typing up his review this very minute: it should appear either in the November issue, or December at the very latest. I heard one at House of Linn (HYPERLINK “http://www.houseoflinn.com” www.houseoflinn.com) in Manchester recently and was most impressed! DP

Hi Ted – sadly you neglect to mention the rest of your system, especially the speakers — which often need to be carefully matched to cartridges, but here goes anyway! Put simply, I’d go for an Ortofon Kontrapunkt b (£775) – it’s a wonderfully lyrical yet detailed cartridge that suits both your arm and cartridge down to a tee. I would run it through the new Whest Audio Whest TWO phono stage, which is brilliant value at £650. Together you have a very high resolution combination that’s dizzyingly dynamic yet very musical. If you have a particularly clean and forward sounding amp and speakers (i.e. a Lyngdorf/Wilson Benesch for example), then adding some warmth from a PhonoNote tube phono stage (at around twice the price of the Whest) would really help, but most systems would really sing with the Whest TWO. DP

The listening experience at house of linn is so good - demonstrations last for hours....
School Of Rock

David Price gets down to the dynamic sound of Cambridge Audio's 840E/840W preamplifier/power amplifier combination...

Let's start this review in an unconventional way, shall we? To cut a long story short, the biggest problem this pre-power combination faces its name — by which I mean Cambridge Audio. Being an avowed fan of the brand, I certainly don't have an issue with it, but to be brutally frank there are going to be people spending £2,000 on an amplifier who do...

You see, it's not impossible to ignore the sizeable number of audiophiles who are brand snobs. For example, I know several who won't countenance any audio electronics that don't have the word 'Naim' writ on the front panel. The same goes for Meridian, Krell, Linn, Mark Levinson, etc. — you get my drift...

Those spending £350 on a 540A integrated amplifier won't give a stuff about the badge because they just want the best sound per pound. But at nine times that amount, sadly things aren't quite the same. With this in mind, the Cambridge Audio 840E/840W will never sell to some stick-in-the-muds, while others will need a lot more convincing than they would had it been made by the hi-fi equivalent of Gucci. That's the uphill struggle this pre-power combination faces.

I sense that Cambridge Audio realise this too, which explains the formidable engineering, build, and feature set — no resting on laurels here! They've thrown everything they've got at this pairing — including fully balanced operation, Cambridge's own Class XD power amplification and massive flexibility across both pre and power amps.

The £800 840E is visually very similar to the 840A v2 I reviewed last year, with its large central backlit LC display with programmable alphanumeric displays for each of the eight sources, and a large volume control legend. Indeed it's more than this — its programmability means tone controls can be selected and stored by input, or bypassed in direct mode, and there's gain trimming for each input (so you can match the level or your phono stage to your CD player, for example), and even alphanumeric naming too on its large display. It also sports the latter's Terrapin amplifier modules designed and built by Cambridge Audio, plus full resistor...
ladder and relay based volume and balance controls. Factor in Trigger Ins and Outs to automatically power up or down the matching 840W power amplifier, an RS232 port, IR emitter and Control Bus In/Out for seamless integration with custom install systems, Cambridge Audio's Incognito multiroom control capability and it's a flexible beastie.

The finish is good — both preamp and power amplifier are certainly substantially built. The thick 7mm aluminium front panel and extruded side panels, locked to a 2mm formed steel base plate specially designed to reduce vibration make for a strong and heavy platform. However, at this price, the fine Cambridge Audio finish begins to look less impressive against some price rivals — let's not forget that this combo is now playing with the big boys; Unison Research's superbly finished 56 valve integrated only costs a few hundred pounds more.

Still, I do like the brutal, lump-like quality of the 840W. It's a big and very heavy box, and purposefully styled. It pushes out 200W RMS per channel [see MEASURED PERFORMANCE] and one attempt to remove it from its packing... "adds power and an insight that the already excellent 840A v2 can only dream of...".

confirms this. The W can even be bridged to give 500W in mono for difficult high end speakers. Inside, it packs second generation Class XD technology, running two pairs of very high current output transistors per channel. Twin rectifiers and separate transformer taps for dual mono operation of the left and right power amplifiers are specified, along with an oversized low leakage flux toroidal transformer with a hefty 1200VA power rating. As befitting a power amplifier of this type, there's a clever solid-state temperature sensor with the big boys; Unison Research's solid-state temperature sensor with oversize low leakage flux toroidal transformer there's even a solid-state temperature sensor with over-heat cut out.

SOUND QUALITY

The first generation Class XD Cambridge Audio 840A was a sonic success, but to my ears not an unqualified one. In short, it sounded very detailed and controlled, but a touch too mechanical. For me, the big surprise was the 840A v2 that followed, which was altogether more fluid and musical — so much so that it proved capable of giving Naim's Naim 5i rival a real run for its money some eight months ago. And this is where we take up the story on the 840E/W, which builds on this base and adds power and an insight that the already excellent 840A v2 can only dream of...

This new pre-power combination is — as the introduction to this review suggests — a veritable sonic success. For its price, it offers a redoubtable degree of power and purchase, along with real subtlety and poise. It is not only better than the highly proficient 840A v2, it's a lot better in a number of ways. As such, it represents a real success for Cambridge Audio.

However, the problem with selling £2,000 amplifiers is that frankly they have to be a bit special, such is the quality of the competition. It's also the case that at this price, buyers get an awful lot more choice about how their new amp is special — which includes some serious valve designs (Ikon Audio's 300B integrated at £1,695 and Sugden's full Class A transistor A215E at £2,145 spring to mind). Set against such competition, this pre-power combination has to work a lot harder to earn its stripes... Kicking off with Simply Red's 'Money's Too Tight to Mention', and there was no way I could miss the bass performance of this combination. The kick drum sound was breathtaking, being immensely strong and assured sounding yet possessed of excellent timing too. Ditto the snare, the Cambridge impressing this big, slick eighties production in all its glory. Rather than just beating along in time to the music, the drum sound seemed to resound around my listening room, lacerating through the mix and hitting me in my rib cage. Behind this was a bass guitar line which could well have emanated from the very centre of the earth, so deep it sounded. The 840W turned it an almost PA amplifier-like shove.

Tonality, this combo was on the dry but folsome side. Bass is definitely generous but not euphonically over full, midband is very clean and proper, and treble is icily incisive without being hard. It's an interesting contrast to my reference Sugden IA4 (£3,495) which proved altogether looser and warmer in the bass, but more open and spacious in the midband and treble.

Dynamically the Sugden was shown up to be less than impeccable by the Cambridge combo. Moving from Simply Red to The Police's 'Everything Little Thing She Does is Magic', and those deep bass synthesiser lines were carried with utter authority by the 840E/840W, whereas the Sugden seemed a little out of breath. As the music built in complexity, there was a sense of compression from the Sugden, whereas the £1,500 less expensive Cambridge held things together in superior proportion; instruments were allowed more space in the mix, better located and able to play individually with seemingly superior freedom.

The midband was where I found this combo to be most controversial; I can see some loving it and others dismissing it on the basis of its performance here. There's no denying its excellent detail and superlative proportion; the ease with which all those strands are separated out both spatially and dynamically is truly special. However, I found this combo to be a little less fluid than it might be. For example, the Cambridge pre-power seemed to be more interested in deconstructing the many strands of the mix in a forensic way, whereas the Sugden was less fastidious about the exact location of this guitar part or that vocal, but altogether more musical and ebullient sounding. Whereas I heard an emotive...
performance from Sting via the IA4, I heard a technically ‘note perfect’ vocal track from the 840E/840W.

Actually, this really suited some types of music. Kraftwerk’s ‘Boing Boom Tschak’ was breathtaking to behold – no two ways about it. Here the Cambridge combo absolutely ruled the roost, as if to say “this is mine”. The Sugden sounded a fraction sweeter and more atmospheric, but altogether more imprecise and breathless – seemingly wilting under the challenge of conveying the song’s swinging dynamics and complex strands. Here, that massive, barrel-chested bass of the Cambridge was a joy, as was its ability to let all different elements of the mix play independently, unfettered by how loud the others needed to be. Likewise, it conjured up a massively wide soundstage, giving a true ‘widescreen’ presentation compared to the altogether narrower and more diffuse one emanating from the reference Sugden.

However, when I switched over to jazz, I found almost the opposite was true. Back with the Cambridge, and suddenly Donald Byrd’s ‘Street Lady’ sounded rather dry and rhythmically plodding on this less than perfect early nineteen seventies Blue Note album. It dutifully did the job alright, supplying its usual vastly spacious soundstage, but didn’t really seem to be having fun all the same. Indeed, the Cambridge combo rather drew my attention to the recording’s various imperfections, whereas the Sugden glossed over them slightly, preferring instead to focus on the song’s infectious groove and the complex rhythmic shifts. It also drew attention to the Cambridge’s ever so slightly steely treble – which is a touch more metallic than it needed to be.

CONCLUSION

As the greatest expression than it needed to be. The Azur 840E/840VV pre-power is a truly accomplished sounding solid-state combo. In some respects, it’s one of the best such packages I’ve ever heard at the price – massive power, huge authority and a wonderfully proportioned and well ordered soundstage are not to be sniffed at. But buyers should remember that – just like any other product at the price – it has a character of its own (in this case a touch on the cerebral side) – and buy it with this in mind. If you’re looking for a gushing, effusive and emotional listen, this combination won’t be for you. However, if you want to experience the physical scale and dynamic majesty of music I can think of nothing better for the money. If this is precisely what you want, then don’t let the fact that Cambridge Audio have recently been masters of affordable budget hi-fi dissuade you.

"bass is definitely generous but not euphonically over full, midband is very clean and proper, and treble is icily incisive without being hard".
Noel Keywood braved the sweltering summer heat to visit Malaysia's annual A/V Show in Kuala Lumpur...

Malaysia’s annual A/V Show is a great place to find products from Japan and China that haven’t yet made it to the West. But things go the other way too, I found: I walked into a room dedicated to the Rogers LS3/5a and found a floor smothered in classic valve amps. I thought I was in heaven!

One of China’s little known manufacturers I discovered was the Chengdu Xindak Electronics Co (see www.xindak.com). I was told by Asia Sound Equipment that, “they build only hi-fi, unlike many Chinese companies”, and with ninety employees are relatively large. The Xindak CV20 amplifier sat near to Rega turntables in a room thronging with people, because it was located in the main ballroom alongside Panasonic and Sharp. Whilst the big Japanese names have abandoned audio for giant screens, projectors and anything else that will make a buck, China still supports high end audio and somehow I suspect it always will...

Xindak were not alone. In the Tong Lee room I spotted Chinese Yarland amplifiers (www.yarland.com). Their FV-34C with EL84s carried a RMI699 price tag (£691 arid a FV-34B cost RM2999 (£468) - and both prices include loudspeakers (I didn’t ask)! But whilst this sounds like the sort of low price once expected from cut throat Far East trading I found it doesn’t apply generally; Kuala Lumpur is now as expensive as London, more so when you want a cool beer.

Whilst Xindak and Yarland were intriguing, Audio Space from Hong Kong (www.audiospace.com.hk) were a little frightening. I spotted a very bright glow from a large valve, surmounted by a ceramic top cap - which means frightening volts. It was an 80S that runs at 850-1500V and there was a dull red glow from the anodes, so this thing was working for a living in their Reference 3 monoblocks. Spec’d on the website as a 25W push-pull amp, it looked to me like a giant Single-Ended or SE design, suggested by the single 805 output tube and vast output transformers. I’m not surprised Audio Space haven’t made it to the UK; Health and Safety will likely be their first customer. But I was suitably impressed by the amplifier’s size and sound. Perhaps protective covers are available, in which case it might just pass UK safety standards.

Big comes in other forms, and for better or for worse the biggest price for an SACD player was being touted at this show by British company dCS. It was for their Scarlatti three-box player priced at a mere £33,000. Er, yes – I didn’t know or even suspect it could ever cost this much to play a frisbee. Also on display was their more affordable one-box Puccini priced at £9k and the intermediary Paganini two box at £17k. Senior engineer Martin Reynolds explained that their players contain the dCS Ring DAC and complex Field Programmable Gate Arrays to encapsulate their own proprietary circuits. I was suitably impressed by Martin’s fluent descriptions of complex digital circuitry, so he took me by surprise when he admitted to starting out in audio designing Beard...
DIY Paradise and their horn loudspeakers.

Loudspeakers largely came in standard multi-driver form, until I walked into DIYparadise (www.diyparadise.com.my). Towering upward at the end of the room was Sonus Faber Stradivari Homage loudspeakers put up a wonderful sound in the Perfect Hi-Fi room. A large, single drive unit monster, with an attractive rich redwood finish. I was intrigued. It looked very much like an enthusiast’s design rather than a commercial product - and it was. Well, in truth a bit of both. Formed by a group of Malaysian enthusiasts DIY paradise sells both kits and fully built products. Made by one of the founders, this loudspeaker was a 12ft long horn with a constant taper, copied from a design by Jan Hedlund. At the throat of the horn sits a single full range Coral Beta 6in drive unit. The horn back loads it, folding upward then back down to the mouth that terminates against the floor. Beside this unit sits a smaller horn with a larger mouth, designed by DIY Paradise.

Hewn from dark brown woods, their products were delightfully Malaysian in character, because this is a country where carved hardwoods are – or were – used in traditional homes. Trouble is, I realised wandering down a Malaysian hotel corridor some years ago, wood makes a tasty meal for termites; there were large holes in the corridor’s skirting boards and neat piles of wood dust on the carpet! I don’t quite know how DIY Paradise will cope with claims from their local customers that creepy-crawlies ate the hi-fi!

One of the best sounds of the show came from the spacious Perfect Hi-Fi room (www.perfecthifi.com.my). They were demning Sonus Faber Stradivari Homage loudspeakers, driven by Mark Levinson amps. The sound stage was airy and spacious, populated with solid well formed images of instruments. A steady stream of listeners were hopping into and out of the arm chairs to listen, drawn by the sound, which carried well.

The K.L. show these days is predominantly A/V for commercial reasons, pure audio being too small a segment in Malaysia to draw a large audience, organiser Dick Tan of 3Dot Events told me. At least, for now. Rapid growth in the late nineteen nineties saw the appearance of audio shows and audio columns and sections run by the English language Star newspaper, but those days are over. All the same, dedicated audio doggedly lives on in Malaysia as it does elsewhere, in a tension between what music lovers around the world want and what the Consumer Electronics business needs to manufacture to produce a profit.

One factor that must have slowed access to music for Malaysians was the elimination of pirated CDs and DVDs. They were everywhere in the huge Sungai Wang shopping mall on my last visit in 2003, the copies so well made it was impossible to tell them from the real thing, except for a suspiciously low price that made purchasing music little strain for locals. Now those vendors have gone. Disc prices at the show were on average a little higher than those in London I found, making them very high by local standards.

Wandering into rooms looking for exotic Far Eastern products, I was taken aback by what I saw in the LS3/5A Club room. A sea of classic valve amplifiers sat on the floor; all in fine working condition. There were Quad IIs, a Radford STA 1S, Leak TL12 Plus, Leak TL12.1, a Macintosh MC140 and a Diva Bluesky. They were being used alternately to drive a pair of KEF LS3/5A loudspeakers, accompanied by Rogers AB1 subwoofers. The club is just that; it doesn’t exist to sell anything but is the passion of Joseph Ki, from Kuching. Borneo and can be found at http://tech.groups.yahoo.com/group/ls35aclubmalaysia. It’s a venue for discussion on music and hi-fi.

Joseph had a fascinating tale for me. Raised in Borneo, he studied architecture in London and is a member of the Royal Institute of British Architects. Whilst staying in the Bayswater area he was drawn into the shop of Thomas Heinitz where he marvelled at Quad ESL63s. They were too expensive and bulky for a student, so he walked out with LS3/5As instead. Now a practising architect in Malaysia, Joseph owns no fewer than twenty six pairs – a true enthusiast if there ever was one!

Although the go-go days of rapid economic growth in the late nineties are over, Malaysia’s annual K.L. International A/V Show still has plenty of interest I found. And when the going all becomes too much it’s the only show where I can sit down and enjoy Nasi Lemak washed down by a cool Tiger beer - heaven!
Yamaha's superb CD-S2000 CD and SACD player was an instant hit with us. Its sound was conspicuously superb, smooth, enveloping and deeply detailed, without being shouty - very Yamaha and true hi-fi. I know many people have sizeable SACD collections and the CD-S2000 will make the most of them, as well as CD of course, but only in stereo. For a little less money - £600 - Yamaha's new for 2008 DSP-AX863SE amplifier can do the same, but in surround-sound when used with a suitable player. Would I get similar results to the svelte CD-S2000 I wondered or, with full surround-sound, might it sound even better?

It looks like a receiver, I know, but there's no radio tuner, so the AX863SE is an amplifier that's more or less identical to the current crop of receivers in all other respects. It has 7.1 channels and if you don't want 7.1, but simpler 5.1, then the spare amplifying channels can be used to bi-amp Left and Right front loudspeakers for better quality. You can, as usual, choose not to use a Centre loudspeaker, an option I prefer for high quality music reproduction.

Yamaha offer yet another variation on the theme of 'loudspeakers everywhere', and that is Presence Left and Right loudspeakers that, they suggest, are wall mounted 6ft or higher just outside the Front loudspeakers, to extend stage width and height. The signal for these will be internally derived through signal processing so it is a contrivance, if possibly an entertaining one. I did not try this as the mounting position identified by Yamaha in their handbook happens to coincide with wall mounted uplighters in my lounge and I didn't fancy removing them for loudspeakers! Bi-amping cannot be used in conjunction with these Presence loudspeakers.

Like all the latest receivers, the new AX863SE will decode all new high resolution music formats, including DTS HD Master Audio and Dolby TrueHD, as well as lower res. Dolby Digital Plus, meant for bandwidth limited broadcast channels used by radio and TV. Both are becoming quite popular on Blu-ray releases but - as an aside - I did see DTS HD-MA used to losslessly pack 16bit/48kHz on one Blu-ray, so superb sound quality isn't guaranteed. Neither the music business nor the film industry seem keen to go beyond 24bit/48kHz at present. It works well, giving much more slam than Dolby Digital, but isn't exactly cutting edge...

Finally, audio wise, DSD digital code from SACD is processed and a small DSD flag will light on the orange display when received. But would it sound as svelte as SACD from the CD-S2000 player, I wondered!

The short answer is no. Measurement showed DSD processing was relatively poor [see MEASURED PERFORMANCE], an afterthought. This was disappointing in what is presented as a high quality product, priced at a not inconceivable £800. It is common nowadays to convert DSD digital to PCM before turning it to analogue through the digital-to-analogue convertors (DACs). The Marantz SR8002 carried out this conversion effectively, giving full SACD performance, characterised by extremely low midband distortion of 0.05% at -60dB. Compare this with 0.64% from the Yamaha amplifier here, or 0.04% from Yamaha's own CD-S2000 player we all liked so much and you can see the DSP-AX863SE is behind in its DSD processing. Yamaha have down converted DSD to CD code, it appears, as bandwidth is limited to 21kHz, when it should reach 35kHz at least. You do get surround-sound,
but not with the great quality SACD possesses. I used an Oppo DV-980H DVD player to route native DSD code through the Yamaha, via an HDMI link.

Not everyone cares about SACD of course, now it is an obsolete format disappearing from shop shelves. Instead, we have high definition digital audio arriving on Blu-ray as PCM, in 24/48, 24/96 and 24/192 code (packed by either Dolby TrueHD or DTS HD Master Audio).

In their specification Yamaha claim to use Burr Brown 24/192 DACs in all seven of this amplifier's channels, making it able to handle any of these codes. Since they are all we're likely to get into the foreseeable future, the AX863SE is future-proof. However, which shuts off displays and all video processing (the TV goes blank) for purest audio. I was a bit disappointed to find only Pure Direct on the Yamaha. This mode gives the best sound, but no picture to watch a video performance. If you want to see video then analogue audio goes through the processor, which degrades quality by imposing a bandwidth limit and passing the signal through an ADC then a DAC.

**VIDEO**

On the video side, the AX863SE accepts Composite, S-Video and Component analogue inputs, as well as HDMI 1.3a digital. Monitor outputs for a TV exist in all these formats too. I was surprised to find that if a TV is connected via HDMI then by default the receiver's On Screen Display (OSD), which is essential for set up, isn't available. This will cause owners grief at set up. I guessed it was available from the analogue outputs, and from there found that the OSD only appears on HDMI if processing is selected. By default, Through is set, the correct choice when HDMI is used to connect a hi-def player to a hi-def TV, so Yamaha need to work out how to get the OSD to appear, or put a warning in the handbook about the OSD's absence in this situation!

The handbook curiously makes no mention of how to obtain the OSD or what it is for, let alone this problem. Instead, it appears to suggest that you switch on, press Scene 1 and are then ready to go. The handbook needs improvement...

Yamaha place faith in their auto-tune system and it wasn't fazed by the gooby I threw at it. with no Centre loudspeaker or subwoofer connected, but it did swell to raise a warning about running quadrophonic! Levels and distances are set and can be viewed, but equalisation is not applied, a sensible approach. Individual loudspeakers can be equalised manually using the graphic equaliser.

Setting up manually is made awkward by some obscure menu presentations, notably for subwoofer set up, and inconsistent use of the Enter function. The menus could well be clearer too.

**SOUND QUALITY**

Initially, CD sounded smooth and even, svelte in fact, very much in the Yamaha mould - and to my liking. There was a taste of CD-S2000 here I felt. Bass was nicely balanced, whilst not being overly dynamic, treble smooth and the midband quite airy. I slowly became aware that there was a warmth in the lower mid region that was pleasant, but a little artificial and that a wiry edge engendered sibilance and transients that, by the end of Amy Winehouse's 'Back to Black' was becoming irritating. Spinning Steve Winwood's 'Roll With It' I realised that the basic tonality was very similar, Winwood not sounding too dissimilar from Winehouse.

Connecting a Russ Andrews DAC-1 USB up to the Multichannel inputs bypassed the Yamaha's digital processing but utilised the audio output stages and this clarified the picture. The Yamaha's smooth, easy but lucid sound was there in abundance, a gloriously airy midband becoming apparent, accompanied by easy, natural treble and firm, if not forceful bass. Gone was the thickening of the lower midband, pinched midband imaging and the wiriness. On balance then, CD processing of a signal from a super low jitter Samsung BD-P1400 Blu-ray connected via optical S/PDIF, and using Pure Direct mode, was distinctly mediocre.

Moving on to 24bit/96kHz PCM from both DVD-A and Blu-ray, the picture changed dramatically. Santana's Supernatural DVD-A had an airy spaciousness across the midband that peppered Latin American percussion instruments around my room in a fashion that was both impressive and immersive. When Yamaha get going they really do well and this was one of the most atmospheric renditions I've heard to date. I sank back to listen to Santana's masterful guitar work, where deep technical ability is transcended by sublime fluency and expression. Guitar never talked better for anyone except Hendrix, and the AX863SE made this very...
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wasn't especially forceful, drums sounding a little restrained in their nasty so things weren't so bad in tones, so I couldn't judge this.

DSD distortion isn't subjectively But SACD was no problem and tamed by the Yamaha, which seemed room in an easy manner, without more able to place the music in the My harder sounding DVD-As were apparent; the best hi-fi brings you on the best, measuring a low 106dB.

was double that (+6dB) of budget players, so it was no surprise that response but -60dB distortion was resolved. The DSP-AX863SE has plenty of power, these figures being well above the 105 Watts specified into 8 Ohms. It will go very loud, as this is put through seven loudspeakers. Damping factor was high at 47, suggesting the Yamaha will have well controlled bass.

Via the 7.1 analogue inputs, which bypass the processor and provide best quality for external analogue connection, frequency response was a wide 2Hz-122kHz, so its full support for 192kHz sampling, which has an analogue bandwidth of 100kHz. Via the processor the upper limit is 22.5kHz, set by anti-alias filtering, and this limit applies to all other audio inputs unless Pure Direct (but not Straight) is selected.

Sensitivity was high at 240mV and distortion, mainly from the output stages, quite low at 0.02% at 10kHz, 1 Watt. The AX863SE is unlikely to display the slight coarseness of sound many receivers suffer and will handle external analogue connection well.

Processing of CD digital (i.e. 16bit at 44.1kHz sample rate) was fair. The processor has, via Pure Direct, a ruler-flat frequency response but at -60dB distortion was double that (+6dB) of budget players, so it was no surprise that EIAJ Dynamic Range was 6dB down on the best, measuring a low 106dB. There was more noise than usual dynamics with the Vivino Brothers, although saxophone was full bodied and harmonically rich. There was a lack of real airiness that I attribute to truncated bandwidth. Whilst Rock on SACD was entertaining it was smooth and slick rather than viscerally exciting. This didn't detract so much from classical though. Rachmaninov's Piano Concerto No2 played by Lang Lang sounding easy on the ear, if a little murky when orchestral strings rose to crescendos. A 2008 recording on Harmonica Mundi of Beethoven's Symphony No3 was clear and concise in placement of orchestral sections, with convincing string tone, smooth if a little restrained all round. Generally, the Yamaha's handling of DSD was a notch up on CD, sounding smoother, but did not fully exploit what SACD can do. It was enjoyable all the same.

Providing you press the Pure Direct button, the Phono input is no disappointment. It has an upper midrange sheen, that's for sure, but it doesn't overwhelm an otherwise lucid midband and atmospheric sound that had Alison Goldfrapp's breathy vocals drifting through my room in delightful fashion, from her new 'Seventh Tree' album. I was using a Nagaoka MP-500 £350 cartridge, granted, but an old-range MP10 or I1 wouldn't be out of place. One unexpected result is that the sound better digital - whoops!

CONCLUSION

The DSP-AX863SE was inconsistent, sounding lacklustre with CD, very good with 24/96 digital and pleasant with SACD, if no more. CD apart, I found it entertaining and with 24/96 PCM on DVD-A and Blu-ray downright impressive. With SACD it was enjoyable too, if not top notch, whilst LP was fine. In practice it will sound very good with most current replay material, but not all. Its digital processing needs to be improved, as does the handbook. Then its underlying strengths, notably a fine analogue section, will become more readily appreciated.
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Next Month in Hi-Fi World
WIN! Dynaudio Excite 12, Cyrus 6 CD & Amplifier system.
Last month I was lucky enough to have the opportunity to investigate one of the great commercial open baffle designs, namely the Wharfedale SFB/3. As I pointed out, the designer Gilbert Briggs found that positioning the SFB/3 alongside the side wall, angled towards the listener, and a metre from the room corner gave the best performance. Last month’s listening seemed to indicate that this was, indeed, the best position, so let’s analyse why.

First, we can take a look at the response in a position that most hi-fi users would automatically choose to place their speakers away from walls and corners. I’ve seen countless photographs of free standing open baffles and it is easy to be misled into thinking this is the best thing to do with baffled speakers.

Whether looking at open baffles, electrostatic or box loudspeakers I’ve never really been happy with speakers that need to be stuck in free space in order to deliver a balanced result, although I can understand the thinking behind it. Because speakers are traditionally measured in anechoic conditions the resulting designs naturally tend to gravitate towards a speaker which works independently of the room acoustics.

However, against that is the fact that room acoustics can never be dialled out of the equation where loudspeakers and rooms are concerned. In order to achieve a performance close to that measured in an anechoic chamber you’d have to play your speakers in a large open space like a field. Indeed, in the absence of an anechoic chamber, there were many designers, including Gibbs, who ended up measuring speakers hoisted clear of the ground in a quiet piece of countryside.

One of the problems with designing speakers for free standing is how do you take account of the inevitable interaction with the room in which they are eventually placed? There’s no real answer to this in fact most of the problems that users experience with free standing speakers are invariably concentrated in the bass.

This is hardly surprising when you look at what really happens as wavelengths get longer and stretch down to bass regions. Below 300Hz, reflections from the floor, ceiling and nearby walls start to add to the speaker’s output, unless the room is the size of a concert hall and the speaker hoisted clear of the floor.

As few listeners are prepared to put their speakers well away from rear and side walls, reflections from
Loudspeakers

these boundaries add considerably to the perceived output of the speaker below 150 – 200 Hz (the exact frequency of transition depending on distance from the walls). In addition the room is, of course, a closed box in itself and low frequency energy builds up with reflections from ALL the room boundaries. We call this 'room gain' and a speaker's output is boosted by progressively greater amounts as the frequency moves below 100Hz. Up to 9dB of room gain can be measured in smaller rooms.

If room gain and the effect of room boundary reflections was entirely predictable then, of course, it could be extremely useful in the design of all types of speakers. Using the increased bass output due to the room we could design either speakers with high sensitivity in the midrange and treble or small loudspeakers with no real bass output of their own.

In reality, rooms differ so greatly in their low frequency performance that trying to predict how a free standing speaker will behave in a room is like trying to choose the outright winner of a horse race. Yes you can read the 'form' but there are always too many variables to be able to know for certain what will and won't work.

As a result, speakers that are designed for free standing use and that have, or attempt to have, an extended bass response often end up delivering a lumpy, ill defined and, often, over-emphasised bass performance in typical living rooms. Listeners typically complain of bass 'boom' or 'weak' bass depending on where the reinforcements and cancellations of certain bass frequencies occur.

So, is there a method whereby we can predict how a speaker will behave in a room at low frequencies with a fair degree of predictability? Well we can have a good stab at it, if we assume close coupling of the speaker to two or three room boundaries.

The floor is an obvious one. It's always going to be there anyway so we can couple the speaker to it by placing a bass unit close to it and making sure the baffle stretches all the way to the ground i.e. a floorstander rather than a standmount.

Then, if we ask the listener always to place the speaker close to one wall, we have two boundaries to which we can couple the speaker. Each boundary theoretically gives

Traditional speaker measurement of an open baffle speaker on a hoist in a field

Drive unit arrangement of Wharfedale SFB/3
In room measurement of SFB/3 in Briggs' recommended position.

Specifically designed for boundary reinforcement? That's what I was interested in finding out.

Analysis of the free standing position shows, obviously, some bass reinforcement from the floor but, also obvious, is the bass light balance compared to the midrange output. By the way these measurements are taken using an average of three

SFB/3 placed across a corner to couple strongly to all room modes.

Effect of moving the SFB/3 0.3m away from the corner position.

Let's put that into perspective. Many hi-fi enthusiasts live quite happily with miniature stand mount speakers that struggle to emit any significant bass power below 60 – 80 Hz. And yet the owners of these speakers speak delightedly of the fantastic bass response achievable from their favourites, how come?

The answer lies in the way our ears perceive the reproduction of bass instruments. Although the fundamental frequencies developed by bass guitar and percussion do, indeed, lie in the 40 – 60Hz area, these are not the strongest output of these instruments. Like many musical instruments it is the harmonics that make up the majority of the character of sound that we, as listeners, appreciate.

On that basis, providing that a speaker can generate a strong output in a room through the 80 – 200Hz region,

extended bass response when we think about the lowest audible frequency of 20Hz but it is all a question of balance.

If your aim with your speaker design is to achieve as extended a bass response as possible then you wouldn't select an open baffle with which to achieve it! Surely the reason for choosing an open baffle is to achieve that open and uncoloured sound that comes from not having a box enclosing the drive units. All we can expect from a good open baffle design is to bring the bass power into balance with the midrange so that the speaker covers the full range of musical instruments.
A choice remark by Noel Keywood led me to investigate one more possibility to use the extra gain available from corner reinforcement. All we have to remember is that an open baffle is a dipole. As such it will have a null in output either side of the baffle. Could we point this null into the corner?

The answer is shown in the last graph. Here I’ve pointed the edge of the baffle into the corner. Amazing for a corner position, we’ve lost the peak at 120Hz and, instead, the bass output looks perfectly balanced with midrange! Could this be our perfect open baffle position?

Obviously, as far as the midrange is concerned, this is something of a disaster as the output of the mid unit is pointing towards the side wall, not towards the listener. But leave that out for the moment as I’m just interested in the bass for this analysis.

For the final graph I’ve overlaid this angled into the corner response with the best sounding side wall coupled response. You can see that, although the bass performance down to 80Hz looks great in the corner response there is very little reinforcement from the room below 80Hz. Not surprisingly the sound of the speaker at this position is ‘boomy’ and overblown in the bass region.

I wondered whether it was possible to achieve the best of both corner reinforcement and side wall coupling by moving the speaker marginally away from the corner by 200 – 300mm. A typical result is shown in the next graph taken at 0.3m from the corner. As you can see there is still considerable boost centred on 120Hz, the advantage here being that the dip at 200Hz has now levelled out. This position still exhibits the bass boominess when listening, however.

Experimental position for bass analysis only by pointing the baffle side nulled output towards the corner.

This will make that loudspeaker sound as though it has a tremendously powerful and apparently extended response. An 80Hz pure tone is deeper than you would think by just looking at the numbers. By comparison, a 40Hz pure tone, whilst sounding incredibly impressive when air is really moved strongly by, say, a large pipe organ, is felt as much as heard.

The reason I say ‘pure tone’ is because most speakers have a strong second harmonic output when fed with a 40Hz sinewave anyway. This makes most people think that 40Hz is a deep and powerful bass note when, actually, they are probably hearing more output at the 80Hz second harmonic. Older speaker designers, well aware of this effect, used to call this ‘frequency doubling’.

The upshot of all this is that, if you really want to hear the fundamentals of musical instruments in perfect balance with their harmonics, then you should be looking either to a large loudspeaker with a big diaphragm area or a large subwoofer. Otherwise delivering a satisfying bass performance is just a matter of delivering bass power where it really matters – in the 80 – 200Hz region with, perhaps, some extension to a -6dB point of 60Hz or thereabouts.

That is exactly what the SFB/3 does in its recommended position in the room, coupling to both side wall and floor and angled to avoid upper frequency standing wave reflections and cancellations.

Now the strongest bass output in any room is delivered by putting the speaker in a corner. Obviously this couples the speaker to all room modes extremely well, but is a little disconcerting unless the speaker has deliberately been designed to fit with this format. Due to the width of the SFB/3 we can’t fit it snugly into the corner; instead we have to place the baffle across the corner.

Let’s look at what happens to the measured performance when we do this. Yes, there is a significant increase in bass output, as expected, but it is centred around a boosted peak at 110Hz. This not only unbalances the bass to midrange performance but also, note, provides a dip in energy at 200Hz. Not surprisingly the sound of the speaker at this position is ‘boomy’ and overblown in the bass region.

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World Radio History
In this heavily revised section, you'll find the great and the good from audio's glorious past. Most are seminal designs which have earned their place in hi-fi history, but you'll also see some oddities which aren't classic as such, but are great used buys. The year of introduction is given, alongside the original UK launch price. Think we've overlooked something? Then write in and let us know!

**NAIM CDS** 1990 £ N/A
Classic Philips 16x4 chipset with serious attention to power supplies equates grill-inducing sonics.

**SONY CDP-101** 1982 £800
The first Japanese CD spinner was powerful and involving. Brilliant transport more than compensated for 16x2 DAC, and you even got remote control!

**SONY CDP-R1/DAS-R1** 1987 £3,000
Sony's first two boxers was right first time. Toned lean, but probably the most detailed and architecturally sounding machine of the eighties.

**TECHNICS SL-P1200** 1987 £500
CD version of the Technics SL-1200 turntable. Massively built to withstand the rigours of pro' use and laden with facilities - a great eighties Icon. Sonically, its pure fun, with hefty bass that can still show weedy modern players a thing or two!

**ESOTERIC PO** 1997 £8,000
The best CD drive bar none: TEAC's Tokyo boys pushed the boat out in style. Brilliantly incisive, ridiculously over engineered.

**KENWOOD 9010** 1986 £600
The first discrete Jap transport was beautifully done and responds well to re-clocking even today.

**DACs**

**CAMBRIDGE AUDIO DACMAGIC** 1995 £99
Good value upgrade for budget CD players with extensive facilities and detailed tone.

**MUSICAL FIDELITY TRIVISTA** 2002 £400
When playing SACDs, the sweetest, most lucid and lyrical digital disc spinner we've heard. Old school stereo, pure ODD design. CD sound is up in the £1,000 class, too! Future classic.

**DPA LITTLE BIT** 1996 £299
Rich, clean, rhythmic and punchy sound transforms budget CD players.

**PINK TRIANGLE DACAPO** 1993 £ N/A
Exquisite: the warmest and most lyrical 16bit digital audio we have ever heard. Clever plug-in digital filter modules really worked!

**QED DIGIT** 1991 £90
Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now passed its peak.

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**Classics**

**Turntables**

**Ariston RD11S** 1972 £94
Modern evolution of Thorens' original belt drive paradigm, Scotland's original super-deck was warm and musical, albeit soft. Still capable of fine results today.

**ADC Accutrac 4000** 1976 £300
Bonkers 1970s direct drive that uses an infra red beam to allow track selection and programming. More of a visual and operational delight than a sonic stunner.

**Pioneer PL-12D** 1973 £36
The beginning of the end for the British turntable industry. When vinyl was the leading source, this brought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PL-112D was off the pace compared to rivals.

**Pioneer PLC-590** 1976 £600
Sturdy and competent motor unit that performs well with a wide range of tonearms. Check very thoroughly before buying due to electronic complexity and use of some now-obsolete ICs.

**Dual CS505** 1982 £75
Simple high quality engineering and a respectable low mass tonearm made for a brilliant budget buy. Polished, smooth and slightly bland sound.

**Goldring Lenco GL75** 1970 £15.65
Simple, well engineered motor unit with soft, sweet sound and reasonable tonearm. Good spares and servicing support even today from specialists. Eminently tweakable. Similar 88 and 99 motor units are budget 301/TDI24 rivals.

**Linn Axis** 1987 £253
Detailed cut-price version of the Sondek complete with LVX arm. Elegant and decently performing mid-price package. Later version with Akiko tonearm better.

**Linn Sondek LP12** 1973 £86
For many, the Brit superdeck; constant mods made over the years, and capable of superb results even today.

**Marcanton TT1000** 1978 £N/A
Beautiful seventies high end belt drive with sweet and clean sound. Rare in Europe, but big in Japan.

**Michell Gyrodec** 1981 £599
Thanks to its stunning visuals, this bold design wasn't accorded the respect it deserved until recently. Early examples sound cold and mechanical, but now right on the pace. Clean, solid and architecturally sound.

**Technics SP10** 1973 £400
Semi-circle Japanese engineering. Sonics depend on plinths, but a well mounted SP10/II will give any modern a hard time, especially in respect of bass power and midband accuracy.

**Rega Planar 3** 1978 £79
Brilliantly simple but clean and musical performer, complete with Acos-derived S-shaped tonearm. 1983 saw the arrival of the RB300, which added detail at the expense of warmth. Superb budget buy.

**Garrard 301/401** 1953 £19
Heavy metal - tremendously strong and articulate with only a veiled treble to let it down. In many respects, better than the seventies 'superdecks' that succeeded it.

**Roksan Xerxes** 1984 £550
Supposedly the first to 'better' the LP12. Super tight and clean sound, with excellent transients. Less musical than the Sondek, but more neutral. Sagger plinth top-plates make them a dubious used buy.

**Sony PS-880** 1978 £800
First outing for Sony's impressive 'Biotracer' electronic tonearm. Built like a tank with a clean and tidy sound, albeit lacking involvement. Scarily complicated and with no spares support - buy with caution!

**Thorens TD124** 1959 £N/A
The template for virtually every 1970s 'superdeck'; this iconic design was the only real competition for Garrard's 301. It was sweeter and more lyrical, yet lighter and less impactful in the bass.

**Towenshend Rock** 1979 £N/A
The product of academic research by the Cranfield Institute, this novel machine has an extremely clean and fluid sound. Substantially modified through the years, and capable of superb results even today.

**Triol LO-7D** 1978 £600
The 'all-in-one' turntable package ever made. Triol/Kenwood threw their 'engineering best practice' book at this one with startling results. Clean, powerful and three-dimensional sound, ultimately limited by the tonearm.

**Tonearms**

**Acos Lustre GST-1** 1975 £46
The archetypal S-shaped seventies arm; good, propulsive and involving sound in its day, but ragged and undynamic now.

**Audio Technica AT-1120** 1978 £75
Fine finish can't compensate for this ultra low mass arm's limited sonics - a good starter arm if you've only got a few quid to spend.

**Alphason HR100S** 1981 £150
First class arm, practically up to present-day standards. Buy carefully, though, as there is no service available now. Totally under priced when new, exceptional.

**SME 3009** 1959 £18
Once state of the art, but long since bettered. Musical enough, but weak at frequency extremes and veiled in the midband. Legendary serviceability and stunning build has made it a cult, used prices unjustifiably high.

**Grace G707** 1974 £58
This early Japanese example of the tonearm art has a smooth, lyrical sound. Imported by Linn, fitted to early LP12s. Sonically way off the pace now, though.

**Rega RB300** 1983 £88
Inspired budget esoterica. Great, tight, neutral sound but tonally grey sounding in absolute terms. Responds well to tweaking, and its cheaper RB250 brother better still.

**SME SERIES III** 1979 £113
Clever variable mass design complete with Titanium Nitride tube tried to beat all things to all men, and failed. Charming nonetheless, with a warm and inoffensive sound.

**Hadcock GH280** 1976 £46
Evergreen unipivot with lovely sweet, fluid sound. Excellent service backup.

**Linn ITTOK LVII** 1978 £253
Arguably the first 'superarm'; Japanese design to Linn specs made for a muscular, rhythmic sound with real dynamics. Now off the pace, but the final LVIII version worth seeking out.

**Naim Aro** 1986 £875
Truly endearing and charismatic performer - wonderfully engaging mid-band makes up for softened frequency extremes.

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TECHNICS EPA-501 1979 £ N/A
Popular partner for late seventies Technics motor units. Nice build and Titanium Nitride tube can’t compensate for middling sound.

INTEGRATED AMPLIFIERS/COMBOS

DELTEC 1987 £ 1900
Fast, dry and with excellent transients, this first DPA integrated is the real deal for eighties obsessives. Radically punchy 80W per channel from a tiny, half-size box. Radical, cool and more than a little strange.

ROGERS A75 1978 £ 220
The prototypical Audiolab 8000a – lots of sensible facilities, a goodly power output and nice sound in one box. The later A75ii and A100 versions offered improved sonics and were seriously sweet and open to listen to.

EXPOSURE VIII/VIII 1985 £ 625
Seemal mid-eighties Exposure pre-power, offering most of what rival Naim amps did with just that little bit extra smoothness and sweetness. Still, it’s by no means ‘sweet’ by today’s standards, being lean, punchy, musical. It’s also possessed of that quintessentially eighties look – frumpy black steel boxes with rough silk screened logos!

SUGDEN CS1/PS1 1976 £ 130
Soft sounding early Sugden combo with a plethora of facilities and filters, complete with seventies-tastic DIN socketry. A sweet and endearing performer as you’d expect, but lacking in power and poor load driving ability, so partner carefully.

VTI MINIMAL/50W MONOBLOCK 1985 £ 1,300
Vacuum Tube Logic was one of the Europe’s biggest tube names in the eighties, and it shows. Rugged, professional build and finish allied to a lively and punchy sound (albeit with limited power) make them an excellent used buy.

A&R A60 1977 £ 115
Sweet and musical feature-packed integrated: the Audiolab 8000a used its blueprint to great effect.

CREEK CAS4040 1983 £ 150
More musical than any budget amp before it: CAS4140 loses tone controls, gains grip.

AUDIO LAB 8000A 1985 £ 495
Smooth integrated with clean MM/MC phono stage and huge feature count. Extremely reliable, too. Post ‘93 versions a top used buy.

MCINTOSH MA6800 1995 £ 3735
Effortlessly sweet, strong and powerful with semnal styling to match.

SUGDEN A21 1969 £ N/A
Class A transistor integrated with an eminently likeable smoothness and musicality. Limited inputs via DIN sockets.

MISSION CYRUS 2 1984 £ 299
Classic eighties minimalism combines arresting styling with clean, lively sound. Further upgradeable with PSU power supply.

MUSICAL FIDELITY A1 1985 £ 350
Regaling Class A integrated with exquisite styling. Questionable reliability.

NAIM NAIT 1984 £ 1,400
Superb rhythms and dynamics make it truly musical but tonally monochromatic. Fine output valves, even has a half useable phono stage.

MYST TMA3 1983 £ 300
Madcap eighties minimalism, but a strong and tight performer all the same.

ROGERS CADET III 1965 £ 34
Sweet sounding valve integrated, uses ECL86 output valves, even has a half useable phono stage, sweet, warm a good introduction to valves.

ROTEL RA-820BX 1983 £ 139
Lively and clean budget. Integrated that arguably started the move to minimalism.

CHAPMAN 305 1960 £ 40
Smooth pre/power combo with a sweet and open sound. Not quite up to Leak/Quad standards but considerably cheaper second-hand.

PREAMPLIFIERS

AUDIO LAB 8000C 1991 £ 499
Tonal grey but fine phono input and great facilities make it an excellent general purpose tool.

AUDIO RESEARCH SP-8 1982 £ 1,400
Beautifully designed and built high end tube preamplifier with deliciously sweet and smooth sound. Not the last word in incision or grip, but that didn’t matter to those who aspired to it.

CONRAD JOHNSON MOTIV MC-8 1986 £ 2,500
Minimalist FET-based preamplifier from the Tank valve specialists is brilliantly neutral and smooth with a spry light balance in the mould of Sugden high end stuff. Something of a curio, but worthwhile nonetheless.

CROFT MICRO 1986 £ 150
Budget pre-amp with exceptionally transparent performance.

LEAK POINT ONE STEREO 1958 £ N/A
A brave attempt by the Glasgow boys to bring retronic controlled user-friendliness to hair-shirt audiophile hi-fi. Didn’t quite work, but not half bad for under £100.

NAIM NAC32.5 1978 £ N/A
The Salisbury company came of age with this, their classic high end pre. Brilliantly fast and incisive sound that’s a joy with vinyl but a tad forward for digital.

LECON A-1C 1973 £ N/A
Amazing styling courtesy of Allan Boothroyd can’t disguise its rather cloudy sound, but a design classic nonetheless.

QUAD 22 1958 £ 25
The partner to the much vaunted Quad II monoblocks - cloudy and vague sound means it’s for anachronies only.

QUAD 33 1968 £ 43
Better than the 22, but Quad’s first tranny pre isn’t outstanding. Responds well to tweaking/rebulding though.

POWER AMPLIFIERS

HH ELECTRONICS TPA-50D AMPLIFIERS 1973 £ 110
Simple design with easily available components, solid build quality and fine sound make for a surprisingly overlooked bargain. Not exactly stylish, however.

LEAK STEREO 40 1958 £ N/A
Leak’s biggest valve power amp offers 35 Watts per channel and more low end welly than the smaller Stereo 20. Despite concerns over reliability their rarity means high prices are the order of the day.
LEAK STEREO 20 1958 £31
Excellent workaday classic valve amplifier with decent power and drive. Surprisingly modern sounding if rebuilt sympathetically. Irrepressibly musical and fluid.

LEAK POINT ONE, TL10, TL12 1 1949 £28
Early classics that are getting expensive. Overhauling is de rigueur before use, using original parts if possible. Surprisingly crisp and musical sound, that's far more modern than Quad II. Deeply impressive when in fine fettle.

PHONO STAGES
CREEK OBH-8 SE 1996 £180
Punchy, rhythmic character with oodles of detail makes this a great budget audiophile classic. Partner with a Goldring G1042 for an unbeatable budget combination.

LECCSON API 1973 £ N/A
Madcap cylindrical styling allied to its 'tower of power' pretensions, but it wasn't. Poor build, but decently clean sounding when working.

REVOX B760 1975 £520
More of a semi-pro machine than a domestic bit of kit, the Revox offers superbly measured performance although the sound isn't quite as staggering as the numbers. Fine nonetheless, and surely the most durable tuner here?

MUSICAL FIDELITY XA200 1996 £10000 PR
200W of sweet smooth transistor stomp in a grooved tube! Under-rated oddity.

LEAK NOSE 1.1 1986 £240
Supreme ergonomics and styling allied to low prices and good availability make this the best tuner on the planet — and we're not talking vintage heat dissipation here. This reworking of Radford's original late sixties design was possessed of a wonderfully rich, old school valve sound with enough power (25W) and lots of subtlety.

LEAK TROUGHLINE 1956 £25
Series I is an interesting ornament but limited to 88-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo via phono multiplex socket, fed by a modern outboard decoder they're deliciously lucid with true dimensionality.

LEAK STEREO 20 1958 £115
The first of the current dumpers is a capable design with smooth, effortless power and a decently musical sound. 606 and 707 continue the theme with greater detail and incision.

NAD 4140 1995 £199
Excellent detail, separation and dynamics — brilliantly musical at the price. T40 continued the theme...

LEAK STEREO 20 1958 £31
Excellent workaday classic valve amplifier with decent power and drive. Surprisingly modern sounding if rebuilt sympathetically. Irrepressibly musical and fluid.

NAIM NAIT3 1993 £595
The warm, atmospheric sound is further proof of Naim's proficiency with tuners.

NAD 4040 1979 £79
Tremendously smooth and natural sound allied to low prices and good availability. Makes this budget analogue esoterica. Needs a good antenna to work properly, however.

PHONO STAGES
CREEK OBH-8 SE 1996 £180
Punchy, rhythmic character with oodles of detail makes this a great budget audiophile classic. Partner with a Goldring G1042 for an unbeatable budget combination.

ROGERS T75 1977 £125
Superb mid-price British audiophile design, complete with understated black fascia. Fine sound in the true Rogers mould — smooth and sweet with fine dimensionality.

PYREX RCA 7100 £19
Gorgeous styling. Partnered with the £1650 Orca this sounds delicious!

TUNERS
MARANTZ ST-8 1978 £353
Marantz's finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.

SANSUI TU-9900 1976 £300
A flagship Japanese tuner designed to steal sales from the likes of Accuphase and Revox, it boasts superlative RF performance and an extremely smooth and lucid sound, along with very fine build and finish.
SONY ST-5950 1977 £222
One of the first Dolby FM-equipped tuners, a format that came to naught. Still, it was Sony's most expensive tuner to date and boasted a very good sound quality allied to brilliant ergonomics.

SEQUERRA MODEL 1 1973 £1300
Possibly the ultimate FM tuner. Massive in terms of technology, size and features dedicated to extracting every ounce of performance from radio, including impressive multi-purpose oscilloscope display.

TECHNICS ST-8080 1976 £180
National Panasonic's specialist hi-fi brand was a big hitter back then, and this is no exception. Superb FM stage makes for a very clean and smooth listen with lots of detail and depth.

ANALOGUE RECORDERS

YAMAHA TC-800GL 1977 £179
Early classic with ski-slope styling courtesy of Mario Bellini. Middling sonics by modern standards, but cool nonetheless!

AIWA XD-009 1989 £600
Aiwa's Nak beater didn't, but it wasn't half bad nonetheless. Massive spec even included a 16x4 DAC!

NAKAMICHI CR-7E 1987 £800
The very best sounding Nakamichi ever - but lacks the visual drama of a Dragon.

PIONEER PDR-555RW 1999 £480
For a moment, this was the CD recorder to have. Clean and detailed.

MRANTZ DR-17 1999 £1100
Probably the best sounding CD recorder made; built like a brick outhouse with a true audiophile sound and HDCD compatibility.

LOUDSPEAKERS

ACOUSTIC RESEARCH

AR185 1978 £125
Yank designed, British built loudspeaker became a budget staple for many rock fans, thanks to the great speed from the paper drivers, although finesse was most definitely not their forte...

SPENDOR BCI 1976 £240
Celestion HF13000 tweeter meets bespoke Spendor Bextrene mid-bass unit - and the result is a beautifully warm yet well focused sound. A little bass bloom necessitates careful low-stand mounting, but these prove that the seventies did have some fine designs after all!

QUAD ESL57 1956 £45
Wonderfully open and neutral sound puts box loudspeakers to shame. Properly serviced they give superb midband performance, although frequency extremes less impressive. Ideally, use in stacked pairs or with subwoofers and super-tweeters.
KEF R105 1977 £785
Three way Bexrrene-based floorstander (complete with castors!) gave a truly wide-band listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace. The quintessential nineteen seventies loudspeaker.

IMF TLS80 1976 £550
Warm and powerful nineteen seventies behemoth with transmission loading and a mixture of KEF and Celestion drive units. Impressively physical wideband sound but rhythms aren’t its forte.

MAGNEPLANAR SMGA 198X £800
Technological loudspeaker with genuinely musical abilities; fast, smooth, open, dry.

MISSION 770 1980 £375
Back in its day, it was an innovative product and one of the first of the polypropylene designs. Warm, smooth, clean and powerful sound.

MISSION 752 1995 £495
Cracking Henry Azima-designed floorstanders combined HDA drive units and metal dome tweeters with surprisingly warm results. Benign load characteristics makes them great for valves.

HEYBROOK HB1 1982 £130
Peter Comeau-designed standmounters with an amazingly lyrical yet decidedly refined sound. Good enough to partner with very high end ancillaries, yet great with budget kit too. A classic.

CELESTION SL6 1984 £350
Smallish two way design complete with aluminium dome tweeter and plastic mid-bass unit set the blueprint for nineteen eighties loudspeakers. Very open and clean sounding, albeit course at high frequencies and limp in the bass. Speakers would never be the same again...

LEAK SANDWICH 1961 £39 EACH
Warm sounding infinite baffle that, with a reasonably powerful amplifier can sound quite satisfying.

MISSION X-SPACE 1999 £499
The first mass production sub and sat system using NXT panels is a sure-fire future classic - not flawless, but a tantalisingly unboxy sound nevertheless!

QUAD ESL63 1980 £1200
An update of the ESL57, with stiffer cabinets. Until the 989, the best of the Quad electrostats.

YAMAHA NS1000 1977 £532
High tech Beryllium midband and tweeter domes and brushtail 12" woofers in massive sealed mirror image cabs equals stunning transients, speed and wallop allied to superb transparency and ultra low distortion. Partner carefully!

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THE KINGSTON TRIO
Turning Like Forever: Rarities Volume Two
Collector's Choice Music

It may be a little difficult to believe, but this group represents a landmark in musical history. More than that, The Kingston Trio is but one of a handful of artists who have, like a dam plonked in the centre of a river, actually changed the course of music itself. A folk group, the three band members - Dave Guard, Nick Reynolds, and Bob Shane — created a harmonic vocal sound partnered by their acoustic music accompaniment of guitar and banjo.

As a group, they made folk a popularist genre. Indeed, they ruled the folk roost during the late fifties and early sixties. However, their importance was more than picking up an entire musical genre, single-handed as it were, and making it vital and a force in music. Without The Kingston Trio, it is almost certain that we wouldn't have had Bob Dylan, Peter, Paul & Mary or Pete Seeger...

As an important part of musical history, Collector's Choice has done all Kingston Trio and folk fans a great service by compiling a second collection of rarities. So what you get here are thirty six tracks of varied and intriguing cuts. They include an instrumental version of 'Stories Of Old', an alternate take of 'Go Tell Roger' and an unreleased track called 'January Summer'. Sometimes you'll hear different vocal arrangements such as in 'Love's Been Good To Me'. You also get a radio interview plus a number of additional fascinating radio spots including some radio jingles and a chance to plug their latest album, at that time, 'Sunny Side'! Other promo recordings for radio include those made for KCPX in Salt Lake City, the home of DJ Bill Terry, who helped launch the group in the first place.

KATHLEEN EDWARDS
Asking For Flowers
Rounder/Decca

Kathleen Edwards, a singer-songwriter and guitar player, has handpicked a style from a selection of genres and made the resultant creative risotto her own. There's elements of country here as well as rock, and smatterings of folk that add flavours of authenticity. Like any good singer-songwriter, she is in love with words. How they feel on the tongue, how they blend with others to shape a song and how the audience reacts to them. She does have a soft spot for swear words, however (witness the track, 'Sure As St'!).

My camp counsellor once put it like this," said Edwards, "she said 'the reason that you swear a lot is because you're not smart enough to fill in the blanks with words that you don't know. And I thought that was actually a great point. And from that point forward, I realized that I didn't want to be gratuitous in my cussing. And that it actually is a lot more interesting to have words that have the same meaning, but they're legal.'

She also takes inspiration from real-life events. Including the sorry tale of Alicia Ross, reported missing, then later found murdered by her next door neighbour. "Part of the reason I think I was so struck by this story was because I really just saw my mother," said Edwards. "You know, how could a parent get up out of bed every morning after knowing that that's the fate that their child met? And all the years that they spent nurturing their child, and trying to keep them safe and protected."

Like the title that fronts it, this new album is a bit of a grower. It melts into your subconscious like a dollop of cream on the top of a glass of hot chocolate.
**PHIL ROBSON**

*Six Strings & The Beat*

Stemming from the increasingly popular Babel record label, Robson, renowned jazz guitarist and co-leader of the band The Partisans, has successfully accomplished a difficult task—plugging a string quartet into a jazz set-up and making it work.

Sounding vaguely Bill Frisell-like, the album wholly benefits from the strings as they both add counterpoint but also their own unique 'improv' moments. Label owner and executive producer on the album Oliver Weindling always has sound quality in mind when he produces his works. This begins with the choice of studio, for example—in this case Eastcote. It was chosen because, 'the atmosphere there was a bit gutsier the engineer has worked with Ian Dury but also had a broad understanding of music and could place Robson into context.'

The process of recording a jazz album is very different to recording a pop album. Jazz demands more of an 'as live' approach in the studio. Which may explain why jazz albums tend to be turned over quickly. Robson recorded this album in just two days, said Weindling. 'his group with the strings had already done four or five gigs and they were well played in. They also wanted to keep the tension of the performance within the final album. They knew they could add overdubs and edits later but they didn’t want to. They have a great degree of probity.'

The band were well prepared—no staring at walls and scratching of arses here. The strings alone contain complex arrangements with definite Bartok influences yet Robson was in the studio from 10am to 7pm for just two days—job done. There are still a few blemishes left on the recording but they just add to the vitality and angularity of the album which is highly recommended.

**JUNIOR KIMBROUGH**

*All Night Long*

Fat Possum

Kimbrough was one of the most significant blues guitarists of the modern age. He commanded total respect from his neighbours—and not just because he had thirty-six children—'He was a sweetheart and a legend but was also the man. no-one messed with Junior,' said Fat Possum’s Licensing Director, Bruce Watson. Kimbrough redefined the blues genre and was a hero to many contemporary artists such as U2 and Iggy Pop.

'The fact that the recording was analogue of the most basic kind helped to make the Fat Possum 'sound', and we pretty much kept that sound, even when we could later afford a nicer studio. We aimed to keep it raw and never be too produced.'

Fortuitously, this provided a perfect complement to Kimbrough’s style. If the label had dragged the man into an expensive studio, the chances are that his overall performance would have been castrated. On ‘All Night Long’, Kimbrough is revealed as a raw performer. His deep groove, elemental guitar and almost improv style is perfectly backed via fluid bass and drums.
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M y earliest memories of hi-fi go back to the nineteen seventies, which makes me young enough to be dismissed as merely a 'boy' by our more senior readers, and old enough to be described as 'fossilised' by our younger ones. Still, it's not such a bad time to be able to remember, because hi-fi was sufficiently different then to show me what's happening now.

Of course, the world was a very different place back then. At the time when ABBA were making early assaults on the charts, disco was all the rage and it was quite unnatural for me to be able to appreciate how glittering, jewel-like thing which, along with the semi-detached with an integral garage and a Ford Cortina 1.6GL [a 2.0 Ghia, surely?! — AS], was regarded as one of the most important things in life to aspire to.

This isn't to say that the hi-fi equipment itself was particularly worthy of the esteem in which so many people held it. To be honest, the fast-growing consumer electronics giants of the day (Sony, Hitachi, Panasonic, etc.) had cottoned on to the fact that this was a very good way to sell boxes of electrical circuitry to the world's public — and were pursuing this goal in earnest. Hi-fi of the nineteen seventies was vulgar — in both original meaning of the word (i.e. 'for the multitudes') and in the modern sense too ('crude').

Whilst classic-crazy audiophiles might look back on that time with a sense of fascination — drooling at the sight of high end Denon DP-3000 turntables, Pioneer RT-909 open reel and Pioneer TX-9800 tuners — let's not forget that about ninety nine percent of what went under the name of hi-fi back then wouldn't make it to market now, so bad it would be seen to be.

The recipe was simple; take a standard transistor amplifier, put it in a big box with a thick brushed aluminium front panel; add chunky spin alloy knobs and some big meters and let the public's insatiable appetite for anything shiny and new do the rest. Inside, of course, it was a different story — a generic circuit with the cheapest possible passive components (and lots of them; this was before op-amps), wiring as thick as horsehair and the smallest possible frame type transformer you could get away with...

No one would be able to sell such stuff now — but not because the buying masses wouldn't accept such tat. Rather, it's down to the fact that this was before op-amps), wiring as thick as horsehair and the smallest possible frame type transformer you could get away with...

Meanwhile, the very people who sell this don't seem terribly interested in engaging with the mass market. I've heard tales of many specialist retailers scoffing at iPods and their ilk, alienating precisely the sort of potential customers they should be chasing. It's as if they've pulled up the drawbridge and are looking down from the castle battlements, cursing and swearing at the 'proles' below who've keep them in business...

Still, I think I'm beginning to sense a shift in this unhappy state of affairs. Gradually, we're seeing a 'sea change' in specialist hi-fi, as the retail trade is beginning to embrace the demon MP3 (or should that be AAC), and manufacturers are finally launching crossover products that give today's mass music buyers a stepping stone back to real hi-fi again. This is absolutely necessary if hi-fi does not, to coin the phrase, "eat itself".

An ever smaller group of specialists making ever more specialist hi-fi for a shrinking demographic isn't exactly a business model to die for.

I think serious hi-fi manufacturers have a responsibility to make more mass market fare; we need to see modern equivalents of all those old Japanese music centres and 'casseivers' that once dominated the likes of Laskys. And we also need a more proactive, crusading even, attitude from hi-fi dealers — this means expert but friendly advice, along the lines of the 'demcraft' courses run by BADA which aim to raise standards and skills amongst dealers.

Put these two sides together and there's surely a future for hi-fi — after all, listening to music will never go out of fashion. What we're fighting for though is the right to be the ones to make this possible.
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Whenever I review a CD or vinyl album, I try to give you a sense of where it has come from. Sometimes I focus on creative roots, especially if the album is a new production, and on other occasions I concentrate on its productive heredity, especially if the work in question is a reissue.

Indeed, there’s an awful lot that can be said about the sound quality of any aural work by examining each step of its production. They used to say that the camera doesn’t lie but, in this digital age, we know that just isn’t true. Similarly, it was said that what the ear beholds must be the truth, and we also know in our times what the ear beholds must be the truth, and we also know in our times what the ear beholds must be the truth, and we also know in our times what the ear beholds must be the truth, and we also know in our times what the ear beholds must be the truth.

When a group decides to record a song - before that song emerges from a (hopefully half-decent) hi-fi - they have to contend with the quality of their own musical equipment, the shape of the studio room, microphone placement, the skill of the engineer, the recording equipment, the cutting equipment and so on. It just takes one of these steps (plus others I don’t have space to include) to go awry and the whole musical production falls flat on its face.

With the launch of a remastering project, however, it is sometimes possible that you can go back and right wrongs. My coverage of BGO Records’ (www.bgo-records.com) Savoy Brown reissue project [see Classic Cuts, p130] showed that it is possible to do just that. Andrew Thompson, the mastering engineer on the Savoy Brown project, was able to explain a range of specific changes about how exactly the overall performance was improved. Mastering as a force for good, as it were.

Take the reissued Savoy Brown album, ‘Getting To The Point’. Thompson was able to detail some of his mastering tweaks. “On track 1, at 63Hz I added 3dB to enhance the bass presence. I also altered the bandwidth a couple of times. I introduced a narrow-band at 63Hz and a wider band at 12Hz. Affecting a frequency with a wide band means you also affect neighbouring frequencies: 60Hz and 66Hz in the former’s case, whereas a narrow band change is more pin-point.”

This shows how, for example, a mastering engineer can at the same time reduce the general bass of a drum kit, increase the floor shaking bass of a bass drum and also tighten up a bass guitar without ruining the overall sound.

Here’s another instance. “Specifically, track four, left-hand channel I added a narrow band at 3kHz to bring out some definition. This is a very revealing frequency. If something sounds a bit muffled on one channel you can push a snare or a guitar. If you push a guitar sound however, the vocal on the same track could sound horrible. So, it’s a question of balance. Same track, right-hand channel, I’ve taken away, at 125Hz, a couple of dB. This is the upper bass/lower mid that would affect the boomy, boxy, hard sound. You sometimes get the wrong kind of thud on a drum in this area. It can also adversely affect the vocal,” said Thompson.

There were plenty of additional changes made by Thompson, of course, but the above gives you an idea of how the whole personality of the record can be changed and, in this case, improved by clever, deliberate editing. Which just goes to show how important the role of a mastering engineer is. He is the hidden face behind the stars. The conductor, if you will, whose skill and personality can make or break any record, new or old. He is the ultimate controller of the journey of sound. Which is of course why talented mastering engineers are so valued and in such high demand.”
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new applications will only emerge once super fast broadband becomes widely available. Interesting times lie ahead...

steven green

Broadband in the UK received a much needed shot in the arm recently when BT announced that it's planning on rolling out 'super fast' broadband to 10 million homes - about 40% of all UK households - by 2012, at a cost of £1.5 billion.

BT said that it would roll out the technology using a combination of fibre-to-the-home (FTTH) and fibre-to-the-cabinet (FTTC), although BT's press release said that FTTH deployment "will be focused primarily on new-build sites", so it sounds like the vast majority of people will receive coverage via the far more limited FTTC.

The difference between the two technologies is that, with FTTH, the data would travel over fibre-optic cable for the whole journey from the Internet right the way into people's homes, whereas FTTC would consist of BT laying fibre-optic cable as far as the roadside telecoms cabinets, and the final leg of the journey would still consist of data travelling over copper telephone wires - most likely using ADSL2+, which is a faster version of ADSL. What matters most to users, though, is the download speeds, and BT said that people using FTTH would see speeds of 100 Mbps, with the potential of seeing over 1,000 Mbps in future. Those connecting via FTTC would see speeds of up to 40 Mbps, but BT added that it's "investigating technologies that can increase those speeds to more than 60 Mbps".

BT claimed that it would introduce the technology to rural as well as urban areas but, considering that the cost of rolling out fibre nationwide has been estimated to be around £15 to £18 billion, and BT is only planning on spending £1.5 billion to cover 40% of the population, I think it's unlikely that people living outside of the towns and cities will be amongst the 40% who will receive coverage. BT said that it would consider extending coverage after 2012 though, so long as there's sufficient demand from consumers. Personally, I think the issue of super fast broadband access could turn into a repeat of what happened when broadband was first rolled out, where people from rural areas put pressure on the government to make sure that broadband was provided in their area, and I think virtually everybody will end up getting access eventually.

One of the main reasons why I imagine BT has taken this decision is that it would otherwise face losing a lot of customers to Virgin Media, which is due to launch a 50 Mbps broadband package on its cable network over the coming months. Virgin's chief technology officer Howard Watson also trumped BT's announcement of 40 to 100 Mbps download speeds by saying, "we are setting ourselves a vision of households using 200 Mbps by 2012".

Virgin's cable network, which covers over 50% of the population, works in a similar way to FTTC, with fibre-optic cable going as far as local neighbourhoods, then copper wire is used to deliver the signal into people's homes. However, Virgin's "hybrid fibre-coax" cable network has the inherent advantage that the coaxial cable that goes into people's homes can carry far higher data rates than the thinner telephone wire that BT will be using, so BT's FTTC will always be playing catch-up to Virgin's cable broadband.

Another factor that I think will have influenced BT is that mobile broadband is growing very quickly, and one City analyst firm even predicted recently that there will be 2.1 billion mobile broadband subscribers by 2015 - in comparison there were 367 million fixed-line broadband subscribers at the beginning of this year. The bulk of those 2.1 billion users would simply be paying for the ability to surf the Web on their mobile phone or laptop, but mobile broadband is also going to get far faster over the next few years. A perfect example is the upcoming release of the 3G LTE (Long Term Evolution) system, which could provide significantly higher download speeds for home users than the 10 Mbps that BT estimates "the majority" of users would receive via ADSL2+ - which is the fastest type of broadband BT will provide, short of using the fibre-based technologies.

So if BT didn't provide higher broadband download speeds, I think a lot of people would switch to using mobile broadband instead. 3G LTE is also only a 3.9G technology, and true 4G systems will supposedly offer download speeds of up to 1,000 Mbps to stationary users. Consequently, roll-out of the 4G systems could well force BT into deploying FTTH to a greater percentage of the population, as well as putting more pressure on it to provide FTTC to everyone else.

Both the fixed-line and mobile broadband providers cite HDTV and HD video in general as being the main applications that will drive demand for faster broadband, as well as other bandwidth-hungry applications such as online gaming and teleconferencing. However, HD is the most obvious application that super fast broadband would enable, and nobody predicted the phenomenal success of user-generated video content on YouTube. so I think there will be a few other highly successful applications that will only emerge once the very fast speeds become widely available. Interesting times lie ahead.
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"a future where we download music from the internet to a hard drive isn't one I'm looking forward to..."

noel keywood

I use computers - but don't like them! Worse, I have a horrible sense they are getting ever closer as necessary for music listening and very soon I will be forced to accept downloading music from the 'net and playing it from a system with a computer in it...

That for me will be a sad day. Call me old fashioned, but I don't want the message split from the medium, where music is just a file on a hard drive. Nor do I want to be forced to use remote controls, servers, wireless routers and suchlike paraphernalia to listen to music. I know the benefits; it's the drawbacks that make me baulk.

To listen to music I can choose an LP from my reasonably well ordered collection, switch on the Garrard with a satisfying clunk, place LP on turntable, cue up, lower tonearm on to disc, then sit back and enjoy. I have been doing this now for longer than I dare admit(!) and cannot remember the turntable ever telling me I don't have permission to do what I'm doing or that I have performed an illegal operation - unlike a computer, especially one with Windows Vista on it.

Mistracking may occur I know, but it's not an onset-of-death experience. It will be just a temporary blemish in the listening experience, a minor irritation. The LP may suffer a little groove damage but it will be playable and enjoyable, now and into the future. It isn't about to be torn to pieces by the cartridge or made unusable in any other way. I know this because I have hundreds of LPs played by dodgy devices over the years, like a Shure M55E I once owned, and they are with me today still providing enjoyment.

That's durability for you, a degree of durability computers do not have. Mistracking of that tiny lightweight head in a disc drive is an altogether different matter. When it starts to happen only the shortest warning is provided by data corruption before the whole shebang goes skyward and, if you haven't backed up, you've lost everything. It's total wipe out with no recovery whatsoever. This is impossible with LP.

Backup is the answer! But when you back up, it is usually to another hard drive and this, it seems to me, is placing faith in something that has just let you down, which hardly sensible! Okay, so there are server farms around the world running thousands of RAID array SCSI discs that guarantee data integrity; but somehow I am deeply suspicious about storing music's valuable to me out there in cyberspace. I know my music will be on a drive somewhere, but where? Having faith in online storage isn't me; I have an iDisk on my desktop but never did get to use it.

And how much will it cost me to keep my music safely for the sort of period my LPs have sat trustily on shelves at home? Some of those LPs - especially an almost mint set of Beatles Factory Samples have indeed gone up in value. That isn't something that will ever happen to music stored in cyberspace.

I was reading wise words not so long ago about how music was a fleeting pleasure before Edison's gramophone arrived and that we all just had to get used to it being like that again - but wasn't convinced. The tide has turned against contrived views like this. Nowadays people are starting to realise that music issued on LP is best not separated from the music and the LP together encapsulate a period in time and really are as one when looked at like this, an historical record in effect. Together they can also hold fond memories for their owner, much like a family photograph. That was just one reason I chose not to throw away my LPs when CD came along.

It's also why I value them ever more as time goes on. Yes, LP sounds better than CD, but there's more value to them than just their utilitarian purpose. You can't say this about hard drives!

I have the tools and ability to record my LPs to a server in whatever digital code I choose, but see no point in doing so. My LPs are fine as they are and need no attention whatsoever, one reason why they are so wonderful. Whether a music server will enhance my enjoyment of them, I doubt somehow. Stabbing at tiny unlit buttons on a remote control in the dark is something I do with the AV receiver and it isn't the exciting bit.

I once took to iTunes but the love affair was short lived, ceasing abruptly when the hard drive expired, together with all the music I had bought. It's a great service and I keep telling myself I should sign up again and spend a bit more time trying to sort out how to respin the library and do all those housekeeping things one must do to keep such a library safe, but perhaps tomorrow.

My scepticism was strengthened recently when I purchased a LaCie Terrabyte drive for storing video. It lasted a few months before expiring. Luckily, I found a user forum where others had suffered the problem and diagnosed it to failure of the controller, not the drives. I got all my video back by removing the two 500GB drives and installing them into the host computer. It was a close shave and another reminder never to trust computer hard drives.

So you see, a future where we download music from the internet to a music server with a hard drive inside is not one I'm not looking forward to. I thank heavens for an LP collection that will see me through hard drive failures!
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**The experts in home entertainment**
Overall component synergy is the most important aspect of assembling a good hi-fi system...

adam smith

Well, the builders are still working hard on our kitchen and, despite adding turntable number 32 to the Smith collection at the weekend (Sonab 65S in case you were wondering), I still have no space, worktop or suitable dust barrier to allow me to start fiddling with it, or any other of the recent arrivals. As a result, I have found myself spending more time than is strictly good for me staring into space and thinking profound thoughts.

The main topic occupying my brain recently has been loudspeakers, thanks to a good few weeks of measuring, listening and generally humping around the contenders from this month’s £2,000 floorstander group test [Note to Editor — more good for me staring into space and surrounded by my fellow big oversampling versus oversampling that one again, twenty years on?), non direct drive (who thought we'd hear continue with regard to belt versus the reproduction chain. Yes, debates their music-making in different ways. This proved very interesting as pretty small standmounter group tests this month’s £2,000 floorstander thanks to a good few weeks of thinking profound thoughts.

In many ways, the humble loudspeaker is probably one of the most controversial components in the reproduction chain. Yes, debates continue with regard to belt versus direct drive (who thought we'd hear that one again, twenty years on?)? non oversampling versus oversampling DACs, DAB versus FM and various others, but loudspeaker debates seems much more passionate and far-reaching...

In one corner you have me, surrounded by my fellow big floorstander supporters, in the second are the small standmounter fans and in another the electrostatic enthusiasts. A fourth contains the full range driver brigade, who are waving cheekily at the horn guys in the next corner and somewhere in the distance of this multi-cornered shape I appear to be conjuring up are the omnidirectional lovers. There are a whole myriad of ways of approaching the turning of an electrical signal back into sound and we all have our own particular preferences.

It has always been my opinion that the loudspeaker has the biggest effect on the sound of a system. Whilst I feel that overall component synergy is the most important aspect of assembling a good hi-fi system, if someone brought out the thumbscrews and forced me to nail my colours to one particular mast, it is the loudspeaker I would point at as being the component that brings about the most dramatic changes.

It is precisely because these items can have such a large effect on the sound that makes choosing them a tricky prospect. Even if you have drawn up a shortlist and organised a demo, the problems do not end there. Imagine you have two pairs set up for comparison: pair A with a rising treble response and pair B with a falling one. No matter how good both designs are, the simple fact remains that if you listen to pair A followed by pair B, then pair B will most likely sound dull, whereas if you reverse the order, pair A will probably sound bright. As a result of this, it is always worth listening to multiple contenders in a variety of different orders.

Another issue can rear its ugly head when you find more than one pair that you would be happy to live with. I found this in this month's test, as the Dali Mentor 6s, Totem Hawks and Monitor Audio GS20s all proved to be absolutely first class designs and choosing between them was an interesting prospect. Ultimately though, the Monitor Audios were the natural choice as winner, as they basically did not put a foot wrong during the time I spent listening to them on a variety of amplifiers, sources and musical material. They repeatedly proved themselves to be an exceptionally capable pair of loudspeakers with no flaws worth worrying over.

The problem is that this does not mean that the Totems or the Dalis should automatically be discounted (nor indeed the KEFs and PMCs, as these were equally impressive in their own ways). The Mentor 6s were hugely detailed but just a little too ‘toppy’ for my liking on most of the amplifiers with which I tried them. The only exception being a low-powered valve design with a rather soft top end, where the two balanced each other perfectly — system synergy in action!

The Totems were an even more tricky case. If anything they are even more dependent on matching than the Dalis, thanks to their low sensitivity, relatively low damping and necessity to experiment with mass loading for optimum performance. That said, I freely hold my hand up and confess that I think they're brilliant, and have done since I first heard them about five years ago. What Totem have done with small cabinets, and the sheer punch, gusto and downright enjoyability of the result makes them highly persuasive units. All in all, this proves that an extended home demo is by far the best way to make your decision.

Frankly, it was something of a light relief to have another spanner thrown in the works, namely smell! I have never before noticed two components with such pronounced odours as the GS20s and the PMC FB1is, and the Monitor Audios are still stinking out the Hi-Fi World listening room, a good week or two after their arrival. Perhaps the easiest way to decide on your component is actually to sniff it, although this would send Dansette prices through the roof — you really can’t beat warm valves in a leatherette case!
VINYL NEWS

contents

OCTOBER 2008 www.hi-fiworld.co.uk

LINN LP12 MAJIK 100
David Price tries the most affordable new Sondek to date.

ORTOFON SPU 105
Haden Boardman tells the story of one of the world's greatest classic moving coil cartridges.

SOUNDBITES 109
David Price auditions Origin Live's new turntable platter mat and Vantage Audio's record clamp.

ADJUST+ 111
The second of a two-part feature in which Noel Keywood tries this superb modern cartridge alignment system.

news

PURE PLEASURE PAIR
Two new releases have appeared from Pure Pleasure: 'Grand Encounter' AKA '2° East/3° East', is a perfect cool jazz album featuring John Lewis (piano), Percy Heath (bass), Jim Hall (Guitar).

Jazz not for you? How about country blues? If so, try Keb' Mo's self-titled debut: a brave, fearless chap who attacks his genre with gusto which doesn't always work, but it's well worth tagging along for the journey.

Bill Perkins (tenor sax) and Chico Hamilton (drums).

ALL THAT JAZZ
Classic Records from the USA has released three new jazz albums via the legendary Blue Note label. Firstly, from the respected alto sax bop player Jackie McLean, comes the largely uptempo 'Capuchin Swing'. Mixing originally penned tracks ('Condition Blue') and covers ('Don't Blame Me'), the band comprises Blue Mitchell (trumpet), Walter Bishop, Jr. (piano), Paul Chambers (bass) and Art Taylor (drums). A great introduction to McLean's works.

Lou Donaldson was another bop sax player but 'Sunny Side Up' (1960) is the antithesis of 'Capuchin Swing'. Here, in conjunction with Horace Parlan on keys, Bill Hardman's trumpet, drummer Al Harewood and bassists Sam Jones and Laymon Jackson, they calmly smooch through the likes of 'It's You Or No One'. Not the greatest of albums, it does however give you a window on a number of hard bop gems.

Finally, Duke Pearson's 'Tender Feelin's' (1959) maintains the relaxed atmosphere, this time via piano, with a selection of smooth ballads such as 'Bluebird Of Happiness'. Along with bassist Gene Taylor and drummer Lex Humphries, this straight-ahead jazz piece is a great way to end a busy week with a cool drink in one hand and a cool blonde in the other... (hope the wife isn't reading this. Paul — Ed.)
THE CAPTAIN AND THE DOCTOR

Direct from the American-based Sundazed label come two 180gm LPs. "Dr. Byrds & Mr. Hyde" (1969) was a strange album. After previous band ructions, original band member Roger McGuinn was the only Byrd left standing after the release of the 'Sweetheart of the Rodeo' album. 'Dr. Byrds...' was a country-rock piece and McGuinn was eventually joined by Clarence White, Gene Parsons and John York. Not a great album per se, as the band had not quite gelled, but there are some brilliant highlights and sparkling individual performances.

Captain Beefheart's 'It Comes To You In A Plain Brown Wrapper' was supposed to be Beefheart's second album to be released in 1967. Despite the tracks intended for that album appearing in 'Strictly Personal', a horribly edited, unofficial form, the legendary album has never been released in full until now, complete with unreleased and unedited tracks. Excellent, vinyl only and highly recommended to all Beefheart fans...

LILY & MARIA

Out now on Sunbeam and presented in a swish gatefold with liner notes on offer within, Lily & Maria's only, self-titled, album, released in 1968, presents a skewed form of psychedelia and folk with a decidedly choral delivery. Full of ambiguous lyrics, which enhanced the mystery of the pair, this sparse, spooky, production leaves the listener feeling decidedly unsettled...

GENIUS BLACK

Three highly talented black artists have been celebrated by Italian outfit Get Back. The first, Elmore James, is captured in 'Genius Blues'. This is a compilation of the great man's recordings from the nineteen fifties, highlighting some of his classic material including 'Stormy Monday Blues', 'Standing At The Crossroads' and 'Held My Baby Last Night'.

Next up is Curtis Mayfield and a themed compilation based on his love songs. Actually called 'Love Songs Vol. 1', it obviously infers that there's more to come. Examples include 'Hey Baby (Give It All To Me)', 'Dirty Laundry' and 'If You Need Me'.

Finally, Get Back has released Sam Cooke's 'Peace In The Valley', an LP covering the entire output of Cooke's works with the Soul Stirrers, one of the foremost gospel groups with whom Cooke first sang in early 1951 until 1956, the date he went solo. Tracks include 'Jesus Gave Me Water' and 'Just Another Day'.

SEVENTIES SOUNDS

Direct from Spain's Wah Wah Records comes a double bill of buried nineteen seventies treasure. Steve Tilston's debut work, 'An Acoustic Confusion' (1971) is a largely instrumental, sometimes vocal, album of folk and acoustic guitar. Lovers of Bert Jansch and Wizz Jones should apply, Tilston was close to other artists on the small The Village Thing label, as were Graham and Anne Hemmingway whose album, 'The Sun Also Rises' is also published by Wah Wah. This acid folk, self-titled, album from 1970 resembles the Incredible String Band in style.
VINYL SECTION

Carbon Dating

Linn’s first LP12 hit the shops way back in 1972, and since then it has evolved so much that under the surface the turntable is almost unrecognisable. The price has risen dramatically too, but the new entry-level Majik package puts it back on the value map, says David Price...

You might be surprised to learn that the first Linn Sondek LP 12 sold for around £80 in 1972. True, this was still a lot of dosh back then (remember, we were yet to experience the ravages of strike-hit, inflation fuelled seventies Britain in all its glory), but so is the £1,560 Linn charge for the cooking Sondek in 2008. Worse still, you’ll need to add an arm, cartridge and power supply to that to get the deck to rotate, much less make a noise...

“even in ‘poverty spec’ Majik form, it is blissfully nice to lay ears upon…”

Indeed, rather than the basic price, I think it’s the cost of the ancillaries that has put off an entire new generation of potential LP12 buyers. Whilst £1,560 isn’t that bad – the problem is that the cheapest Linn Akito arm is now £720, and the cheapest Linn Adikt cartridge is £225. Then you’ve got the baseboard and power supply to consider (£990 for a Lingo, anyone?), so you can easily end up with a £3,500 sized hole in your pocket.

Well, Linn obviously think this is limiting LP12 ownership too, because the new Majik LP12 addresses precisely this point, packaging up those bolt-on extras (or should I say essentials?) for a very reasonable £1,995, complete with five year warranty and a choice of Maple, Cherry, Rosenut, Walnut or Black Ash finishes. An optional hinged transparent lid adds a further £145 if you require it. This ‘plug and play’ package (well, your dealer will set it up for you and there’s nothing extra to pay on top) includes the LP12 itself, an internal ‘Majik LP12’ power supply (£295), a solid base (£110), a Pro-Ject 9cc tonearm (£413) and a Linn Adikt Moving Magnet cartridge (£225). If you do the sums, that’s a saving of £1,040 no less...

Of course, Linn have done ‘get you started’ packages on the LP12 before. In the late seventies, dealers would happily sell you a Rega R200 tonearm and usually throw in a cartridge, to give you an entry-level LP12 for under £300. Then Linn Products themselves cottoned on to this, and the Basik was born – a £46 tonearm/cartridge combination to get you going. The Majik LP12 is the twenty first century version of that. The idea is that you can then take advantage of the large amount of official (and unofficial) modifications available for this great deck – from the Lingo external power supply to Keel subchassis via the Ekos tonearm, Akiva cartridge and Trampolin base board. It was a good idea then, and it’s a good idea now; my only query being why didn’t they offer such a package five years ago, when the world and his wife were coming back to vinyl?

Some might be shocked to find a ‘lowly’ Pro-Ject 9cc tonearm on an LP12, but don’t underestimate it – as our listening tests showed, it’s a quality affair that is better than you might expect.

The 9 inch conical armtube echoes Wilson Benesch’s high end A.C.T. 2 in its use of carbon fibre. An inverted bearing design with four hardened ABEC7 spec ballraces, it features good copper internal wiring, plus accurate VTA and azimuth adjustment. The supplied Linn Adikt is also impressive; we found it very good on the test bench [see MEASURED PERFORMANCE] and it auditioned no less well. Beautifully finished, it features a rigid body and a Gyger II stylus – which is replaceable.

For those who need me to reprise the LP12 Sondek, I shall do so briefly – as there can’t be many reading this magazine who don’t know what the fuss is about. Getting on for thirty six years old, for many years it was the paradigm for high end decks. An independently suspended subchassis design, it uses an AC synchronous motor to drive an inner platter via a short, flat section belt. On top of this sits a heavy Mazak outer platter and a simple felt mat to support the record. Coil spring suspension isolates the platter and arm, while a patented, high precision single-point bearing forms a ‘closed loop’ with the tonearm and cartridge, says Linn.

SET UP

Setting up the LP12 is easy, because your dealer does it for you! Linn’s dealer training programmes are uniformly excellent at teaching them what is a relatively uncomplicated, but still fiddly, process. As such, your deck should arrive correctly fettled, so all you’ll have to do is to site it correctly. This in itself has been the subject of much debate, but suffice to say LP12s like light, non-resonant...
platforms, such as light rigid coffee tables and – better still – purpose-made hi-fi wall shelves. Still, there are umpteen other options, from the superb Quadraspire racks to twenty year old bargain Audiotech tables on eBay!

Needless to say, the LP 12 must be level to give of its best, but there are a few other little tweaks that many years of LP 12 owning taught me. First, the Linn’s short sturdy belt gives good torque transfer between the motor and the platter; superior in my view to long string-type belts that drive the periphery of the platter (à la Michell's GyroDec) in terms of ‘grip’. However, it is accordingly more sensitive to dirt on the inner platter (the gearing effect ‘amplifies’ any surface imperfections, creating subtle speed variations) so it’s imperative to keep belt and the inner platter edge scrupulously clean. As such, don’t touch the edge of the inner platter at all and handle the belt with clean hands. [Wearing cotton gloves is a good idea when setting up any belt drive deck – AS].

At the risk of facing ridicule, I’ll also add that, to my ears and in my system, the different surfaces of the belt sound different. One is slightly smoother and silkier to the touch than the other (no idea why; I presume it’s just how it’s made; if you can’t tell the difference between the two surfaces, try feeling it with your lips). and I think the smoother side sounds better. Ditto, either side of the felt mat has a fractionally different sound. I’ll leave it to you to decide whether experimenting with these is worth five minutes of your life or not; many will think the latter so I mention it only for the sake of completeness!

SOUND QUALITY
Well, what we have here is a very nice, accessible LP 12 experience. To my ears, it’s certainly the best sounding ‘entry level’ Sondek yet made (better than nineteen eighties LP 12/Basiks with the higher spec Valhalla power supply in my opinion). It crystallises everything that’s great about this deck – and reminds me why Linn have kept it in production for so long. Even in ‘poverty spec’ Majik form, it is blissfully nice to lay ears upon.

No, you’re not going to get vast tracts of bottomless bass, enormous levels of forensic detail or ear assaulting dynamics – but the interesting thing is that this simply doesn’t matter. The LP 12 gives an unalloyed musical experience, taking you into the spirit of the song and singing its heart out. In this respect, I’ve still yet to hear any other turntable at any price that does this...

Rose Royce’s ‘Wishing on a Star’ was a case in point. The LP 12 let the music float by me, untroubled by the need to obsess on particular aspects of this venerable, late seventies all-analogue recording. Whereas my Michell GyroDec reference took great trouble to tell me about the tape hiss on the recording, the Linn instead majored on the beautiful harmonics issuing from the piano part, and the pianist’s gorgeously

Vinyl Section
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Laid back playing style. Beautifully loose, the track was a warm and wonderful musical experience instead of a forensic examination into the recording techniques and equipment at the time.

Michael Jackson's 'Don't Stop Till You Get Enough' was another ear opener. The LP12 Majik has a gentle, warm bass (none of the excess of the seventies and eighties versions here) that doesn't impress with its power or dynamic contrasts, but golly gosh can it play a tune! The sequenced bass line opening the song had all the enthusiasm of a terrier chasing a rat, bounding up and down with heady abandon. When the percussion cut in, the LP12 Majik was ready and veritably ripped through the complex percussive elements in Quincy Jones's epic production.

Even this entry-level LP12 proved particularly good with heavy rock: Lynyrd Skynyrd's 'Saturday Night Special' is about as a good exemplar of the breed you'll find this side of ZZ Top, and the 'baby' Linn was well up for conveying all its glory. Guitars had believable timbre, vocals were appropriately raw and grainy and the bass tuneful and superbly fluid. Again, the Sondek's 'easy' quality let the music breathe past me, conveying the lazy feel of the recording, but was still compelling listening all the same.

Moving to my well worn copy of Beethoven's Pastoral Symphony (DG, Karajan, Dresden Philharmonic), and noticed how the LP12 doesn't emphasise surface noise as some, considerably more expensive turntables do. Again it gave a sweet and organically musical rendition, although with classical music it's easier to discern the deck's tendency to curl in the left and right extremes of the concern; Michell's GyroDec gives a far more expansive stereo acoustic.

Still, the LP12's soundstage fell nicely back like an SME 10A, where the GyroDec seemed to fall off much sooner.

CONCLUSION

Turntables are like shoes, they just need to fit you properly before you can really live with them. The Majik LP12 won't suit every individual, because it falls short on several counts (bass extension, dynamic articulation and soundstaging), but it also wins hands down on several others (musicality, tunefulness). Those who place the former attributes above the latter should look no further than Michell's GyroDec or Avid's Diva: superb designs both. However, audiophiles who happen to believe 'it don't mean a thing if it ain't got that swing' must hear this. The Majik LP12 brings its own unique and charming way of making music to the £2,000 plug and play party — and not before time some might say!

REFERENCE SYSTEM:
Michell GyroDec/TecnoArm/Linn Adikt
Sugden IA4 integrated amplifier
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SOUND & VISION

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Ortofon's classic SPU cartridge is surely one of the most important moving coils ever made, and retains a huge fan base even today. Haden Boardman tells its story...

By today's standards, Ortofon's SPU 'stereo pick up' is a flawed and anachronistic device, but that doesn't mean it should be dismissed out of hand or simply forgotten. Instead, this venerable moving coil is actually very important in the great scheme of things, both for the role it played in the early days of stereo micro-groove LP reproduction, and for its sound quality which is distinctive and distinguished even today.

Back in the nineteen fifties, Ortofon ruled in moving coil cartridge technology. The early monophonic A, AB and famous C pickup heads are rightfully legends. In 1956, one would set you back £17 17 shillings, when the nearest priced high end cartridge was by Lowther, at £15. With no standard mounting system, buying an Ortofon cartridge would lead to you purchasing a matching arm (as would the vast majority of vintage pick ups; Decca, EMI, etc.). This state of affairs only really changed with the introduction of the SME pick up arm; early versions of that used Ortofon's G type head shell, setting an industry standard that lasts to this very day.

A stereo pick-up is a much more complicated beast than its mono counterpart. A mono record simply wiggles the stylus from side to side; there is no up and down movement (which is why you should never play stereo records on an old pre-stereo mono pick-up, as the cartridge is not designed to track the extra stereo information, it will simply gouge it out!) A stereo pick up, however, has to transmit electrically the three dimensional graph of the groove; side to side and up and down.

First mention of the SPU comes around 1961. Its output was 500µV with a recommended load of 3 ohms, and frequency response of 20Hz-20kHz. It was available with three different sized stylus tips, for playing your old mono recordings, 78s and stereo LP. This did mean you had to have two cartridges, or three if you played 78s! Around 1965, Ortofon introduced an elliptical stylus for the SPU, making it possible to fit your deck with an SPU-GTE.

"none can move me in the way an Ortofon SPU does..."

Installed in a plastic G headshell, the naked SPU body does not really fit in to anything else with ease. There were two versions initially, with or without transformer step-ups stuffed into the back of the headshell – the latter explaining that 'T' designation. Ortofon continued this option right up as late as 1978. The cartridge remains in production to this day – with nine different models,
With KEF's new Reference Series, nothing compromises the purity of the recorded signal. The sensational new Uni-Q® driver array has been comprehensively re-engineered to project an even more natural sound, while the ultra-low distortion LF drivers deliver heftier bass with uncanny clarity. Integration is seamless, thanks to its high-order crossovers. Before it leaves the craftsmen who built it, every loudspeaker is tested against a calibrated laboratory reference.
Although no longer a universal high end favourite (in Europe at least; the same cannot be said of the wacky hi-fi world that is Japan!), Ortofon’s original patent on stereo moving coil cartridges is echoed by almost all modern moving coils, which have their generator system based on SPU principles – with the likes of Audio Technica, Denon and Fidelity Research as notable exceptions. The SPU’s spirit lives on so many other modern moving coils...

**SOUND QUALITY**

For me personally – and I realise this view isn’t held by everyone – the Ortofon SPU digs out more emotion and detail than any other cartridge I have listened to. Its weight, authority and soul almost defies description. Bass is organic, and seems to start lower than most other cartridges, and it can convey real drama and emotion. Midsrange is clear and clean, stereo image is exemplary, detail, ambience; everything is where it should be.

Listening to my own 1989 SPU Gold, Garrard 401 and SME 3012/11 is still a shocking experience. From a collection of over twenty moving coil cartridges, I have a true love for Denon DL103 (which is almost as greedy in requiring a high mass arm to get it to truly sing) and several of the later Ortofons which have incredible outright detail and insight. But none can convey that real power of music or move me in the way an SPU does.

"the Ortofon SPU digs out more emotion and detail than any other cartridge I have listened to"

As arm mass became lower, and the obsession with trackability came to the fore, Ortofon launched the S15 and the SL15; these are based on the SPU but will work in (slightly) lower mass arms and have normal half inch mountings.

**BUYING**

Try to avoid the vintage stuff – it’s a ‘pot luck’ situation. If you know someone who can rebuild a dead one for you then fine, but other than that leave it to those for those rebuilders and Japanese collectors, as most are now totally worn out. From the mid nineteen eighties there were a surprising number of special editions, in fact I think virtually every second-hand SPU you see will be a special of some kind. These are better made, and sound tighter.

Although they’re totally unsuited for mounting on bouncy, suspended chassis decks. The whole concept fits the Garrard 301 idler or Technics SP10 direct drive concept incredibly well. Both decks rely on a plinth to tune the sound, and both decks suit these high mass arms and low compliance cartridges. De-shell the SPU is not a bad idea, but fiddly.

You can buy the current SPU Royal as an N version without shell, and Ortofon supply the cartridge with a suitably machined spacer to fit a conventional headshell. There are certainly better headshells out there than the G; I can fully understand why the Japanese go to around 7mV. Personally, I do not think they are that good, and currently use an old Ortofon T3000.

There are thousands of used examples on the market, but buying second-hand is pot luck!
**RETO**

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ORIGIN LIVE PLATTER MAT £49

Platter mats were all the rage back in the nineteen seventies, as anyone who remembers the Spectra mat and its ilk will testify. Unsurprisingly perhaps, with the exception of the venerable Ringmat, the breed had and its ilk will testify. Unsurprisingly who remembers the Spectra mat in the nineteen seventies, as anyone who remembers the Spectra mat. This is healthy, because the right of digital. Now though, we're back in a world where there are umpteen different aftermarket solutions. This is healthy, because the right platter mat can make or break a turntable, and it's frightening that some manufacturers seem to give this aspect of their deck's design fairly scant attention. Well, Origin Live have now joined the fray with this, their so-called universal platter mat. The manufacturer claims a significant increase in clarity and articulation, deeper bass, superior instrumental separation and greater overall musicality. The result of over twenty five years of research - including experimentation with countless platter mats including felt, fibreglass, cork, graphite, carbon fibre, acrylic, PVC, MDF, aluminium and steel laminates - it's claimed to be "more consistent across a wider range of turntables than any of the above materials". Needless to say, Origin Live are keeping mum about the material(s) used!

It's certainly one of the less conspicuous aftermarket mats - at only 1.5mm thick it shouldn't cause problems with VTA adjusters and is very light, so it won't overburden weak belt drive motors or make direct drive servos work harder for their living. It was a direct swap with the stock felt mat on a Linn LP12, and produced interesting results. With every type of music, the mat further improved the Linn's already impressive rhythmic snap, and seemed to lower the noise floor even more. There was a slight improvement in focus, and generally a more relaxed yet authoritative sound. Moving to a massive Marantz TT1000, the OL mat worked wonders. Ping the platter with the stock glass mat and it rung like a bell, but substituting the Origin Live dampened it down dramatically. This was reflected in the listening, as the deck became noticeably cleaner and more focused across the midband, while the bass - which had been very strong but slightly laboured sounding - gathered speed and fluency. Overall then, a brilliant upgrade at just £49 for belters and direct drives alike. DP

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VANTAGE AUDIO
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Like platter mats, record clamps and weights were all but forgotten for many years, but are gradually coming back into vogue. The arguments around clamping have raged for ages, with Linn making a big statement in the UK high end turntable market with Linn making a big statement in the UK high end turntable market by arguing against their use. Whilst the LP12 might (arguably) sound better without a record clamp, most turntables are obviously improved by their use. It makes sense, after all, that the disc is firmly affixed to the platter, as flaky as possible and with its surface 'damped' - with vinyl, any vibration (even tiny amounts of airborne resonance) muddies the sound. Screw type clamps work well - Michell's standard-fit GyroDec item (also available as an aftermarket accessory) is great on belt drive decks. They're generally light, so they don't upset the springs on suspended subchassis decks, yet achieve a good purchase on the disc itself. However, for direct drives or idlers that don't have wobbly wire coils to contend with, a massy record weight makes good sense. Vantage Audio's is hewn from solid brass - and is about acoustically inert as any such big lump of this type of metal, and no less heavy: its size, mass and design are very close to that of Trio's classic Lo-TD clamp - which makes it just about ideal.

The problem with this device is that it is simply too heavy for most direct drives. Even our battle-hardened Technics didn't sound completely happy with it on. With direct drives, it all depends on the torque of the motor; the SL1200 is good in this respect, but even it seemed to be struggling. There was no speed drop, it was just that although changing the sound, the weight wasn't really improving it. Moving to a Marantz TT1000, and things took a real turn for the better, resulting in a deeper, 'darker' sound with greater ease and less sense of direct drive's 'cerebral' nature. The music flowed more naturally, whilst the very slight upper midband tonal hardness seemed to soften out a bit. There was a sense of better control, as well as a more relaxed sound overall. Although not able to try this on Garrard 301/401s, I suspect it would be an ideal partner. So if you run a rugged non-suspended deck, this is a superb affordable tweak. DP

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Modern technology comes to the aid of the LP with Adjust+, a way of adjusting the vertical alignment of your cartridge for better sound. In the second and final part of his review, Noel Keywood delves deeper into its capabilities...

Last month I looked in detail at the primary functions of the Adjust+ software, namely that of setting cartridge verticality (or horizontal tracking angle), as well as vertical tracking angle. Getting them right significantly improves sound quality. If you missed this feature in the September issue, this is available in electronic form on our website, for £1.90. In Part II this month I am looking at other measurements Adjust+ can make. They don’t facilitate adjustment, but can tell you how well your record deck is performing.

FREQUENCY RESPONSE

I was intrigued by this option within Adjust+. Measuring cartridge frequency response is difficult and the problems obscure. Few test discs have ever been accurate enough in themselves to give a meaningful result, so I doubted Adjust+ could manage better. One professional test disc, cut at half speed, is accepted as accurate worldwide: JVC TRS-1007. We have two samples, bought from Japan at high cost long ago, that we use for our cartridge tests. TRS-1007 is now out of production and unavailable.

At high frequencies that test discs have traditionally been inaccurate, and here the Adjust+ disc gave a result similar, if not the same, as TRS-1007 - impressive. So you can measure the real frequency response of your cartridge to a useful degree of accuracy. But why would you want to? The reason is that many cartridge preamps, including the Trichord Diablo we used within this review, possess switchable capacitance that modifies the high frequency response of Moving Magnet cartridges (but not MCs). Adjust+ will show you how things change as you do this and whether the response gets better or worse. It will also show just how flat, or otherwise, your cartridge is.

As LP playing makes a comeback, the emergence of the Adjust+ test LP is good news, but there are problems. For good reason, test discs never use RIAA correction, but custom equalisation that demands a special preamplifier, which means you can’t measure frequency response through an ordinary phono preamp at home. RIAA boosts treble during cutting, and cuts bass, and the treble boost increases both velocity and acceleration of the cutter.

To keep both of these high frequency parameters within acceptable limits for the cutter and playback stylus, signal level on the Adjust+ LP has been kept down, resulting in a poor signal-to-noise ratio at low frequencies. As a result of this, warps start to contribute to the test results, explaining the low frequency lift in the response graph. It may be possible for Adjust+ to lessen this with narrower FFT bins, but there is a trade off against measurement times.

At the other end of the scale, our Goldring 1012GX got decidedly shaky at high frequencies tracking the Adjust+ disc, mistracking above about 4kHz, although it stayed in the groove. So it appears that high velocities are reached all the same and some cartridges will object, likely giving ragged treble under measurement. The Ortofon 2M Black also looks uncertain at high frequencies, our response shows, ignore the low frequency part of the graph.

Amazingly, the Adjust+ disc gave similar results to TRS-1007, although that is not to say "the same". Look at the graphs of Ortofon’s 2M Black with JVC and Adjust’s discs. The Adjust disc shows raised bass, and treble that looks ragged, but reaches 20kHz within one dB or so. JVC TRS-1007 superficially looks a lot different - although to my eye it looks similar. The reason is that below 1kHz cartridge generators are flat, ignoring arm resonance which occurs very low at 12Hz or so. So the Adjust+ plot is wrong (explanation later) and you can safely draw a straight line in your mind from 40Hz up to 1kHz.

It is at high frequencies that test discs have traditionally been inaccurate, and here the Adjust+ disc gave a result similar, if not the same, as TRS-1007 - impressive. So you can measure the real frequency response of your cartridge to a useful degree of accuracy. But why would you want to? The reason is that many cartridge preamps, including the Trichord Diablo we used within this review, possess switchable capacitance that modifies the high frequency response of Moving Magnet cartridges (but not MCs). Adjust+ will show you how things change as you do this and whether the response gets better or worse. It will also show just how flat, or otherwise, your cartridge is.

As LP playing makes a comeback, the emergence of the Adjust+ test LP is good news, but there are problems. For good reason, test discs never use RIAA correction, but custom equalisation that demands a special preamplifier, which means you can’t measure frequency response through an ordinary phono preamp at home. RIAA boosts treble during cutting, and cuts bass, and the treble boost increases both velocity and acceleration of the cutter.

To keep both of these high frequency parameters within acceptable limits for the cutter and playback stylus, signal level on the Adjust+ LP has been kept down, resulting in a poor signal-to-noise ratio at low frequencies. As a result of this, warps start to contribute to the test results, explaining the low frequency lift in the response graph. It may be possible for Adjust+ to lessen this with narrower FFT bins, but there is a trade off against measurement times.

At the other end of the scale, our Goldring 1012GX got decidedly shaky at high frequencies tracking the Adjust+ disc, mistracking above about 4kHz, although it stayed in the groove. So it appears that high velocities are reached all the same and some cartridges will object, likely giving ragged treble under measurement. The Ortofon 2M Black also looks uncertain at high frequencies, our response shows, ignore the low frequency part of the graph.

Frequency response of Ortofon 2M Black with Adjust+ disc.
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Wow and flutter of our Pioneer PLC-590 test turntable measured 0.108% according to our Rohde & Schwarz UPL analyser, using the Adjust disc.

SPEED ACCURACY / W&F
Speed accuracy is a fairly straightforward measurement, where a 3,150Hz tone is read from a track on the test LP. If it reads 3181Hz then the player is running 1% fast and Adjust clearly displays error in large numerals. Turntables usually have an error of less than 0.5%; anything greater indicates there is a problem.

Wow and Flutter refer to variations of speed. Wow being slow variations below 10Hz and Flutter fast ones above 10Hz. Interestingly, Flutter is analogous to digital Jitter, both being variations of frequency, or frequency modulation. Adjust+ gave a reading of 0.11% with our Pioneer PLC-590, a little higher than our Rohde & Schwarz UPL audio analyser with DIN weighting selected, playing test LP DIN 45 545 Gleichlauf-Mess-Nullplatte (synchronisation measuring record, Babelfish says) that recorded 0.07%. So the Adjust+ result is close to professional test equipment. Adjust+ say the result is weighted and the disc has a residual wow and flutter value of 0.03%.

To get a meaningful reading, the LP must be centred so the arm isn’t swinging in and out and professional test discs usually have an outer locked groove for this purpose. The Adjust+ disc lacks this so it has to be centred visually in an ad-hoc manner. When I placed the disc off-centre deliberately, the 0.11% result rose to 0.2%, illustrating how a large wow component at 0.55Hz due to disc eccentricity will affect the result. Even without a locked groove, the Adjust system has sufficient resolution and accuracy to give a meaningful result, showing just how well a turntable is holding speed and whether maintenance is needed. Again, this is an impressive result, because cutting latches in themselves can suffer speed variations that will affect any disc that is cut, but the Adjust+ disc avoids this problem.

LF RESONANCE
Pickup arms have a lower subsonic limit (i.e. below 20Hz) imposed by the resonance of arm mass against cartridge compliance. Ideally, it should be around 12Hz. Much lower and the arm will read warps rather than ride over them; much higher and low audio frequencies will receive noticeable boost. Frequency will be low if the arm is heavy (high effective mass) or the cartridge very compliant. Another factor here is cartridge weight, which at 8gms or more approaches the effective mass of a modern arm at 12gms or so.

Adjust+ measures low frequency response using a frequency sweep from 8Hz up to 40Hz. Usually, there will be a resonant peak of 4dB or more and you can see this in our graph showing behaviour of a Goldring 1012GX cartridge in an SME M2-10 arm. Adjust+ neatly identifies the peak and measures both its frequency and amplitude.

There’s not so much you can do about the LF resonance, because, if it is low, using lighter headshell screws or abandoning the finger lift will make little difference. If it is high, when an incoherent Moving Coil cartridge is used in a lightweight arm say, mass can be added to the headshell. However, these days lightweight arms don’t exist; most are medium mass. So measuring LF resonance is interesting, but it doesn’t facilitate system tuning.

CONCLUSION
All in all then, the Adjust+ test LP is accurate and gives a reliable set of measurements, in conjunction with a computer and soundcard, plus Adjust+ software. The system is superb value at 249 Euros, allowing a cartridge to be aligned with great accuracy, and a wide range of test data to be gleaned about turntable behaviour. It is perhaps a bit complicated, as such an ambitious system inevitably will be, but it works well and is mightily impressive. Nothing like it has ever appeared before, to my knowledge, so it moves the art of LP playing forward by a significant step.
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VPI Grasshopper GLARIC MC Cartridge x-demo
2500 1499

VPI HR-X Turntable x-demo
2925 6799

VPI record weight S/H
150 75

VPI Periphery Record Clamp S/H
600 249

Amplifiers

Preampamps

Was

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Audio Research SP16 with Phono Stage x-demo
2492 1649

BEL CANTO Evo 2.0 Amplifier S/H
5000 3725

Krell KRR3 Series II Remote Controlled Preamp S/H
2898 1959

Marten 501 Preamp S/H
N/A 399

Musical Fidelity X 100 Preamp S/H
899 399

Orpheus Two Multi-channel Preamp S/H
3200 1390

Rolet Michi RHA-10 Active Insteage S/H
1999 999

Roksan L Preamp requeres PSUD S/H
2269 785

Spectral DMC 15a Preamp Shaa Genii S/H
4700 2499

Spectral DMC 30s Reference Preamp S/H
7800 3499

Audio Research VMX20V Valve mono Amplifiers x-demo
5000 3725

Bel Canto Evo 2.0 Gen II Amplifier S/H
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Bel Canto Evo 4 Amplifier S/H
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Denon AVC-A11X Surround Amplifier S/H
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Krell Evo402 Black S/H
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Jadis CA30 mono valve mono x-demo
2250 1799

Leben CS-200 Power Amplifier x-demo
1800 1350

Mystere Concept 24/11 EL34 Integrated x-demo
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Mystere Concept 142/14 KT88 valve integrated x-demo
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McKorxiam DNR12 Power Amplifiers BINB
2195 1499

Orpheus THREE Stereo amplifier S/H
2999 1299

Naga MPA RCMI x-demo
10450 6999

Paffles Impo 2x-demo
5690 4799

Primua Luma Proluga 2 x-demo
1160 9493

Primua Luma Proluga 3 x-demo
1099 799

Audiospeakers

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Audio Physic VRG3 Maple S/H
4400 1795

B&W DM 605 S2 walnut S/H
599 349

JM Lab Micro Utopia be Classic x-demo
4700 2999

Kurus Essence Floorstand Falesander S/H
2800 1350

Living Voice Audio Verge S/H
4400 2999

Martin Logan Fresco centre x-demo
850 535

Martin Logan Mosxio x-demo
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Martin Logan Summit Cherry x-demo
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Pen Audio Charmelie Subwoofer x-demo
1995 999

Pen Audio Redox x-demo
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ProAc Response 2800 Wav x-demo
10205 8199

ProAc Response 308 Cherry x-demo
4620 3699

Ruarck talsman il mahogany s/h
899 375

Sonus Faber Cremona Maple x-demo
5000 2699

Spendor S3 Cherry S/H
599 349

Telesonic T8000 Beech Subwoofer S/H
2999 1999

Vienna Acoustics Bach Grand x-demo
1295 1035

Vienna Acoustics Mozart Grand x-demo
1699 1360

Vienna Acoustics Beethoven Baby Grand x-demo
2195 1760

Quad 2003 Electrosonic x-demo
6000 3999

Cables and Accessories

Was

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Audio Note AN-1 Y 1M digital RCA-cable S/H
N/A 99

Audioquest 1.5m Topaz RCA-RCAs S/H
m A 99

BCD Amplifier stand x
850 239

Cogan Hall intermmezzo EM 0.75m RCA S/H
N/A 99

Creek OBH 10 Remote Volume Contraduo
179 119

Eichmann Express 4 interconnects BINB
80 49

EAT Cool Valve EVC 80 ls Diamond BINB
85 70

EAT Cool Valve EVC 88 Diamond BINB
85 70

EAT Cool Dampers BINB
15 10

Grand Prix Audio Formula shelf x-demo
689 399

Grand Prix Audio Lamenta 4 tier Carbon fibre Table x-demo
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Hovland HPC 1m RCA interconnected
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Kimber KS1130 3.5 balanced interconnected S/H
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220 175

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70 32

Ringal 3 Mini XLR Support system BINB
135 79

Reonlink Set S3 BINB
88 30

Shakti Stone BINB
199 159

Siletch HP3 AES/EBU 1m Digital S/H
423 199

Siletch Octopus signature Biaw mains block S/H
580 299

Siletch SPX300 Shuko mains cable 0.5m S/H
175 95

Siletch SPX300 Shuko mains cable 1m S/H
195 99

Siletch SPX300 UK mains cable 4m S/H
650 199

Spectral MH-790 8ft Speaker cable S/H
900 399

Spectral MI-330 10ft interconnected S/H
1275 599

Transparent Balanced Mains Link 1m S/H
379 249

Transparent Music Wave Plus Biwire 2x 15ft S/H
1009 649

Wireworld Equinox2.2.5m Biwire x-demo
1259 699

XLRE XQAM 2.5m Digital RCA75ohm BINB
199 65

XLRE XQAM 2.5m RCA-RCAs BINB
395 119

XLRE XQAM 2.1m Digital RCA75ohm BINB
275 85

XLRE XQAM 2.1m XLR-XLR BINB
495 185

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Midland Audio X-change are looking for Audio Research, Krell, Mark Levinson, Naim Audio, SME, Wadia.
WANTED WANTED: Hi-Fi Year Books for most years. Any reasonable condition. Please telephone with quantity and asking (sensible) prices. Tel: 07710 828 286 (Brighton)

QUAD 12L standmount loudspeakers. Rosewood piano gloss finish. Multi award winners. Superb sound. Mint condition. £250. Tel: Darran on 07876 705266


FOR SALE: B&W DM605.52 loudspeakers, £450. Tannoy ST50 super tweeters £30. Isotek Orion, never used, £250. Tel: Peter 01642 559 078

MISSION 752F speakers £220 ono. Rotel RA05 amplifier £250 ono. Marantz KI Signature CD player £220. Kef IQ5 speakers Apple £250 ono. DNMM reson speaker cable £5.50 pr yard. TCI Viper interconnect £20. Tel: 01903 813 883

DENON DVD 2900 high end universal player. Battleship build, absolutely amazing. Late silver model. Low use. Used as a high end transport. Boxed as new. £350. Tel: Darran on 07876 705266

JVC QLA7 DD turntable £350. Technics SLP777 CD £65. Technics SH8020 graphic £65. JVC KD95 cassette deck £110. Stereoophile magazines (50). Luxman CD2 pre, MO2 power £600. Tel: 01708 457 691 (Essex)

LINN KABER Aktive black £550. 3 Linn HK 100s £250 each. Henley phono M/C upgrade, silver wired, battery powered £250. Quad valve FM £80. All in very good condition. Tel: 01647 61421

KEF REFERENCE 100 centre speaker. Excellent, boxed with instructions, £50. Kef Q85 surround speaker, as new, boxed with instructions, £40. Buyer collects. Tel: 01902 782 509 after 6pm

UNISON RESEARCH Hybrid valve equipment. Unico Secondo 120wch integrated amplifier with phono inputs, £950 ono (currently £1560). Unico CD player £850 ono (currently £1450). Excellent reviews. Spare Quad 99. Primare CD110 remotes, offers? Tel: 023 8073 8935


NAIM CD3, good condition in perfect working order. £240. Tel: 01282 816445

KRELL 400xi immaculate, good working order. Offers above £1350. Conrad Johnson PV12AL valve pre, immaculate, good working order £650. Lovely Quicksilver valve monoblocks, Croft upgraded with new Precision components. Offers above £750. Tel: Stanley 07951 553 091


MISSION CYRUS 3 amplifier £150. Mission Cyrus FMX tuner £100. Pair Hi-Fi World KL53 three way floorstanding speakers, beech finish. Tel: 01732 457 712

TANNOY: STUDIO Monitors 15 DMT II and Universal Super Tweeters ST-100. New February 2005. Domestic use only, pair as new, manuals and boxes. £2199 ono. Tel Robert 01392 873 984 (Exeter)

NEW TEAC DAB FM radio with remote control, NXT speaker, instruction manual, digi clock LCD display. Very special unwanted prize. Bargain. £125. Stereo receiver. Tel: 023 8073 7823

WANTED: DPA 2005 pre/power amplifiers. Must be in very good condition. Tel: 01306 887 554

MUSICAL FIDELITY X-LPS V3 phono amplifier MM/MC, mint, boxed. Pair Lyn Olsen ME2 speakers with external X-overs. Professionally built, midnight blue. 18" and 24" Atacama stands. Genuine offers please. Tel: 0115 975 4070 (Nottingham)

SOUND ASSOCIATES 520C power amp made by Quad, upgraded £200. Rotel RA940BX integrated, upgrad- ed, £75. One Audax Piezo gold dome tweeter £60. Tel: 0113 248 8340

QUAD 405 Mk2 power amplifier, late grey model with some scuff marks on case. £180. Tel: 01372 728 951 or Email: mrgecooper@aol.com

SUPERB DAK amplifier 4x100w + 100w subwoofer with LF gain. Inbuilt UHJ decoder surround sound. Controls for stereo width/balance, front/rear balance. Laboratory quality. Cost £475. Collect. Tel: 01753 586 660 (WindSOR)

WANTED: NAKAMICHI cassette deck CR-7. Must be in excellent condition. Tel: 01452 713 211

WANTED: TWEETERS for Monitor Audio R952 speakers. One or a pair. Tel: 07723 059 047
FREE READER CLASSIFIEDS

LIVING VOICE Auditorium Avatar OBX-R2 in Santos rosewood. Excellent condition, original packaging. Less than 3 years old. £2100. Tel: 023 803 6335


MILLER & KRIESEL V.125 12" sub £250. Music Works 6-way mains megablock. 3x 1.5m IEC leads £225. Tannoy Oxford, no grills £125. All items excellent condition, Tel: 01722 334 694 (Salisbury)

WHARFEDALE EVO 30 speakers, maple veneer, beautiful sound, original model, only £320. Cambridge A840 Azur, 18 months warranty left, £360. Tel: 01225 706783 (Wilt)

PSB QUALITY crossover networks c/w connector housing. Single wired gold plated sockets. £40 plus P&P with free PSB (NAD) tweeter. Tel: 01132 733 744 (Leeds)

FORTY CURRENT Hi-Fi magazines for sale. £20. Buyer collects. Mr. Gunn, after 6pm. No time wasters or nicks. Summer gift. Tel: 01268 767 841

NORDOST super bi-wire flatline MkI 2x4 metres 2-4 connection banana type. Very good condition. Boxed. £90. Tel: 01733 757 499 (Peterborough)

MARK LEVINSON 38.5 preamp, mint condition. Very, very low use. With manual and remote. Cost £6500, will accept £1450. Tel: Tony 07868 714 812 (London)

MUSICAL FIDELITY Nu-Vista CD3. Nov 2001. Under 1000 hours use. One owner, Mint in all respects. Tremendous value at £800. Tel: 01752 773 369


HUGE SPEAKERS RRR FS100, 1230mm tall, 43.5kg. Six months old. See review Hi-Fi World November 2007. Tel: 01962 713 517 (Winchester)

EXPOSURE CD player. Original version. Little used. £250 or near offer, Tel: 0151 677 3521

ARCAM CD73 CD player, mint condition. Cost £450, sell £200 ono. Tel: 07940 797 483 (Greenock, Scotland)

MARANTZ CD94, new drive belts fitted plus new spare part available. Open to offers or P/X for Quad 405. Tel: 01277 219 639 Essex


LINN SONDEK, Itsock arm, no cartridge - £500 o.n.o.; Audio Innovations 1st Audio Monoblocks - £450 o.n.o.; contact Derek on 07729 065 244 or at dereklowe@tiscali.co.uk

Hi-Fi WORLD magazines some from 1991 onwards and almost every copy to 2008. £50 buyer must collect. Musical Fidelity DAC and PSVU 12 months old a couple of times £395 plus postage. Tel: 07967122765 Manchester

WANTED: Top quality Hi-Fi separates and complete systems, Naim, Linn, Cyrus, Meridian, Arcam etc., fast, friendly response and willing to travel/pay cash. Please call me on 0781 5892458

ELAC FS207.2 jet3 ribbon speakers, cherry finish. With boxes and manual. Mint condition - £395. Tel: Frank 02920 419226 (South Wales).

THETA GEN III DAC. One of the greatest ever. Excellent condition. You can take your DAC to my home to compare in Sutton SM3 8SA. £620. Tel 020 8661 5329.

Email: zhuo_deng@hotmail.com

CLEARAUDIO STABILITY headshell, AC006, SME fit, engineered design (Similar to Orsasonic headshell). Few days use only, boxed as new, transforms SME 3009 / 3012 type arm performance. £100. 01204 578074 (Bolton)

SME 30/12R tonearm, complete with two counterweights, twin weight outrigger, armhead, phono connectors arm base. Superb example, perfect working order. Spare new Soundlab solid headshell - £650, 01204 578074 (Bolton)

AYRE P-5XE phono pre-amplifier - new condition - 18 months old, one owner - original packaging, manual. Balanced and single ended inputs. £999 + carriage. Tel: 01892 530830

REGA PLANAR 9 turntable, Arcam Alpha8 CD, Alpha9 amp, Alpha8 tuner Pioneer twin studio deck, custom built americanewood Castle speakers cost over £600 accept £650 ono very nice system 07732890753 stormx29@btinternet.com

LUXMAN Direct Drive Turntable PD444 magnet suspended spindle, crystal phase locked loop. Sumo Polaris 11 Power Amp S/N 8102145. Arcam Delta 110 Digital Pre-amp R/C. Offers. Buyer collects. Kent. stangers@supanet.com

TEAC A3034S, discrete 4 channel, H/S Reel to Reel deck, excellent condition. Includes original Nabs, metal spoons, spare belts, 4 line + 4 mic inputs £175.00 ono. Tel: 02476276666 56blueslover@aol.com

NAIM NAP200 £650; Naim NAC202 £650. Both £1200. NAPSC power supply £90. Stage44 (m/c) £90. Everything £1350. All boxed, mint (bought summer 2006, hardly used), Tel 01327 706637 (Daventry).

GARRARD 401 turntable, SME 3009 Series II pick-up arm and SME 2000 plinth (rosewood), £450. Telephone 01189 413708.

LEAK 2075 speakers £750 ono. JBE Slate Mk3 direct drive turntable £750 ono. EAR 934P MM/MC valve phono stage £5000ono. B&W 1800 speakers £195, reconcie@bdirls.freeserve.co.uk or 01798 813133.

LINEAR A Tom Evans valve amp £1850. Vibe pre. £950. Grace M902 pre and headphone amp with DAC £575. Mordaunt-Short Performance 6LE new sealed. Mike 01224 572370

WANTED: Top quality Hi-Fi separates and complete systems, Naim, Linn, Cyrus, Meridian, Arcam etc, fast, friendly response and willing to travel/pay cash. Please call me on 0781 5892458

QUAD ESL 63's, black, matched: 026623/ 026624. Offers. Buyer collects. Kent. stangers@supanet.com
WANT: QUADRAPHONIC-LPs Dolly Parton "Bargain Store" RCA APD1-0950, Dolly Parton "My Tennessee Mountain" RBCA APD1-0033 quadmastersound@yahoo.de

SALE: JACKSON 5 "In Japan" Quadraphonic-LP Tamla Motown CD4W-7037 70,00 EUR quadmastersound@yahoo.de

FOR SALE SD Acoustics SD5 SME 3012 tonearm. complete with two counter-weights, twin weight outrigger, armlead, phono connectors arm base. Superb example, perfect working order. Spare new Soundlab solid headshell. SME rebuild, £650, 01204 578074 (Bolton)

CLEARAUDIO STABILITY headshell, AC006, SME fit, engineered design (Similar to Orsonec headshell). Few days use only, boxed as new, transforms SME 3009 / 3012 type arm performance, £100. 01204 578074 (Bolton)


NAIM CDX2 with XP52 power supply. Immaculate condition, 15 months old, 21 months left on warranty. Complete with boxes, manuals etc. £3700.00 01235 765986 sfinch123@ntlworld.com

WANTED CHORD Odyssey 2 speaker cable 2x3 m silicone outer jacket chord plugs. Also wanted PMC DBI speaker wallbrackets Tel 01234 302769 or 07840428253

FOR SALE SD Acoustics SD5 SME 3012R tonearm, complete with two counter-weights and working order. £170 ono. Mobile 07502009541


QUAD II Forty power amps & QC Twenty-Four matching pre-amp in cartons, in mint condition - stunning!! Any Demo £2200 inc shipping! Call Steve 07808 628236 (EpsumSurrey)

MARANTZ CD16 high end CD player: exc condition, boxed, manual, remote. £250 ono. Tel 0207 932 0108

QUAD 306 current dumping poweramp 50 Watts per channel. Excellent condition and working order. £170 ono. Mobile 07502009541

Rotel RA-05 amp. Rotel RCD-06 CD player, latest models, immaculate, boxed £350. Half price! no offers. Lee West Midlands 01384 412234

Wharfedale 708 in stunning condition £140 each or £200 the pair. Buyer collects. Colin. Barrett60@ntlworld.com

FOR THE BUYER
1. Not everyone is honest - Buyer Beware!
2. Don't send cash!
3. Accept no verbal guarantees.
4. Have you heard the item or something similar? If not, why do you want it?
5. Don't pretend to have knowledge - it's your fingers that will get burnt!
6. Is it working? If not, why not? Can it be repaired and if so is it worth it?
7. Has it been modified and, if so, have notes been kept?
8. Was it any good in the first place?
9. Don't send cash!
10. If you are in the slightest doubt, arrange an audition (see point 5) if it's too far, wait for another time.
11. Either buy it or don't: vendors are excusably impatient with 'consultation' exercises.
12. Don't send cash!

FOR THE SELLER
1. Make no verbal guarantees.
2. Values fall as well as rise. What was worth £xxx a year or two ago is no guide. Pricing is last month's bargains; it's only worth what someone will pay for it.
3. Amateur second-hand dealing is not a big money game; you win some, you lose some.
4. Be prompt with despatch. If in doubt about buyer's bona-fides, either wash out the deal or send C.O.D.
5. The best guide to pricing is last month's Classifed: that a 'classic' was worth £xxx a year or two ago is no guide. Values fall as well as rise.
6. Amateur second-hand dealing is not a big money game: you win some, you lose some.
7. There will always be time-wasters: be tolerant within reason!
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Did you know that changing the caps in your amplifier will give you a bigger improvement than changing the valves? Coupling capacitors are more critical to the performance than valves are! In vintage amps they are likely to be "leaky" or "out of spec". Modern "High End" amps are often fitted with cheap & cheerful types. Polypropylene types are small, cheap and last forever, but have a "harder" more "metallic" sound. Only Jensen Paper in Oil can bring out those smooth rich musical tones. Your amplifier will immediately sound more expensive and less fatiguing. It will cost less than you think!

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CLASSICAL CONTACTS

When a classic goes 'poof', your troubles have just started, but there may be a good ending. Replacing taking parts can improve the sound, so here is a short listing of all those companies who specialise in getting a classic up and running again after its deposited a small ring of soot on your ceiling!

CLASSIQUE SOUNDS
(Paul Greenwood, Letchworth) ESL-75s restored, rebuilt, fully renovated or improved. Lekh. Quad valve amps etc. Tel: 0845 1233157 / Mob: 07960 285381 Email: classical_sounds@yahoo.co.uk www.bathaudio.co.uk/classique

GT AUDIO
(Graham Tricker, Bucks) Leak Troubleshooter specialists. Also Quad and other classic units, radios and amplifiers restored, repaired. Tel: 01372 276604 / Mob: 07708 431963 Email: ghughm@googlemail.com

ARCAM ALPHA 7 CD Player. £100. I have upgraded my system. Email: johnand sueburr@yahoo.co.uk Tel: 020 8864 8008 www.onethingaudio.com www.respond.co.uk

LORICRAFT AUDIO
(Tony O’Sullivan, Bucks) Revox 301/401 and their own 501: repair, spares and service. Tel: 01488 72267 Email: brian@revoxservice.co.uk www.revox.freeuk.com

MUSICAL FIDELITY X-LPS
V3 phono amplifier M/MMC, mint, boxed. Pair Lyn Olsen ME2 speakers with external crossover. Professionally built, midnight blue, 18" and 24" Atacama stands. Genuine. Offers please. Tel: 0115 975 4070 (Nottingham)

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As the long nights draw in, the hi-fi season kicks in and all of a sudden there’s no excuse not to be spending more time with your system! With this in mind, November’s Hi-Fi World is rounding up three high end systems for your pleasure — including the best products from the likes of Meridian, Clearaudio and Chord! And there’s so much more — including exclusive reviews on Acoustic Energy’s superb AE1 MkIII SE mini monitor loudspeaker (pictured), DNM’s enigmatic new 3D preamplifier and Q Acoustics’ affordable 1050i floorstanding loudspeakers. Here’s just some of what we hope to bring you:

LOGITECH SQUEEZEBOX DUET NETWORK MUSIC PLAYER
SPENDOR S3/5a vs. AMPHION ION STANDMOUNTERS
ACOUSTIC ENERGY AE1 MkIII SE LOUDSPEAKERS
MARTIN LOGAN THE SOURCE LOUDSPEAKERS
DAB/WI-FI RADIO HYBRID MINI GROUP TEST
MONSTER BEATS by DR. DRE HEADPHONES
CONSONANCE DROPLET LP3.1 TURNTABLE
ICON AUDIO PS2x VALVE PHONO STAGE
MERIDIAN 808.2 DIGITAL DISC PLAYER
OLDE WORLDE: GARRARD ZERO 100S
Q ACOUSTICS 1050i LOUDSPEAKERS
NAIM HDX DIGITAL MUSIC SERVER
PIONEER VSX-LX51 A/V RECEIVER
WADIA TRANSPORT iPOD DOCK
vdH CANARY MOVING COIL
DNM 3D PREAMPLIFIER

PICK UP THE NOVEMBER 2008 ISSUE OF HI-FI WORLD ON SALE SEPTEMBER 30TH, OR SUBSCRIBE AND GET IT DELIVERED TO YOUR DOOR: p82
# Free Reader Classified Ads

## Order Form

**Terms and Conditions:** Only one advert per reader. Maximum length per advert is 30 words. Adverts over 30 words will not be accepted. No Trade Adverts. This section is strictly for readers selling secondhand hi-fi equipment only. Telephone numbers and E-mail addresses are treated as one word. Model numbers are treated as one word i.e. Quad 303 = two words. Sorry, we cannot accept adverts over the telephone. The Publisher reserves the right to judge submissions.

You can email your advert to us at: classifieds@hi-fiworld.co.uk or write or type your advertisement copy in block capitals with one word per box and post it to us at:

Hi-Fi World Free Readers Ads, 
Unit G4, Argo House, Kilburn Park Road, 
London, NW6 5LF.

We will accept photocopies of this form

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November 2008 - 8th September

December 2008 - 9th October
CLASSIC CUTS

“SAVOY BROWN
RAW SIENNA
1970”

Blues rock outfit Savoy Brown found more success in America than here in the UK. Headed by Kim Simmonds, the group had a Jethro Tull approach to its line-up, which is to say that it changed regularly! ‘Raw Sienna’, originally released on the Deram label, is arguably their best album, and one of the best blues rock albums to come out of this country, displaying a gamut of styles with some truly distinctive highlights such as ‘Needle and Spoon’ and ‘Stay While the Night Is Young.

The album is currently available for sale from BGO Records (www.bgo-records.com). Beat Goes On has a magnificent catalogue of releases that rewards close examination and covers a wealth of genres. Always well recorded, its CDs offer great value for money as the company often provides two albums on one disc. This is the case with ‘Raw Sienna’ which is doubled up on the same CD with ‘Looking In’, released in the same year and almost as good an album as its CD partner.

Thankfully, BGO treats its music with the respect it deserves, so when it assigns a mastering engineer to help produce a new re-release, it goes for someone who not only understands the music but also the digital and analogue formats. This gives the source every chance to shine on the much maligned CD format. Thompson also commented that you cannot wholly trust the parent company to make a top notch flat transfer (or clone as it’s sometimes called) to an analogue tape. When did they last clean their tape heads? Did they align the recording correctly with a NAB test tape (a tape of test tones that helps align the following music to the tape heads)? “There have been times when I’ve returned the clones because the tape azimuth has been completely off, for example.” Hence the use of a CD-R flat transfer is not always such a bad idea after all...

Thompson tried to produce a CD with a similar warmth to that of a good vinyl set-up. “One of the biggest disappointments for so many reissues is the tinny sound. You know that they’ve gone back to an original master and flat transferred it. However, they forget that many CD players have an innate coldness as opposed to many turntables which add their own warmth. Also, you have to make a note of where it was cut, as many lathes add to the music’s personality. For example, on an American Scully lathe – as opposed to a European Neumann – it’ll add a bit of bass life giving you extra warmth. This is why many American cut albums had a warmer, apparently deeper, sound.”

Hence, for ‘Raw Sienna’, Thompson was conscious of lifting the bass in the right areas to give the whole production a warmer sound. Of course, if the bass was too forward, giving a boxy feel to a bass drum, for example, Thompson would slice the bass to quieten it down a bit. Which all goes to prove that, firstly, analogue has a big say in how a digital production will sound but, most importantly, a mastering engineer can make or break a reissue. BGO Records can be thankful, however, that Andrew Thompson did a great job with this CD – it’s highly recommended. PR
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