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From CD and DAT to fancy interconnects and crackpot tweaks, the 1980s changed so much of the hi-fi landscape. More important however, was the way it shifted the gaze of audiophiles from loudspeakers to source components. Quite right too. As that old computer adage has it (‘garbage in, garbage out’), what’s the point of having the best amplifier in the world if it’s got a stinker of a turntable or CD spinner driving it? Trouble was that amidst all the hyperbole, we took our eyes off the ball, relegating speakers from the ‘be all and end all’ of system sonics – to mere pieces of furniture.

In this month’s Hi-Fi World we get serious about speakers once again. We round up budget standmounters from Acoustic Energy, Mission, Mordaunt Short, KEF, Quad and Wharfedale, try out Dali’s Royal Tower floorstander, recommend the ultimate 'full range' loudspeaker system (from Quad, REL and Townshend), witness the magic of Mordaunt Short’s Genie and drool over the statuesque carbon-fibre clad Wilson Benesch Curves.

Dominic Baker, MD of Focal UK, explains what designing loudspeakers entails, and Noel Keywood extols the joys of Quad’s original electrostats. And no matter how good your particular boxes are, you’ll need some serious affordable audiophile amplification to drive them, so we hear Naim’s super new NAC I 12x/NAP150x transistor combo, and Shanling’s SP-80C tubular belles. Factor in great new digital sources from Musical Fidelity’s A5 CD and Benchmark’s DAC1 plus much, much more - and there’s much to speak of inside!

David Price, editor
55 Musical Fidelity A5CD - one of the best CD spinners ever?

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At £5,000 this stunning carbon fibre confection is not cheap but, reckons Dominic Todd, it's this company's sharpest yet

Channa Vithana does our speaker shootout, with models from Acoustic Energy, Mission, Mordaunt Short, KEF, Quad and Wharfedale

Noel Keywood on Quad Musikwiedergabe, a German electrostatic specialist remanufacturing Quad ESL-57s and Braun LE-1s

It's every speaker owner's dream - the prospect of a true, full range system that's flat from bottom to top. David Price has an answer...

Ian R MacLeod looks at the ancient art of reproducing music — and the lengths to which people go to make it sound better...

Does this new multichannel loudspeaker system have the magic touch? Channa Vithana decides

Dominic Todd auditions this beautiful floorstanding loudspeaker from Danish Audiophile Loudspeaker Industries.

David Price talks to Dominic Baker, MD of Focal UK about the fine art of loudspeaker design

Antony Michaelson rather immodestly claims Musical Fidelity’s new A5 to be ‘the best CD player in the world’... Well, Dominic Todd liked it

Another pro audio digital-to-analogue convertor that works brilliantly in the domestic context. Dominic Todd listens in...

Naim thought it time to “X-rate” its entry-level pre and power amplifiers. Dominic Todd goes one step beyond

This pair of monobloc tube power amplifiers, in the striking shape of the 3Dacoustics by Shanling SP-80C, is auditioned by David Price
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TWENTY ONE, TODAY
Sugden has a new A21 integrated amplifier out. The latest A21SE is evolved from the much-lauded A21a, combining increased power with improved user facilities with a completely new line stage and remote volume control. The line stage is dual mono with separate current shunt power supplies. It boasts 30W of pure Class A into 8 ohms, and dramatic new styling. For more information call Audio Synergy on 01924 406016 or click on www.audiosynergy.co.uk.

PHON HOME
Phonosophie, the well-established German audio specialists, has a new range of high end separates available in the UK. Headed by Ingo Hansen, the company's new range includes four CD players ranging from the Impuls 1 (£2,675) to the two-box Impuls 3 (£12,725), and amplifiers from the 2x70 watt entry-level Classic 1 integrated (£1,875) to pre-power active systems using the 250 watt Mono Spike power-amps (£8,500 each). Phonosophie products are hand-built in Hamburg, and the range includes turntables, speakers, power supplies, cables, racks and accessories. More details can be seen at www.phonosophie.co.uk or you can call 01730 261924.

DAB HANDS
Arcam, the first specialist hi-fi company to make a bespoke DAB tuner, has a new model out. The DiVA DT91 (£449.90) is claimed to be "the highest quality DAB/ FM Tuner available", boasting "class-leading audio performance, state of the art connectivity and control features, an FM tuner implemented in the digital domain and full implementation of DAB features". It makes its debut at the Bristol Sound & Vision 2005 show (Friday 25th to Sunday 27th February). For more information, click on www.arcam.co.uk and/or www.bristolshow.co.uk.

SHOW AND TELL
High End Praha 2005 is the only hi-fi show in the Czech Republic that allows audiophiles and videophiles alike to experience the best kit around. It will be held on 26th and 27th of February 2005 between 10am and 6pm. Entrance fee is 100,-CZK (£2 GBP) and the much of the proceeds will be donated to the Czech UNICEF. The show is sponsored by Czech magazine STEREO&Video, AudioQuest and Castle Acoustics. For more information, email pz@reference-cinemas.cz.
BIG THING
The new IsoTek Titan mains power filter dispenses with isolation transformers in favour of a direct-coupled design with a nine-stage series and parallel filter configuration. A radical new circuit is optimised for a high degree of common mode noise rejection with the highest possible differential mode rejection compatible with massively low insertion losses. Great care has been taken to minimise insertion loss at mains frequency. The new circuit also offers the desirable characteristics of a true balanced supply, especially at high frequencies where it possesses superior performance to its isolation transformer based predecessor. To further ensure the greatest possible transient capability, enough to realise an unlimited peak current (23,000 watts potential), two things out of the ordinary have been achieved. Firstly, the minimum constant running ability of the device is rated at over 4600 watts. Secondly, the unit is fitted with an RCBO, a high tech electronic protection that allows huge transients whilst remaining safe. The IsoTek Titan is specifically designed for large power amplifiers, to provide hitherto unknown levels of conditioning without dynamic restriction. It has two high quality 13A outlets and a Neutrik connector for the Multi-Link accessory for connection of a further six components. Only trouble is, it's a big mother: 275x183x275mm and 12.75kg to be exact... Contact Activ Distribution on 01635 291357 or click on www.isoteksystems.com.

BBC RADIO ACTIVE
Sales of DAB digital radio sets are set to soar past one million units by January, buoyed by Christmas trade, the BBC predicts. The announcement comes as the BBC's vision for the future of DAB digital radio - as submitted to the Secretary of State for Culture, Media and Sport - is published as part of the Government's review of digital radio. It was predicted earlier this year that sales of DAB sets could reach a million by 2005 but figures up to October, showing more than 800,000 units sold (DRDB / Gfk) before Christmas trade had begun, suggest the end-of-year total will exceed that figure. Simon Nelson, Controller of BBC Radio & Music Interactive said: "The BBC is fully committed to DAB and, thanks to the collaborative efforts of the BBC, commercial radio, manufacturers and retailers, digital radio looks like being one of the success stories of the year".

It also states that, although there are encouraging signs from the digital radio market, the industry and the country are not yet ready for the switchover to digital radio. The report recommends the Government review the progress of DAB digital radio in three years with a view to setting the date for switchover. It asks that a joint industry plan for the digital migration of the entire U.K. radio sector should be agreed before this review. The plan should ensure that, before switchover, analogue provision is matched and no participant in the radio sector is left behind. In the report the BBC reveals that it has devised an outline plan for allocating and managing spectrum that will deliver enhancements to all tiers of digital radio provision. The submission calls for the release of five blocks of Band III spectrum for DAB digital radio, for use by the entire radio industry enabling the migration of BBC and commercial services that are currently not available on DAB.

The details will be shared with Ofcom and the Government as part of the BBC's request that a joint industry approach be taken regarding spectrum. The BBC also recommends that the Government explore ways to support the U.K. DAB digital radio manufacturing industry. The full report is available at www.bbc.co.uk/info/policies/dab_review.shtml.

KRYS TALINE
Founded in October of 2003, Krystal Kables has been producing a range of mains cables that claim to "break the mould of traditional aftermarket cable designs" with new fully screened types, rather than the outer shielded or plated weave styles commonly found. Unlike most aftermarket cable makers, it argues that RFI rejection isn't the true cause of hiss, muddling and distortion in a hi-fi system, but the design and construction of 2 or 3 core flex cable itself that's constantly 'polluting' the power running through it that is the real issue which needs to be addressed. Any electrical appliance that utilises flex cable suffers from this distortion, Krystal says. At the budget end of the range is the SATURN cord (£18.50 for 1m), extending all the way up to the solid silver cored MERCURY power lead (£585/m). The company also makes 4, 6 and 8 way trailing sockets with the option of any one of its leads as the entry cord, plus a full range of interconnects, speaker cables and accessories suited to the budget conscious audiophile. All cables are built by hand, PAT tested for electrical safety and finally connected up to a real hi-fi system before despatch. The full range can be found at www.krystalkables.com.

MANA FROM HEAVEN?
Mana has a new range of non-magnetic stainless steel racks on sale. Since moving the company from Iver in Buckinghamshire to larger factory premises in Anglesey North Wales over three years ago, the company developed its range of supports and brought the fabrication in house, as well as changing its company logo from the Gothic typeface so familiar to a generation of eighties hi-fi buyers. The non-magnetic stainless steel range came about from experiments with different types of steel - the company found non-magnetic stainless steel spikes 'made a worthwhile improvement over high tensile steel spikes' (and now offers them as an upgrade). Both Mana's standard range and the new stainless range are available in either black or silver, although the stainless is also available in a polished finish as well. For more information, click on www.mana.co.uk.

CORRECTION:
Apologies to Amity Electronics. Hi-Fi World's ghost in the machine changed the printed prices from Euros to UK Pounds in our January 2005 issue. The correct prices for the HPAIC and HPA4S headphone amps are 288 Euros and 316 Euros respectively. As such, they both represent superb value for money and are even more heartily recommended than before!
**TOYS FOR THE BOYS**

Denon's new (£379.99) DN-S1000 CD/MP3 player is designed to offer many of the same high-end features and benefits of the DN-S3000 in a far smaller, portable package. Measuring 226x92x215 mm and weighing just 3kg, the DN-S1000 includes advanced MP3 Playback functionality (Seamless Looping, Scratching, Hot Starts and Effects), built-in effects (Filter, Flanger and Filter plus the world's first Echo Loop), platter effects, 3-way BPM counter and two Hot Starts. The DN-S1000 also features another world first, Next Track Reserve with Cross Fader - with the ability to store hundreds of MP3 files on one CD, Next track Reserve allows DJs to cross fade to another song within the same disc for a smooth non-stop mix. "Wicked!", etc...

**FLOOR SPACE**

TCI’s Diamondback is a high quality flat loudspeaker cable, retailing for £7.99/m, that’s suitable for use under carpets. The company says the neutral balance and unobtrusive appearance of Diamondback means it easily fits into a vast range of systems and homes. It claims an open and dynamic sound with controlled and extended bass response. For details, call 07710 196 949 or click on [www.true-colours.com](http://www.true-colours.com).

**SHOP TALK**

Apple has today announced that music fans have purchased and downloaded more than 200 million songs from its iTunes Music Store. The 200 millionth song was part of The Complete U2, making iTMS the world’s number one online music store by far", according to Apple CEO Steve Jobs. In the UK, it features more than 800,000 songs from the major music companies and gift certificates and exclusive music not found anywhere else online.
This ad features a few new products we’re excited about, as well as a couple of old favourites (which we’re still excited by even after all this time!) From top right, going anticlockwise, first off are the Anthony Gallo Reference 3 loudspeakers (£2400/pr). You can’t tell from the picture, but these are actually very compact (about 3 feet tall) but have the most amazing bass extension and a very open sound. Next, the brand new Musical Fidelity A5 series amplifier (250W/ch) and CD player, at £1499 each, are superb value. They are designed to be better, and cost less, than the popular 308 series, and don’t even feel embarrassed in the company of the famous Nuviesta and Trivista series. The CD even features a valve output stage, just like the late lamented Trivista DAC! The Duevel Bella Lunas (£3160 to £4160/pr dependent on finish) need no introduction. This superb Omni design, featured at the recent Heathrow Show, should be on everyone’s shortlist. Origin Live’s new Sovereign turntable (£3850 plus arm) sets new, even higher standards for this already envied manufacturer whose decks already receive huge acclaim from the press. Next up is something we thought we’d never see - a valve / transistor hybrid power amp from Tom Evans, famous for their Groove phono stage and Vibe preamp. The Linear A (£3999) is a truly innovative design which draws on the strengths of both technologies to give transistor speed and control with valve naturalness and texture, another milestone for Tom! Many people will still remember the success we had with the Magneplanar MG 1.6 speakers at the show. These flat non-electrostatic panels with ribbon tweeters produce the most amazingly believable soundstage, all for the direct import no-middleman price of £1500/pr. The new Duevel Shuttle-Disk rechargeable battery CD player (also £1500) is on permanent demo - bring your own CDs and be pleasantly surprised! Lastly, we had to squeeze it in, what we regard as probably the finest all-round (pardon the pun) turntable in the world, the Brinkmann LaGrange with the Brinkmann 10.5 tonearm (£8395 in total), a truly staggering combination.
You can spend an awful lot of money on loudspeaker cables, but what benefits does it bring? David Price investigates...

Regular readers may know that I'm not into cables. Whilst this might be an extremely healthy state of affairs to 'audio agnostics', those initiated into the weird and wonderful world of hi-fi might think it strange. After all, what better way of spending £700 is there than an oversized set of wires in a fancy box?

Well, I decided to test my prejudices by comparing a most unprepossessing run of QED Micro at £1.75 per metre with something costing nearly fifty times as much – Chord Company's latest Reference, commanding the princely sum of £699 for two runs for three metres (terminated)... The QED Micro is a dim and distant ancestor of the company's ubiquitous '79 Strand' – a wire that set the hi-fi world alight some twenty five years ago. This was the first audiophile cable I ever bought, and yes – it made a massive difference over my previous 'bellwire'. The Micro is an altogether different over-large budget stereo imaging.

By the standards of other modestly priced fare, I couldn't fault it – it's an immediate, accessible and musical listen and only lets the side down in any objective sense with its light bass. Still, it's not intrusively light, and what there is is very taut and tuneful – so this could actually be used to good effect when trying to get your over-large budget floorstanders (read: boom-boxes) to work in small rooms. Overall, I was impressed by the all round quality of these – they show their excellent pedigree in everything from the sound to the packaging to the termination.

What then of Chord Company's Signature? This is another brand with a gold-plated reputation for top quality, no-nonsense products. Top quality cable is used as you'd expect, and the company has taken great care to shield it – something which is a vital component of any cable's final sonic performance. Similar to the tri-shielding system used on the Signature RCA phono interconnect, this cable is extremely thick and chunky and as such extremely room unfriendly – oh for the slight, malleable feel of the QED Micro which hides away behind carpets so effortlessly! And the fact that it's plug-ugly black and red to boot will probably mean that many people's other halves will veto any purchase decision instantly...

Inside this affront to aesthetics is lots and lots of multi-strand heavy-gauge copper. Two individually shielded lengths of cable are twisted together to produce each run. The ends are held together with specially developed, non-compressible aluminium clamps – great for durability, but not so great for those who don't want their front room to look like a recording studio. Termination is high quality gold-plated 4mm banana plugs.

The question then is – is the Signature fifty times better than the Micro? The answer is – don't be silly, of course not. No way. But considerations of absolute value aside, this is one of the very best loudspeaker cables I've ever heard. They opened up the system like a crowbar on a crate – suddenly it was all scale, power, depth, dimensionality and an incredible sense of musicality. Hitherto, the system seemed to have been sipping distilled water, but now it was gulping good old 5-star gasoline...

Interestingly, the Signature is so open and transparent and dimensional, yet it isn't one of the many high end cables I've heard which simply deliver a super-silky sound. The big Chords are very, very neutral with a delicious, finely etched treble and superbly powerful and impactful bass, yet it doesn't sound over-finessed and sleep-inducing. Rather, it's a brilliantly voiced everyday cable for all systems and musics. Is it worth it? Of course not – the QED Micro is a brilliant value start point, but buying a cable like Chord's Signature is pure indulgence for those who've got a system good enough to profit from it. If you have, then you can probably afford the Signature, and so won't be put off by its out-of-this-world price...
Wilson Benesch has produced a pared-down version of its mighty Carbon Fibre Composite A.C.T. loudspeaker. At £5,000 the Curve floorstander is still not cheap but, reckons Dominic Todd, it's the company's sharpest yet...

It's now fifteen years since Wilson Benesch quietly introduced the world of vinyl to the, literal, strengths of carbon fibre. It had only to be a matter of time before it branched out into loudspeaker design, with the A.C.T. (Advanced Composite Technology) becoming a showpiece for the technology. This used a triple-curved CFC (Carbon Fibre Composite) cabinet and special, bespoke, drive units to produce one of the most open and neutral sounds around. Following on from the success of the A.C.T, the new Curve uses essentially the same formula, but with a simplified construction and slightly reduced size. The best news, though, is that at around £5,000, it costs a good £3,500 less than the A.C.T.

Take a look at the Curve, and the first thing you'll probably notice is that lustrous carbon fibre cabinet. This is really the centrepiece of the 'speaker and, unlike many products these days, it is the real deal and not just patterned plastic. The composite itself is made from no fewer than twenty four materials, and is moulded to a shape designed to disperse standing waves. There's nothing original about this tapered cabinet design — KEF have been doing it for years — but the additional curvatures at the back shows wonderful attention to detail. Internally, the whole cabinet is reinforced by substantial metal supports.

Composites may be lightweight, but by the time the Curve has had its frame installed, it's actually heavier than many of its rivals — not necessarily a bad thing for a hi-fi 'speaker, of course, and a factor that certainly worked in the A.C.T's favour. Where the Curve is less glamorous than its big brother is in the areas that finish off the cabinet. The top is capped with acrylic, whilst nothing more exciting than MDF is used for the base and front baffle.

That said, there's little wrong with this material, as countless high-end 'speaker designs bear testimony to. Our 'speakers were finished with stained cherry trim although, it should be pointed out, that this costs an extra £350. Black or silver side cheeks are standard. Finishing off the cabinet is an attached steel plate that holds the four substantially sized spikes. This not only supports the 'speaker, but increases its stability through an expanded footprint.

Showing every bit as much attention to detail are the drive units. The 25mm (1 inch) tweeter is a pretty standard, soft dome design, but the twin woofers are quite unique. The "Tactic" cones, as WB like to call them, are made from a three-layer, self-bonding, woven polymer. Look closely and you'll see that the finish of the two drivers is different. This is because, with this "two-and-a-half-way" design WB have chosen to match the characteristics of the drivers to their required task. The mid/bass unit then, uses a lighter, finer weave with a heavier, copper voice coil. Meanwhile, the bass cone uses a denser, heavier weave — to produce a stiffer cone — with a lighter, aluminium voice coil. The chassis of both cones are of the "open" type, and constructed of aluminium. To finish off the design, the terminals...
are machined by Wilson Benesch themselves, and constructed from the ideal mix of solid copper, plated with gold. Alongside the A.C.T., the areas of cost cutting are all too apparent yet, against the opposition, these are still exceptionally attractive speakers that make the most of their exotic materials. Even at £5,000, though, composition is far from thin on the ground. Wilson Benesch reckon these speakers to be exceptionally transparent, but then so too is the Quad ESL-989 (£4,600-£5,000). With a super tweeter, the level of detail that Tannoy's Dimension TD 10 (£5,000) can extract from a recording is also quite remarkable. Then there's the vice-like grip shown from the Acoustic Energy AE3 mkII (£4,500) to contend with and, not to mention, a whole host of other rivals. Naim, B&W, KEF, PMC and Focal would all dearly love you to pass your MK their way, and all of them can make pretty convincing cases, too...

**SOUND QUALITY**

Using a pair of Musical Fidelity X-P200 power amps' with XPREV3 pre', AS CD player and Benchmark DAC 1, I began by listening to The Brand New Heavies', Shelter. The most impressive aspect of the sound was the way that the A.C.T.'s open and unboxy qualities have been carried across to their baby brother. The level of transparency and soundstage width was almost panel like in its lack of colouration. Considering the size of the cabinet, the scale of sound was also pretty impressive, too. That said, impressive as the scale was, the bass notes - whilst deep - were a tad soft. At the other end of the scale, I found the treble to be set well forward of the norm. Still, it was at least smooth and well integrated, and went towards creating a cohesive and musical balance. Where the treble response did become a little more trying, though, was with a brighter recording such as Sheryl Crow's, Sweet Child O' Mine. Here I found Crow's vocals too close for comfort, even though their focus within the stage couldn't be faulted. If your system is ever-so-slightly soft around the edges - or indeed based around vinyl - then this balance would suit perfectly but be warned, if it's already bright, then you could find yourself with a pin-sharp but Ultimately overly forward balance. Otherwise, the resolution of the guitar was good, and there was plenty of space around the band's instruments, allowing them to breathe. Although far from being the smoothest rendition of the song I've heard, I have to say I had a sneaking admiration for the Curve's portrayal of the piece. Refinement, after all, probably wasn't something that Rose had on his mind when he wrote the song! It should also be added, that although forward and, it could be said, bright, the Curve wasn't in any way harsh or grainy sounding. With Daft Punk's 'Discovery', it was the midrange that, once again, provided the star turn. Bass proved weighty enough, but also under-damped. Still, that didn't affect the excellent layering of effects and broad, focused sound stage. Even though the bass did lack some pace, it somehow didn't seem to matter as the integrity of the rest of the balance was such that you were too engaged in the rest of the music to really care much.

Enjoyable or not, I still had some concerns regarding the Curve's bass response, so I put on Raghav & Naina Boss's 'It Can't Be Right', which contains a suitably energetic bass line. In my listening room I did detect some boom and definite bass overhang. Moved to another room, though, and the problem disappeared. Clearly, the Curve is more sensitive to room acoustics than most, making home audition a must.

Move away from bass heavy R'n'B to Classical music, and you'll find the Curves far more at home. Considering the forward treble, the brass wasn't anything like as fierce as I'd been expecting with Chabrier's 'Espana'. Instead, it combined vibrancy with refinement to great effect. Strings were equally well portrayed, and the whole orchestra benefited from excellent staging. Whilst most of the drama and tension of the piece was intact, transient attack was not quite all it could be. Subtle nuances were, however, brilliantly captured, and the benefits of the exotic construction clearly audible when it came to...
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ULTIMATE SPEAKERS

When editor DP asked me to detail my favourite high-end loudspeaker I began to panic. Trouble is, there are simply so many wonderful designs, that to single out any particular one seems unjust. This is compounded by the fact that many of the designs I've heard haven't been in the least bit helped by their temporary location of hi-fi show hotel room. So, excuses over, it's time to narrow down the pack. In terms of transparency and seamless response, a decent Quad electrostatic is still hard to beat. The ESL-889 is subtle, but even a well-serviced ESL-63 can deliver highly impressive results. I've always been a fan of small monitor 'speakers, as there's not much that can beat them in terms of B&W Signature 805, although there are many other highly timing and articulation. For me, best of the best of these is still was the most dynamic I've ever heard but then again with a sized eyeballs set into a vast, white triangular body. The sound over 8' feet tall had, what can only be described as, football impressive designs out there. In terms of the 'awe factor', the highly impressive results. I've always been a fan of small moni-

ESL- 989 is sublime, but even a well- serviced ESL- 63 can deliver

narrow down the pack. In terms of transparency and seamless

location of hi-fi show hotel room. So, excuses over, it's time to

the brand is the Cabasse Atlantis MC. Shown at the 1993 Heathrow hi-fi show, this French design was over 6' feet tall had, what can only be described as, football sized eyeballs set into a vast, white triangular body. The sound was the most dynamic I've ever heard but then again with a price of, if I remember correctly, £12,000, then so it should have been!

Yet as good as all these 'speakers are, none can even con-

sidered to be the perfect design. The reason is that, like many other high-end 'speakers, they all have terrific strengths, but some notable weaknesses, too. What's needed, then, for the perfect high-end 'speaker is a combination of the transparency of the Quads, the articulation of the B&W's with the dynamics of the Atlantis MC. For me, the 'speaker that best encapsulates all this is KEF's Reference 207. Some may be surprised by my choice, especially as it comes from a brand not usually associ-

ated with esoteric hi-fi, yet take a look at the evidence. KEF are one of the most respected 'speaker manufacturers of all time. Look back at previous greats and, the changes are, that they will have used KEF drive units, or at least technology pioneered by KEF. At £9,000 the pair the Reference 207s aren't cheap, but they do incorporate everything KEF knows about loudspeaker design.

They are also just 'cheap' enough to be considered as a realistic choice, and not an extravagant fantasy costing tens of thou-

sands of pounds.

What makes the Reference 207s special for me, as I've alluded to earlier, is their blend of qualities. At 66kg each and standing 130cm by 70cm these are, by anyone's standards, big boxes. Given a reasonably sized room and 'big' is exactly how they sound. The soundstage is simply huge, with the twin 25cm woofers providing plenty of weight and scale to the music. Given their size, this much you'd expect, but the KEF's go much further than this. Using a 'Hypertweeter' and KEF's renowned Uni-Q system for the treble and upper-midrange gives these 'speakers uncanny detail and focus, especially for one so large. The cabinet may not be fashioned from anything more exotic that laminate birch ply and MDF, but it's as solid as you could wish for (not to mention immaculately presented). Its rigidity and separ-

ate enclosures no doubt goes some way to explaining the 207's surprising agility and pacy timing. Usually, physics dictates that 'speakers of this size suffer in terms of timing and cohesion, but this is certainly not the case here. Whilst, it's not quite as seam-

less and transparent as the finest electrostatic, then, it's an awful lot closer than you might think. For a six-driver array, box cabinet design 'speaker, this is a remarkable result.

Although this is one of the finest all round 'speakers I know, like anything else, it's not without fault. Although the dynamics are vast and powerful, the actually quantity of bass may come as a slight disappointment to some. Personally, I'm happy with the balance, but those expecting floorboard-rippling grunt may be advised to add a [hugel] subwoofer or look elsewhere. Ultimately, good hi-fi should make you forget about the hi-fi alto-

gether and simply draw you into the music. This is exactly what KEF's Reference 207s do and, for that reason alone, are my favourite high-end design. DT

instrument decay. As before, my overriding impression was that whilst there were some obvious flaws with the performance, it remained an immensely capable 'speaker in so many ways, not least in its ability to entertain the listener.

Like many other high-end 'speakers the Wilson Benesch Curves show some remarkable characteristics tarnished, ever so slightly, by a few flaws. Considering the complexity of the construction, the finish is superb. It might not have all the gloss of the A.C.T, but it still stands out as a very classy design. Unlike other WB designs, I also found it an easy load to drive, opening up the options for matching amplifiers.

Sonically, the Curves produce a stage that is as broad as it is deep, and a spaciousness that seems to forget it originates from a couple of smallish boxes. Within the staging, the midrange is the real star, showing excellent timbre, definition and focus. Slightly less impressive are the frequency extremes. The bass is very room dependent and can lack sharpness. The treble, on the other hand, was occasionally too forward for my liking. Both issues can be addressed, but they are both worth paying attention too, and make a home demonstration mandatory.

These issues aside, the Curves remain an immensely enjoyable 'speaker to listen to. As a device with which to get 'lost' within the music, few come close, even at higher prices still. Wilson Benesch has successfully achieved their aim of producing a cut-price A.C.T, and the Curve can be confidently recommended to any lover of music. Lovely.

MEASURED PERFORMANCE

Wilson Benesch use carbon fibre drive units in carbon fibre cabinets, so there's tremendous consistency in the materials used within the Curve. The midrange unit is a little uneven in its output, our response analysis shows, suggesting it will have some character. A small peak around 800Hz will push vocals forward and improve enunciation by a subtle degree. Above this frequency output extends smoothly up to 20kHz with no drop at all. This usually imparts a bright sheen to the sound, appropriate with vinyl but occasionally challenging with CD.

At the other end of the spectrum the Curve reaches down to 40Hz, helped by raised output from 50Hz-100Hz, from the lower bass unit loaded by a reflex port in the bottom plate. This will give it fairly generous bass; the Curve will definitely sound weighty. Both (top) port output and the Impedance curve suggest it will sound well damped too. In fact, the impedance curve has far less variation than normal and the Curve is substantially less reactive than most 'speakers, meaning it is a far easier amplifier load and will consistently get the best results from amplifiers. It uses a 4ohm bass unit to keep sensitivity up, which measured a good 85dB.

The Curve will sound forward, detailed, a trifle bright at times, but has solid sounding deep bass. It measures well in all areas and will undoubtedly work well. N.K

VERDICT

Arresting looks, esoteric construction and immensely capable sound, but the bright, sryg vocaling won't suit all.

WILSON BENESCH CURVE

WILSON BENESCH

(C +44 (0) 1142 852656

www.wilson-benesch.com

FOR

- transparent mid-range
- material construction
- musical and involving

AGAINST

- forward treble
- softened dynamics
- room-sensitive
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www.bristolshow.co.uk
stand and fight!

Channa Vithana adjudicates in this month's standmounting speaker shootout, with models from Acoustic Energy, Mission, Mordaunt Short, KEF, Quad and Wharfedale. Seconds out...

All six standmounting loudspeakers here cost under £400, and thus represent a great test of their respective manufacturers' ability to make a serious value for money product. They're all sharply styled, as you'd expect in such a hotly contested market sector, and three feature fashionable and modern looking curved cabinets - although none of these are beautifully elliptical in plan like the lute shaped (£2,500) Sonus Faber Cremona Auditors for example, instead being squared off at the rear.

Intriguingly, in this age of manufacturing convergence and OEM component sharing, these mainstream brands feature for the most part completely different approaches to engineering and technology -- if not cabinet construction (usually MDF) or basic box shape. There are aluminium, polypropylene and Kevlar drivers along with the more traditional plastic variant drive units.

Programme included Sting's 1986 'Bring On The Night', a live document following the release of his first solo album 'The Dream Of The Blue Turtles'. It's quite a challenge because it is live and captures Sting at a transitional period in his career where he is swapping over from the screechy high pitched vocals of the Police to the more technically proficient and smoother singing of his latter years. It also contains some beautiful bass playing by Daryl Jones, which tests the bass delineation (or lack thereof) abilities of these speakers.

Another reference disc was 'Mysterium Sacred Arias' 2001 featuring Angela Gheorghiu, which has some stunning renditions of early choral works and has many near silent notes, deft instrumentation and orchestration mixed with challenging vocals that suddenly come out of nowhere. 'Mysterium' should be a stern test for a speaker to see how it copes with multi-layered and powerful female vocals and therefore speaker/in-room resonance. And so to battle...

REFERENCE SYSTEM & SET-UP
Denon DV-3910 multichannel player
Eclipse A502 amplifier
Chord Company Odyssey 4 speaker cable
Chord Company Chameleon Silver Plus interconnect
Russ Andrews Reference 350i PowerKord.

SPEAKER PLACEMENT
For set-up I varied the positions accordingly for each speaker between 2-2.8m wide, while they sat atop birch ply stands in a 4.5x6.5m room containing floating laminate wood floor over concrete with concrete walls. With the exception of the Aelite Ones (straight firing) all the models preferred plenty of toe-in.
Distributed in the UK by Marantz, these Mordaunt-Shorts are the largest and joint cheapest speakers in the group. The MS912s feature a 165mm proprietary CPC ('Continuous Profile Cone') aluminium driver and 25mm aluminium dome tweeter beneath a mesh cover. MS claims the CPC driver has an, "uninterrupted cone surface (that) ensures excellent rigidity and therefore minimal distortion, something conventional drivers have trouble matching". The aluminium front baffle is an attractive affair, bluff and clean without visible fixings. The drivers sit within beautifully profiled openings giving the MS912s a modernist and futuristic look. The cabinet is conventionally shaped but has curves at the corners to minimise diffraction as well as look more attractive.

The MS912s are said to be, "braced by a wood composite, whose mechanical properties counteract those of MDF, further reducing resonance and cabinet coloration" and are magnetically shielded. At the rear there are several hex head fixings for the back panel and a set of gold plated binding posts with port above. The company claims a frequency response of 55Hz-22kHz and a sensitivity 89dB with a nominal impedance of 4-8ohms and power rating of between 15-150W. The MS912s come finished in cherry or black ash, both in a neat vinyl wrap that the Chinese are so good at doing, and measure 355x205x295mm and weigh 8kg. Mordaunt-Short recommends a ten hour running in period.

SOUND QUALITY

Due to their size, the MS912s produced the most expansive sound of the group, they had an exuberant nature especially preferring the jazz/ pop of Sting to Angela Gheorghiu where they struggled a little with the choral vocals. However if it is energetic modern music you are after then the MS912s are very good especially considering their low price. They were the easiest speaker to drive, going louder than the others at exactly the same volume level. Their strengths are a smooth and even response with great timing. They did have a tendency for some midband glare characteristics however, this being similar to the Wharfedales and was especially so with Gheorghiu where they couldn't handle her vocal crescendos as well as say, the much smaller KEFs did. Still I like this speaker and within its rock/pop limits it produced a most enjoyable sound. For instance the bass lines from 'Tea In The Sahara' from 'Bring On The Night' was one of the best of the group having good extension with meaty expression and a rare slice of tunefulness. Overall, a lot of bang for your buck and pretty refined with it too. It's interesting to contemplate that this offers dramatically better sound than any nineties box of the same price — brilliant value...

MEASURED PERFORMANCE

The MS912 has a smooth, even frequency response characterised by a small amount of plateau treble reduction. This amounts to just -1dB or so and, since the tweeter itself measures flat and smooth, helps ensure the 912 gives slightly less of the forwardness and glassy sheen that is so common today. Like Kef, Mordaunt Short soften out the sound just a tad, to ensure it doesn't lacerate when handling bright CDs. Mordaunt Short's tweeter also handles strings well, due to its lack of peakiness. The 912's large-ish cabinet reaches down to 50Hz, the port taking this down to 40Hz. An almost ruler flat response down to these low bass frequencies suggests good damping and tuning, which will provide an even natured type of bass free from boom. It should play bass lines well, without undue emphasis - room permitting.

The 912 uses a 4ohm bass unit to get a sensitivity of 88dB - relatively loud for the cabinet size...
The Diamond series of loudspeakers from Wharfedale have in their various iterations been going since 1983 and earned a great reputation as the low cost but high quality option for the enthusiast and newcomer alike. These new 9.1 Diamonds measure 296x194x278mm and follow the modern trend of curved cabinet shape, though are only curved to the sides, with the rear squared off. The 9.1 has a 130mm Kevlar mid/bass driver with 25mm dome tweeter both of which use the visually preferable hex head fixings. Just below the mid/bass driver are two small ports.

At the back there is a set of nicely designed and high-quality clear plastic sheathed binding posts suitable for bi-wiring which are vertically mounted and asymmetrically positioned enabling much easier hook up with banana plugs. These binding posts are located on a small plastic moulding which uses the same hex head fixings as the drive units to attach to the cabinet which is a nice detail. Although they are vinyl wrapped, in this writer’s humble opinion this is the best looking design of the whole group (even though the visual aspect wasn’t the manufacturer’s original priority!). The Diamonds have the right proportions and are very well made and attractive to look at sans grill. They come in beech, cherry, black and silver finishes. Power handling is quoted at 20-100W with 6ohms impedance, 86dB sensitivity and frequency range between 50-24kHz. From the very first, Diamonds have measured very well, in spite of their budget status. Early Diamonds in particular were small, but deadly accurate in measurement and dynamic to listen to. The 9.1 is quite a lot larger than the original and extra box volume equates to lower bass. The new 9.1 reaches down to 40Hz (-3dB) our measurements show, before output falls steeply. The port is tuned to 50Hz, suggesting the 9.1 will have fast bass, rather than any sign of deep rumble. Wharfedale have lifted output around 100Hz by 3dB or so to give a little extra bass weight, so the Diamond is likely to have plenty of subjective impact and a good sense of speed too. With output flat to 20kHz there’ll be no lack of treble, so detailing will be good but there may also be some sheen to CD.

SOUND QUALITY

I found the Diamonds worked better with the Angela Gheorghiu disc, preferring her vocals and the classical musical arrangements. Her vocals were not overly exaggerated and indeed were handled with a great maturity for a speaker at this price. On to Sting though and the story is a little different because the Diamonds were not happy with the jazz/ pop arrangements of the band. This is interesting because the actual drive units had excellent integration considering the musical structure and bass was nicely controlled and tuneful - for instance but there was a veiling of the overall sound when it came to the more modern style of music. There was also a small but noticeable midband-glare expressed through the lower-mid registers with both vocals and instruments. Both these factors detracted from its strengths when compared to the others in the group. This is a visually arresting and classy sounding little speaker which in isolation proved very impressive - the trouble is, so did the rest...

VERDICT

SUPERB DESIGN
- superb design
- well built, finished
- price, driver integration

AGAINST
- slightly veiled sound
- slight midband glare

WHARFEDALE DIAMOND 9.1 £180
Wharfedale International Ltd.
(+44(0) 1480 447 700)
www.wharfedale.co.uk

MEASURED PERFORMANCE

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The new Diamond measures well, just like the original. It now goes lower, but should sound fast, clean and impactful. NK
The Q Compacts are the smallest in the KEF Q loudspeaker series. Indeed they are the smallest speakers in this test measuring just 280x180x250mm and weighing 3.9kg. KEF is one of the famous British speaker brands with many innovative concepts and technologies to their name such as the POD units that housed and isolated the midrange and tweeters first seen in their late seventies and early eighties models. The POD concept is still in use today in their complicated high-end reference series while the Q Compact doesn't have its own POD, it echoes this by having a raised curved section (inscribed fetchingly with a 'Q series' legend) above the main driver unit to "aid driver dispersion".

One of KEF's other innovations is its UNI-Q driver technology which in the Q Compact features a 130mm polypropylene mid/bass driver and 19mm aluminium tweeter housed within its central core where a dust cap/pole piece might normally reside. The main cabinet is made from MDF and is curved at its sides and gently curved on the front baffle while the rear is squared off. The UNI-Q driver is attached with just three stainless steel hex head fixings, which is most attractive. There is a semi-circle shaped port just below the driver integrated into the chassis mounting. At the rear are a set of titanium coloured biwiriable binding posts fitted onto a matching flush faced plate that is in itself screwed down with stainless steel hex head fixings. KEF recommends a period of 30-40 hours running in and claims a frequency response of 50Hz-27kHz, a power handling of 10-100w, 89dB sensitivity and 8ohm impedance [see MEASURED PERFORMANCE].

SOUND QUALITY

The KEFs, rather surprisingly for their size and price, excelled in this group. They produced the most natural and integrated sound and were stunningly good because of this. Timing was spot-on and the driver integration was near perfect. With both Sting and Angela Gheorghiu they excelled in the treble and midrange presenting very low coloration while also being unfussy about placement. It was with Angela's vocal crescendos that the KEFs proved their mettle – showing no noticeable glare or distortion during those difficult vocal passages. They had a most sophisticated treble while their bass response was very good, though being hypercritical the low frequency performance was a tad soft dynamically in comparison to some of the others – doubtless a function of the diminutive dimensions. Because of its smaller size the Compact couldn't obviously be as expansive as say the Mordaunt-Short, or have powerfully extended bass equivalent to the Mission V60s, yet it did everything important right and at a very reasonable price, therefore that is why it is so good.

MEASURED PERFORMANCE

The Compact measures out much like the early Q1 in its fundamental response balance. A steady downward trend toward high frequencies is sufficient to give a fulsome balance and ensure the metal dome tweeter sounds well integrated by not attracting attention. There's no sign of peaking at high frequencies, which also aids smoothness and integration. There might even be a little warmth in the sound, but with output maintained to 16kHz the Compact will not sound dull, or lack detail. A generally smooth trace from peaks or dips indicates low colouration and fundamentally accurate presentation.

Output from the Compact is strongest around 160Hz, but it reaches down to 80Hz before output starts to drop away. The port supports output from 50-60Hz, but not lower. As a result, like all small speakers the Compact will sound fast and have good impact, but not weighty. KEF use a 4ohm bass unit to keep sensitivity up, managing 86dB from one nominal watt of input.
These continue the Mission tradition with the company's proprietary 'IDG' system, which stands for Inverted Driver Geometry and are instantly recognisable with the bass driver positioned above the treble unit. They measure 305x180x240mm, weigh 5.2kg and come finished in a cherry real-wood veneer.

The cabinets are magnetically shielded suitable for AV use and made from 19mm MDF with a 38mm MDF contoured front baffle for "excellent dispersion for a wide listening angle". The mid/bass driver is a 130mm aramid type while the tweeter is a 25mm microfibre dome unit with neodymium magnet and ferrofluid cooling. Inside it uses an acoustic second order crossover and Aculfil long fibre damping.

The design as a whole is a success and I really like the distinctive polished hex head fixings for the mid/bass driver and flush mounted hex fixings for the tweeter. The dark grey moulding and chassis for the driver is attractive too, being nicely designed with the famous Mission logo inscribed below the tweeter.

I am not too keen on the grill though, there's nothing wrong with the look of it but for practicality I found it tricky to attach/detach onto the cabinet as it kept on falling off. And I would also prefer a better standard veneer such as the beech option, as this cherry (in the flesh) is a little too orange for me! At the back there are horizontally spaced biwirable binding posts and above them an anti turbulence port. Mission recommends letting the V60s "run in for at least 24hours before serious listening" and quotes a frequency response from 60Hz to 20kHz, with 8ohm impedance, 86dB sensitivity and power handling between 25-100w [see MEASURED PERFORMANCE].

**SOUND QUALITY**

The Missions had a distinctly velvety quality about them with the Angela Gheorghiu disc. The sound was smooth and refined, and immediately enchanting. However on longer appraisal while I really enjoyed that velvety smoothness and the deepest in-room bass extension of the group, listening to 'Tea In The Sahara' I still felt there was something missing. It is not the treble, which was generally good (though with a minute hint of sibilance) — rather it was the overall timing of the Missions that I found to be lacking. Bass, though deep wasn't especially tuneful either and it seemed a tad dislocated to the rest of the band. Overall, the Missions had a lush and smooth sound with a warmer balance, which would work well with fast and bright equipment.

**MEASURED PERFORMANCE**

The V60 has been tuned to offer more bass than a small bookshelf loudspeaker and is a little more suited to stand mounting. However, whilst it has goody amounts of low frequency output our analysis shows, it will not sound boomy. Although both lower limit and port have much the same behaviour as the smaller m50, the roll off in low frequency output lower down is less abrupt, the V60 reaching down to 25Hz (-8dB) even. I would not expect floorstander type bass, but the V60 should sound quite weighty for its size.

Mission allow treble to peak by +5dB at 16kHz and this may well add some spit or sharpness to the sound. Otherwise, with a smooth upper midband the V60 will sound detailed. Sensitivity was normal at 85dB and measured impedance as expected at 6ohms, a 4ohm bass unit being matched to an 8ohm tweeter.

**VERDICT**

MISSION VOLARE V60 £250
Mission
(+44 (0)1480 423 700
www.mission.co.uk

FOR
- lush, velvety quality
- deep bass

AGAINST
- dislocated timing
- tricky grill
- cherry veneer colour
first heard of Acoustic Energy in the late eighties when they released their legendary and infamous AE1 speaker—which became a modern classic and one to be feared by the competition and low-powered amplifiers alike. These Aelite Ones have curved sides, which are squared off front and back, similar to the Wharfedales and are substantially built for their size. They are real wood veneered and come in black ash, cherry and birch finishes. They are magnetically shielded for AV use, measure 186x291x231mm and weigh 6kg apiece.

True to AE tradition, the mid/bass driver is a lightweight alloy cone with 32mm coil and features a high power, long throw magnet system fitted inside a 110mm die-cast chassis with six attractive colour-matched hex head fixings. The neodymium tweeter with silk fabric dome has a high dispersion 25mm diaphragm and is ferro fluid cooled and damped. It has a superbly designed oval surround, which is spoilt by the abundance of cross head screws, though they are at least colour matched to the surround. The internal wiring is said to be quality OFC. The cabinet is made from 15mm MDF while the front baffle is 22mm MDF. At the rear it has gold plated biwirable binding posts and a single port above. AE quotes a frequency response of 45Hz-23kHz, 80m impedance, 89dB sensitivity and 100 watts maximum power handling [see MEASURED PERFORMANCE].

SOUND QUALITY

The Aelites eschew the modern tradition for politeness and fulsome bass, instead having a powerful and distinctive delivery. They have the best driver integration of the group providing a fast and brighter than normal response, which is intriguing as they are controlled too without any stifling of dynamics. Though they are a little retiring with the low frequency extension (as a result of their superb control), but boast very good bass definition. The treble forms their most distinctive character being incisive and discerning, with Sting’s vocals providing a continuously entertaining listening session though with a little forwardness. With Angela Gheorghiu, the AEs were less expansive than some of the warmer tinted speakers in the test but were tight, fast and powerfully dynamic. Their inherent control prevented listener fatigue but their distinctive and occasionally up-front delivery may not be suitable for all and thus would be ideal for warmer balanced systems in need of some pep.

MEASURED PERFORMANCE

Under test strong output from the tweeter of this loudspeaker was obvious and measurement shows it runs flat right up to 20kHz, at the same level as lower frequencies. As a result, the small AE1 is almost ruler flat, which in use usually translates to a bright and forward sound, albeit one that is technically accurate. A small dip and peak at 630Hz corresponds with a peak in port output and is likely due to an internal reflection. This is likely to be heard as colouration, perhaps a little boxiness on speech or vocals.

Below 125Hz to small AE1 rolls away slowly, displaying a well damped response that will suit wall placement. Bass will be light but clean. The small port is tuned low for a speaker of the size, to around 40Hz. Whether this contributes much to low bass is best assessed by listening. Sensitivity was good considering impedance measures 7ohms, a high figure. The AE1 produces no less than 86dB at one metre from a nominal watt. The small AE1 will sound, light, bright and detailed. Meant for wall mounting it will give a tightly controlled sound, measurement suggests. NK

VERDICT

AE AELITE ONE £330
Acoustic Energy Limited
(C) +44 (0)1285 654 432
www.acoustic-energy.co.uk
FOR
- superb driver integration
- positive, lively sound
AGAINST
- careful matching essential

MARCH 2005
QUAD 11L  £380

Measuring 325x190x243mm, this baby box is something of a departure for a company more associated with its famous high-end ESL electrostatic flat panel speaker! Although it looks conventional at first glance, it is well specified for the price - the most obvious visual characteristic being the lustrous 'piano gloss' six-layer lacquer finish. The 11L is quite special, with attention to detail such as flawless cut-outs for the drive units and attractive hex head fixings for both drivers. Once you have positioned it correctly then I would advise to remove unsightly fingerprints and leave well alone! Another practical issue is to treat it with utmost care, as any scratches would be ruthlessly revealed on its glossy surface. Quad recommends a minimum 50 hour running-in period.

Drive units are special too, featuring a 130mm Kevlar mid/bass unit and 25mm dome tweeter. Round the back it features two small ports above biwirable binding posts without the usual plastic moulding for such adjuncts, which is aesthetically preferable as it doesn’t spoil the form of the cabinet. Another interesting detail is that the Quad has a black plinth, which is located to the underside of the main cabinet. It is smaller in area and has four small rubber disc pads at its base. It provides an attractive physical separation from the main cabinet enabling clean lines to be expressed. Quad claims a power handling of 30-150W, 6ohm impedance, 86dB sensitivity and a frequency response of 45Hz-24kHz [see MEASURED PERFORMANCE].

SOUND QUALITY
The Quad’s strength was in musical timbre and superb tonal shading when it came to both instruments and vocals. Guitars had real tangible qualities and Daryl Jones’ bass on ‘Tea In The Sahara’ had excellent delineation providing bite, depth, expression and extension! The overall sound of the Quads is one of elegance and good instrument separation. With Angela Gheorghiu’s vocals there was a full-bodied quality, rich and deep with flush midband prevalent. The Quads weren’t as adept on the timing though being slightly laid back compared to the others in the group which is a shame as otherwise they were almost perfect. They preferred however to concentrate on the individual characteristics of a piece and did so very well, but the trade off here was a slight internalising of the musical structure and therefore an introspective outlook, deep, lush and smooth but not exuberant or naturally expansive. An excellent, superbly engineered loudspeaker, then, one which is intelligently voiced for Quad’s typical clientele.

MEASURED PERFORMANCE
The Quad 11L is notably flat in its response characteristic, with very little variation from 80Hz up to 16kHz. This makes it fundamentally accurate, but without a little bass lift to add body, it’s likely to sound dry unless near-wall positioning is used. Tweeter output declines a little above 7kHz, but very little. It may soften the sound just a little, but since an earlier sample was flatter this could just be down to sample variation.

With a port tuned to approximately 54Hz the 11L reaches low, but not as low as some slightly larger models. It will likely have well damped and fast sounding bass, but no bass surplus.

Sensitivity was good at 87dB and impedance measures 6ohms overall, dropping to 4ohms at low frequencies, as a 4ohm bass unit is used.

The 11L is accurate, but expect a dry, concise sound rather than a fulsome or soft one. It’s a well engineered speaker. NK

VERDICT  ●●●●●
QUAD 11L  £380
Quad Electroacoustics Ltd.
C +44 (0)1480 447 700
www.quad-hifi.co.uk

FCR
- finish and build
- fine separation
- price and technology
AGAINST
- just a little slow
Resolution Loudspeakers

Wish list, for the best loudspeakers ever conceived:
1. Make sure the sound only comes from one place (one drive unit)
2. Eliminate all woofers, ports, electronics & crossovers
3. Use the theoretically perfect enclosure (8 foot stuffed pipe)
4. Fold into floorstander size with 5 tiled-concrete reflectors
5. Eliminate resonating materials using non-wood interior & sides
6. Finish with real mahoganies, solid brass and 24k gold connectors

Dream on, enjoy the reality now!
The best imaging, realism, and detailed fidelity anywhere in the world
- with the jaw-dropping looks to match
- and a price you can’t afford to miss

Resolution Loudspeakers
www.worldsbestloudspeakers.com

230W MMP, bi-wirable
90*22*30cm, 26kg
r.r.p. £1200 pr.
conclusion

I was pleasantly surprised that I had such an individual bunch of loudspeakers considering their budget prices! You may also be surprised to see that one of the cheapest models has come out top and that it did so on its own merit and punching above its price category. I was also pleased that some of my subjective assessment actually correlated with NK’s measured performance!

[1] KEF Q COMPACT (£200)
I was most impressed with the KEF; I liked its even-handed delivery and superbly low coloration sound especially with Angela Gheorghiu’s challenging but melodic choral vocals. The Q Compact had a wonderful ‘at ease’ sense of proceeding with music and was unflappable yet never dull. It was simply the most natural-sounding speaker of the group and this was down to its excellent timing and driver integration combined with high resolution. As a bonus it is easy on the eye and well made with obviously good engineering practice — being the UNI-Q drive unit arrangement — that works. A further delight was that it was one of the cheapest tested and in the group context I am pleased to say it is my top recommendation regardless of price.

[2] QUAD II (£380)
A visually attractive speaker with its 6-layer piano lacquer coat and excellent, bespoke (almost entirely non-OEM) build. It was easily the best sounding speaker of the group when considering individual aspects such as timbre and instrumental separation along with bass, mid and treble quality. It had a deep sound, being immersive and very tangible with guitars and drums for instance while equally adept with very different vocal styles. It didn’t get the top spot for the fact that however wonderful all those individual aspects were, it wasn’t brought together as a whole and in comparison with the KEFs sounded a little forced as a result.

[3] ACOUSTIC ENERGY AELITE ONE (£330)
I really liked this speaker a lot. In nearly every way it had the sound that I personally favour the most – resolution, slam and great timing with an almost super-clear presentation. It had powerful dynamics and was intriguingly controlled too in spite of its energetic nature. However, just because I like it doesn’t mean it would be universally suitable and thus some will find it bit too characterful...

[4] MORDAUNT-SHORT MS912 (£180)
This is a lot of speaker for the money and in many ways so is the sound. It is bold and exuberant with a great expansive quality, no doubt enabled by the larger cabinet size. It was also the easiest to drive in the test going much louder than the others were. It was limited to liking the more modern style of Sting though and had a slight midband glare, so this is why it comes in at fourth.

[5] MISSION VOLARE M60 (£250)
This little Mission had the best bass extension of the group and was fulsome, lush and velvety. It was characterised by a warmer balance with a generally polite sound. I believe this design would be best suited to fast and bright systems where it would enable a more balanced sonic vista. It is well made and a good design too, but I wasn’t convinced by the orange cherry veneer or the haphazard way the grill is placed onto the cabinet.

The Diamond comes last not because it is a bad speaker — not at all. In fact it’s a thoroughly attractive one and my favourite styling design of the lot! I really like its proportions and the sound has real promise with superb timing and driver integration, but I found it lacking in the finesse department while it also had a tendency for midband glare that the others did not. This has little to do with its price because there were other lower cost models here. So in the context of the group, I found it to be lacking in expressive and dynamic ability with the modern jazz/pop of Sting. It preferred the Choral work of Angela Gheorghiu, which will limit its appeal. Still, if this suits, then I would recommend a serious audition before purchase.
Here’s your chance to win the dream team for making the most of your existing hi-fi loudspeakers, offering powerful bass reinforcement and welcome extra treble air and space—plus real gains in musicality in the upper bass and upper midband too!

The first part of the prize is a pair of Townshend Audio’s Maximum Ribbon Super Tweeters (worth £800), designed to extend the response of your speakers to 100kHz, so as to experience the advantage of the new digital audio formats (DVD-A, DVD-V containing 96/24 stereo PCM audio, and SACD) and the 30kHz plus frequency response from high-quality vinyl reproduction. Employing super-powerful neodymium magnets and an ultra thin eight micron pure aluminium ribbon, the low frequency -3dB point of the first order crossover is set at 20kHz. Output may be set to suit speakers with sensitivity from 80-110dB, adjusted in steps by an eight position switch on the rear. All copper conductors, including the matching transformer windings and the aluminium ribbon, are deep cryogenically treated (DCT). Pressure relief vents in the sides of the case are provided to allow the air pressure on the ribbon to equalise in the event of sudden pressure changes. The Super Tweeter may be connected directly across the output of amplifiers up to 350W.

There’s a choice of chrome or satin black finishes, and both look exquisite.

The second part of the prize is REL’s superb Strata III subwoofer, a high-fidelity sub-bass system designed for use with high quality stereo and multi-channel audio systems. It boasts a true 100W (continuous) discrete direct-coupled MOSFET amplifier driving a downward-firing 250mm long-throw driver with cast chassis. There’s a chunky audiophile-grade toroidal transformer, gas-tight Neutrik high level connection for long-term consistency of sound quality, high quality, panel-mounted twin phono inputs at 0dB and +12dB (low level), a balanced high level Neutrik input, totally discrete input circuitry for high and low level inputs, separate volume controls for high and low-level adjustment, simultaneous connection of high and low level sources and Set-Safe® audibly transparent driver protection. Dimensions are a reasonably compact 416x522x325mm and weight a solid 23kg.

There’s a choice of Brittex Black, Black Ash, Cherry, Light Oak, Roseneck and Walnut finishes.

If you’d like to win them, then all you have to do is answer the following four easy questions. Send your entries by February 28th 2005 to:

March Competition, Hi-Fi World magazine, Unit G4, Argo House, Kilburn Park Road, London NW6 5LF.

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"This is a remarkable player for the money, with superb sound, looks and feel, which gives you no clue as to the budget price... A very solid buy - and a lot of fun."

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"This is a remarkable player for the money, with superb sound, looks and feel, which gives you no clue as to the budget price... A very solid buy - and a lot of fun."

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The 40 wpc, X-80 and the 80wpc X-150 amplifiers are part of Musical Fidelity’s revamped X-Series. Both models feature a dual-gang analogue volume control and high-output transistors for each channel. The X-150 also includes a very high quality phone stage.

The X-Ray® CD player, replacement for the legendary X-Ray, uses the same DAC and upsampling principles as the acclaimed Tri-View SACD player.

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Who Are Sevenoaks?

Founded in 1972, Sevenoaks Sound & Vision is one of the largest and most successful hi-fi and home cinema retailers in the country. Each Sevenoaks Sound & Vision store stocks a wide range of quality products, covering all categories of specialist home entertainment, from Hi-Fi separates and systems to DVD players, widescreen plasma televisions and projection systems, all at highly competitive prices.

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Noel Keywood tells the story of Quad Musikwiedergabe, a German electrostatic loudspeaker specialist remanufacturing Quad ESL-57s and Braun LE-1s using the original tooling...

"When Braun did the LEI in the 1960s they needed to design their own audio transformer, because the better Quad one would not fit into the LEI box. The Braun transformer was not as good as the original Quad one, so the sound of the LEI was always behind the LE1 for this reason. Today we manufacture a new audio transformer which meets the original specs of Peter’s one, and with dimensions that fit into the LEI. Both the LE1 and ESL57 now come with protection boards."

Peter Walker told me that the audio transformer of the ESL57 had always been designed to saturate (magnetic overload) early, to help protect the bass panels from excessive input. But the original ESL57 had no protection; it was only with the ESL63 that protection was used. The ‘63 had a self powered (from the audio signal!) compressor circuit that muddied the sound, before it crowbared the amp. Quad amps were designed to handle a complete short, but others weren’t and one irate American customer, whose monster power amp went up in a puff of smoke, sued Quad in America for recompense.

As the 63 was coming to the end fitting new panels to the ESL57. Two bass panels flank a central treble panel.
Manfred Stein and Dr. Hirsch of Quad Musikwiedergabe with an ESL57 tensioning jig.

of its life a new type of protection was tried: high voltage diodes in the audio transformer secondary circuit. These clip the signal hard and have proved more effective in use than earlier methods. As a result, upgraded ESL57s are best retroactively fitted with such protection, to prevent the arcing that would occur on overload which, ultimately, damaged the Mylar panels and necessitated a re-build. Refurbished ESL57s from Quad Musikwiedergabe come with such protection.

As Quad Musikwiedergabe explain, the Mylar for a '57 is stretched over a frame on jigs, and the correct tension must be achieved. It's a skilled business, one that Braun reputedly never got right. As a result, their LE1, although clearly styled in classic Bauhaus tradition, never really matched up to the ESL57. It had weaker bass, due to the modded audio transformer, and a little more treble too, for a brighter sound that, it was felt, would better appeal to German ears. The ESL57 had a slow treble roll off in classic UK tradition, which makes for a smooth and unintrusive sound, great for classical music in particular. Peter Walker never really got to know the modified version of the ESL57, when speaking to him I found!

Another factor affecting the sound of a typical ESL57 is progressive loss of treble panel output due to ageing. Yep, '57s get old like all of us, but sound softer in their old age, perhaps not like all of us! Manfred Stein said refurbished ESL57s sound brighter as a result.

Quad Musikwiedergabe also now produce an ESL-63 re-dressed in Braun clothing and called the LE-2. The '63 is a true point source, full range loudspeaker, quite different to the twin-panel ESL57. Listening position is less critical, but still critical all the same I've found from long experience. The sound is softer too, deliberately so, since treble loss was engineered into the delay line between the annular sections. Manfred admitted he preferred the ESL57, when in tip-top condition - and I'd agree.

And with what should you drive an ESL57? "Unquestionably, a modern Quad valve power amplifier made by us", Manfred said. With output transformers made in Switzerland, using modern materials, and the rest of the amplifier made in Germany, this is a beast of fascinating pedigree. The ESL57 still remains one of our top loudspeakers. The market for good, classic audio is growing and continuing interest in the ESL57 confirms it as a true classic. Box electrostatics may come and go but the original electrostatics lives on, but now its spiritual home is Germany.
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It's every loudspeaker owner's dream — the prospect of a true, full range system that's flat from bottom to top. No such thing exists, but David Price has an answer!

The trouble with Quad's ESL 989 electrostatic loudspeaker is that, for something that is so, stunningly, disarmingly capable at some things, it's pretty damn crap at others. If it wasn't so incredibly accomplished in some ways, it wouldn't have raised my expectations so high, and maybe I'd have been less disappointed by its oh-so-obvious failings...

Now, I'm not having a pop at Quad. The problems that the 989 suffers from are largely a function of the fact that it's an electrostatic, which is to say that the same reason that gives it a transcendental midband also means that its bass is middling and its treble an afterthought.

Maybe I'm being a tad fussy. As regular readers will know, my other speaker is a Yamaha NS1000M, which succeeds — and fails — in all the ways the Quad fails — and succeeds. The Yam is, in my view, the best ever moving coil loudspeaker, and it shows us precisely what the best electrostatic is doing wrong — and vice versa.

To give you an example, the Yamahas have gut-wrenching bass. Properly driven, the lows that these speakers give are so fast, tight and strong that it feels like someone's just hit you in the back of your chest with a cricket bat. Likewise, the treble is supremely crisp and spacious — a tad bright, but this is usually because what you're driving it with is; and if not, you can always trim it down with the NS1000M's level pot.

By the same token, the midband is brilliantly open and neutral — but there it stops. The Quads show how loudspeakers can really image, and despite their lack of LF grunt, they really do give you a 'wall of sound'. This is probably because they are actually, literally, a wall of sound...

The 989s show real imaging and dimensionality like nothing else I've ever heard, over so much of the room. They've no 'sweet spot' like a KEF Uni-Q or Tannoy Dual Concentric driver. Rather, the Quads hang images in space like, well, that's where they were always supposed to be...

Go back to the NS1000Ms, and once again, the Quads sound like you've just switched on the 'high' and 'low' filters you used to get on 1970s Japanese amps. They're bandwidth-limited, constrained, hide-bound and compressed. It's such an anti-climax, and yet the things the Quads do well just blow the Yams into the weeds...

Yet the things the Yams do kick the Quads back into 1957... Oh for the best of both worlds!

BRING AND BUY

Well, I have an answer. True, it doesn't turn the ESL-989s into fire breathing, head-banging behemoths to rival the NS1000Ms, but it raises their game sufficiently for you not to be aware of their problems and pitfalls, enough for you to sit back and enjoy their brilliance without the tears of that risible (by the standards of other 'ultimate loudspeakers') bass and treble. It makes them work as a rounded, cohesive whole that — even after an evening pinned to the rear wall in front of a pair of NS1000Ms at full tilt — doesn't seem obviously compromised. The good news is that, as a percentage of their total purchase price, it isn't too expensive either — and there are added bonuses too. Enter Townshend Maximum Supertweeters and REL Strata 5 subwoofer. Time to say hello to a nice, evenly balanced 15Hz to 90kHz, and an audio experience that few will ever forget. Listening to this threesome, you get that sense that what you're hearing is something few others — even most owners of super-fi loudspeakers and top studio engineers — will ever experience. It is special, truly it is.

SHOUT TO THE TOP

The Townshend Maximum comes in a petite (50x30x100mm) casing in a choice of either Titanium or a stainless steel mirror finish which looks exquisite. Pressure relief vents in the sides of the case are provided to allow the air pressure on the ribbon to equalise in the event of sudden pressure changes. Inside is a super-powerful neodymium magnet and an ultra thin eight micron pure aluminium ribbon, plus a simple crossover to set the sensitivity. All copper conductors, including the matching transformer windings and the aluminium ribbon, use Townshend Audio's Deep Cryogenically Treated (DCT) process, as found in its Isolda loudspeaker cables, and are heat annealed (-190C to +150C).

Output may be set to suit loudspeakers with sensitivities from 80-110dB, adjusted in steps by a rear-mounted eight-position switch. Also on the back are the usual 4mm banana sockets. I run a discrete cable to each supertweeter (QED Micro suffixes, and isn't too intrusive), with the Quad ESL-989s being aspirated by Chord Company Reference. Townshend says the Maximums run from 20-70kHz (at ~3dB points), or 12-90kHz (at ~6dB). In my system, they sit atop the 989s angled ever-so-slightly inward, with the level controls set at one less than maximum (although this depends on your system).

"The Townshend supertweeters and REL subwoofer make for another brick in the 'wall of sound', and then some..."
What Hi-Fi?

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The Right Note
Music in the home
Having a long running respect for REL subwoofers (NK can't speak highly enough of them) I opted for the new Strata 5. Now, this is by no means the biggest and baddest in the company’s range — but with the Quads, it's a case of less is more. Think of it this way — they're delicate, carefully matched panel speakers (and now with similarly oriented ribbon tweeters), and so the last thing you want is a Neanderthal boom-box ruining everything and wiping out £7,000 of carefully honed genius. The Strata 5 seemed just (little) enough to do the job — anything more would have been needlessly and probably carelessly too...

The new Strata 5 employs a sophisticated digital control regimen, which claims the most precise and comprehensive control of calibration parameters available in the sub-bass system market. A closed box design with a downward firing drive unit, it boasts a DC-coupled amplifier to avoid phase shifts, with audio-grade MOSFET output devices, high quality smoothing capacitors and ultra-quiet audio quality low-loss toroidal transformer. Filter capacitors are high quality nitrogen filled polystyrene types of 1% tolerance and indefinite life. Very close tolerance components ensure consistency of performance. Superior-grade 30mm MDF, available in Black Brittex for £700 or £800 for Maple, Cherry and Rosnet real wood veneers. This includes the remote control, which as we'll see, is darned useful for set-up. REL supply a long piece of wire for connection from the speaker output terminals, which they believe works better than via line-level RCA phono connections (also provided).

Switch the Strata 5 on and you're faced with several hours of fiddling. Actually, you can get really good results in the first couple of minutes, and from then it's down to fine tuning. Subs aren't hard to place — put them in one corner of the front wall, about 1.5m from the walls themselves, where they then drive the room brilliantly. The next thing is to remember that the idea is NOT to hear the sub — it should be adjusted so you can't hear it, period.

This done properly, suddenly the system hits a sweet spot and starts to do great things. In the case of my room, gain was set very low (otherwise you hear boom) and the system hits a sweet spot and starts to sound obviously compromised in isolation (far from it), but put them against something that pushes out 200W with almost no distortion and they're lightweight. How to compensate for this?

Well, you can’t! But you can certainly divert attention from the Quads’ lack of serious seismic activity with a subwoofer. But it's a touch more complex here. It's not a case of sticking a super tweeter on top and marvelling at the improvement. With a sub, you've got to [a] get a good one and [b] get it working properly.
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It wasn’t always like this. For most of human history, people have enjoyed perfect music reproduction in their homes. From the times when our ancestors sat around fires in loincloths to the upright pianos in Victorian parlours, the sounds made to entertain ourselves were rendered with absolute precision. The only problem was, you or someone else had to do the playing. But that’s just part of the story.

Long before the invention of the phonograph, other, essentially sonically more accurate, ways were being found of reproducing music. The ears of Marie Antoinette, whilst they were still upon the head attached to her body, were apparently enchanted by the sounds of an early music box. That was in the early 1790s; a time whenextravagantly clever and expensive walking, speaking, chess-playing automata were all the rage. Music boxes, in a pattern which all hi-fi users would recognise, evolved through mass production in the nineteenth century into large, ornate, multi-cylinder and then multi-disk objects of domestic prestige and consumer lust.

Maintenance kits were available, finishes ranged from the utilitarian to the lushly expensive; there were magazines. And the sound had a bite and attack — an essential reality and ‘hereness’ — which modern high-end equipment couldn’t hope to match, even if today’s audiophiles would doubtless define the performance as a tad ‘mechanical’.

Then, in the 1890s, came pianolas. No self-respecting Edwardian drawing room or Prohibition speakeasy would be without one or another version of these devices, which evolved from the hand-cranked to the electrical, and from workaday coin-in-the-slot to extravagantly complex. Great pianists of the day such as Rachamaninov recorded performances on high-end versions of these devices, which could then be reproduced anywhere and are still sometimes played, whilst composers such as Stravinsky wrote specially commissioned pieces. It wasn’t just pianos, either. The wealthy audio fan of 1910 could perhaps consider: the delights of the Phonolitz-Violina, which combined the piano with the violin, or even, if you were really into the dedicated-listening-room end of things, a pneumatically-powered Orchestron, with strings, pipes, bells and piano and perhaps even flutes and saxophone, on which you could listen to anything from the classics to the latest dance craze, all played with staggering dynamics and clout.

**GRAM PASTIMES**

Set against this, it’s surprising that Edison’s crackly old phonograph ever got a look in, especially when you consider his limited vision of the use of his device, and his insistence (in an early version of the War of the Formats) on the use of cylinder rather than disk. With this variety of recorded audio, such a late arrival on a home audio scene in which telephonic transmission was already making a strong impression, it was certainly touch-and-go. The reclusive Marcel Proust took time off in his cork-lined Paris apartment from writing his mammoth novel ‘À la Recherche de Temps Perdu’ to dress up in evening attire and listen to an Operaphone service which relayed live concert performances straight from the stage. Queen Victoria, not everyone’s image of an audiophile, did the same. And the sound quality? It was commented approvingly that it was as if the performance Her Majesty was listening to was taking place in the room next door. Muffled by half a foot of brick and plaster, to put it another way.

When gramophone reproduction finally began to gain in popularity, it’s no surprise to find that the designs mimicked the earlier formats and devices. They had the finish and veneer, the ivory and brass accouterments, not the mention the shape and purpose, of music boxes. In what perhaps might be defined as an early Eden of phonograph production, when the analogue signal in the groove was transmitted directly into the air without the inevitable compromises in reproduction which the use of electronic amplification inevitably brings, a beautiful symmetry of design and function could be achieved. Still, debates about sound quality raged then just as they do now. Soundbox or horn, or both? How many wind-up spring motors gave the longest-lasting performance and pitch stability, or was it better to go electric? And what combination of wood and metal gave the best, the most resonant, the truest, sound?

And, even if perfection was seemingly as far off then as it is today, you could always tweak. Tins of needles from competing manufactures promised greater felicity, clarity and volume. Fibre needles, which required special cutters, offered reduced wear and tear. There were also speed testers, and at least as many varieties of cleaners and dusters as there are...
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now. And you could always upgrade by investing in a bigger sound box, or a larger horn...

GONE ELECTRIC
By the 1920s, electric amplification was the choice for most serious audiophiles, and specialist manufacturers of modular hi-fi allowed an early version of mix-and-match. Valve amplifiers from this era can look startlingly like modern audio components of the same ilk, but a riffle through a catalogue for high-end loudspeakers of this time reveals some gorgeously beautiful shapes, colours and creations. The fan-like Gaumont Lumiere, the Art-Nouveaud Radiolavox and the frail and jewel-like Hervour Minilux would grace any modern state-of-the-art system in terms of their striking and idiosyncratic looks.

The mainstream of audio, though, continued to take its cue from the music box and the piano right up until the 1950s. The Chinese-lacquered Pye Black Box of the early 50s, would, as Gramophone remarked, "grace any drawing room or boudoir". These were heavy and expensive pieces of domestic furniture, designed to be noticed, especially in an era when the television was an empty corner still waiting to be filled with visions of bickering, insect-eating 'celebrities'. And when televisions did emerge, it seemed only natural to incorporate them as well, into huge, megalithic devices which took up at least as much space as a modern THX surround sound set-up. Even in the later fifties and early sixties, when hi-fi began to take on something like its present day appearance, many designs, in a fresh attempt at modernity, lunged towards the look of the cocktail cabinets. That, in fact, was what many of Quadrrophonic offered surround sound and too many boxes for most people's taste. Eight track provided a audio cassette large enough, if thrown, to fall a cat. When CD arrived in 1982, the hyperbole of the Victorian adverts which promised Perfect Evenings of Music at the Fireside resurfaced once again, and proved to be equally enticing, and just as illusory.

The way things are looking, with the hopes of SACD and DVD-A already heading in danger of heading the way of the Orchestron, discriminating audiophiles may have to wait for blu-ray or possibly some other high-bitrate format to make a fresh attempt at the time-honoured task of reproducing real-teeming music in the home. But, whatever it is that finally emerges as the next big thing, you can be sure that the promises will be as rich as ever, and probably just as illusory. Perfect sound, indeed — trying to tell that to our Neolithic ancestors, or Marie Antoinette!

Marcel Proust's trick of dressing up in evening attire to listen to a performance is perhaps an early example of tweaking...

TWEAK SPEAK
Marcel Proust's trick of dressing up in evening attire to listen to a relayed performance is perhaps an early example of tweaking, even if the tweak was psychological. But, then as now, there are few lengths that someone somewhere won't go to make the experience of listening more real...

We all know about sensible tweaks that work, but the ones which we find more fascinating - and let's face it, we're often willing to try - are the weirdest ones. I still have triangles of foil stuck to some to plugs and other odd and ends of audio equipment in mute (and, quite possibly, sound-enhancing) tribute to Peter Bolt's theories. If I didn't own so many books, I might even have taken up the suggestion made in the 1980s that audio quality is contaminated by the presence of even-numbered objects in the room, and that an extra sheet of paper placed into every volume would produce that extra bit of sonic nirvana.

The best tweaks, whilst seeming really odd, have to make a strange kind of sense. Who could argue, for example, that plastering your hi-fi gear with roofing bitumen wouldn't probably reduce resonance? Similarly, a child's rubber bathing ring would almost certainly make a good low-cost isolation platform, as well as providing an interesting visual focal point, especially if the inflatable ring happened to be in the shape of a pink-spotted animal, with head and tail. Putting a blanket over the telly also sounds as if it might have some logical basis, and echoes Linn's old horror of the sonic contamination of extra speakers, even if it does rather conjure up the image of covering up the budgie. But perhaps, if the little blighter's getting too noisy, we should all try that as well...

There's certainly logic to the idea that opening windows before a listening session to let in some new, fresh air could have a beneficial effect, even if the effect might be less sonic than psychological. Closing those same windows, and all doors as well, during playing the actual music, also makes sense, both in terms of science and the maintenance of domestic and neighbourly harmony. Raising all cables off the floor to reduce resonance — there might be a point in that, too, as a way of reducing unwanted resonances. And, for those of us with fireplaces, shoving a woofer up the chimney to increase bass response; now that would certainly do something to the sound. Then, and this must surely be most effective tweak of all, we could all get our ears syringed. But, in fact, I have to admit that I haven't seriously tried any of these tweaks because they seem, well, too obvious.

The most fascinating tweaks need to have something occult in their practice; an element which goes against a scientific world-view and all common sense. In view of the cultural and historical heritage of hi-fi, that's hardly surprising. After all, reproduced music in the home emerged amid many other voices into the culture of late Victorian society. It came with the stutter of Morse and the ping of the telephone and the hiss of gas and the splutter of electricity. But it also came amid a huge popular obsession with ghosts and spiritualism. Séances were being recorded; ghosts were being serenaded by phonograph voices in the hope that they, too, might be captured on cylinder or camera. Even today, what serious audiophile hasn't closed their eyes and seen the spectral face of a singer hanging between their speakers? And all the talk of imaging, breadth and depth: visually-based words which mean something else in terms of high fidelity.

Tweaks which have an element of magic about them will never go away. Placing amber beads on and around your hi-fi has a lovely tinge of well-dressing superstition about it. Putting coins on top of speakers almost sounds like a kind of tribute; a casting into the sonic wishing well. It's probably only a matter of time before the particular type of amber and coin (gold, surely, and preferably ancient) becomes the next tweak that someone, somewhere, is willing to try out.

Meanwhile, before I head off to spend a fortune on shipwreck Spanish doubloons salvaged from the Bermuda Triangle to offer to my homely B&Ws, I may even take a tip from Marcel in his cork-lined Paris apartment, and dust down that dinner jacket...
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Channa Vithana auditions Mordaunt Short's new Genie multichannel loudspeaker system...

The 402 satellites have triangulated yet gently curved aluminium enclosures with only two visible panels. Those crisp curves resemble classic jet-age designs from the 1950s, without the garish chrome plating, coexisting here with a restrained contemporary feel.

Each has two aluminium drivers recessed in circular chamfered openings - a 102mm 2nd generation CPC woofer and a 25mm mesh covered aluminium dome tweeter (with a recommended power handling between 15-100W via a damped 2nd order crossover). Behind are nicely turned out screw-in aluminium binding posts accepting banana plugs or cable up to 10mm in diameter. The satellites come with an integral mini tabletop stand attached at an angle to a ball and socket joint into the cabinet allowing for flexible positioning. In the own box base, you can remove a rubber stop enabling cables to be passed through if wall mounting is required for which M-S usefully provide an alignment sheet for correct drilling, and there are optional tall stands.

The 404 centre speaker sports two 89mm aluminium CPC woofers either side of a 25mm tweeter, as used in the 402s. The 404s have a wider elliptical enclosure mounted horizontally, made with the same specification and attention to detail described above. The 409 subwoofer is finished in matching silver and curves with only two visible panels. Those crisp curves resemble classic jet-age designs, too.

The bass is not as adept with electronic and analogue instruments. Where they struggled to achieve the same degree of treble finesse.

However, with all the high-res music I used, I preferred the multichannel option to the straight stereo for its greater separation and integrity to the musical structure. Given how well the Mordaunt Short Genie performed with all sources compared to bespoke hi-fi stereo loudspeakers, I was seriously impressed and would heartily recommend the system. Rarely do you find as well engineered and highly competent all rounders at or near the price - if ever. Simply the best-realised multichannel sub/sat speaker system I have seen.

CONCLUSION
In 2.1, the MS 402s were preferable to my MA R852 stereo reference speakers with the high-res formats, though they were not as adept with regular stereo CDs, where they struggled to achieve the same degree of treble finesse.

SOUND QUALITY
Using just the 409 subwoofer with my reference (bass shy, resolution high) MA R852s proved simply stunning, underpinning their vibrantly energetic nature wonderfully. Moving to the full 402/409 combo as a 2.1 system, I was met with an undeniable smooth, though not bland, sound as the 402s almost kept up with the R852s in terms of speed and resolution.

However, it was multichannel where the Genie system really shined, the satellites gelling perfectly to reveal Sting's 'Sacred Love' - previously a congested mess even on stereo SACD - as a fluidly natural piece with excellent integration of the electronic and analogue instruments.

Here all the speakers disappeared, melting into the surround mix and lacking the usual repellent 'whizzing-by' sounds from DVD movies. DVD-Audio proved just as enticing with Bjork's esoteric vocal-rich 'Medulla' showing great composure through the Genies, again highlighting a most refined, lush yet thrilling sound. Last but not least, listening to Queen's Greatest Video Hits 2 on DVD DTS 24/16 with video switched off was sublime enough to lose over an hour!

VERDICT

Beautifully refined sound quality, flexible mounting options, an adjustable subwoofer and easy installation means this is multichannel without tears, and a darned capable two channel performer to boot!

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SET UP
Using the supplied installation CD for test tones and hand held SPL meter to determine the settings for the variable notch filter (that forms M-S's Active Room Control) to closely match your room acoustics with the sub, set up was easy. I tested the Genies with a Marantz SR7400 multi-channel amp and Marantz DV8400 universal disc player. Speaker cabling was Chord Co Odyssey 4 single wired for fronts and Odyssey/Odyssey 2 for centre and rears. Interconnects for six channel audio were Chord Co solid for front, Kontak link 507s for centre/rear and OED silver anniversary for the sub. All satellites were placed on Birch Ply stands while the centre was atop the TV. A pair of closed box Monitor Audio R852s were used as a stereo reference.
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Cut here
The British are coming’ was the mantra Arcam applied to their little budget wonder, the Arcam Alpha 3 amplifier back in 1991. John May blows the dust off this 90’s solid-statesman!

For most of the eighties, the budget amplifier sector was typified by Creek, NAD and Rotel. Back then, Japanese transistor integrations were renowned for possessing a hard-edged sound, with little emotive abilities and a grainy, monochromatic presentation. Where Nipponese amps did have the edge was in generally better and more consistent standards of finish, and more superfluous facilities of course!

In 1985, Arcam decided it wanted a piece of the ‘budget audiophile’ market. Hitherto residing in the mid-fi sector with its tremendously successful A60, the company took the essence of this amp and rehoused it in a plastic case which, for about five minutes, seemed extremely stylish. And with its sensible range of facilities and sweet sound & proved a big success with the hi-fi cognoscenti of the day.

The Alpha 2 that followed boasted much improved aesthetics, establishing a new house-style for Arcam. Again, this proved a hit with the press and the public alike, selling over seven thousand units in 1990! There were a few teething problems with this design - namely ‘designer’ feet that kept falling off - but by and large this was a highly impressive and adept performer.

The Arcam Alpha 3 that followed was a textbook example of budget design work done right. The MM/MC phono stage on the Alpha 2 was replaced with a quality MM-only phono stage. Cost savings here meant improved sonics elsewhere! More money was available to increase the power output of the amplifier from 30W to a more useable 40W. Air cored inductors were employed to improve the sound, as well as a source-direct switch, and the provision of two sets of loudspeaker binding posts, facilitating the use of bi-wiring. One set of the loudspeaker binding posts was ‘switched’, muting when headphones were inserted, with the other set boasting a ‘Direct’ signal-path for ultimate fidelity. Those pesky feet were also replaced by more sensible rubber stick-on items.

The net effect was a finely voiced amplifier. That sweetness of sound and sheer listenability was still there, but the tonal palette was more ‘mature’ in nature, a little drier than its predecessors had been. It didn’t possess the all-out clout, excitement and speaker driving ability of its rival Pioneer A400, but made up for this by proving a more engaging listen. Unfortunately, the Alpha 3 never did quite set the world alight in the same way as the Pioneer, which was a pity as it was arguably the more capable all-rounder. Whilst the Pioneer sounded more impressive on first audition, the Arcam was ultimately more faithful to the original source. It was also more forgiving of source components, too.

Today, the Alpha 3 may be had for as little as £30. As long as they have been well looked after, there is little that can go wrong with them. The cheap volume pot will certainly be noisy after fourteen years of use. This may be rectified with a squirt of isopropyl alcohol and the control rotated a few times to clean out the gunk. Even better, it can be replaced entirely by an ALPS Blue Pot for a cheap upgrade. The outside of the phono sockets also have a tendency to come away with the interconnect when unplugged! These may be carefully glued into place for a stronger bond. Failing that, make sure the interconnects you use do not have tight phono plugs. Replacement phono sockets are still available however.

The ageing budget electrolytic capacitors should be replaced. I changed all of the low value items in my Alpha 3 with standard Black Gate types. This made a huge difference! Dynamics were vastly improved, reminding me of the original Naim Nait in certain respects. The real beauty of the Alpha 3 is its ability to get the best out of whatever genre you care to play through it. It has the knack of getting the best out of your source components, no matter what the price. Although only rated at 40W, it is quite adept at driving a wide variety of speakers with little trouble.

When the great Eric Braithwaite reviewed the Alpha 3 in the October 1991 edition of Hi-Fi World he achieved respectable results with the Quad ELS electrostatics – no mean feat!

So here we have yet another important slice of British hi-fi heritage available for peanuts second-hand, and easy to upgrade for great sound as well! If you’re on a budget, or perhaps casting around for a second system, the Alpha 3 warrants serious consideration.
Dominic Todd auditions the beautifully proportioned
Royal Tower floorstanding loudspeaker from
Danish Audiophile Loudspeaker Industries...

The Royal Minuet II is one of Dali’s
longest serving models. It’s a sweet
little thing that, as with many a
small speaker, has won a great deal
of admiration over time. Finally
sensing the potential, Danish
Audiophile Loudspeaker Industries has de-
veloped a range around this baby monitor. The
Royal family now consists of the slightly larger,
Sceptre, a centre "speaker called, Vocal and the
tower "speaker we have here called, ermm.
Tower!

As with other Dali speakers, the cabinet is
assembled by hand in Denmark to a very high
standard. The construction is 22mm MDF
throughout with centre brace and both front
and rear reflex ports. Unlike some of the
competition, however, there is no base cavity to
fill with sand or less shot. The examples we
had for review were finished in a cherry wood
veneer, although gloss black, white and other
woods are also available. Cabinets are hand
polished and lacquered, and the finish is
generally superb. Having said that, these days I
would expect nothing less as "speakers such as
the Chinese produced Quad L-range feature
immaculately finished cabinets for a good deal
less money [see box].

With such a beautifully finished cabinet it
came as a let down to find that not all the
spikes properly fitted the bolt-on feet. The cast
feet themselves were fine, and add a good deal
of stability to an otherwise narrow footprint.
For a £1,000 "speaker, however, cross-threaded
or incorrectly sized spikes is disappointing. Also
less than ideal is the grill, which uses partic-
ularly flimsy mounting pegs. These may sound
like small gripes, but could and should be easy
to address.

As with other Dali speakers, drive unit
selection is both careful and bespoke. The twin
woofers and tweeter may not look like much,
but they are both based upon established
technology and appear well engineered. The
woofers feature doped paper cones and cast
aluminium chassis. They are not magnetically
shielded but, in practice, I found the "speakers
had to be very close (within 15cm) of a TV set
for this to be a problem.

For the high frequencies, Dali has chosen a
3/4" silk dome tweeter. Again, this is a safe,
predictable choice, but no less worthy for it.
With such a small treble unit, the Royal’s
crossover phases the treble in later than usual.
This is designed to place less pressure upon
the treble, and can be facilitated by the woofers
dexterity at higher frequencies. The crossovers
themselves, Dali are especially proud of. Each
feature in-house, hand wound chokes, and good
quality metallised polypropylene capacitors. All
components are hardwired and the terminals except bi-wiring. With the exception of the few negligible flaws, this is a beautifully finished ‘speaker. It offers little in the way of groundbreaking technology, but just good old-fashioned attention to detail. I respect Dali for this, and know of many a successful ‘speaker that follows the simple is best philosophy. Whether the Royal Tower is to join their clan remains to be seen...

SOUND QUALITY
I found the sound of these loudspeakers to be quite unique, and unlike that of most British designs. Whist vocals were set well forward, the balance was extremely smooth. Bass was on the leaner and dryer side, missing the depth of some. The obverse of this though was excellent integration between bass and midrange, especially for a twin-woofer design. Decent timing and control also benefited from the use of smaller woofers. As you’d expect from a narrow cabinet, the Royal Towers produced a broad soundstage and a particularly open balance. Ultimate lack of cabinet capacity, however, meant that they couldn’t quite match the competition in terms of bass weight.

It soon became clear that these would be excellent ‘speakers to use with a low powered valve amp, as I regularly had to turn the volume down from what would be my more usual settings. Yet what also became clear, with Eminem’s ‘Kill You’, was that the Royal Towers aren’t exactly the hardest hitting of floorstanders. The forceful bass line was softened somewhat, and far from the deep bass that said, it never sounded particularly bass light, just down on what similarly priced and sized rivals offer. The real star, though, was the midrange. Where other floorstanders can sound bright; problems like this will be obvious. The Divine Comedy’s ‘Bad Ambassador’ benefited from a spacious, enveloping soundstage that easily drew the listener into the music. After the precision shown earlier I was surprised by some woolliness becoming apparent in the lower midrange. Certainly against metal-coned rivals, there was less control shown when the music became more complex. Before this hadn’t arisen as an issue because the music was simpler. As with Eminem, the balance was on the safer side of neutral and not as exciting as some. Still, the supremely smooth strings contrasted against an electric guitar that, whilst not the most vivacious, still had plenty of bite.

All this held true with Classical music too - with Chabrier’s, España, there wasn’t massive attack, but the music did always remain composed and refined. Still, I did miss the tension and drama of the rippling bass lines, and the sharp attack of timpani drum. It sounded just a little too soft for me, and needed to sharpen up. Whilst scale and g.p. may have been a little lacking, accuracy of timbre from both brass and strings remained to the fore. Although not the most dynamic, the instruments did at least sound true, and the Dali didn’t favour one section over the other.

CONCLUSION
Clearly this is not a ‘speaker for lovers of dance or rock music. Even those who favour large scale Classical orchestration may be disappointed. Although the name suggests strong bass and crunching dynamics, the real picture is rather different. Nevertheless, for others though, the Royal Towers have formidable talents that make them immensely appealing. The insight and realism offered from the midrange is quite exceptional. From a floorstanding ‘speaker The handmade crossovers appear to work well, as the response from bass to treble is a good deal more seamless than many. The drive units may not be flashy, but they also have a winning way when it comes to vocal and instrumental texture. As a device to really feel the music from a musicians perspective, the Dali’s score highly. Whilst the Royal’s cabinet finish is up there with the best, it is let down by a few niggling flaws. Dali must attend to this, as with most rivals are, these days, simply flawless when it comes to presentation. Whilst this ‘speaker won’t suit everyone, there are those who will adore it. I can imagine that teamed up with something like a Naim CDSi CD player and PrimaLuna I valve amp, they would simply sing. Perhaps not the king of ‘speakers, but a worthy prince nonetheless.

The Dali’s are unusual in that most of their European competitors are now built in the Far East. Reduced costs has the effect of either lowering the cost to the consumer, or ensuring a higher spec at the same price. Both of these advantages can be seen with two of the Dali’s main rivals. The Quad 22L not only manages to undercut the Royal Towers by £200, but also features an equally impressive cabinet finish. Sonically it sounds a little more forward than the Dali, and bassy too, although it can’t match the Towers’ sense of refinement or openness. Key rival number two is the Epos M22. Like the Quad, they are also built in China, even if the cabinet finish isn’t quite so glossy. It is more substantial, though, and the twin woofers are larger in diameter. As you’d expect from Epos, the M22 wins friends through its fleet of foot pace and punchy, dynamic sound. The Towers are a more subtle ‘speaker and engage in a very different way. If the Dali’s are too laid back for you, though, then Epos has the answer right here.

MEASURED PERFORMANCE
This floorstanding was remarkable for how loud it went with little power. It’s helped by measuring out at a low 50ms overall impedance, but all the same 90dB from one nominal watt of input (2.84V) is very good going. The Royal Tower will run happily with low power amplifiers and it demands little from higher power types. It needs current rather than voltage swing, but most transistor amps can meet its requirements without trouble. Being comparatively unreactive across the audio band - bass peaks - it will also get the best from most amplifiers.

Frequency response
The graph shows the response at 10kHz, which may well add a little warmth or body - not usually a bad thing. Bass output remains smooth enough down to 40Hz, so this little Tower goes low. The lower port peaks around 40Hz too, but gets down lower so there will be good head in the sound within reasonable sized rooms. The tweeter has plenty of output up to 20kHz so bright CDs will sound bright; problems like this will be obvious.

The Dali Royal Tower measures well in all respects. Its response is a little less even than some, suggesting a little colour, but otherwise it looks very good. NK
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When Dominic Baker edited *Hi-Fi World* in the mid nineteen nineties, he was an absentee editor. Instead of bashing keyboards, he spent most of his time bolting drive units into large boxes, making loudspeakers on our listening room floor. Unsurprisingly, DB left us to work as senior designer at Focal JMLabs, where he did some of the company’s most esoteric loudspeakers including the Utopia Be series. Now, as the newly appointed Managing Director of Focal UK, he talks to David Price about the fine art of loudspeaker design...

DP: *IS IT EASIER TO DESIGN 'STATEMENT' PRODUCTS, OR 'AFFORDABLE' ONES?*

DB: I wouldn’t say that one was easier than the other, but you do approach them in completely different ways. A ‘statement’ product, such as the Grande Utopia Be, is the result of many years of research into materials and technologies. The research takes the ideas you may have for new, better ways of doing things and refinements of existing technologies and develops them into something that can then be practically used. Combining the results of such research with existing materials/technologies and developing them into a product is a very long process. But because it’s a statement product, there are no deadlines, so less pressure. At the affordable end of the market things are quite different. It’s about finding that perfect balance of the technologies and materials you have available to you to make the least compromise possible. This is incredibly difficult with a loudspeaker as each and every component has a knock on effect on sound quality. For a loudspeaker to become something special, each and every component must work in harmony.

**WHAT ARE THE RESPECTIVE DESIGN PRIORITIES FOR [A] HIGH END AND [B] AFFORDABLE PRODUCTS - AND WHY?**

From an acoustic engineer’s point of view, the list should look something like; sound, sound, sound, sound, sound, sound… Luckily Focal was founded and owned by an acoustic engineer, Jacques Mahul, who I know would agree with the above. For many modern buyers, aesthetics are the primary factor, which is something that we are becoming increasingly aware of. That’s what our marketing department and industrial designers are responsible for, but as you know we still make squarish wooden boxes that sound good, so they haven’t been allowed to conflict with this sonic priority.

DP: *DO YOU GO ABOUT COSTING THE COMPONENTS IN YOUR PRODUCTS - WHAT MAKES YOU DECIDE TO USE ONE CAPACITOR, FOR EXAMPLE, AND NOT ANOTHER? WHO DECIDES THIS?*

DB: It’s about keeping things in balance. Designing a product is basically navigating through a long chain of compromises. The best products are the ones that make the right decisions all the way down the chain, sensibly balancing one component with the next to take the shortest, least compromised path to the final product. One badly chosen compromise at the beginning of the process will cost you all the way down the line and the result will be average, at best. Taking your example to two extremes, I could use a fabulously expensive crossover capacitor that had ultimate sound, but if this meant making a compromise to the driver, then the extra detail the capacitor is supplying to the driver would be lost. Conversely, a high end driver fed by a crossover incapable of resolving the level of detail the driver is capable of would be equally wasteful.

**IS THERE ANY 'GOLDEN RULE' ABOUT THE IMPROVEMENTS/COMPROMISES CAUSED BY SPECIFIC COMPONENTS (I.E. IF YOU SPEND 10% ON A BETTER CAPACITOR, DOES IT BRING A 10% IMPROVEMENT IN SOUND)?**

Nothing that you spend 10% extra on provides an instant 10% gain. But if you add 1% to 10 different elements, the right ones, you multiply the benefits. Spend a little extra on a tweeter that has a better diaphragm material (lower colouration) and a lower resonant frequency. Used within the same loudspeaker as one using a lesser tweeter the differences will be minimal. Now, retune the crossover frequency a little lower to make use of its wider bandwidth and beaming effects from the upper midrange... branded: working for Focal obviously had a great effect on DB...
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will be reduced, increasing dispersion and giving a more open and natural midrange. To capitalise on the extra detail that the new tweeter is capable of, spend a little more on the crossover components and the cable and feed it more detail as well. The overall effect will be a dramatic improvement.

HOW MUCH DOES LISTENING PLAY A PART IN THIS? DO YOU LISTEN TO ABSOLUTELY EVERYTHING? WHO DOES THE LISTENING?

We listen to absolutely everything that has an effect on the sound. This is where Focal's approach of building everything in-house is especially powerful. We're not captive to a drive unit supplier, so will devote as much time listening to rubber compounds used in surrounds and the effects different glues have on the interface between the voice coil and cone as crossover components. Maybe there are loudspeaker manufacturers out there who actually listen to the types of metals they use for their spikes; I would suggest that buying in their drivers from 3rd parties has allowed them this luxury of this time.

WHY DO YOUR COMPANY'S PRICE POINTS START AND STOP WHERE THEY DO? IS THIS BECAUSE YOU CAN'T MAKE ANYTHING CHEAPER, OR ANYTHING BETTER (RESPECTIVELY). OR IS THAT THE ROFIT'S/SALES/VOLUMES DICTATE THIS DECISION? OR MARKETING, EVEN?

We start our product range with Chorus 5. These products use a Focal hand built driver using a polyglass cone (hollow glass spheres bonded to a paper base) and a unique Aluminium/Magnesium inverted dome tweeter. Making these drivers any cheaper would significantly affect their performance. Moreover, because of the quality of these drivers they demand a certain cabinet/damping and crossover quality to be able to realize their potential. This sets the base price. Our product range stops with the Grande Utopia Be, a loudspeaker where we made no compromises at all during its development. This is why it costs £45k. Either way, it's not sales/marketing that determine our range. We want to offer a wide range of loudspeakers with the proviso that they are all 'Made in Focal' quality.

WHY DO YOU USE THE CONSTRUCTION MATERIALS YOU DO? DO THESE REALLY INFLUENCE THE SOUND? GIVE EXAMPLES. DO YOU FEEL THERE'S ANY BENEFIT TO USE SO-CALLED 'HI TECH' MATERIALS, OR IS THIS MORE ABOUT MARKETING?

Sensitive use of materials is key to loudspeaker design. The most important materials are those used for the diaphragms of the drive units, that's why we develop so many of them ourselves; glass and Kevlar sandwich cones, polyglass cones, AlMg tweeter diaphragms, Beryllium etc. These diaphragm materials directly influence the sound and drive many of the engineering choices within a product. It's about picking the best material for the job, regardless of it's label as a hi-tech material or not. A good example of this is the paper cone, which we still use for our entry level products, albeit with a fine coating of hollow glass spheres which produces a slightly brighter, clearer tone. Today paper cones are among the most expensive to make (labour intensive) and difficult to market; regarded as cheap and low tech. Yet paper has wonderful acoustic properties, being stiffer than plastics, aluminium, glass fibre and Kevlar cones of the same weight.

DO YOU SEE A NEED TO MOVE DOWNMARKET IN FUTURE - EVERYONE SEEMS TO BE RUSHING TO THE LOWEST POSSIBLE PRICE?

Because of our philosophy, Made in Focal, I don't see this ever happening. Focal is owned by an acoustic engineer with a passion for music, something that has rubbed off on everyone involved with this company. Sure we could 'Focal' badge cheap, outsourced products, but where would be the fun in that?
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MARCH 2005
www.hi-fi-world.co.uk
Antony Michaelson rather immodestly claims Musical Fidelity's new A5 to be 'the best CD player in the world'... Well, Dominic Todd liked it...

It came as no surprise to discover that Musical Fidelity thinks its new A5 CD better than its existing A308. After all, the A308 is only £500 more expensive, and the A5 benefits from the latest chipsets and the lower manufacturing costs of Taiwan... But calling the A5 the best CD ever is surely a boast too far?

'Nell, the new machine certainly gets off to convincing start with its build and finish. The thick aluminium front panel and ribbed side cheeks wouldn't disgrace players from the class above, and are a definite step up from the class average here. Equally impressive is the weight and thickness of the casing, although it was something of a surprise to find a lack of any discernable damping material.

Styling is a matter of taste, but it can't be denied that the A5 has presence. It has the visual authority of one far more exotic, but with the Art Deco twist that has been a Musical Fidelity trademark from the early days. Those faux rack mounting handles on the front, by the way, are of little practical use but do a fine job in breaking up the expanse of matt silver on the front panel.

Generally, I thought the A5 to be a visual success, with only the slightly plasticky buttons letting the side down. Otherwise, though, this could easily be a £5K machine!

You wouldn't expect a player such as this to be loaded with features, but you would expect a full complement of socketry. Some may miss the A5 not featuring balanced XLR outputs, but, otherwise, the MF has everything covered. The provision of both coaxial and optical outputs may not seem like a big deal, but you'd be surprised, especially at this price, by how many players omit one or both of these vital links.

Both transport and power supply are rigidly bolted to the casing, but both are of a decent quality. The Philips VAM1202 has become something of a standard for this type of player now, and the small toroidal power supply is equally unsurprising. Where the A5 is quite unique, though, is with its DAC. The 192kHz upsampling 24 bit, Delta-Sigma, dual differential, DAC isn't unusual in itself, but the output device most certainly is. With a nod to Musical Fidelity's highly rated, and far more expensive 'Vista' ranges, the A5 features twin mu-Vista (6112) valves in its output stage. These valves are quite rare, which explains why the production run of the A5, like other MF valve based products, will be limited to 1500 units.

As before, although a 192/24 upsampling DAC can't improve the resolution of the 16bit CD format, it does mean that far gentler filters can be used downstream. As well as using the upsampling DAC, Musical Fidelity has also worked hard to improve the sound quality by focusing upon jitter. This involves getting the two sections of the machine, the transport and DAC, to effectively talk to each other better and, thus, reduce timing errors.

**SOUND QUALITY**

With the A5 hooked up to my usual reference system, I also had an Arcam FMJ CD33 CD player and a Benchmark DAC1 on hand for comparison. To ensure system synergy, and give the A5 CD the best possible chance by using Musical Fidelity's matching A5 amp (reviewed next month), in addition to my own. Listening began with Peter Cincotti's 'St. Louis Blues'. Straight away, for better and for worse, the effect of the mu-Vista valve outputs was instantly apparent. Focus and articulation of the vocals was first rate, with a sense of flow that is typical from a good valve, but rare from CD.

The sense of texture and apparent subtle nuances of detail gave the A5...
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the feel of an analogue source. No matter how fluent the sound, however, one could never get away from the feeling that the A5 lacked bite. True enough, put against the DAC! or a Naim CD5x, transients were softened and brass lacked the raw intensity that it would usually possess.

Daft Punk's 'Voyager' was produced with weight and authority. The depth of sound was highly impressive for this class but, once again, the tauntness of bass and general attack' was less so. This couldn't, however, prevent the A5 from demonstrating a more than generous soundstage with only the height being slightly inferior to the

CD5x. Particular praise should be directed towards the fine balance achieved in terms of projection. Whilst the A5 boasted superb layering of sound, and generous projection from the 'speakers, one never felt as though the music was being 'thrown' from the 'speakers. Even higher volumes could easily be enjoyed without one's teeth being put on edge.

The first time the smooth character of the A5 really became an issue was with Halvosens 'Entry March of the Boyars'. It was here more than anywhere, where I really missed the metallic edge of brass, and the jarring impact that a full orchestra can, and should, radiate. Nevertheless, for fans of separation the A5 turned in a performance that is probably the finest in its class. To be able to follow individual instruments this easily, from a CD player of this price, simply hasn't been possible until now. Although soft in character, the A5 is still immensely precise and focused. Its musical viewpoint may have been somewhat rose-tinted, but it's a beguiling and inviting view nonetheless.

In terms of synergy, the Musical Fidelity was at its most impressive with female vocalists such as Annie Lennox. Here, the liquid smooth reproduction was ideal to calm the slightly spiky recording of Lennox's voice in 'A Thousand Beautiful Things'. The solo guitar was beautifully resolved and pulled, as ever, well clear from the rest of the mix. Despite the soft bass response, the scale and presence of the song couldn't be faulted. If you like to be immersed in music, then this is exactly what the A5 will do. When it comes to getting down and dirty, for all its refinement, the A5 can still pull a few surprises. V2's 'Call You Sexy' had an expansiveness that swelled from the 'speakers. True, it still couldn't do anything about the softness of the lowest registers, but it certainly wasn't ponderous. Vocals remained cohesive and, even at high volumes, free from grain and spit. Whilst not having the greatest dynamic attack, it was the type of sound that you could turn up loud, and listen to for long periods of time without fatigue.

"in terms of separation the A5 is surely the finest in its class"

CONCLUSION

This isn't the best CD player ever - it simply isn't sonically rounded enough, for one. What it is, though, is certainly one of the most beguiling and fluid of players. For resolution, texture and articulation, combined with a complete lack of grain and harshness this is the finest in its class, and a good few above, too. Yet, there's more to a good piece of hi-fi than refinement, and this is where the A5 falls down. Especially when not partnered with the matching A5 amp, you can't fail to notice the CD player's lack of bite and transient attack. Sometimes this is of little concern, but at others it is a disappointment. Lovers of brass, in particular, would probably disapprove of the softened sound. Had there not been the Naim CD5x and Benchmark DAC! then I could probably have forgiven the A5 its softer responses, and still awarded it top marks - it really is that special in other respects. Yet, with it trailing so far behind these two in other areas, it can't quite be regarded as class best. For all that, this is still a magnificent CD player and one that should make for fifteen hundred very happy customers...

THE RIVALS

Although lower in price than the Musical Fidelity A308, the A5 will find competition, if anything, even tougher at its new price point. Two rivals stand out from our CD player group test of November 2004. Top of the tree is the Naim CD5x. Even without the optional FlatCap 2 power supply this is the £1,500 that the A5 must beat. Next to the A5 it does look rather dour, but the Naim does offer timing, focus and staging that are still unmatched at the price. The A5 counters with an even more 'organic' and lucid sound. Both are superb. If you fancy something slightly different, however, then don't rule out the second placed player. Sony's CDP-XA5000ES may not quite match either of the others with CD, but it does offer spectacular results with SACD. It's also beautifully finished, and more than a match for the A5 here. Finally I've always been something of a fan of the Arcam FMJ CD players. Like the A5, the FMJ CD33 also uses upsampling DACs. It doesn't look as expensive as the MF, but then it is cheaper at £1,300. It's a beautifully consistent player and, in some respects, is the safest option out of all the players here.

VERDICT

One of the most beguiling CD players at any price, with a deliciously analogue sound, but not for everyone. Superb value and surely an instant classic.

MUSICAL FIDELITY

www.musicalfidelity.co.uk

MEASURED PERFORMANCE

<table>
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For
- Class leading refinement
- Stunning resolution
- Esoteric finish

Against
- Lacks bite
- System and music dependant

MARCH 2005 (4f) WWW.MBLE3

57
Benchmark's DAC1 is yet another pro audio product that reckons it has the wherewithal to make it in the domestic market. The specs look good, but does it have the sound quality to convince the audiophile? Dominic Todd listens in...

Rather like Apogee's Mini-DAC reviewed in December 2004, the Benchmark DAC1 is primarily designed for the studio. Yet, after experiencing the exceptional results of the Apogee, it's becoming clear that there is an increasing amount of studio kit that's more than acceptable for the audiophile...

Indeed, looking at the DAC1, you couldn't really mistake it for anything other than a studio product. Having said that, the Benchmark is better than many and, unlike the Mini-DAC has feet for a start! It also features a milled aluminium front panel and robust case. Whilst this is designed to be either rack mounted, or flight cased and manhandled, it will look perfectly unobtrusive in the confines of a domestic hi-fi.

Rather like other professional hi-fi, though, it's not the style that interests the audiophile, but the componentry inside. And it's here where the Benchmark looks especially promising. Unlike many professional DAC products, it appears that a good deal of care has been exercised over the choice of power supply. Designed for stability of current, the onboard toroidal design is of generous specification. This feeds a 96kHz, 24bit Analogue Devices DAC with automatic sampling rate adjustment form 44.1 to 96kHz.

As with the Apogee, Benchmark has focused upon jitter as a major factor of sonic deterioration in the digital domain. As such, they've come up with a system they call 'Ultralock'. Reckoned to be 100% jitter free, the D/A conversion clock is totally isolated from the digital audio clocks in a topology that is said to outperform the type of two-stage, Phase-Locked-Loop design used in the Mini-DAC.

Being a professional product, the DAC1 has been designed to handle less-than-ideal digital signals with grace. A soft muting system means that pulling the power, or the digital feed, won't create any nasty pops through the speakers, yet audio is present again within only 60 milliseconds of restoring the input. In the case of power, it's back within just 500 ms. Furthermore, the DAC1 won't mute unless it absolutely has to. The DAC I will not mute even when the input data is all zeros, meaning that no audio is lost when an audio transient follows a silence. This should improve subtle detail, and the realism of sound.

As well as being designed as a superior quality DAC, the Benchmark DAC1 also performs the function of high-grade headphone amp. Twin quarter inch jacks are driven by Benchmark's HPA2 high-current amp, that is designed to drive a wide variety of headphone loads. Next to these front mounted jacks is a volume control which, if you choose, will also adjust the output level, making it suitable for direct connection to a power amp. Unfortunately the volume control itself, is a pretty cheap device, but it does at least feel substantial in operation.

There is pretty much every type of socket you're likely to need. A balanced XLR digital input joins the more usual optical and coaxial. Whilst the coaxial uses a BNC connector, it's easy enough to fit a phono converter - in fact one even comes supplied with the unit. Switching between these inputs is managed by a toggle switch on the front panel. As you'd expect, the primary output is that of XLR, but there are also some gold-plated phos for those without balanced inputs on their amps. The output features fixed, variable or user calibrated settings, accessed via a rear-mounted toggle. As I found when I reviewed the Mini-DAC, domestic DACs are rather thin on the ground these days. Still, the £939 DAC1 does have opposition not only from the £880 Apogee, but also Cyrus' DAC-X at £1,100.
SOUND QUALITY
Kicking off proceedings was Dr John’s ‘Chickee Le Pas’. The first aspect of sound that I couldn’t help but notice was the sheer expanse of the sound stage, including a superb texture to the vocals. Bass weight was certainly superior to its nearest rival, the Mini-DAC, but by absolute reference standards, could be said to lack a small amount of extension.

That said, for a £1,000 DAC, bass performance was still well above par. Fine integration, decent definition and plenty of weight meant that this wasn’t a DAC that had anything to be embarrassed about in the lower registers. Best of all, though, was the seamless way in which it appeared to unravel music with a stunningly clean. So, the DAC made a pretty good first impression, but to see if it upheld this with a variety of different genres, I switched to Eminem’s ‘Kicking Off’. The performance was still well above par. Powerful bass projection and, once again, that spacious staging, helped to produce one of the most dextrous performances of this track I’ve ever heard.

By now, my expectations of this DAC were sky-high, so it probably wasn’t surprising to find that the next track would come as something of a disappointment. The Divine Comedy’s ‘Come Home BillyBird’ didn’t prove to be quite as engaging as I’d hoped. The performance was still well resolved, with smooth orchestration and fine vocal projection, but the rippling bass didn’t have quite the authority or presence that I’d been hoping for. There was also a tad more sibilance than I’m used to, but I’m prepared to put this down to the DAC’s obsessive quest for detail rather than any specific sonic flaw.

Being true to the original recording was another aspect of the benchmark that I was aware of with Jennifer Warnes’s ‘Big Noise New York.’ I felt it to be exceptionally true to the recording, yet managing to be analytical without the often-associated quality of a sterile nature and lack of listener involvement. No doubt the fine timing helped, with the solid bass also preventing the song from sounding too sparse. Otherwise, the precision, stable imaging and vocal articulation merely confirmed this to be a DAC of high merit.

Where I have, in the past, found some studio-based products to fall down, is in the area of stringed orchestration. No such worries with the DAC1, though. With John Rutter’s ‘A-Roving’, the bodies of the strings sounded as though they were made from wood and not glass. Yet, they were also possessed of just the right amount of metallic bite, to prevent them from sounding as though they’d been stroked with bows of silk. Being, at heart, an analytical beast, there was plenty of acoustic information in the background. Whether you like to hear the odd shuffle of paper or creek of chair is a personal matter. As it’s flat from 1Hz to 20.8kHz; our analysis shows a convolved impulse from CD that depicts this.

Output was a massive 3.7V from the variable output set to maximum, and 3V from the fixed output. Distortion levels were as low and just 1.6% with a -80dB dithered signal. The DAC 1 matches the best CD players in this area.

CONCLUSION
It may look pretty innocuous but believe me, the Benchmark DAC1 is one of the most impressive digital products I’ve heard in quite some time. Where it is good, it is exceptionally so. In terms of precision, soundstage depth and focus and balance, the DAC1 deals a deadly blow to pretty much all of the opposition, and a good deal of integrated CD players costing up to £3,000, too. Where it is less good, there is usually a question of personal taste at issue.

For example, some listeners may find the sound slightly too dry, or too revealing. In this case it’s hardly fair to blame the Benchmark, but the warts-and-all nature of the DAC1 is something potential purchasers need to be aware of.

As if the impressive sound quality of this product wasn’t enough, it also proves refreshingly simple to use in a domestic setting. While there are plenty of tweaky bits for the pro — including the calibrated output — it’s an easy enough product for the domestic user to simply plug and play. I wouldn’t suggest that it could compete with the best from Naim, MF or Cyrus when it comes to style, but, then again, it is at least discrete. As studio products go, this is the most impressive I’ve heard yet and essential listening for audiophile. Highly recommended.

MEASURED PERFORMANCE
The DAC1 offers a pretty straightforward but good set of results. It has an almost flat frequency response right across the audio band. From an external synthesised digital signal generator it was flat from 1Hz to 20kHz; our analysis shows a convolved impulse from CD that depicts this.

Output was a massive 3.7V from the variable output set to maximum, and 3V from the fixed output. Distortion levels were as low and just 1.6% with a -80dB dithered signal. The DAC 1 matches the best CD players in this area.

Jitter was minimal with occasional peaks to 60pS, and noise also very low. The DAC 1 gives a tidy set of results with 16bit at 44.1kHz from CD. It is - potentially - a good way to upgrade an old CD player. NK

HOMESTUDIO
Not since DAT have we seen such a resurgence of pro-equipment filtering through to the domestic market. True, there have always been those who chose to use professional amps and ‘speakers for their home system, but instances of this are quite rare. Until now, crossovers have tended to be in the recording domain. Think Sony Pro-Walkman, Sony TCD-3D portable DAT and even the Revox B77, and you’ll get the idea. These days it tends to be computer software that’s shared between home and studio, although with products such as the DAC1 and Apogee Mini-DAC, the hardware crossover is making a comeback too.

VERDICT
Outstanding precision and detail that sets new standards for the class. Despite its pro origins, the DAC1 deserves serious consideration from all lovers of music.

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FOR
- class leading sound
- comprehensive socketry
- domestic friendly

AGAINST
- styling
- err, that’s it!

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MARCH 2005
MF-11 WORLD
59
With upgraded products either side of the NAC 112/NAP 150, Naim thought it time to 'x-rate' its entry-level pre and power amps too. Dominic Todd listens for improvements and suggests ways of taking the next step beyond...

Naim Audio is on something of a roll right now. As well as producing some of the most highly respected CD players around, it's also receiving near-universal praise for its amplifiers — which hasn't always been the case... Both the Nait Si integrated and the NAC 282/NAP 200 pre/power have received rare five-globe reviews in this magazine, and it seems that, these days, Naim can do no wrong. Yet, the trouble with continuous improvement is that it doesn't take long for other models in the range to be left behind. And so it was with the entry-level pre/power, the NAC 112/NAP 150. Naim knew this, though, and it hasn't taken them long to do something about it. The new NAC 112x (£680) and NAP 150x (£795) are the results of a good deal of research and technology downscaling, which allows for both to feature ideas and circuit topology from the range-topping models.

Like all Naim preamps the NAC 112x doesn't feature a built-in power supply. Instead, it takes its current from either a Naim power amp or, better still, a separate power supply [see UPGRADING]. As is becoming more the fashion these days, Naim has opted for a resistor ladder volume control. This allows for less distortion — as there's no potentiometer in the signal path — but also preset levels for each of the separate inputs. Speaking of which, the NAC 112x has six line level inputs. The good news for those unfamiliar with Naim products is that two of these are switchable from the standard DIN to the more conventional phono.

Other new additions to the 'x' model include the provision of RCS and, optional, RS232 sockets. These allow the NAC 112x to be controlled externally, and are vital for the more demanding multi-room installations. Inside there is a completely new main board, with extensive use of star-earthing, and a revised display PCB, too. For the first
time, the display board now uses SMT (Surface Mount Technology), which should help to reduce noise levels. I found the rear connection panel to be rather loose but, oddly, Naim says that this is exactly how it's supposed to be! It helps it fit the new Fraim rack.

For this test, we used the FlatCap 2 (£525) power supply for the pre-amp. As before, there really doesn’t appear to be much to the FlatCap 2. Inside it’s all rather empty with a solitary toroidal looking very lonely. Still, with selected low-noise regulators and two separate secondary windings to isolate each of the dual supplies, the resulting PSU represents a considerable step-up on powering the NAC 112x from the NAP 150x.

SOUND QUALITY
Listening began with the Scissor Sisters’ “Mary”. Of all the tracks used, this actually turned out to be the most disappointing. In this case, though, the term disappointing is relative. In general, there was a spacious acoustic, a typically taut and well-integrated bass response and fine cohesion across the frequency response. Less pleasing, however, was a hardening of vocals, especially at higher volumes, and also a lack of bass weight. As I say, though, the plusses still far out number the minuses, and this was still a precise and well-focused performance that you’d expect from a modern Naim. After the superlative performances of the Nait Si and NAC 282/NAP 200, though, it did seem a tad lacking. Moving on to Blondie’s “Happy Dog” seemed to suit the Naim combo far better. Here, the raw guitars were to the fore and, although energetic and lively, the sound never became brash or uncouth. The trademark Naim foot-tapping rhythm was there, and the song leapt from the ’speakers without an ounce of spare fat. As before, bass was on the lighter side of what you’d expect from a £1,500 pre-power, but at least this time the vocals didn’t harden as the volume rose. In fact, Harry’s vocals were blessed with plenty of depth, and beautifully layered against the fulsome percussion. An impressive performance, then, but even more so as I began to realise the NAC 122x/NAP 150x were beginning to pull off that old trick that only the best hi-fi can achieve – that of invisibility. Not literally, of course, but the type of sonic invisibility that makes the listener simply forget about the hi-fi altogether and concentrate, instead, on the music.

Peter Cincotti’s “On The Moon” provided a similarly spellbinding rendition. The vocals didn’t quite demonstrate the effortlessness of something like the MF XPRE v1/X-P200, but there was certainly plenty of attack and drive from the percussion. Staging was extremely precise, making it easy to follow individual elements of the music and, if the vocals did lose a little in terms of height, then they were at least projected well forward of the rest of the mix.

If you like Dance music, then you can’t fail to like the Naim. A case in point was the superb rendition of Narcotic Thrust’s ‘1 Like It’. There’s nothing like a good Naim amp’, with super swift timing, to make the

UPGRADING
As you may have already noticed, this particular Naim pre/power amp’ was supplied with the upgraded power supply, amusingly termed the FlatCap 2. Naim has long believed that the quality of the power supply is crucial to an amplifier’s performance, especially that of the preamp’. The £515 FlatCap 2 adds an extra incisiveness to the performance and improves upon the, already, decent resolution. As good as it is, though, you can get better. For a few pounds more, well £925 in total to be precise, Naim will offer you the HiCap. Using a half-sized version of the superior 2-series casing, the HiCap features improved vibration resistance. It also has a dirty great toroidal transformer and smoothing capacitors that make the FlatCap 2’s supply look rather weedy by comparison!

The beauty with pre/power combinations is that you don’t have to go for a set combination. Should you decide to stick with the NAP150x, but go for a higher grade preamp’ then you might want to consider the NAC 202 (£1,400) or even the NAC 202 (£2,830). The NAC 202 features precision matched rotary potentiometers with precious metal wipers. It also benefits from the more substantial 2-series casing, and is upgradable still further by the NAPSC power supply which controls the digital and control sections of the amp separately from the audio side. With the NAC 282, this is included as standard. There are also further upgrades to component quality and separate listen and record, source selectors. Combined with a HiCap power supply it’s a formidable preamp, and sees off many more expensive competitors.

If you’d prefer to stick with the NAC 118x, but upgrade the power amp’ then you’ve got the choice, realistically, of either the NAP 200 (£1385) or NAP 250 (£2315). The NAP 200 has, once again, that better quality, anti-vibration, casing and a useful power hike to 70 watts. The NAP 250 raises the stakes considerably by not simply boosting the power output to 80 watts, but by also using the same 007 transistors as used in the fearfully expensive NAP 500. Even though it’s changed much over the 27 years of its life, the NAP 250 is still something of a classic and, like the NAC 282, still a formidable combatant. So, cards on table, if I were to upgrade I would look towards the preamp first. Unless the NAP150x doesn’t have enough grunt to power your ‘speakers, you’ll get a greater benefit from upgrading the pre’ than the power amp’. In my opinion a NAC 202 with NAP 150x sounds better than a NAC 118x with NAP 200. Either way, as soon as you can afford it, the HiCap will transform the sound of either preamp, and is probably the most cost effective upgrade here.
Below is a small selection from our range of carefully chosen equipment:

**Denon DL-103 MC cartridge.** The 103 has been in production since 1963, and for good reason - its performance is legendary throughout the world. Probably the best value cartridge available today at just £100.

**Verdier Control 'B' valve pre-amplifier with switchable MM & MC phono stage (via internal transformers).** This high performance pre amp costs £1,200 and can even be upgraded by connecting an external valve regulated power supply (£1,075 extra).

**The Something Solid XR** has become our reference equipment support, its novel use of balsa end grain shelves and tensioned shelf suspension give it a neutral presentation that lets equipment perform without added artifice. 4 tier version available from £600. (Stop press new Economy version now available from just £300).

**Michell Tecnoarm A** This beautifully crafted Rega based tonearm features a bead blasted and perforated arm tube, easily adjustable VTA and monolithic litz pure silver wiring. Incredible resolution for the price £420.

**Audion Silver Wight MKII** A superb range of single ended 300E zero feedback amplifiers starting from just £2,000 for a power amp or £2,250 for the line level integrated version. Awesome 18W parallel single ended mono-blocks also available from £3,225. Excellent Premier MM valve phono stage also available - £500.

**Music first Audio TVC pre-amplifier** Instead of using resistors to control the volume the TVC uses stopped transformers. Incridible transparency without any of the dynamic compression found in conventional passive preamplifiers. Copper wired version: £1,500. All silver wired £2,700.

**Opus Continuo Reference turntable with Cantus parallel tracking tonearm.** Designed to compete with a master tape the Opus sounds exceptionally musical. Combination pictured costs £3,900 including Thet Cartridge Min Music Maker 3.

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CONCLUSION
Had the Naim Nait Si or NAC 282/ NAP 200 not existed, then this would be a five-globe product, no questions asked. The trouble is that they do, and for all its qualities — and there are many — the NAC 112x/NAP 150x can't match either. Sonically it's a country mile off the more expensive combination whilst, in terms of value, it can't compete with the stupendous performance per pound of the Nait Si.

For all that, this is still a super amp", and an improvement upon the earlier models. In terms of listener involvement, vitality and sheer precision this is one of, if not the, most impressive amps" in its class. The sticking point comes with lower frequencies. It's here, especially with less sympathetic 'speakers, that the muscle of the opposition begins to tell. By comparison, the Naim simply sounds light in the bass, lacking in authority and restricted in stage width. It's a measure of how good the rest of the amp" is, then, that I would still whole-heartedly recommend this amp": Match with efficient 'speakers, and sympathetic cables, and you'll have one of the most musical entry-level pre-power combos about.

THE RIVALS
Perhaps Naim's greatest adversary these days, is Musical Fidelity. It's therefore no surprise to find that the 112x/150x combo faces its toughest test from the MF XPRE v3 and X-P200. It's true that the Musical Fidelity is a touch more expensive, but then it does also boast a Naim-bashing 200 watts power output. Interestingly, when the junior, integrated, versions of these two amps (the Si and X-150) battled each other in June 2004 it was the cheaper Naim that just came out on top. This time, in my opinion, the positions are reversed. As rhythmic and precise as the Naim sounds, it simply can’t match the MF for scale or weight. With a second power amp added, the MF is in another league which, even with a HiCap added, the Naim simply is in another league which, even with a HiCap added, the Naim has no answer to. It's another reason for this Naim to just miss the five-globe mark.

Musical Fidelity aside, I would put the NAC112x/NAP150x ahead of its rivals. That means that, against last month’s contenders in the group test, it would have come second. Not bad when you consider that these included the none-too-shabby Cyrus 8vs/PSX, Roksan Caspian Pre/Power and Exposure 2010 integrated/power. The Naim manages to create a superior blend of precision and involvement than all of them, even though they may, individually, score a point or two over the Naim in some areas. Certainly, as has already been mentioned, if you have a particularly tricky pair of 'speakers to drive, then the Roksan, in particular, may prove the better choice.

Another rival you might like to consider is the Quad 99/909. Like the Musical Fidelity, it’s a little more expensive than the Naim, but a good deal more powerful with it. It will sound a little ponderous by comparison, but counters with a more authoritative sound and a broader soundstage. Finally, from the left field, don't forget Prima Luna’s remarkable Prologue 1. At £800 it’s a good deal cheaper than the Naim. It's also an integrated, and a valve amp", but none the worse for being either. It loses some of the Naim’s precision but, in terms of fluidity and lush musicality, is in a league of one. The good news is that, whichever amp" you do choose, you can be assured of the best sound quality at this price point that there’s ever been. The new NAC112x/NAP150x simply reinforces that.

listener want to get up and dance. With the NAC 112x/NAP 150x, that’s exactly what you’’ll want to do. It wasn’t just in the timing, but in the way it could seemingly start and stop the pace on a sixpence. To use a DJ analogy, the Naim had the alertness of a decent direct drive 'deck, such as the SL1200, against the opposition’s own-brand budget belt-drive special. In short, after listening to a NAC 112x/NAP 150x, everything else just sounds sloppy. Having said that, for all the vigour and passion, the Naim was still lacking in ultimate bass.

If the Naim had been at its peak with Dance music then, with Classical, it came down a notch or two. That's not to say the sound was in any way poor, it just didn’t impress as much as it had done before. With Mily Balakirev’s 'Islamey", string tone wasn’t quite as sweet as a good valve amp", or even the transistor Musical Fidelity for that matter. That, and the lack of scale, prevented the Naim from producing a first class performance. That said, the way in which the combo held a tight grip on the music, even during the most complex passages, was impressive. Even amongst the most chaotic sections, small details from percussion could still be heard with crystalline detail.

MEASURED PERFORMANCE
The NAP-150 power amplifier produces 50W into 8ohms and a 80W into 4ohms, not much for a dedicated musical direct drive power amplifier these days, but at just 0.02% levels was low. There was little change in structure with level, always a good sign. Near full output (~10dB) things changed little, a worst case result of 0.04% being returned at 10kHz. Naim amps traditionally have an unusually high input sensitivity of 70mV, raised to 100mV and even 200mV, but not to modern sources that deliver 500mV or more. The NAC112X and NAP150 combo have a low-ish input sensitivity of 500mV, good for CD but with some sources volume (gain) may have to be turned up high.

As always bandwidth was tightly limited to no more than audio frequencies, the upper -1dB limit measuring 24kHz. This helps keep the sound smooth and contributes to the darker presentation.
Right now, Shanling is the star of the burgeoning Chinese hi-fi scene. And after a couple of killer digital disc spinners, the company now has a pair of monobloc tube power amplifiers out, in the striking shape of the 3Dacoustics by Shanling SP-80C. David Price meets and greets...

My trip to China last August was a real ear-opener. Beijing's a beautiful city, more modern even than that one-time inspiration for Bladerunner. Tokyo (a place I spent much of my adult life in) You get the sense that it's a place that's growing and changing at a remarkable pace — one hitherto only seen in Japan in the early nineteen seventies as the country moved to become the world's second largest economy after the United States of America. Right now, China is number six, but this can’t be for long...

What's happening in the Chinese hi-fi scene is a function of this. There's a bewildering array of brands springing up hither and thither, often as a result of companies working as OEM suppliers to established foreign audio names, and then going-it-alone with their own marque. Shanling is one of the best known from the People's Republic here, thanks to its interesting, innovative even, CD and SACD players. If one can possibly ascribe national characteristics to hi-fi, then Shanling is very Chinese — design-wise it's dramatic, quirky yet conservative. An interesting new application of very well established technology, this is no simple clone of Japanese, European or American kit even though there are definitely 'echoes' of all the aforementioned. Build is lavish, but still has that slightly imperfect 'home made' (read: hand built) feel that Japanese high end lacks. Although Shanling throws lots of chunky, well finished brushed aluminium at the casings, the fit and finish doesn't quite have the sense of being 'hewn from solid with millimetric precision' that (admittedly more expensive) high end Japanese stuff exudes. Compare and contrast, for example, JVC's equivalently priced AX-SD1 Class A integrated transistor amp: everything from the silky gate of the on-off switch to the beautifully radiused aluminium fascia plate gives it the look and feel of a top Lexus. The Shanling SP80Cs by contrast, feel more like a Lotus; stunning styling, oh-so-clever design by not quite up there on finish... There's no much to them; each monobloc sports two EL34s, a 6N8P and a 6N9P, plus a massive toroidal power transformer and equally voluminous output tranine. This adds up to 16kg and 460x204x188mm — no small thing, an SP80C. The fascia sports a smallish circular window (very Marantz — no surprise, as this company is very, very big on the Chinese high end market) with a fluorescent volume display (switch on default: -40.0dB). To the rear of the left side is a single RCA phono socket, and opposite on the right side is a cheap looking power switch. Behind, on the rear panel, are three large gold plated speaker binding posts (ground, 4ohm tap, 8 ohm tap), and IEC socket and a 2.5mm minijack for...
connection to one another. Essentially, this links both amps up so the remote volume controls them both simultaneously; you nominate one as the 'master' and the other as the 'slave' by a tiny switch above, and this is indicated by a blue LED in the frontal display. Finally, the units come complete with the white Michael Jackson gloves (so as not to get fingerprints on your beloved new bits of kit during set up), tasty looking power leads (although the review units lacked UK 3-pin mains plugs and had north European plugs instead) and a lovely little all-aluminium remote control.

**SOUND QUALITY**
Warning: not all valve amplifiers are made this way. If you’re interested in tube amps in principle because of their innate smoothness, fluidity and grace, then don’t buy the SP-80C because it has little of this. Indeed, so much of antidote to the trad ‘Quad II’ stereotype (‘scuse the pun) of ‘loose and lovely’ is the Shanling that one can only think they had Naim’s NAP250 in their corporate sights!

Of course, being a highish power push-pull running EL34s, you’d never expect it to be sweetness and light, but the surprise was how far away it was even from the likes of Audio Research’s VSi-55 and my own modded World Audio KS801, both of which have a real tiger in their tanks. It’s no exaggeration to say that the Shanling is the most bracing tube amp I’ve heard to date, and none the worse for it...

Bracing? Think touching down at Heathrow in November after a long spell in the Tropics. It’s a the aural equivalent of a chill late autumn morning, so crisp you could almost carve your initials into the sound. But this is only the half of it, because the Shanling sounds massively powerful. It’s a kind of Musical Fidelity kW500 of tube amps, I guess you could say. It takes anything you want it to play and veritably catapults it at you with breathtaking authority. And the great thing is that, being a tube design, it does have that ever-so-slightly sweet patina ever present, but it has to be said that with the SP-80C this is a minor mitigating factor!

Driven by the smooth, svelte strains of Stello’s DP200 DAC/preamp (in ‘Fixed’ output mode) upscaling at 192kHz the digitals from a Musical Fidelity X-RAY v3 CD player, the Shanling made my Yamaha NS1000Ms sit up and take notice like no other tube amplifier I’ve tried with them. Jocelyn Brown’s ‘Somebody Else’s Guy’ was just plain astringent until I knocked the treble level pots back by 0.5dB each side. This just tipped the balance back from ‘raucous’ to ‘revealing’, and the SP80C’s real character flooded out.

Let’s start with the good news. As a brief look at the output transformer suggests (and a quick lift off the ground too) that this has massive bass power — and it has! Even Audio Research’s superb VSi-55 lacks its ability to flap those big twelve inch woofers of the NS1000M. It was disarmingly strong and tight, and just kept on punching harder and harder as I ‘tickled the loud pedal’. Snare drums stopped and started with greater speed (and commitment) than any other tube amp I’ve heard, bar none. This simply did not sound like valves, save the tiniest, merest and most modest hint of tonal ‘warmth’ down in the low bass. This subtly pleasing tonality allied to lightning attack transients proved an infectious combination...

When you move upwards to the midband, the Shanling has another ace up its sleeve — stereo imaging and projection. This obvious strength is, I believe, closely associated with those monster-truck output trannies. Unlike many tube amps which struggle to push any kind of stereo image out of the loudspeakers and into the room, the SP-80Cs well and truly kick it into the opposition’s half. These monoblocs are staggeringly good at pushing vocals out at you, and just about anything else too. Lateral image location is also superb — things are tightly located within an expansive, architectural soundstage. It’s all laid out on a plate for you.
Kandy

It's not all black and white.

Roksan, for those with a little more grey matter.
without so much as an ounce of doubt.

All well and good then, but the Shanling isn't the multi-talented master of all trades its early promise would suggest. Alas, none of its "By All Means", with its rapping brass, sounded positively acerbic at high volumes -- there's simply too much negative feedback dished in for it to achieve that trademark velvety sound midrange. The utterly self-effacing neutrality of the NS1000Ms showed it's a tad eggy alright, but I didn't dwell on this, as the brilliance of the bass had me entranced. The way this amplifier combo can start and stop on a sixpence (or one Euro cent, or whatever) has to be heard to be believed.

4Hero's "Escape That", with its beautifully recorded acoustic instruments, showed that no matter how confidently the Shanlings can project into the room and etch the stereo image onto your very forehead, this amplifier combo is still veiled. It doesn't hang images back behind the plane of the speakers well, and as a result suffers from a lack of air and space, despite its tonal brightness. Moreover, it's not great at tonal colouring either. There's a slight hint of graining on violins, which isn't so much grey transistor mush as ice-white frost. Up in the treble, this is especially noticeable for its loss of air and space, despite its tonal brightness. Moreover, it's not great at tonal colouring either. There's a slight hint of graining on violins, which isn't so much grey transistor mush as ice-white frost. Up in the treble, this is especially noticeable for its loss of air and space, despite its tonal brightness. Moreover, it's not great at tonal colouring either. 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ERIC CLAPTON
461 OCEAN BOULEVARD
(HYBRID SACD: STEREO & MULTI-CHANNEL DSD)

We usually attempt to divide our attention between formats and labels, but it is hard to ignore the fact the only major label putting out high resolution discs in sizable numbers is Universal, which means that this month’s rundown consists exclusively of Universal Chronicles series classic rock back catalogue. It says something about the demographic they are aiming for that the vintage of these thirty-odd year old Claptons and Eltons puts them before the time of the average forty year old. ‘461’ is the only album here I have significant familiarity with - and that was listening to the parental copy - so these opinions are those of someone listening properly to these albums for the first time in their surround forms.

While the Elton SACDs have all been worked on by Greg Penny, the Claptons have had their mixes done by a variety of engineers and producers with ‘Slowhand’ (which is also available as a multi-channel SACD) done by original producer Glyn Johns. The surround versions for ‘461’ and ‘Layla’ were actually produced by UK eighties pop musician Simon Climie, and ‘461’ has been given a subtly attractive feel. It’s a more involving, cleaner sounding version of the album I probably last heard twenty years ago. ‘461’ is a much stronger set than ‘Slowhand’, with great performances from the man himself and a consistent band of sidemen, including a fantastic live-sounding Jamie Oldaker on drums. Check out the straightforward, almost stereo version of Robert Johnson’s ‘Steady Rollin’ Man’. Clapton’s dobro sounds gorgeous on ‘Give Me Strength’ and Yvonne Elliman’s supporting presence is felt throughout. It is a shame that with a double Deluxe Edition made available on CD at the same time space can only be found for three bonus tracks, but these do fit in both thematically and musically.

DEREK AND THE DOMINOS
LAYLA
(HYBRID SACD: STEREO & MULTI-CHANNEL DSD)

‘Layla (and other assorted love songs)’ is a rock classic, containing as it does that seminal title track, but there is plenty else to commend it as an album. Key to the whole project is Clapton’s writing hook up with Bobby Whitlock and the guitar interchange between EC and Duane Allman. It is fascinating how, in four short years between 1970 and 1974 Clapton had gone from this primal blues-rock to the more middle of the road variant to be found on ‘461’. The difference in vintage is also evident in the recording; although both albums were produced by Tom Dowd, ‘461’ also sounds tamer and easier on the ear than ‘Layla’ which is admirably live, but a little thin and shrill. It is difficult for me to comment on the fidelity of this, having heard neither the original tapes nor preceding versions of the album, but the sound might fatigue slightly after the full eighty minutes.

It is impossible to quibble with the musical qualities of the album, but like ‘461’ few risks are taken with the material in the surround mix. Disappointingly the title track is not the all-around assault that some might have done (some reportedly prefer the aborted surround mix by Elliott Scheiner – that is a story for another day…). From the point of view of a rock history student it is a shame that, in common with the other Claptons, no textual background is supplied — the packaging is the bare bones original supplemented with SACD reworking credits. You would have thought that with the effort being made to turn these three Clapton artefacts into the new format, budget could have been spared to add a contextualising sleevenote or two but on the whole they are nonetheless worthy of addition to your collection, according to taste of course…
ELTON JOHN
ELTON JOHN
(HYBRID SACD: STEREO & MULTI-CHANNEL DSD)

After the initial success of the 'exemplary' 'Goodbye Yellow Brick Road' SACD and DVD-Audio it was inevitable that more classic Elton John would be revisited by mixer/producer Greg Penny. The first batch consists of this eponymous second album, 'Madman across the water', 'Tumbleweed Connection', 'Honky Chateau' and 'Captain Fantastic'. The reason for selecting these two titles for review is not just that they are the most prominent of that little batch. They are also the best served in the supplementary tracks stakes, as both add three excellent tracks to the original running order. In the case of 'Elton John' these include the delightful orchestrations of 'Bad Side Of The Moon' which echo the spectacularly attractive arrangements of Paul Buckmaster found on the album proper. Musically this is the quintessential early seventies singer-songwriter album, containing the classics 'Your Song', 'Take Me To The Pilot' and 'Border Song'. Elton's vocals are soulful and strong, and the original sequence ends with the quintessential synth on the symphonic 'The Cage' and the positively proggy 'The King Must Die'.

'Goodbye Yellow Brick Road' was justifiably criticised by some for its over-bright sound, particularly in its SACD guise. The nippickers have attempted to tar the new batch with the same brush, but I found the sound of this album in particular to be richly satisfying, with a lovely natural bass guitar sound, and all five discs exhibit a consistency of quality. Perhaps Penny does read the message boards and heed the criticism! Of course what Penny really excels at is creating enjoyable surround versions, and throughout this batch he is demonstrating an admirable emergent talent for '5.1ing'. This album is given a similarly natural feel to the Claptons, but is somehow more involving and richer sounding. The surround is definitely the main event with these discs.

ELTON JOHN
CAPTAIN FANTASTIC AND THE BROWN DIRT COWBOY
(HYBRID SACD: STEREO DSD ONLY)

'Captain Fantastic' ranks with 'Goodbye Yellow Brick Road' as one of John's most successful albums, and it is not hard to see why. The style has moved on, and has become closer to the distinctive up-tempo pop which became his seventies trademark. The likes of '(Gotta Get) A Meal Ticket' and 'Someone Saved My Life Tonight'. The bonuses are thus all the more important here, and they include stunning surround versions of single-only tracks such as 'Lucy In The Sky With Diamonds' and 'Philadelphia Freedom', the latter having a wonderfully exact, punchy sound.

The packaging standards are higher than the Claptons, but not by much. After the delightful restored artwork of the 'Goodbye Yellow Brick Road' digipak it is a disappointment to get dodgily reproduced versions of the mid nineties remasters' artwork, but at least that means we get John Tobler's useful sleevenotes. Elton John fans will undoubtedly want to acquire all five discs, but waverers should start with these two as exemplars of his undoubted talent and of how far Elton progressed in the first half of the seventies. Interested parties should note that by the time you read this the next batch should be close to the mastering stage, and will include 'Caribou', 'Don't Shoot Me I'm Only The Piano Player', 'Rock Of The Wespas' and 'Blue Moves'. It is to be hoped that once he is through the Eltons, (maybe just the classic ones, eh?), Penny succeeds in his aim of moving on to other albums he has stewarded in their stereo past-lives by the likes of KD Lang, Rickie Lee Jones and Eddi Reader. He should be the absolute oxyen of multichannel mixes by then, if he isn't already...
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Creek Audio manufactures in the UK. Current products include A50, A50R and 5350SE integrated amplifiers, CD50 Mk2 CD player, and T50 tuner. All products are similarly styled providing an easy mix and match choice depending on budget. Our miniature OB box range includes two phono pre-amplifiers, two headphone amplifiers and a passive pre-amplifier.

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A reference guide to Britain's manufacturers and distributors
SINGLE-ENDED PURITY

Our Parallel Single Ended (PSE) power amplifiers offer ultimate sound quality. Each monobloc has two beautifully linear 300B directly heated triodes in its output stage, producing 20 watts into an 8 ohm load. At the front of the circuit we have a 6AU6 pentode, followed by an ECC82 as the driver valve. This design uses a SU40 rectifier valve in the power supply, in combination with a 10H choke, giving an extremely quiet supply. Both mains and output transformers are built on high quality E/I pattern cores. Feedback can be switched in or out whilst running, using a rear panel switch. Complex layered and sectioned output transformers give full output and low distortion across the audio band even without feedback, making such an option possible.

This is one of the few amplifiers in the world so good it will work without feedback - and no feedback is the preference of most buyers. It gives a spacious, relaxed and fluid sound quite unlike that of solid-state amps, all of which use feedback to correct deficiencies.

By operating linearly in feedbackless, pure Class A, single-ended mode these 300B monoblocs are as pure as it gets - and sound quality reflects the fact. Fast, clean and clear in their presentation, at the same time their purity of sound is easy on the ear.

For more power, we also offer 300B in Push-Pull (PP) form. The 300B PP monobloc shares the same look and chassis as the 300B PSE monobloc. The 300B PP kit has been created for those who prefer a bit more power. With a pair of 300Bs in push-pull configuration providing 26 watts output, they will drive most modern loudspeakers to perfection. Andy Grove’s design is totally feedbackless, using a 6AU6 pentode as the input valve and a 5687 as the phase splitter. The power supply uses a Russian SU4 for rectification. The kit is constructed by hard wiring, so some experience is required. 300B PSE owners do have the option to buy the conversion kit for £250.00 to turn their monoblocs to push-pull status. Each monobloc weighs 23kg.

PHONO-II is a dedicated valve phono stage for MM cartridges, with MC input transformers an option. By using all-d.c. supplies from PSU-II and a case in which there is no power supply PHONO-II is hum free, something that is difficult to achieve with valves. With accurate RIAA equalisation right down to 10Hz (-3dB) PHONO-II gives a wonderfully pure, dimensional sound from LP possessing a sense of life and dynamism quite different to solid-state preamps.

Finally, PSU-II is a power supply unit that feeds both the PRE-II and PHONO-II. Keeping the power supply separate removes hum, often the bane of valves.

The PRE-II is a high quality valve pre-amplifier that will drive any power amplifier. It has a gain of x5 which, with CD, enables it to deliver a large 10V output swing. To keep the amount of active amplification low, this pre-amp uniquely uses a line drive transformer to deliver a pure signal to the power amplifier. There are six inputs, a tape monitor and two sets of output sockets. It is powered by the external PSU-II power supply. The volume control uses high quality Alps Blue potentiometer which, with our solid, turned brass, chromed knob, gives a quality feel rarely encountered these days.

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SERIES II MODULAR PRE-AMP KIT
KelB4 is an affordable, integrated valve amplifier for those who want to enjoy the valve sound, but from a simple, easy to build kit. It uses inexpensive EL84 output valves, known for their sweet sound, in conventional push-pull arrangement to provide 15 watts into an 8 ohm load. The output transformers are our own quality Ultra Linear design. Up front, the circuit employs an ECF80 input/phase splitter valve, which contributes to Ke184's extremely smooth sound.

The amplifier has very low hum and for simplicity it is built on a printed circuit board. A strong steel chassis is fronted by a 3mm anodised front panel and attractive brushed aluminium effect knobs. There are five line level inputs, plus one monitor input, with a tape output included, all controlled from the front panel.

At the rear is a mains switch/IEC power input, earth post, phono sockets, and 4mm banana sockets for loudspeakers. The KelB4 will highlight all the intricacies and depth of detail in your favourite recordings whilst retaining a warmth and fullness that is almost exclusive to pure valve amps and is rare at this price point.

KelB4 weighs 10kg. External dimensions with valves are 300mm(w) x 270mm(d) x 150mm(h). Single input version also available at £285.

Our 6550 series amplifiers are built around the rugged 6550 beam tetrode that's popular in America. This valve is widely available at a good price. Producing no less than 40 watts into an 8 ohm load (available in a 4 ohm version if required) our 6550 is a power house, since valve watts always sound louder than transistor watts!

The difference between our 6550 and most others is that we use valve rectification (5U4) and a choke pi filter, for a power supply that is quiet and free from solid-state hardness. This is a true high-end design from Andy Grove, hard wired. It is a cut above the many other 6550s, with enough power to drive most loudspeakers, including insensitive electrostatics for example. 6550 combines high power with a top-end smoothness of sound, yet doesn't cost the earth to run, as the valves are inexpensive and have a long life.

The amplifier weighs 14kg. Dimensions are 390mm(w) x 330mm(d) x 190mm(h) with valves, or 220mm(h) with cage.

The Headphone II amplifier is a beautifully simple design using Mullard ECL83 valves, a triode and power pentode housed in the same envelope. It works directly from any source, be it CD, tape, tuner etc., or from an amplifier's tape out or pre-amp out sockets. The circuit uses high specification EI output transformers that will drive any headphone load from 16 ohms to over 300 ohms depending on how the secondaries are wired up.

The Headphone II is a pure Class A single-ended design with the power pentode wired up in triode configuration for added sonic purity, and it is as quiet as a mouse. Treble has the crispness of the best solid-state, but with the tonal resolution and delicacy associated with valves. Bass is punchy and controlled without becoming artificial.

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These are expert kits, not for the inexperienced. You must be able to solder and read a circuit diagram. The valve kits contain lethal voltages. We cannot be held responsible for any injury or damage arising from the construction of these kits.

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<td>£10.13 each ... £36.50 set of 4</td>
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<td>30w Mains Transformer - 375v / 5v / 6.3v</td>
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<td>PP 30w Output Transformer</td>
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<td>HT Choke 200mA 7H</td>
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**By Rail**
The train journey from London, Liverpool Street station to Chelmsford takes about 40 minutes, with 3-4 trains running per hour. You can then get a taxi or catch a bus (numbers 45A & 45C) to Writtle Village Green where you will find Rumsey Row between the chemist and ‘Which-Craft’. WAD are located at the far end in the last unit on the right.

**By Air**
London Stansted, London’s third airport, is only a 35 minute drive from Writtle with cheap flights to many EU destinations. Heathrow and Gatwick are also easily accessible via the M25 (90 minute drive).

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Let you know in due course which room I spend most time in. 

For now though, let me explain in a little more detail why I am doing this, because choosing either high definition stereo or surround-sound is an option that faces us all. I hear many say "not me"! Most Hi-Fi World readers are not dreaming about surround-sound. It's too commercial, and, in my experience, the main one when it comes to reproducing music rather than film sound. The other is centre channel dominance, which gives high quality mono! This is a bizarre phenomenon, as much down to mixing as anything else, but it can be compensated by reducing centre speaker output. 

Loudspeakers of choice in the second listening room will be electrostats run from a valve amp. This room will have heavier sound treatment to cope, and also to ensure good conditions for loudspeaker reviewing in general. I'm toying with the idea of using either ESL57s with One Thing panels, or new Quad 989s. ESL57s are more amenable to modification and upgrade, since there's a growing body of knowledge about them that aids DIYers like myself, as well as a widening pool of parts. What doesn't concern me is ultimate bass quality, because it encourages artificiality. 'Fast' loudspeakers with 'slam' are commonly optimised to be like this through various tuning techniques that compromise accuracy and add colouration. Exciting on straightforward Rock music, they fall down if asked to reproduce anything else; not my bag.

In the past I have run large, quality conventional floorstanders, like most people. As electrostats and subwoofers get better I feel a tug back in this direction, but with Blu-Ray and high definition video soon to be upon us, totting up to six channels of 24/192 digital audio, I won't want to be missing out here either! Whichever sort of system you choose, stereo or surround-sound, getting fantastic results doesn't mean spending an arm and a leg on the loudspeakers. Swapping the furniture around and doing a little DIY might be all it takes to set things up for great results.
The greatest thing about high fidelity music reproduction equipment is that it's the means to an awe-inspiring end - listening to music - which is surely one of life's highest pleasures. The next best thing about hi-fi is that you get back what you put in, which is to say that the more intelligently you choose, match, tweak and tune your stuff, the better the results will be.

Yet what fascinates me most, however, are all the engineering, economic, political and even philosophical decisions that are made on the way - in short, who said what, where, when and why? And nowhere are these more explicit than when designing a loudspeaker...

That most speakers look the way they do, is more about expediency than anything else - there is no rule book that states that moving coil cone and dome transducers in largish narrow boxes are necessarily better than anything else - in fact, in many situations, the reverse is true. So when I speak to designers who sing the praises of this or that particular midrange drive unit or cabinet, I can't help thinking that this is more of a psychological process (self-affirmation) than pure intellectual justification. It's the audio engineering equivalent of Steve Coogan's fictional salesman Gareth Cheeseman staring at himself in the mirror and saying 'Grrrr... you're a tiger!'

You see, the sad thing for any speaker designer is that whatever he does or doesn't, he's already lost the war. This is because his basic building blocks are seriously limiting him, and in order to get round this, he has to

- [a] be a genius,
- [b] design and manufacture an alternative set of building blocks and then refer back to
- [a]. Because it's so hard to conceive of (let alone build, let alone implement cost-effectively) the perfect transducer, then any designer is already working with a whole set of compromises before he leaves the starting grid. Imagine having to come up with a race-winning Formula One car running bicycle tyres and a diesel engine...

No speaker is perfect, but in the realm of affordable audio, you don't expect it to be. At the high end, though, what's most shocking is that there's often little (or no) advance on a loudspeaker's ability to offer convincing all round performance. Indeed, the higher you go, often the less well rounded they often tend to be, with the designer going 'hell for leather' trying to get precisely what he wants, rather than anyone else. The result is that many 'ultimate' loudspeakers are 'hyper-focused' on doing one thing particularly well, and to hell with the rest of it...

Wilson Benesch's Curves are a case in point. They're a stunningly well engineered, deliciously styled piece of pure indulgence. Anyone who likes megabass should look elsewhere, but if you're after electrostatic-like midband incision, then this is your box. What the Curves bring to the party over their Quad ESL-989 rivals however, is treble extension (a real bugbear of the Quads) and bass punch (as opposed to bass, ermm, presence). Being moving coil, the WBs can shift air better than the Quads, yet offer similar levels of midband delicacy and textural faithfulness. They lack the Quads' imaging, but so does every other loudspeaker I've heard. Ultimately then, the Curve is very intelligently voiced - offering most of the performance of an electrostatic panel design without its flaws and some unique strengths of its own.

I have to say I am deeply impressed by them. Although they're essentially a textbook box loudspeaker, Wilson Benesch offer genuine innovation with materials technology. Any fool can stick some off-the-shelf drivers in an MDF box and load it with bits of wool, and although WB take this basic template, the driver cones are bespoke, featherweight, super-rigid carbon fibre and the cabinet is too. Given that both these factors influence the sound tremendously, The Curve is pure good news to me. The Quad ESL-989's of course use radically different transducers (better, in the midband at least, than the WBs, I think) but spoil the delicious recipe with perfunctory treble and mediocre bass. Having used a pair for the past two years, I for one would love to hear 989's re-framed in Carbon Fibre, instead of their current wobbily-woolly wood(!) enclosures. Or, how about WB placing electrostatic or NXT panels in gorgeous carbon fibre exo-skeletons? Either way, the results would be stunning. As for the chances of this happening, well - start at zero and work downwards. Quad is committed to its technology, WB its, and never the twain shall meet - not for abstract reasons of design or engineering, but commercial necessity. That's the trouble with speakers - even living with some of the very best in the world, you're just never happy.
Back in 1992 there was a war on - a fierce rivalry between brand new digital recording formats, MiniDisc (MD) and Digital Compact Cassette (DCC). Although most agreed that DCC actually sounded better it was, thanks to a combination of convenience and the marketing might of Sony, MiniDisc that won the day.

Since then, it's proved to be a remarkably robust format that has coped surprisingly well with the advent of both CDR and MP3. Indeed, it was only less than a year ago when Sony launched their latest enhancement of the technology, Hi-MD. In a riposte to MP3 portables, Sony managed to develop the ATRAC codec and blank disc to deal with an amazing 1GB of memory per disc. The claim of 45 albums on one disc certainly sounded impressive, even if the required 48kbps bitrate was less so.

Although Sony has a much-reduced range of full-size players, they only recently launched a brand new, and comprehensive, range of MD portables. This, and a substantial fan base for the format, made me think that here was a technology that would go on forever. It's already defied the doomsayers, so why should that change now? Well, in a word the answer comes from Sharp. Or rather, it doesn't anymore. An unrelated glance at their UK website the other day, listed no portable MD players whatsoever. Sure enough, manuals and service support is available, but no actual players for sale.

The importance of this for the future of MiniDisc cannot be underestimated, as it was Sharp who, along with Sony, developed the format. It's fair enough to say that Sony did indeed do the lion's share of the work, but Sharp do still hold a good deal of patents relating to MiniDisc technology and, to my knowledge, were the only other company to develop a domestic MiniDisc transport. A visit to the international site does still list MD players, but for the company to apparently pull the plug on what was a healthy (UK) market can't bode well for the format. Of course, one look at the high street and you can see why Sharp's priorities have changed. LCD TVs were all over the place this Christmas, and Sharp have a very generous chunk of the market share. You can hardly blame them for filling their warehouses with LCD TVs, when they're in such a strong position.

What will be interesting to observe is what the few other remaining manufacturers' reaction will be to Sharp's move. It can't be denied that MiniDisc has been declining for some years now, but a look at the current range of portable players available in the UK shows a truly anaemic range. Panasonic lists just two models. The SJMJ50 and SJMR230 are both actually rather good but, come replacement time, I doubt very much that either will see a successor.

To illustrate just how these players have become flavour of yesterday, take a look at a price comparison website such as Kelkoo. Here you'll find just 3 retailers promoting the SJMJ50 and SJMR230 are both actually rather good but, come replacement time, I doubt very much that either will see a successor.

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sound engineering is only a whisker away from unsound engineering...

I would never have been a success as a lawyer. That was why I gave it up and became a writer. As an academic subject, the law was enchanting; to make the transition from the world of scholarship to practice in what proved to be a world of commerce was disgusting. Yet it was there, in a Chancery Lane office, that I first encountered the tape recorder. In those early 1950s I suppose that this was many people’s first meeting with the device.

One of the features of this office contraption was the automatic maintenance of playback level, so that a half-swallowed syllable or a complete fit of the mumbles might still be heard and understood. Since this sad world contains more bad speakers than good audio-typists, that corrective circuitry was doubtless a speaker than good audio-typists, that this sad world contains more bad speakers than good audio-typists, that this sad world contains more bad speakers than good audio-typists, that this sad world contains more bad speakers than good audio-typists, that this sad world contains more bad speakers than good audio-typists, that this sad world contains more bad speakers than good audio-typists, that.

Perhaps it could. What about the rattle of the keywork on George Zukerman’s beautifully-played bassoon during his performance of the Mozart concerto? Or the heavy breathing and the whispered curse of some unfortunate orchestral clarinettist whose reed has come adrift?

Close miking is folly, for it does not even allow the instrument to sound as it should be heard; if you are listening to somebody singing or playing an instrument in an ordinary room, you do not stand close up to him. Multiple close miking is worse, for it does not allow an ensemble to sound consistent. Sure, I want to hear the bassoon obbligato while the upper voices of Verdi’s Requiem soloists sing ‘Quid sum miser’, but I can usually hear it well enough in the auditorium; why not in a recording, unless it be that the ‘engineer’ has turned the singers’ mikes up and the orchestra down?

It is an entirely different matter when a singer deliberately chooses to hold a microphone close. In familiar popular music, it may be for an essentially artistic reason. In heavyweight rock and the like, it may simply be for the sake of being heard above the general amplified din. There is a similar case for the modest amplification of an inherently weak instrument (violin, say, or acoustic guitar) in a concertante role — or even a voice: pity the poor little soprano trying to be heard in the Four Last Songs above that enormous and overbearing Richard Strauss orchestra. Even in a good concert hall (a rare commodity nowadays) the problem can be real, though where the orchestra is not so big as to be spilling over the edges of the platform there is usually room to bring the soloist well forward. Things may be very different in the recording studio...

In such cases the procedure is valid, but even then the scope for over-engineering the effect is vast and dangerous. I once asked the man at the mixing desk for the Supertramp group, back in the 1970s (remember Crime of the Century?), to what extent he considered himself to be applying musical criteria to his apparently technical work, and he judged that his motivation was at least 80% music and at most 20% technology. It still worries me to think how much harm can be done within the limits of that 20%: sound engineering is only a whisker away from unsound engineering.

In this context, what does High Fidelity mean? The expression cannot be limited to the things that seem to worry those nerd-like obsessives who fret and fume about sampling rates, output wattages, bi-amping and dipoles. What did The IT Man tell them thirty years ago, but that the most important thing is the source? Admittedly he was trying to sell them LP12 Sondek at the time, but what he spoke was a greater truth: hi-fi actually starts at the microphone.

So why should hi-fi magazines not poke and pry into recording studios, argue with architects, interview recording engineers, examine microphones, vet processing circuitry, consult performers? The domestic enjoyment of music depends as much on these as upon the domestic apparatus through which we relay their products.

Although there are some few record companies who conscientiously do a remarkably good job, readers need to be informed not only about them but also about the others whose commercial priorities encourage them to issue volumes of compression and syrup, of thunder and lightning, for the moneyed but unmusical customers who are today so image-conscious that they believe their eyes rather than their ears.

If that majority really wants such stuff, I suppose there is no reason for them not to have it; but publication should be education, and it should be a duty to explain to those who are missing the best just what they are missing. Bread and circuses are all very well, but not when for the same money one could enjoy protein and the opera.
Another year, another confusing morass of digital vapour-ware to claw through... welcome to 2005! And here is the oft-promised state of the blue laser format war address.

January gives the consumer electronics industry the opportunity to start the year of with a bang with CES, and the pre-show trails during the entire month of December have clearly indicated that battle lines have been drawn.

It is hard to believe that is at least three years since the initial whispers of blue laser technology enabling higher capacity 12cm shiny data disks emerged. The terminology Blu-Ray for the Sony innovation, customarily supported by the Sony/Philips axis (now they have all but lost interest in SACD hardware and software), has been around for a similar length of time, although recent months have seen the term BD gain currency as the adopted abbreviation for 'Blu-Ray Disc' as a packaged medium. (Caddied Blu-Ray ROM discs and consumer HD video recorders using them have been around in Japan for some time now).

HD-DVD is a more recent blue laser variant primarily promoted by the usual S/P opponents Toshiba (along with NEC), which in common with DVD-Audio has been endorsed by the DVD Forum. (I wonder if that will do HD-DVD as much good as it did DVD-A!)

The tag vapour-ware is a little bit unfair in the case of Blu-Ray and HD-DVD, as 2005 is the year which should see specifications finalised during the first quarter of the year, and product available to the (American) consumer before their end-of-year holiday season.

The evidence of solidification is all around - the beginning of December saw most of the major Hollywood studios throw their hats into the ring, and the weight of studios putting their vote behind HD-DVD seemed to suggest first strike to the DVD-Forum. However this was swiftly countered by the not insignificant announcement that the Mouse was behind Blu-Ray. Yes, Disney, the studio which was an ardent supporter of such failed and flaky ideas as DIVX, (not Divx the video codec, but DIVX the short-lived time-expiry 'DDVD'), had somehow hooked up with Sony et al to queer what could have been a smooth run in for HD-DVD.

That said, nearly every other pre-show announcement strengthens the case for Blu-Ray. There is the inevitable weight of its inclusion in the forthcoming Sony PlayStation 3. There is the fact that while the Memory-Tech announcement of an HD-DVD/DVD hybrid only allows for a DVD-5 DVD layer (no use for most movies guys!), the JVC announcement of a similarly backwards compatible Blu-Ray disc allows for the customary DVD-9 layer. Philips are ready with an OEM CD/DVD/BD drive. At least the main DVD authoring software providers Sonic and their recent acquisition Roxio plan to release both Blu-Ray and HD-DVD burning/authoring solutions. Maybe Sony haven't won yet!

As ever the reasons for the corporate decision making are not clear yet, (although I suspect the usual piles of loot to be a factor), and again as ever, until things settle down the net result is confusion and anguished decision making (or disastrously for the CE companies NON-decision making) for the consumer.

So how can we here at HFW help clarify these muddy waters for you? The answer, dear reader, is that as yet we can't. Although CES may bring a slight degree of greater lucidity, in reality it is going to take at least the rest of this year to watch the dust settle. The key thing we have to remember is that as was the way with DVD, we audiophiles are always last in the queue for consideration and information. Yes, details of which audio codec is likely to be found on which carrier are starting to emerge, but it is much easier to find informed debate on the video codec side of the equation.

The reason for this is obvious – the main driver behind the need for higher capacity carriers has nothing to do with audio, and everything to do with the struggle to accommodate a full-length movie in High Definition form. Now, we are not a home cinema magazine, and I leave it entirely up to you the reader to decide if you want to read me pontificating on the video codec side of this debate in future issues. Some of you may not have the slightest interest in video displays and AV amps, but I suspect a lot of you do, and as this area hurtles into the foreground there is important information which can be imparted to ensure costly bad purchasing decisions are not made. Please let us know in the usual manner if you would prefer to entrust your decisions to the counsel of other publications, or if you would like me to attempt to elucidate the video side of the HD issue next time!
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!

**DIGITAL**

**CAMBRIDGE AUDIO CD11986 [£1500]**
Inspired Stan Curtis redesign of Philips CD104, complete with switchable digital filter. Lean but tight and musical performer.

**CAMBRIDGE AUDIO CD4SE 1998 [£200]**
A touch soft in the treble and tonally light, but outstanding in every other respect.

**LINN KARIK III 1995 [£1775]**
The final Kariik was a gem. Superb transport gives a brilliantly tight, grippy dynamic sound, albeit tonally dry.

**MARANTZ CD73 1983 [£700]**
A riot of gold brushed aluminium and LEDs, this distinctive machine squeezed every last ounce from its 14x4 DAC - super musical.

**MARANTZ SA-1 2000 [£5,000]**
The greatest argument for SACD. This sublime Ken Ishiwata design is utterly musically convincing with both CD and SACD, beating most audiophile CD spinners hands down.

**MERIDIAN 207 1988 [£995]**
Beautifully built two-box with pre-amp stage. Very musical although not as refined as modern Bitstream gear. No digital output.

**MUSICAL FIDELITY TRIVISTA 2002 £4000**
When playing SACDs, the sweetest, most lucid and lyrical digital disc spinner we've heard. Old school stereo, pure DSD design. CD sound is up in the £1000 class, too! Future classic.

**MERIDIAN MCD 1984 [£600]**
The first British 'audiophile' machine was a sweeter, more detailed Philips CD100. 14x4 never sounded so good, until the MCD Pro arrived a year later.

**NAIM CDS 1990 [£ N/A]**
Classic Philips 16x4 chipset with serious attention to power supplies equals grin-inducing sonics.

**SONY CDP-701ES 1994 [£890]**
Sony's first ever bespoke high and audiophile machine used a 16x2 DAC to provide a clinically incisive sound; supreme build quality allied to the pure unadulterated luxury of a paper-back-sized remote control.

**SONY CDP-R/DAS-R1 1987 (£3,000)**
Sony's first two boxer was right first time. Tonal lean, but probably the most detailed and architectural sounding machine of the eighties.

**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-101**

**DACs**

**CAMBRIDGE AUDIO DACMAGIC 1995 [£99]**
Good value upgrade for budget CD players with excessive facilities and detailed sonics.

**DCS ELGAR 1997 [£8500]**
Extremely open and natural performer; albeit extremely pricey - superb.

**DPA LITTLE BIT 3 1996 [£299]**
Rich, clean, rhythmic and punchy sound transforms budget CD players.

**ESOTERIC P0 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.

**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 plentiful. Postiron PSU upgrade makes it smooth, but now past it.

**TURNTABLES**

**ARISTON RD115 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.

**TEACVRDS-T1 1994 [£600]**
Warm and expansive sound made this a mid price hit. Well built, with a slick mech.

**YAMAHA CD-X1 1983 (£340)**
Nicely built 16x2 machine with a very sharp and detailed sound; sometimes too much so. Excellent ergonomics, unlike almost every other rival of the time.

**COMPACT DISC TRANSPORTS**

**WORLD CLASSICS**

**www.ln-fndorld.co.uk MARCH 2005 HI-FI WORLD**

**83**
**PIONEER PL 12D** [1973] £65

The beginning of the end for the British turntable industry. When vinyl was the leading source, this bought new standards of noise performance and stability to the class, plus a low friction S-shape tonearm. Laser PL 112D was off the pace compared to rivals.

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**DUAL CS 5505** 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** 88/89 1963 [£15.65]

Simple, well engineered middlesize with soft, sweet sound and reasonable tonearms. Good spares and servicing support even today from specialists.

**LINN AXIS** 1987 [£253]

Simplified cut-price version of the Sondek complete with LVX arm. Elegantly and decently performing mid-price package. Laser version with Akito tonearm better.

**LINN SONDEK LP 12** 1973 [£86]

For many, the Brit superdeck; constant mods meant that early ones sound warmer and more lyrical than modern versions. Beguilingly musical but now off the pace.

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**TECHNICS SP 10** 1973 [£400]

Seminal Japanese engineering. Sonics depend on plinths, but a well mounted SP I0/11 will give any modern a hard time, especially in on plinths, but a well mounted SP I0/11 will

**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. Sagging plinth top-plates make them a dubious used buy.

**THORENS TD 124** 1959 [£ N/A]

The template for virtually every 1970s 'superdeck'.

**REGA PLANAR 3** 1978 [£79]

Brilliantly simple but clean and musical performer, complete with Acos-derived S-shape 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.

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**DUAL CS 5505** 1982 [£75]

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**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.

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**REGA RB 300** 1983 [£88]

Inspired budget esoterica. Detailed, tight, neutral sound but tonally grey sounding in absolute terms. Responds well to tweaking, and its cheaper RB250 brother better still.

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**SME SERIES III** 1979 [£113]

Clever variable mass design complete with Titanium Nitride tube tried to be all things to all men, and failed. Charming nonetheless, with a warm and inoffensive sound.

**HADCOCK GH228** 1976 [£64]

Evergreen unipivot, with lovely sweet, fluid sound. Excellent service backup.

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**LINDEN 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.

**NAI MAPO** 1986 [£675]

Truly endearing and charismatic performer - wonderfully engaging mid-band makes up for softened frequency extremes.

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**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.

**MICHILL 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 architectural sound.

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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.

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**INTEGRATED AMPLIFIERS/COMBOS**

**DELTA EC** 1987 [£1900]

Fast, dry and with excellent transients, this first DPA integrated is the real deal for eighties obsessives. Ridiculously punchy 80W per channel from a tiny, half-size box. Radical, cool and more than a little strange.
MISSION CYRUS 2 1984 [£299]
Classic eighties minimalism combines arresting styling with clean, open, lively sound. Further upgradeable with PSX power supply.

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

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

LEAK POINT ONE STEREO 1958 [£N/A]
Good for their time, but way off the pace these days. Use of EF86 pentode valve for high gain rules out ultra performance. Not the highest-fi!

LINN LK-1 1986 [£499]
A brave attempt by the Glasgow boys to bring remote controlled use/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.

LECSON AC-1 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 anachrophiles only.

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

POWER AMPLIFIERS

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

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

MCINTOSH MA6000 1995 [£3735]
Effortlessly sweet, strong and powerful with sensual styling to match.

LECSUN AP1 1973 [£N/A]
Mastercraft cylindrical styling alluded to its 'tower of power' pretensions, but it wasn’t. Poor build, but decently clean sounding when working.

MARANTZ MODEL 9 1997 [£6000]
Authentic reproduction monoblocks still more than cut the sonic mustard. Highly expensive and highly sought after.

operation. It's also possessed of that quintessentially endearing performer as you'd expect, but 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!
Crisp, clean and beautifully controlled with gorgeous styling. Partnered with the £1650 fine fettle. Orca this sounds delicious! Crisp, clean and beautifully controlled with a grooved tube! Under-rated oddity. Overhauling is de rigueur before use, using original parts if possible. Surprisingly crisp and musical sound, that’s far more modern than Quad IIs. Deeply impressive when in pace, but endearing nonetheless. Some pipe smoking slipper wearers swear by them!

Gorgeous styling. Partnered with the £1650 QII, Ludicrous monoblock version of the giant KSA-100 is one of the seminal eighties transistor power amplifiers. Massive wallop allied to low prices and good availability make this one of the best amplifiers of its type, ever.

Monstrous stomp from this seminal Japanese power amplifier, complete with switchable Class A and Class B operation. Clean, open and assured sounding, albeit a tad behind the pace on high speed dance music. Rosewood side cheeks and black brushed aluminium completes the eighties-tastic experience.

Another of the serious classic solid-staters. Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build. Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build. Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build.

Creek OBH-8 SE 1996 [£180]
Punchy, rhythmic character with oodles of detail makes this a great budget audiophile classic. Partner with a Goldring GI042 for an unbeatable budget combination.

Class A and Class B operation. Clean, open and assured sounding, albeit a tad behind the pace on high speed dance music. Rosewood side cheeks and black brushed aluminium completes the eighties-tastic experience.

Tuners

Marantz ST-8 1978 [£353]
Marantz’s finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength andultipath.

CREEK CAS3140 1985 [£199]
Excellent detail, separation and dynamics - brilliantly musical at the price. T40 continued the theme...

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

Naim NAIT III 1993 [£595]
The warm, atmospheric sound is further proof of Naim’s proficiency with tuners. The all-time classic valve amplifier, with a deliciously fluid and lyrical voice. In other respects though, it sounds hopelessly dated. Low power and hard to partner properly.

Pioneer TX-9500 1976 [£295]
Another of the serious classic solid-staters. Boasts the usual high end Jap package of fine sound, brilliant sensitivity and superb build.

Leak Troughline 1956 [£25]
Series I an interesting ornament but limited to 88-100MHz only. II and III are arguably the best-sounding tuners ever. Adaptation for stereo easy via phono multiplex socket. Fed by a modern outboard decoder they’re deliciously lucid with true dimensionality.

Yamaha CT7000 1977 [£444]
Reputedly the best of the classic Jap analogues, this combines sleek ergonomics, high sensitivity and an explicit, detailed sound.

Quad FM4 1983 [£240]
Supreme ergonomics and styling allied to a pleasingly lyrical sound with plenty of sweetness and detail made this one of the best tuners around upon its launch.

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

NAD 4140 1995 [£199]
Brilliant affordable digital tuner has a smooth, detailed musical sound plus sensible real-world facilities.

ROGERS TS5 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.

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-5500 1977 [£222]
One of the first Dolby FM-equipped tuners, a format that came to nought, Still, it was Sony’s most expensive tuner to date, and boasted a very good sound quality allied to brilliant ergonomics.

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!

SONY WM-D6C 1985 (£290)
Single capstan transport on a par with a Swiss watch, single rec/replay head better than most Nak. Result: sublime.

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

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

PIONEER CTF-950 1978 (£400)
Not up to modern standards sonically, but a great symbol of the cassette deck art nonetheless.

REVOX A77 1968 (£145)
The first domestic open reel that the pros used at home. Superbly made, but sonically off the pace these days. B77 better, but couldn't match the Japanese.

LOUDSPEAKERS

ACOUSTIC RESEARCH AR18S 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...

BBC LS3/5A 1972 (£80)
Extremely low colouration design is amazing in some respects — articulation, stage depth, clarity — and useless in others (both frequency extremes). Came in whole variety of guises from various manufacturers building it under licence. Partner with Rogers AB1 subwoofers for an extra two octaves of bass!

KENWOOD DM-9090 1997 (£550)
Serious and sophisticated sound thanks to well implemented ATRAC 4.5; surprisingly musical MD recorder.

SONY TCD-8 DATMAN 1996 (£599)
Super clean sound makes this an amazing portable, but fragile.

PAULDSON BCI 1976 (£240)
Celestion HF1300 tweeter meets bespoke Spendor Bextrene mid-bass unit — and the result is a beautifully warm yet well focussed sound. A little bass bloom necessitates careful low-stand mounting, but these prove that the seventies did have some fine designs after all!

LOWTHER PM6A 1957 (£18 EACH)
This seminal full-range driver is still manufactured. High sensitivity, as fitted to many classic horn designs.

QUAD ESL57 1956 (£45 EACH)
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 supertweeters.

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

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

JA 149 1977 (£120)
Infamous cylindrical speaker that was ignored for decades but now back in fashion! Based on classic KEF T27/B110 combo as seen in the BBC LS3/5s. Doesn't play loud, needs a powerful transistor amplifier, but rewards with fine clarity in imaging.

LOWTHER PM6A 1957 (£18 EACH)

DIGITAL RECORDERS

SONY MDS-JESSSES 2000 (£900)
The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding.

PIONEER PDR-555RW 1999 (£480)

TANNOY WESTMINSTER 1985 (£4500)
Folded horn monsters which certainly sound good if you have the space. Not the last word in tauntness but can drive large rooms and image like few others.

JAF 149 1977 (£120)

LOWTHER PM6A 1957 (£18 EACH)

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 as forte.
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MISSION 752 1995 [£495]
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HEYBROOK HBI 1982 [£130]
Peter Comeau-designed standmounters with an amazingly lyrical yet decently refined sound. Good enough to partner with very high-end ancillaries, yet great with budget kit too. A classic.

CELESTION SLE 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...

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Warm sounding infinite baffle that, with a reasonably powerful amplifier can sound quite satisfying.

LEAK SANDWICH 1961 [£39]
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QUAD ESL63 1980 [£1200]
An update of the ESL57, with stiffer cabinets. Until the 989, the best of the Quad electrostatics.

YAMAHA NS1000 1977 [£332]
High tech Beryllium midband and tweeter domes and brutish 12” woofers in massive sealed mirror image cabs equals stunning transients, speed and wallop allied to superb transparency and ultra low distortion. Partner carefully!

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!

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These are the best products we've heard that are currently on sale in the UK, complete with the date they were originally launched and their current retail prices. Watch out for regular updates...

**TURNTABLES**

**AN TT/ARM ONE/I Q1 1998 £725**
Redesigned Systemdek BX now off the pace, but the arm and cartridge are both star performers.

**LINN LP12/ LINGO 1973 £2100**
The quintessential belt drive superdeck offers a beguilingly musical midband as the expense of lumpy bass and nebulous imaging. Latest Lingo brings a new lease of life, with even more punch and polish.

**MICHELL TECNODEC 2003 £575**
Superb introduction to Michell turntables on a budget. Top quality build and elegant design make it the class of the mid-price field right now.

**MICHELL GYRODEC SE2002 £670**
Its beauty is more than skin deep — superbly finished and beautifully etched treble makes this one of the very best sounding turntables at any price. Michell's Orbe offers marginally more impactful bass, but can't touch that amazing mid. Exquisite.

**ORIGIN LIVE AURORA GOLD 2004 £1,470**
Semi-final entry level high end deck showing Mark Baker's characteristically obsessive attention to detail. The result is an extremely wide open and natural sounding machine that lacks the Michell GyroDec's slightly 'mechanical' nature — along with some of its scale and accuracy ideal for those seeking that classically beguiling vinyl sound.

**PROJECT DEBUT II PHONO SB 2002 £170**
Fuss-free all in one starter turntable, complete with built in phono stage. Not a star performer, but a fine mid system upgrade all the same.

**REGA P3 2000 £290**
Great entry level audiophile deck with fine bundled tonearm. Tweakable, and responds well to careful siting on a Base platform.

**REGA P25 2001 £619**
Until the Tecnodc, the best mid-price turntable package. Fine build and elegant styling. Clean, open sound but limited at frequency extremes in absolute terms.

**SME MODEL 10A 1995 £3333**
Exquisitely engineered deck and arm combo, but dry and clinical sounding compared to rivals. Accomplished performer with classical music, nonetheless.

**CLEARAUDIO REFERENCE 1996 £4,070**
Fine bass articulation and power allied to stunningly open and atmospheric midband and beautifully etched treble makes this one of the very best sounding turntables at any price. Michell's Orbe offers marginally more impactful bass, but can't touch that amazing mid. Exquisite.

**ORIGIN LIVE AURORA 2003 £1600**
Cleaner than a Linn LP12 and warmer and more mellifluous than a Michell GyroDec — but lacks the latter's incision and dimensionality. When fitted with an OL1 arm, this package is all many will ever want...

**CLEARAUDIO REFERENCE 2003 £4,000**
The company's best value vinyl spinner; good enough to get the best from almost any tonearm and cartridge combination. Brilliantly open and neutral sound; supertative pitch stability; stunning build and styling — Michell Orbe does most of this at half the price, however.

**TECHNICS SL 1200/III 1973 £395**
Slick build makes it a respectable performer, although the cheapo arm limits it — fit a Rega RB250 and it's suddenly a serious mid-price machine.

**HADCOCK 242 SE 2000 £649**
Latest of a long line of unipivots, with added mass, revised geometry and better finish. Musical like few others at or near the price.

**LINN EKOS 1987 £1700**
Elaborate mods over the years, including revised bearings and the recent new wiring has kept it a serious contender in the superarm stakes. Lacks the SME's slam, the OL's clarity or the ARO's emotion, but has a feisty musicality all of its own.

**ORIGIN LIVE ILLUSTRIUS 2002 £1570**
A modern superarm with substantial build. Extremely strong, even and open sound in the mould of the late, lamented Zeta, plus fine tonal colouring. Exquisite.

**MICHELL TECNOARM A2003 £399**
John Michell's brilliant reworking of the Rega RB250 theme, using blasting and drilling techniques usually seen in motorsport! The result is the best sounding arm at £400, and as good as most at four times the price. Runs SME's very close in all except bass, and better for musicality. Stunning.

**MICHELL ORBE SE 2002 £1916**
Cosmico-object evolution of the Gyro adds massy acrylic platter and two-stage isolation. Fantastically capable all rounder with commanding, powerful, detailed sound that gets the best from almost any arm and cartridge.
standards

ORIGIN LIVE SILVER 250 £625
This fully developed and expertly tested Rega boasts a superbly even, transparent and tuneful sound. Gives away only a small degree of finesse and dimensionality to top arms.

REGA RB250 1984 £112
Sold through Ploom Marketing, this is capable far beyond its price point, with a tight, lean and detailed sound. Responds brilliantly to Origin Live counterweight modification, and well to rewiring.

SME 109 1989 £767
Entry level SME complete with cost-cut aluminium armature and detachable headshell. Tight, neutral sound with good tonality but lacks the IV's pace and precision.

SME SERIES IV 1988 £1127
Offers nine tenders of the SME V's magic at just over half price. Exquisitely built and finished, and a design classic. Faces stiff competition these days, but lovely nevertheless.

SME SERIES V 1987 £1614
The so-called Best Pickup Arm in the World lacks the IV's pace and precision. One of the best MMs going, with sweet and detailed sound, but needs careful matching to smooth playback.

REGA PLANET 2002 £498
Rhythmic and beguiling performer, although lacks the warmth of tone needed to better its Marantz rival. Superb ergonomics and design, nonetheless.

LYRA PARNASSUS OCT 1997 £1895
Superbly neutral and expansive sound makes this the best budget silver disc player at its price. Extremely musical sound that's almost as convincing - superbly warm and three dimensional nature makes listening a joy. However, the lack of DVD-Audio decoding and poor feature count makes it look middling value compared to some of the universal players here.

NAIM CDX2-XP2 2003 £4950
A fine high end machine, but add an XP2 and it becomes one of the most charismatically engaging 16bit machines we've ever heard. Plays music with such passion!

NAIM CDX3 2003 £7050
The most polished Naim CD to date; tremendously capable and musical, but lacks the Rotwinder quality of the cheaper CDX2-XP2.

PHILIPS DVD963SA 2003 £400
Creamy CD sound allied to superb SACD and DVD video playback makes this brilliant value for money.

NAIM ARO 1987 £1425
Chromatic unipivot is poor at frequency extremes but sublime in the midband; truly emotive and insightful.

NAIM CDX 2003 £3000
A Planet on steroids, this machine adds depth and breadth to its baby brothers already impressive sound. Good, but facing stiff competition.

MUSICAL FIDELITY TRI-VISTA1 DAC 2003 £1,200
Superbly neutral and expansive sound makes this offboard digital-to-analogue converter an excellent upgrade to any mid-price CD player — fed by a decent transport; few 16bit players at any price come close.

ORTEFON KONTRA PUNKT C 2004 £1,000
The most secure tracking MC we've heard; its super clean, fast, detailed and neutral sonic make it a brilliant partner to warmer sounding turntables.

PORTON CONTRA'B 1999 £720
Surprisingly articulate performer by Ortofon standards. All the brand's usual polish and detail allied to real vim. Loves making music!

LYRA LYDIA BETA 1998 £600
An altogether more beguiling listen than the MC30S, although not quite as incisive. Superb all rounder, nonetheless.

LINN GENKI 1999 £1950
Excellent mid-price purchase, with only its Marantz rival to challenge it. Tremendously well-rounded yet engaging sound makes this the best budget silver disc spinner by far. Build quality is excellent at the price, and the styling bang up to the minute. Blistering value for money.

LYRA PARNASSUS DCT 1997 £1895
Jonathan Carr's masterpiece is a brilliantly lyrical and fluid performer, with a deliciously sweet tone and immense subtlety and polish.

ORTEFON MC25FL 1994 £285
Strong budget MC, with a cleaner and more detailed sound than the Dynavector; more sterile and less emotive, however.

ORTEFON MC30 SUP'R 1995 £550
Beautifully clean and detailed device with real finesse, albeit a tad mechanical sounding.

DYNAVECTOR DVI0X5 2003 £250
A distant descendent of the classic Ultimo 10X; this has warmth and sweetness in spades; allied to a punchy bass. Beats GI042 comfortably.

ORTEFON CONTRA' B 1999 £720
Superbly neutral and expansive sound makes this the best budget silver disc player at its price. Extremely musical sound that's almost as convincing - superbly warm and three dimensional nature makes listening a joy. However, the lack of DVD-Audio decoding and poor feature count makes it look middling value compared to some of the universal players here.

DYNAVECTOR DV10X5 2003 £250
A distant descendent of the classic Ultimo 10X; this has warmth and sweetness in spades; allied to a punchy bass. Beats GI042 comfortably.

CREEK CD501I 2004 £699
Extensive revisions make this an altogether more beguiling machine, and one of the best at its price. Extremely musical sound that's surprisingly upfront for a Creek design. Excellent mid-price purchase, with only its Marantz rival to challenge it. Selling rather forgo a decent transport; few 16bit players at any price come close.

CREEK CD50I 2004 £499
Extensive revisions make this an altogether more beguiling machine, and one of the best at its price. Extremely musical sound that's surprisingly upfront for a Creek design. Excellent mid-price purchase, with only its Marantz rival to challenge it. Superbly neutral and expansive sound makes this the best budget silver disc player at its price. Extremely musical sound that's almost as convincing - superbly warm and three dimensional nature makes listening a joy. However, the lack of DVD-Audio decoding and poor feature count makes it look middling value compared to some of the universal players here.

CREEK CD50I 2004 £699
Extensive revisions make this an altogether more beguiling machine, and one of the best at its price. Extremely musical sound that's surprisingly upfront for a Creek design. Excellent mid-price purchase, with only its Marantz rival to challenge it.

CAMBRIDGE AUDIO 640C 2003 £250
Tremendously well-rounded yet engaging sound makes this the best budget silver disc spinner by far. Build quality is excellent at the price, and the styling bang up to the minute. Blistering value for money.

CREEK CD50I 2004 £499
Extensive revisions make this an altogether more beguiling machine, and one of the best at its price. Extremely musical sound that's surprisingly upfront for a Creek design. Excellent mid-price purchase, with only its Marantz rival to challenge it.

DENON DVD-2200 2003 £499
Superb do it all mid-price player; fine DVD-A and SACD sound allied to excellent video performance will be all many could ever want. Ultimately it's a little bright and mechanical sounding, but you have to go into high end territory to truly better it. Stunning value.
PIONEER DV-568AV 2003 £799
Pioneer's most accomplished mid-price machine to date, this boasts full DVD-A/SACD playback, a welter of facilities and the all-important HDMI video and i-Link audio digital outputs, making it high-on future-proof. Factor in its - if not outstanding - sound and superb pictures and it's practically impossible to fault.

SONY SCD-XB790 2003 £250
Quite unlike any other budget Sony CD spinner we've heard, here's a very 'analogue' sounding machine that's smooth and warm and even. Factor in fine SACD playback and this machine is a brilliant budget buy - unless you want DVD-Audio that is, which it lacks.

ORELLE CD100EVO 2003 £1,200
Extremely engaging and musical sound, but maybe a tad too bracing for some tastes. Superb aesthetics complete an attractive package.

ARCAM CD73 2004 £400
The best all rounder at the price; unfailingly smooth and mellow sound allied to fine build and attractive styling makes this a worthy upgrade to entry-level designs.

ARCAM D78 2004 £800
We've not found a more capable 'real world' DVD player; peerless picture and CD sound at the price, although lack of universal playback will deter some.

ARCAM FMJ CD33 2004 £1,300
Consummate smoothie with an unusually organic and natural sound, but lacks the command of some rivals. Its all round sonic, aesthetic and ergonomic polish will endear it to many.

CAMBRIDGE AUDIO AZUR 440C 2004 £250
The best budget CD spinner we've heard, warm and satisfyingly musical, fine build and aesthetics and that remote control make for unarguable package at the price.

DENON DVD-A11 2004 £1,600
Classic Japanese 'battleship' DVD universal machine does practically everything superbly, with no obvious weak points except the undistinguished CD sound. Top value.

EXPOSURE 3010 2003 £1,200
One of the most 'analogue' CD players, second only to the Shandong. Wonderfully beguiling balance leaves you looking for the tube around, all ed to mind-boggling flexibility.

STELLO DP-200 2004 £1,495
Brilliant do-it-all upsampling DAC preamp with headphone output and phono input. One of the best digital to analogue converters around, allied to mind-boggling flexibility.

DIGITAL RECORDERS

APPLE IPOD 4GB £399
Genre-defining best of breed, thanks to supreme ergonomics and build allied to fine sound.

PIONEER PDR-609 2001 £200
Brilliant value CD recorder that makes excellent recordings from its digital inputs. Half decent digital converters, too.

PHILIPS DVBDR80 2003 £370
Poor CD audio playback, but makes great DVD video recordings and boasts fine ergonomics. Top AV value.

SONY RCD-W3 2002 £250
Usual superb Sony ergonomics make for no-nonsense budget buy. Fine direct digital copies, but analogue input poor. Middling sonics, but there's a digital output!

YAMAHA CDR-HD1300E302 £600
HD means MD-style ease of editing, but compromises recording quality even so slight- ly. Add decent CD replay and it's a fine all-rounder nonetheless - top value.

PHONO STAGES

CREEK OBH-215E 2003 £250
Muscularly enjoyable yet highly refined for the price - a superb buy. Gives the Dino a real hard time.

EAR 834P 1993 £400
Classic tube design with a deliciously warm and expansive sound - shame about the loose bass and veiled treble!

LINN LINTO 2000 £900
A musical and incisive performer, with more speed than the Delphi at the expense of detail and tonal colour.

QED DISC SAVER 1995 £35
Rhythmic, bouncy sound via battery, although it's bright and forward. Great value, but £100 more on the X-LP is well worth it!

TRICHORD DINO 2002 £299
Great all rounder with switchable MM/MC. Fast, fluid and smooth like no others at the price.

TRICHORD DELPHINI 2003 £995
The very latest 'Never Connected' variant is easily the best, bringing velvety smoothness to an already refined and engaging performer. Neutral to a fault - some will mourn the passing of the charismatic ISO.

MUSICAL FIDELITY XLPVS3 2003 £249
Fine all rounder at the price, which a satisfyingly full bodied sound that's smoother than the Creek but a tad less engaging. Only Trichord's Dino, with its easy upgradeability for just £50, reflects badly on this fine bit of kit.

PROJECT PHONOBOX LE2004 £99
Great little box that improves on most bundled phono stages found in budget integrated amplifiers, adding detail and definition and a measure of smoothness too. If £100 is all you're prepared to spend, then do it happily on this, but you'll get obviously better results from the £250 brigade.

WHEST AUDIO PS.20 /MSJ.20 2004 £1,000
Disarmingly clean, smooth, open sound makes this the very best phono stage we've auditioned to date, but some will still prefer the gutsier feel of the Trichord Delphi.

GRAHAM SLEE ERA GOLDV 2004 £460
Wonderfully warm, open and musical nature makes this an essential audition for those wanting a top value mid-price phono stage.

AMPLIFIERS

ARCAM DIVA A65 PLUS 2002 £370
Classic budget Arcam - deceptively sweet and open with sensible facilities and plenty of power.

ARCAM FMJ A32 2001 £1150
For those who value serious power and labyrinthine facilities over outright clarity or grip. A very impressive all rounder with an unusually muscular power amp at this price.

AUDIO NOTE OTO SE 2000 £1199
This baby tuber is beautifully sweet and creamy, but lacks solid-state's clarity, detail and misson. Low, low power means speaker choice critical.

AUDIO NOTE SORO SE2000 £1699
Wonderfully out-of-the-box sounding tube middleweight is all about sweetness and fluidity. Limited power and loose bass, but little the worse for it.
CYRUS 6  2003 £600
Cracking do-it-all mid price design, bringing svelte sound, good connectivity and upgrade-ability and stunning style and build.

CYRUS 8  2003 £800
Unusually warm and lyrical for a solid-stater, with decent power and punch. PSX-R adds dynamics, detail and dimensionality.

SUGDEN A21A  1993 £1020
The most musical amplifier at the price, bar none. Delicious. Class A sound is smooth, sweet and wonderfully transparent with true tonal colour. Low power, so match carefully.

AUDIO RESEARCH VSI5 2003 £2,895
Unusually warm and lyrical for a solid-stater, tonal colour. Low power, so match carefully. None. Delicious Class A sound is smooth, open, liquid. Cracking value.

CREEK A50IR  2004 £550
Powerful, muscular sound allied to real finesse makes this unusual integrated an essential audition at the price.

MARANTZ PM-17MKII MODIFIED  2004 £1,500
Gloriously offbeat do-it-all design with a truly warm, smooth and three dimensional sound. Think of this as a latter-day Audiolab 8000a - with a good deal more colour and finesse - and you'll have its measure. Lowish power output at the price, but fine real world speaker driving ability.

UNISON RESEARCH S6  2002 £1,625
Tremendously musical and little sound with real finesse and subtlety too. Very slightly upper mid forward encourages careful partnering with ancillaries (Revolver R45s are ideal), but overall fantastic value for money.

ORELLE SA100EVO  2003 £1,200
Fine build, exquisite design and a wonderfully lucid sound make this an essential audition at the price.

MUSICAL FIDELITY X-CANS V3  2003 £249
Mr Michaelson's best headphone amplifier to date, with an extremely open and explicitly detailed sound plus serious bass wallop and the ability to drive any phones to very high levels. Errs towards brightness with some headphones, so match carefully and use smooth cables.

CREEK OBH-12  2000 £220
Brilliant value budget passive, giving little away in sonics to far more expensive designs. Connectivity and build aren't great, but what do you expect at this price?

MUSICAL FIDELITY X-CANS V3  2003 £1500
Novel and effective pre with switchable gain via a transformer, and balanced operation. Open and incisive sound, yet makes most active rivals sound edgy by comparison.

MF AUDIO PASSIVE PRE  2003 £2400
Superb transistor behemoth, worth partnering with any high end CD player or preamp. Oodles of grunt served up with poise and purpose.

MUSICAL FIDELITY A308 CR  2003 £700
Useful budget power amp with plenty of clean transistor power. Not the most transparent, but sweet and clean all the same. Fine build completes a great value package.

NAIM NAP150  2002 £795
Driven by a decent source and a NAC112, this gives highly enjoyable results - providing you like the Naim sound! Taut, fast and feisty despite its relative lack of power.

QUAD 909  2001 £900
The latest current-dumper has a smooth and expansive character with enough wallop to drive most loads. Not the most musical, but superb value all the same. Lovely build, finish and Quad's legendary service are nice.

CROFT TWIN STAR  2003 £1750
With a taste of the best of both tube and transistor, this latest update of the Croft classic is a truly endeavors experience.

HEADPHONE AMPLIFIERS

SUGDEN HEADMASTER 2003 £600
Unusual combined preamplifier and headphone amplifier, this boasts a surprisingly smooth and open sound which suffers only when compared to preamps at twice the price.
GRAAF GM20 OTL 2003 £3,300
Awesome output transformer-less valve power amp gives dazzling speed and incision, with an ethereal soundstage and deliciously delicate detail. Tremendous punch belies its humble 20W power rating. Factor in one of the most exquisite finishes this side of an Aston Martin and it's very hard to say no...

SUGDEN MUSICMASTER2003 £1,300
Quintessentially Class A Sugden sound is not warm as many expect, but extremely neutral and open with real tonal colour. By comparison, tube sounds bloated and standard solid-state hazy and brittle. Superb when partnered with efficient loudspeakers like Reovler R45s, but many will find it under-powered.

LOUDSPEAKERS
B&W COMI NT 2002 £750
Fine clarity and imaging allied to pleasing warmth and great rhythmic cohesion make these standmounts an essential audition.

CASTLE CONWAY 3 2003 £930
Superbly smooth and crisp performers, with a big hearted musical sound. Ultimately coloured though, with a slightly plumy bass.

CYRUS CLS50 2001 £800
Charmisatic performer with a fast, tight and open midband, but lacks cohesion and scale.

KEF Q1 2003 £250
Highly polished and articulate standmounts at the price, but demand good ancillaries for best results.

KLIPSCH HERESY II 1997 £1,100
An outstanding high sensitivity loudspeaker with midrange and treble horns coupled with infinite baffle 12" bass driver. Effortless, fast and accurate.

LINN NINKA 2001 £995
Major on rhythms and dynamics, making them an invovling listen. Reasonably refined, too - but tonally disappointing.

EPSON ELS-3 2003 £200
Plenty of brio and a decent degree of refinement makes this budget baby a fine value contender.

MISSION 762SE 2003 £900
Bright and right design capable of brilliant speed and grip, at the expense of warmth. Demands high quality, high powered ancillaries.

MONITOR AUDIO B4 2003 £350
An unusually smooth and lucid performer at the price, and its 3-way design means it drives rooms well. Fine engineering, but build and finish so-so.

REOVLER R45 2003 £999
Wonderfully easy to drive floorstanders, that are a dreamboat for tube amplifiers, and great for party-mended transistor users too. Great attack transitions, fluid and musical bass and midband and smooth treble make them fine all-rounders.

W'DALE DIAMOND 8.1 2001 £120
Still the best baby budget standmounts around. Tight and grippy thanks to Kevlar drivers, but invariably limited in the frequency extremes.

MORDAUNT SHORT 914 2002 £300
Warm, detailed and articulate performer, but a touch loose in the bass and veiled up top. Fine partner for budget valve amps.

NAIM ALLAE 2002 £1990
Taut and grppy like few others, this speaker majors on transient speed. Surprisingly smooth for a Naim box, with nicely etched treble. As always, tonally dry.

QUAD ESL-988 2001 £3400
Wonderfully neutral and self-effacing with sublime imaging and projection. Treble lacks extension, bass lacks weight - although the pricier 989 answers the latter resoundingly.

PERIGEE FK-1L 2002 £5000
Charmisatic ribbon design with delicately open mid and treble, allied to fine bass weight. The right room and ancillaries essential. Engaging, musical and powerful sound. Superb.

TDK 580 2002 £90
Ingenious NXT multimedia sub/sat system has a wonderfuly even and open sound - like baby electrostatics.

MARTIN LOGAN CLARITY 2003 £2,895
Supremely transparent and open with brilliant depth perspective and image projection. The midband is up there with the very best at any price, while the bass and treble integrate well but don't especially shine. Dynamically limited, with middling bass punch, but it's met the point - that delicately fluid and intricate midband win great respect.

TANNOY EYRIS DCI 2003 £699
The combination of dual concentric treble/midband drivers plus superwriters make for a very spacious and expansive sounding loudspeaker, albeit one that's a little bright and loose in the bass. An excellent mid-price design well worth auditioning.

MONITOR AUDIO GR60 2002 £1,295
In some ways, these come close to Yamaha's legendary NS1000Ms, thanks to their tremendous clarity, great transients and full-fat wide bandwidth performance. Bright and clean, but never fatiguing or uncouth. A truly accomplished all rounder that gives a real taste of 'super-fi' at a reasonably affordable price.

TOWNSEND MAXIMUM 2003 £800
Another brilliant niche product from Max, these ribbon aspirated superwriters add space and atmosphere to any good high end loudspeaker, and more surprisingly perhaps make things more fluid and musical too. Superb affordable esotera.

KEF Q4 2004 £400
Hard to argue with the value of this small footprint floorstander, very cough, even, dimensional and detailed sound works well in confined spaces and large rooms alike.

ELAC FS207.2 2004 £1,000
Deeply capable mid-price floorstanders, distinguished by superb JET ribbon tweeter which is unmatched by class rivals: engaging, slightly warm nature needs serious transistor power to sing.

EPOS M12 2004 £950
Classic Epos blend of speed, attack, power and punch will delight rock and techno fans alike, but classical and jazz buffs will crave more colou and texturlarity.

MONITOR AUDIO S8 2003 £800
Very few can rival this floorstander's all round ability; highly smooth, warm and three dimensional sound allied to an easy load and good sensitivity makes this hard to overlook.

REOVLER RW16 2004 £400
Outstanding standmounter with tonal accuracy and speed that totally belies its price; good sensitivity for a small box makes it great with valve amps too. A budget audiophile classic.

SPENDOR S3/5E 2004 £950
A natural successor to the BBC LS35as, whose impressive neutrality, imaging and evenhandedness makes this a superior, if less charismatic, loudspeaker.

TOWNSEND MAXIMUM 2003 £800
The best affordable superweever we've heard - you'd be amazed at the difference it makes! Classy ribbon design, flexible level settings, cool styling...

HEADPHONES
JECKLIN FLOAT TWO 1998 £99
Wonderful panel-like sound from these esoteric-looking headclamps.

SENNHEISER MX-500 1999 £19
Our unqualified recommendation for those seeking a serious sounding pair of in-ear phones. Smooth, detailed and musical.

SENNHEISER PX-100 2002 £29
Cracking pair of lightweight open back cans ideal for personal, but good enough for real hi-fi use. Superb build allied to a smooth and engaging performance make them the spiritual successor to the HD-400s.

SENNHEISER HD-650 2004 £250
Not the best headphone in the world, but a superb all round reference all the same. Very crisp, detailed and even sound allied to superlative build and fine comfort makes all most people will ever want. Cable upgrade yields great results.

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Arcam T61 2002 £250
This sleek looking and refined sounding FM/AM tuner isn't the last word in musical involvement, but is fine value, nonetheless.

Arcam DTA8 2003 £650
A fine radio, hampered only by its seriously compromised DAB medium. Probably the best DAB tuner ever, but one for Digital Radio enthusiasts only...

Cambridge Audio DAB300 2003 £150
Fine ergonomics allied to great ease of use and respectable DAB sound makes this superb value.

Primare T21 2002 £600
Seriously accomplished design with mature sonics, great styling and fine build.

Pure Digital DRX-702ES 2003 £249
Great with Digital Radio, but thin a tad sounding on FM at times. It's a top hybrid, nonetheless...

Systems

Denon D-M31 2003 £250
Excellent CD receiver package with surprising sonics and a brilliant tuner as a bonus, although its amplifier section doesn't quite match the Onkyo. Optional speakers are mediocre.

Onkyo CS-210 2003 £300
Superb value thanks to excellent sound, great built and ease of use, but the bundled 'speakers rather let the side down.

Linn Classik Movie System DI 2002 £2,995
Superb ergonomics and performance from this one-box beauty, but it's just a tad expensive and in value for money terms, compares poorly to the original Classik Music System.

Pioneer NS-DV990 2003 £799.95
Whiz-bang technology fest with DVD universal playback, discrete display and NXT flat panel speakers. Superb for the spare room or study — truly intelligent and elegant design — but don't expect it to match the sonics of AV separates.

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TIMELESS — PART 1
Just read your October issue, and it’s marvellous to come across a magazine that’s existing in the real world. Would have to agree with your columnist’s sentiments about old gear. One thing I have found when I read ‘other’ hi-fi magazines is that when I have finished I feel that somehow my system just doesn’t cut it simply because it isn’t the latest thing out. I think that these ‘other’ mags come across more like glorified product brochures rather than helpful guides to enjoying music replay. I encounter this ‘latest and greatest’ phenomena when most hi-fi dealers. Their approach seems to miss a very important point - that most people improve components within their systems incrementally, rather than moving to a higher spec total new system in one hit. Some parts may be older, but still perform well. When I describe my system to sales people they get this look of disdain on their face, as if to say - “these bits are good but this old stuff is rubbish”.

These ‘old’ bits (A&R Cambridge C150 preamp) still work fine. They are still there because I can’t afford to completely revamp the whole system in one hit. Some parts may be older, but still perform well. When I describe my system to sales people they get this look of disdain on their face, as if to say - “these bits are good but this old stuff is rubbish”.

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Every generation has its classics, and Hi-Fi World is interested in them all!
TIMELESS — PART II
I read and enjoy Hi-Fi World every month and have done since the very first one hit the news stands. Indeed I read Hi-Fi Review before that and really enjoyed it too. Though I enjoy other monthly magazines, I find myself habitually drawn back to my favourite read. I have based major purchases on advice born of magazine reviews, and been bitterly disappointed at the results. An interesting note is that I always cross-reference reviews by other magazines with Hi-Fi World. I do find myself in a period of adjustment lately with new contributors, etc., though I do respect change. As with most middle-aged people, I have settled into a time warp. I have now begun to collect vintage hi-fi. With the aid of Hi-Fi World I am tracking down and also reading about all the fabulous things that I loved in the 70s, 80s and early 90s, though could not then afford.

I am computer literate and have a Sony surround-sound system connected to my telly (Theatre in a Box) for watching movies and music DVDs. I enjoy both genres very much. Like life itself, the ways of listening to music are in a transitional period and, just as I am growing hair in places best not mentioned and feeling the first twinges of arthritis, the phrase audiophile is a word synonymous with those of a hobbyist nature, striving to get the best from their selected devices. My present philosophy is enjoy the old and embrace the new. We are very lucky to be in between generation. We are able to enjoy the memories of early innovation that is shaping today's transducers, whilst we reap the benefits of new technologies. Sometimes things evolve differently, though not better. In the case of hi-fi, I believe things to be evolving differently and better.

Dr Clinton J Westridge

Lucky man to enjoy surround-sound and vintage hi-fi! The two are poles apart in most situations. I'm impressed by modern surround-sound through even a modest hi-fi system, but I had to rearrange my lounge quite substantially to shoehorn everything in and still have some free carpet space. Personally I'm looking forward to easier disc access than we get from DVD, especially DVD-Audio, and hope Blu-Ray provides it. It looks like Sony and Philips are pedalling hard on this one. Fingers crossed they will succeed... NK

THE DRUGS DON'T WORK
Over the past few years I have been trying to put together a system that I like. Sounds simple, but it has been hell. I'd find a pair of speakers that I really liked and then think, yes, but if I changed my amp to X it would improve things, etc., etc. Add into that, moving house and having to change to smaller, bookshelf type speakers and I don't even want to start talking about eBay. Anyway, I thought if I put the problem to you guys you might be able to help so here goes.

I loved my KEF Reference Fours, didn't mind the Epos22, hated the B&W CD1 INT too bright, found the ATC2OSL active just not right and now have a pair of Ruark Spectres which seem okay. But then I sold my Sonic Frontiers CD1, which replaced a Shanling which replaced a Naim CDI which replaced a Rega Planet, and am using my Sony 940 SACD player and things seem harsh again. No wonder, you are probably saying... I was using a Musical Fidelity E300 pre with two E series power amps but have changed to a Myriad M120. I had one of these a few years ago and liked it. Also I have a pair of valve mono amps, small 4.5w jobs which I've tried using the Myriad as a pre. As you can see, I'm in a mess and need help. I think the amp is up for the job, as well as the speakers, but could you recommend a CD player that would give me a smooth sound? I need therapy!

Alex Medhurst

Your Myriad M120 is a thoroughly good solid-state, hard hitting yet clean, with deep, firm bass. Myryads are well engineered too, by designer Chris Evans, ex-Arcam and NAD. So I'd confirm your feeling that the M120 is a good start. Pity about the KEF Reference 4s. Loudspeakers like this are rare. KEF's coupled-cavity bass system sure does work and their Uni-Q unit has great focus; can you get them back? I'd rate these a good match with the M120.

Otherwise, current KEF Reference 203, 205 or 207 loudspeakers may suit, but listen first as KEF opt for a brighter balance these days. As I remember it, Reference 4s were very well integrated and cohesive, as well as 'large' in their sonic presentation.

Older Sony CD players weren't the softest and smoothest on the market, although the 940 does a good job with SACD - and SACD is, for the most part, easier on the ear than DVD-A. I would have rated the Shanling a good enough match but you've got rid of this too! You've got rid of some gems Alex. As finding something that suits your tastes and expectations is difficult and is, ultimately, a very personal decision, I'd strongly suggest you either try and re-purchase the good items or look for modern equivalents. My suggestion is you try and settle down first with amp and 'speakers, meaning you need to find loudspeakers to suit the Myriad. Can you visit a KEF dealer for a listen to their latest? After that, look for a source you like. Arcam may well suit; since they lean toward a smooth, easy but expansive sound. NK

Hi Alex — you seem to be chopping and changing for its own sake. Hi-fi dealers don't exist solely to take people's money — they do actually offer the most important thing a hi-fi buyer needs, namely the chance to try before you buy. If you simply buy things more or less at random, basically because they seem a good bargain, then it's a false economy. You then spend most of your time trying to find buyers for bits you don't want, instead of listening to music — which kind of defeats the purpose, if you ask me... So, if you were you'd knock down and build a system around a source you like. Given that you obviously like smooth and sweet sound, then I reckon Musical Fidelity's new A5 CD would be a great start point. You could retain your valve amps and then invest in a pair of Revolver R45s (and a REL Strata 5 subwoofer to add weight) — result: capacious, expansive, musical sound with real sweetness and light; something you might not want to change in a hurry... DP
DISC-OGRAPHY

As a regular reader I always look forward to reading Hi-Fi World, and wish to add my voice to those of your readers arguing for some form of comparative testing of new hi-fi products against older renowned equipment. The reason for this is quite simply that as a music enthusiast I, like most of your readers, dream about achieving audio nirvana and in the search for the next upgrade I take opportunities to listen to and consider potential purchases, whenever possible within my existing system.

However, I seem to reach a recurring conclusion, namely that much of what is the latest wonder product, when compared with older equipment, either is different, but not necessarily better; or if it is better, it is so expensive as to make the possibility of upgrading not easily achievable.

Recent experiences searching for a new DAC have borne this out and whilst I can accept that my system overall might be restricting the performance of any potential new addition, the whole system cannot be upgraded every time one tries to accommodate a new piece of kit. Now to the main point of the letter. Because I have not been able to justify the expense involved in making a major improvement to my system via new hardware additions I have been considering the issue of making the best of what I have already got. In order to achieve this your magazine’s recent articles on computer audio, particularly high resolution sound via computer developments in sound cards and editing/authoring software seem to me a viable way forward.

An article by Noel Keywood on Archiving Analogue (Sept 2003) prompted me to attempt the archiving of my vinyl collection to DVD-Audio disc. After months of agonising I decided to take the plunge and for an outlay of around £230 purchased M-Audio’s Discwelder Bronze editing and authoring software.

So, for anyone considering the same route that I have followed, be warned, the hi-fi virus which affects so many of us - and in my case was fading away - can strike yet again and in a more virulent form. At least there is the satisfaction of finding a cost effective way forward in developing my hi-fi interest, in trying to learn about audio editing processes and the creation of various kinds of music compilations. I would be happy to share my experiences with interested readers and to learn from others who have done something similar, especially if they have mastered the editing and restoration processes involved. My e-mail address is Hugh Duff

Yep, know what you are suffering from, Hugh! Transcribing vinyl to DVD Audio can get to be an afflication, a rare disease little known to human beings. Neither hi-fi magazines nor computer mags. have got their heads around this one yet, but perhaps we shouldn’t be surprised! The ideal is to use 24/192 conversion from a serious vinyl front-end. You then end up with an archived record of highest quality, that is easily stored, accessed and played, and which will (should) survive indefinitely. You can also edit and de-pop, click and what have you, or even tonally re-balance an original. It’s far better than curtailing the resolution of vinyl by using the inadequate 1970s coding scheme devised for CD. NK.

GOING TO GROUND

About a year ago I bought a pair of mint, ex-demo Tannoy TD8 loudspeakers to partner my Quad CD-P909 set up. The Tannoons have a 5-way terminal block to allow for bi-wiring plus a separate earth terminal. For the last 12 months I have run the speakers in bi-wire mode, tinkering with speaker placement and isolation of the CD and amp until I achieved what I felt was a pretty good sound (other people agreed). At the back of my mind was the unused earth terminal on the speakers and recently, having a couple of hours to myself, I dug out some spare cable and connected the earth terminal to two of the feet-securing screws of the 909, by way of an experiment (there is no separate earth on the 909 and this was the most expedient way of earthing to the case-work). The result of this (I admit) lash-up was an immediate improvement in the overall sound - more space around instruments, greater clarity and an overall ‘something’ that is very beguiling. I hadn’t expected such an improvement to what was already a great sounding system (alright, it is just CD, but I like it!) but I have a few questions I’m hoping you can answer:

1) am I just deluding myself or am I really hearing an improvement?
2) if there is an improvement, what’s causing it?
3) how do I go about making the set-up more "professional"? I believe Tannoy make a 3-core cable but have a feeling it is ruinously expensive - what other options do I have?
4) if earthing your speakers does lead to an overall improvement in sound quality, why don’t other manufacturers provide the option?

Shaun Sheppard

Hi Shaun. I had a conversation with Tannoy about this, during which they put forward some interesting views that rarely get aired. I asked them to reply to your query about loudspeaker earthing - better from the horse’s mouth! Obviously, there’s plenty of room for experiment here, since it is relatively easy for a reasonably competent DIYer to earth loudspeaker driver units. On the matter of using screened cable, I know from experience that it is essential in many setups close to a powerful transmitter like Crystal Palace, in South London, to prevent RF pickup, so this problem is real. However, you do have to watch out for cable capacitance, since solid-state amps don’t like driving...
capacitive loads. I presume Tannoy's own cables are low capacitance.

"Several of the loudspeakers in Tannoy's range are now provided with an earthing terminal, to enable the drive unit chassis to be connected to the amplifier chassis or ground. Using standard loudspeaker cables, listening tests revealed a reduction in hardness to the sound and a more transparent midrange, with the driver chassis grounded. Objective measurements, such as sensitive distortion analysis, failed to find any difference to the loudspeaker performance between earthed and unearthed drive units.

Our attention then turned to other mechanisms that could explain the subjective differences found. It was discovered that despite the presence of the magnet system, the voice coil was quite effectively picking up radio interference, experiments with an amplifier and transmitting antenna demonstrated. Between 100 kHz and 100 MHz, a reduction of between 6 and 25 dB was found in the picked-up signal, as measured at the amplifier terminals.

At high frequencies, the power amplifier output impedance increases substantially, as the negative feedback becomes less effective. Thus any radio interference appearing at the output terminals will enter the amplifier forward path via the negative feedback loop. This will cause intermodulation distortion with the main audio signal, and is likely to blur fine detail, due to effectively the broad band noise like nature of the signal.

Thus, to obtain the maximum benefit of drive unit earthing, it is logical that a screened loudspeaker cable is used, to prevent radio interference entering the system between amplifier and loudspeaker. We investigated this, using two sets of high quality loudspeaker cables, one with an outer screen, connected to the amplifier earth at one end, and the driver chassis connection at the other. It was found that with the screened cable and earthed driver, the effect was similar to earthing the driver with an unscreened cable. The sound became smoother, with improvements in detail and transparency.

The magnitude of these effects will vary greatly between amplifiers. We would expect a high feedback transistor amplifier, with non-linear open loop performance to exhibit a greater benefit from driver and cable screening than a low feedback valve amplifier, with good open loop linearity. In addition, with such an amplifier, the high output transformer inductance is likely to provide good isolation from radio interference.

Improvements to the system result by reducing the amount of radio frequency interference picked up by the voice coil, and allowed into the amplifier, causing noise and distortion. So, driver chassis earthing gives you a better amplifier. To reap the full benefits of the technique, it is necessary to use screened loudspeaker cables of the type we have specially developed, otherwise interference will get into the system between amplifier and loudspeaker, lessening the potential improvements in smoothness and transparency that can be attained."

TANNYO

WELL ARMED

I read with interest the letter in December's issue from Kostas Agath and would like to give my methods of cartridge alignment to your readers. I am in no way connected to the hi-fi trade, just an enthusiast who has used an LP12 for 25 years. I apologise in advance if most of this is old hat to many of your readers, but it may be of help to some.

I got involved because dealers rarely have the time to get the best out of their customer's turntables or cannot be bothered. I've realised that setting up a phono cartridge is a task that has to be taken seriously if one is to be elevated to the audio Nirvana that ensues from a proper set-up.

It does help if the arm/cartridge combo is known to synergise well together, as the results can exceed the costs of the individual item. An example of a poor combo is the Linn Ittoki Audio Technica AT-OC9. Both items are reasonable but just don't gel. An example of a good combo is the Ittoki Denon DL304, and an even better one is the Naim ARO/Dynavector DW17D2 which is the combo that I presently use. (The Naim/Denon is one of the few combos that will track the TELARC 1812 Overture at 1.3g!). Down to basics:

1. Vertical Tracking Angle (VTA) can make or break the final performance. We are told to level the tonearm to the record surface and all is well. Impossible! Okay do it, then lower the arm by 1mm. The result is that the arm still looks level! VTA always baffled me until I read on article on the subject some years ago. Basically, the essence of it is that every cartridge has a sweet spot when VTA is set correctly by raising/lowering the tone arm. When it is reached, the sound stage snaps into focus.

Set the arm slightly low. (If you are able to measure the existing height with a ruler, it makes less hit and miss - i.e. on the ARO, if the arm tip is removed, the pillar height can be recorded. On other arms, pencil lines at 1mm intervals on base may do.) Listen to the effect of this using a suitable disc. Some discs are just a mix i.e. electronic and possess little sound stage, which is how I assess VTA. I use 'The World Of Ted Heath' as it sounds like a live recording and has a wide sound stage. Others could be 'Tango In The Night' by Fleetwood Mac, or 'Graceland' by Paul Simon, which boogie along nicely.

We are listening for a sound stage that spreads evenly between the loudspeakers, and individual instruments can be picked out easily. With the arm low, the sound stage will be narrow. Raising the arm 1mm at a time will widen the sound stage until it snaps into focus and sounds alive. The effect can be amazing when this happens. If you raise the arm past this point, the sound stage extends past the speakers creating a hole in the middle...
Thanks for your detailed set-up instructions John. I can confirm that
it is best to get the arm pillar as low as possible and then raise it slowly.
Measurement shows quite clearly that this is the best way to optimise
performance.

I tend not to mention World Audio Design too enthusiastically
because it upsets some manufacturers. They shout: "foul!" if I do so. 
Readers may think: "well, you would say that wouldn’t you" and since my
surname isn’t Profumo I’d rather they didn’t! In my view though, a good
valve phono stage is the ultimate
upgrade for vinyl. Ours is one of the
best and a great way to get from LP
what is really on there, without the
dead hand of solid-state intervening!

By all means upgrade to 300B SE
as the ultimate amplifier. Go to the
World Audio Design Bulletin Board
(www.worldaudiodesign.co.uk) for views, tuning information and much
else. Ultimately, as BB’s succinctly
note, there’s no way to improve
upon well designed and finely tuned
DIY hi-fi. These days amazing
specialised components are available
for audio use, from advanced modern
valves coming out of East European,
Russian and Chinese factories, to
special capacitators from America,
Europe and Japan. Never in the past
have such components been made
specifically for audio. They’re
esday, but in exalting
in such temptations as Graham and VPI
unipivots I returned to the SME fold, my
faith renewed. Why? Because I
discovered that the big SME arms need
proper mounting and better quality
wiring. Thus properly worshipped they
will reward the faithful. A small bet, Mr
Wennen is contemplating a life of
sackcloth and ashes. For such is the fate
of the unbeliever...

I too lost the faith, but after exalting
toget serious sound from vinyl,
tonearm set up is crucial.

Peter Skinner

John Oates
Yes, that observation made my eyeballs rotate a few times and the hand reach for the phone, but I stopped myself since witch hunts and inquisitions were given up as a bad idea a long time ago - even by the Church. I guessed a reader of experience was likely to say what I was thinking too - sorry it cost a cheese sandwich! I've never got much satisfaction from Unipivots, from the intriguing Decca International to the Hadcock. I'm not at all convinced there's any great need for a single point bearing - and certainly not one that rocks. I was always structural ringing and its sonic signature was more of an issue. And the place on which an arm sits is just an extension of the structure. So suitably mounted and wired I'm sure an SME is still as close to heaven as it gets. But then, hi-fi is a broad church and the experience was likely to say what I expect the repair (I don't want to entrust it to some local incompetent!). If you don't have details for Mr. Adams can you suggest a competent repairer for such an item? I stay in the Glasgow area. Any help you can offer would be much appreciated.

Alasdair McNicol

Hi Alasdair - Voyd's Guy Adams is no longer in the hi-fi industry - he now works for a major computer manufacturer. I believe the only people in the country who can effect repairs are Audionote (01273 220511, info@audionote.co.uk), and Mark Baker whose Origin Live DC motor replacement works very well. Indeed, OL has modified a number of Voyd decks, and the response is extremely favourable; the kit sounds magnificent with the advanced kit. The cost of the Audionote repair will be approximately £500; alternatively the OL mod costs £339 inc. one motor, but an extra motor costs another £79. Hope this helps.

SW

TWEAK TIME

I recently purchased a Michell GyroDec with a RB300 rewired arm to which I fitted the Goldring 1042. After I got home and set it up I was very disappointed. Previously I had been using a Goldring GL75 with the 1042 onboard. Although the GyroDec offered more definition and detail I had lost some of the musicality and sound stage that I previously had with the old Goldring purchased for £30. My dealer was most accommodating and helpful and we compared both decks on their showroom using some amp and speakers but the difference was minimal. I took the decision to have a refund for my GyroDec and buy a TecnoArm to fit to another old Goldring, a GL 89, to see if this would be a suitable upgrade from my original sound.

It was a sunny day and I decided to have a little experiment and investigated whether I could fit the TecnoArm onto my GL 75. I found it was possible by making a small thin plate to obtain the correct arm height. Although the arm hole was not in the recommended place for the template supplied with the techno arm I fitted it anyway. After a bit of tweaking using an old record for cartridge setup, I know this is not much spoken about these days or recommend it worked extremely well, the sound is fabulous. Everything I ever wanted and a little more; clean and crisp fast and open to enough bass too.

The problem I have is with my recently purchased speakers the Mordant Short MS908s - same as those reviewed by yourselves, but with the extra bass speaker. These offer a very clean sound and bass too. However, the midrange can be a bit squeaky and I was wondering what I can do to improve the sound? Will adding sand into the units make them worse? Can you suggest some suitable speaker cable I might try to warm up the midrange? Or do you have any other suggestions? Will a separate spur rather than using ring main help to improve the overall sound or make it more harsh? The other equipment I have is not very impressive as I have been limited to a small budget but my heart is in the right place: Goldring GL75 deck, Michell TecnoArm, Goldring GL1042 cartridge, Project SE phono box, Sony TA-F940 Amplifier, Mordant Short 908 speakers, Sound Organisation rack Z540.

I hope that you can offer me some suggestions no matter how small. Will any of the HiFi tweaks you suggested in your article assist like a Michell record clamp? If so can you recommend a rubber mat that I might use as the original Goldring mat has a grooved pattern in it. Is it better to use Focalpods and will these be good as a replacement to the rubber feet on the base of my GL75? Finally, is there a reasonably priced pad I can place my turntable on to improve its sound even further?

Bob
Hi Bob – well, I suspect that your Gyro wasn’t properly set up. Before he died, John Michell confided to me that he sometimes despaired about dealers (and reviewers) not knowing how to get the Gyro working properly. Correctly levelled, with the springs bouncing equally and perfectly, it blows a GL75 off the map. But still, your Goldring is a fine bit of kit and easily good enough to respond to all number of tweaks. 

Mount the deck on an Audiophile Furniture Base SP01 isolation platform, with Foculpods supporting it for good measure. Run the Goldring 1042 at 1.75g, and back the bias off a tad (1.5g I find best). Use the Michell clamp in conjunction with a Rega P3 felt mat (call Rega, they’re about £15). Clean the connections on the cartridge pins with Kontak, and the armlead phono plugs, the Project Phononbox sockets, etc. Your Sony integrated amp isn’t the best by a long way (I suspect an Audio Analogue Pucinni Setanta (£975) would be just the job), but in the meantime you could invest in a few metres of the superb Chord Odyssey 2 loudspeaker cable to tame it, and pull some of that midband grain out. Let me know how you get along…?

DP

Music are pointing in the right direction, but all this ‘stream but nothing else’ nonsense is laughable. Has no-one thought of running a lead from the soundcard of their PC to a CD/DAT/MD/tape recorder to record those streams?!

A case in point: I own around 15,000 records, of which about 95% are in storage as I’ve currently nowhere else to put them. If I want to hear a song that is on one of those records, what do I do? Go to the storage unit and spend a couple of hours trying to find what I want and give myself a hernia in the process, or click on Kazaa or Bearshare? Doesn’t the 1988 Copyright Act cover fair use? Hey, under that Act purchasing a single copy of a bootleg CD is legal so long as it is for your own private and personal use! I pity the poor prosecutor at that trial!

Given that many of the court cases and judgments in bootlegging cases in the UK have been far from sensible, justifiable or astute (I recall one case where a tape seller was fined £10k and the chap after him who had knocked out his wife’s teeth got fined £120 - yep, the case did get thrown out on appeal) doesn’t really fill me with hope on achieving a sensible and workable solution. The words ‘tape’, ‘blank’ and ‘ levy’, ‘horse’, ‘door’ and ‘bolted’ spring to mind.

Finally, what’s with the “oh my gawd” line on My Bloody Valentine? Some of the most fascinating music of the past twenty years in my humble opinion. Still, John May is right, ‘tis one album definitely suited to vinyl replay (Warner US surprisingly reissued both MBV LPs on vinyl last year - gorgeous pressings!). Speaking of which, have you tried out any of the Earmark reissues? I usually have a chronic aversion to Czech-pressed vinyl, but the ones I’ve heard of these things sound incredibly good.

Guy

In Britain Copyright law more stringently limits consumer’s rights than elsewhere. Having recently held lengthy conversations with both the BPI and IFPI Press Offices about all this, in connection with Apple Computer’s iTunes music download service, I think I began to see where the real problem lies. I also sense that the issues will only be satisfactorily dealt with when everyone agrees on the balance of rights to be struck between artists and consumers, and this will only be achieved when an outside Legislative body intervenes to impose a set of rules. In light of the argument that exists on all this it isn’t surprising perhaps that the European Commission has been calling for views to be submitted to aid their own investigation on the subject, preparatory to introduction of Europe-wide legislation.

In Britain, the view has been that vendors are free to attach any rights they wish to the sale of their goods, which seems fair enough. Trouble is, this makes for a situation so complex it is impossible for consumers to understand, without a degree of effort that is simply unrealistic. Do we all want to read a tortuously long list of rights as set out in an agreement every time we purchase music? Such a situation already exists with computer software, with agreements in legalese that are absurdly long.

Trying to bamboozle consumers, or face them with unrealistically difficult terms and conditions of sale isn’t something that will remain forever acceptable, I believe. These days consumers have rights too, and the big failing of the music business is, in my view, their inability to understand this and offer a reasonable set of rights that is fair and understandable to consumers as well as artists. No matter how hard I pressed them on this matter, the IFPI in particular defensively refused to acknowledge this, saying only that they existed to represent artists, not consumers.

As national legislative bodies can’t agree on what constitutes fair rights either, it is hardly surprising the EU should get involved. You can find more on all this at www.bmro.org. The only depressing thing here is that the U.S.A. will undoubtedly go its own way, so the confusion will continue. You will not, for example, be able to buy music from iTunes USA (as I have tried to do) which, last time I looked, had a better back catalogue of British artists than iTunes UK! But as Apple explained to me, the U.S. music companies handling British artists are restricted by contract to selling within their own territories - fine until the internet came about. In truth Apple do negotiate and offer consistent rights through i-tunes, so perhaps they will, in future, be able to overcome this hurdle too. If they do it will be a unique achievement.

You can at present record from an analogue feed to overcome anti-copy mechanisms, but Philips and others have demonstrated analogue watermarking schemes able to prevent even this.

N.K.
Hi Guy – 'Loveless' is one of my favourite albums of all time, so there was no criticism of MBV there – I was merely alluding to the fact that it's a fairly 'rigorous' sonic workout for any hi-fi system, and you're right, it's almost unlistenable on CD!

DEAR JANE (AGAIN)
I have to respond to Jayne Lee Wilson's letter in the July 2004 issue. While many classical music lovers prefer CDs there are also many who still listen to vinyl. They attend concerts too and some play in orchestras as well – I believe this possibly includes Setright.

I've just listened to three superb performances on disc. The Concerto for Orchestra by Lutoslawski, played by the Chicago Symphony Orchestra under Seiji Ozawa, is on a well played singlesided EMI test pressing from 1971 and has everything: attack, delicacy, rhythm, ground-bursting timpani, emotion and a scratch in the quiet passage at the start of the third movement. The Sonata Representativa by Biber, played by Ramanesco, is on a digitally recorded CD; it's vibrant, warm and intimate but if I could get it on vinyl I would. The most involving is Hungarian Rhapsody No. 10 by Liszt on a Columbia 78 from the mid-thirties; this direct-cut disc is still able to convey Ania Doifmann's passion and drive seventy years on despite wear caused by steel needles.

Is this preference for analogue because my Arcam Alpha CD player is now thirteen years old? The LP source is a Garrard 301, Michell Tecno4am, Ortofon MC 10; the 78 source a Garrard 401, SHE3009 III, Shure M44 with Expert Stylus Company 78rpm styli. They feed a nineteen-year-old Rotel RA6401X8 amplifier and Monitor Audio R352 speakers. EQ for 78s is provided by a graphic equaliser. I don't know if this system qualifies as well balanced but it plays a lot of music.

Or is my preference because of compromises inherent in CDs? Some of our newer local buses have digital multiplex control systems, you can tell when ringing the bell, Press the button and nothing happens so you press it again. By then the first signal has reached the bell, so it rings twice. I think this is true of CD, the quantisation rates are not fast enough for us. I'm now upstairs listening to a lunchtime concert of Mahler songs on BBC Radio 3. 1950s TSL valve FM tuner, Leak mono Varslope III and TL 12 plus amplifier, AR4xx speaker, bliss. After Mahler some Franz Ferdinand on CD or maybe Art Hodes on a Blue Note 78 or Marta Sebestyen on LP. My daily bread is good music and it is delicious. Richard Zarywacz

STATIC DYNAMIC
I am a regular reader of your mag and appreciate the views of your reviewers – even JKS who it has to be said is a difficult, if not an oddball, read. I have a Naim Nait 5 integrated amp paired with an Arcam CD72 player and a Naim NAT 5 tuner (an excellent tuner which shares the shelf with another favourite - Leak Troughline 3 Stereo tuner and Quad tuners from the FM1 to FH4 and Quad AM tuners 2 and 3).

I listen mainly to jazz, smooth jazz, blues and some pop mainly on FM radio. My room is approx 19'x13' (5.9m x 4m). I use Naim cable and interconnects with Quad 21L floorstander loudspeakers (which I don't think you have reviewed). Incidentally, I have paired the Naimts with my (properly serviced) Quad ESL57s and was disappointed. Before I did so I e-mailed the Naim factory and got this response: "We would not recommend this combination for sound quality but do not see a technical reason why it should not work." They were right. While the Naim Nait 5 is to my liking it does seem to lack depth or soundstage (because it is underpowered?) and I was wondering about potential upgrades while staying with Naim.

Given my budget, as I see it there are three options:
1) buy a Naim Nait Si integrated and get rid of my Nait 5;
2) buy a Naim NAC 112X pre-amp (paired with my Nait 5 as a power amp)
3) buy a Naim NAP 150X power amp (paired with my Nait 5 as a pre amp). I am leaning towards option 3 as the extra power from the NAP150X will hopefully resolve my concerns. I would appreciate your views.

JBK (from Sydney)

In my experience Quad electrostatics don't sing with solid-state amps. This has to be a generalisation, as I haven't heard every combination on the market, and many - perhaps most - people are happy enough with such a partnership. But having put a good valve amp in front I find it difficult to recommend the transistor route. The sound is often disappointingly flat and bland, as you've found. I believe electrostatics rather brutally expose the limitations of solid-state amps, in a way that dynamic speakers do not, mainly because the boom of a box (tech speak: time delayed returns!) provides artificial ambiance cues that disguises the intrinsically flat sound of solid-state. So two expensive items that can work brilliantly in other circumstances fail to gel, as you've discovered.

I suspect the picture is slowly changing, as the latest Naim amps are smoother and more dimensional than ever before. You could well try a NAP150X, but whether you feel it is satisfactory with an ESL-57 is your decision. Don't forget that a small subwoofer can help by adding in low bass, since the ESL-57 gets down to 90Hz before rolling away and this limits its delivery of low end dynamics. A subwoofer subjectively strengthens the sense of dimensionality that's otherwise lacking.

Your room is dimensionally suited to the ESL-57s and will get the most from them, assuming its walls are solid brick or breeze block. Peter Walker, founder of Quad, told me he preferred long rooms, placing the 57s at either side, against the wall and at right angles to it to increase apparent panel area, so reducing low frequency cancellation, to improve bass output. The usual rule was to position each panel well away from the rear wall to 'lose' rear radiation from the speaker. Best to put bookshelves or sound absorbing curtains behind if possible.

NK

I'm currently using my lightly tweaked World Audio KS881 with the ESL-989s, and am getting preferable results even to the mighty Musical Fidelity kW500. There's a real sense of space and ease with the tube amp, which the MF lacks – and this is about as powerful as transistors get! Still, it wouldn't hurt to get more grunt for your system, so I'd counsel the NAP150X as your next obvious step. You should also check out my feature on p37 for more electrostatic set up tips. As an aside, don't think that – as a rule – updated 'i' or 'SE' versions of amplifiers (or anything else for that matter) are actually worth selling your existing non 'i' or 'SE' version for. Generally speaking, they're more about sales and marketing than dramatic sonic improvements, and simply don't warrant all the time and trouble of selling your existing kit, let alone the expense. If you really want to upgrade, then at least for a model or two up the range, or higher.

DP

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SINGLE-ENDED PURITY

Our Parallel Single Ended (PSE) power amplifiers offer ultimate sound quality. Each monobloc has two beautifully linear 300B directly heated triodes in its output stage, producing 20 watts into an 8 ohm load. As the front of the circuit we have a 6AU6 pentode, followed by an ECC82 as the driver valve. This design uses a 5U4 rectifier valve in the power supply, in combination with a 10H choke, giving an extremely quiet supply. Both mains and output transformers are built on high quality EI pattern cores.

Feedback can be switched in or out whilst running using a rear panel switch. Complex layered and sectioned output transformers give full output and low distortion across the audio band even without feedback, making such an option possible.

This is one of the few amplifiers in the world so good it will work without feedback - and no feedback is the preference of most buyers. It gives a spacious, relaxed and fluid sound quite unlike that of solid-state amps, all of which use feedback to correct deficiencies.

By operating linearly in feedbackless, pure Class A, single-ended mode these 300B monoblocs are as pure as it gets - and sound quality reflects the fact. Fast, clean and clear in their presentation; at the same time their purity of sound is easy on the ear.

The kit is totally hard-wired; it does not use circuit boards. We can supply without valves, or with the superb Tesla 300Bs, Russian SU4s and European 6AU6s & ECC82. Our 300B PSE kit bears an affordable price of £895.00 (UK price) excluding valves. Each monobloc weighs 23kgs (50lbs). External dimensions with valves: 25cm(w) x 38cm(d) x 22cm(h) per monobloc.

PUSH-PULL POWER

For more power, we also offer 300B in Push-Pull (PP) form. The 300B PP monobloc shares the same look and chassis as the 300B PSE monobloc. The 300B PP kit has been created for those who prefer a bit more power. With a pair of 300Bs in push-pull configuration producing 26 watts output, they will drive most modern loudspeakers to perfection. Andy Grove’s design is totally feedbackless, using a 6AU6 pentode as the input valve and a 5687 as the phase splitter. The power supply uses a Russian SU4 for rectification. The kit is constructed by hard wiring, so some experience is required. 300B PSE owners do have the option to buy the conversion kit for £250.00 to turn their monoblocs to push-pull status. Each monobloc weighs 23kg.

The PRE-II is a high quality valve pre-amplifier that will drive any power amplifier. It has a gain of x5 which, with CD, enables it to deliver a large 10V output swing. To keep the amount of active amplification low, this pre-amp uniquely uses a line drive transformer to deliver a pure signal to the power amplifier. There are six inputs, a tape monitor and two sets of output sockets. It is powered by the external PSU-II power supply. The volume control uses high quality Alps Blue potentiometer which, with our solid, turned brass, chromed knob, gives a quality feel rarely encountered these days.

PHONO-II is a dedicated valve phono stage for MM cartridges, with MC input transformers an option. By using all-d.c. supplies from PSU-II and a case in which there is no power supply, PHONO-II is hum free, something that is difficult to achieve with valves With accurate RIAA equalisation right down to 10Hz (-3dB) PHONO-II gives a wonderfully pure, dimensional sound from LP, possessing a sense of life and dynamism quite different to solid-state preamps.

Finally, PSU-II is a power supply unit that feeds both the PRE-II and PHONO-II. Keeping the power supply separate removes hum, often the bane of valves.

<table>
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<tr>
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<td>300B PP Monobloc Kit</td>
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<td>Moving coil step-up transformer</td>
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<td>Power Supply Unit (PSU-II)</td>
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SERIES II MODULAR PRE-AMP KIT
KEL84 is an affordable, integrated valve amplifier for those who want to enjoy the valve sound, but from a simple, easy to build kit. It uses inexpensive EL84 output valves, known for their sweet sound, in conventional push-pull arrangement to provide 15 watts into an 8 ohm load. The output transformers are our own quality Ultra Linear design. Up front, the circuit employs an EC80 input phase splitter valve, which contributes to KEL84's extremely smooth sound.

The amplifier has very low hum and for simplicity it is built on a printed circuit board. A strong steel chassis is fronted by a 3mm anodised front panel and attractive brushed aluminium effect knobs. There are five line level inputs, plus one monitor input, with a tape output included, all controlled from the front panel.

At the rear is a mains switch/IEC power input, earth post, phono sockets, and 4mm banana sockets for loudspeakers. The KEL84 will highlight all the intricacies and depth of detail in your favourite recordings whilst retaining a warmth and fullness that is almost exclusive to pure valve amps and is rare at this price point.

KEL84 weighs 10kg. External dimensions with valves are 400mm(w) x 270mm(d) x 150mm(h). Single input version also available at £285.

KEL84 VALVE INTEGRATED AMPLIFIER KIT

£335

Our 6550 series amplifiers are built around the rugged 6550 beam tetrode that's popular in America. This valve is widely available at a good price. Producing no less than 40 watts into an 8 ohm load (available in a 4 ohm version if required) our 6550 is a power house, since valve watts always sound louder than transistor watts!

The difference between our 6550 and most others is that we use valve rectification (5U4) and a choke pi filter, for a power supply that is quiet and free from solid-state hardness. This is a true high-end design from Andy Grove, hard wired. It is a cut above the many other 6550s, with enough power to drive most loudspeakers, including insensitive electrostatics for example. 6550 combines high power with a top-end smoothness of sound, yet doesn't cost the earth to run, as the valves are inexpensive and have a long life.

The amplifier weighs 19kg. Dimensions are 390mm(w) x 330mm(d) x 190mm(h) with valves, or 220mm(h) with cage.

KIT6550 - An integrated amplifier with line inputs and volume control. Accepts CD, tuner, tape etc., but not LP.

KAT6550 - A power amplifier for use with a separate pre-amp. Paired with PRE II and PHONO II (+PSJ II), can provide LP reproduction.

KAT6550 VALVE POWER AMPLIFIER KIT

£580

The Headphone II amplifier is a beautifully simple design using Mullard ECL83 valves, a triode and power pentode housed in the same envelope. It works directly from any source, be it CD, tape, tuner etc., or from an amplifier's tape out or pre-amp out sockets. The circuit uses high specification EI output transformers that will drive any headphone load from 16 ohms to over 300 ohms depending on how the secondaries are wired up.

The Headphone II is a pure Class A single-ended design with the power pentode wired up in triode configuration for added sonic purity, and it is as quiet as a mouse. Treble has the crispness of the best solid-state, but with the tonal resolution and delicacy associated with valves. Bass is punchy and controlled without becoming artificial.

External dimensions 270mm wide, 275mm deep and 85mm high.

HEADPHONE II

£285

£615

KIT6550 VALVE INTEGRATED AMPLIFIER KIT

£615

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Ex - demo and second hand items

Digital

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<td>ATC SCM7 Cherry x-demo</td>
<td>499</td>
<td>375</td>
</tr>
</tbody>
</table>

Cables and Accessories

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Was</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>JM Lab Micro Utopia Anigre with Stands S/H</td>
<td>3999</td>
<td>1699</td>
</tr>
<tr>
<td>Mordant Short 902 S/H</td>
<td>249</td>
<td>99</td>
</tr>
<tr>
<td>Martin Logan CLS/111 Anniversary Electrostatics 7 months Old S/H</td>
<td>6700</td>
<td>4295</td>
</tr>
<tr>
<td>Naim Audio Intro Black Ash S/H</td>
<td>875</td>
<td>499</td>
</tr>
<tr>
<td>Peak Consuit Incognito Rosewood x-demo</td>
<td>7500</td>
<td>5799</td>
</tr>
<tr>
<td>Rega ELA Cherry x-demo</td>
<td>749</td>
<td>579</td>
</tr>
<tr>
<td>Roksan Ojan3X Rosewood S/H</td>
<td>1299</td>
<td>449</td>
</tr>
<tr>
<td>Vertly Fidelios Black Lacquer x-demo</td>
<td>800</td>
<td>4999</td>
</tr>
</tbody>
</table>

Cardas Neutral Reference 1m RCA-BNC S/H | 550 | 375 |
| BCD Amplifier Stand S/H | 1299 | 699 |
| Irem isopower 8 way distribution Black S/H | 425 | 199 |
| Madrigal MCD 2 1 fatboy Digital cable new & boxed | 319 | 159 |
| Mission Isolat S/H | N/A | 29 |
| Siltech SQ59S3 2x4m Balanced Interconnect x-demo | 2370 | 1499 |
| Siltech Signature G5 1m AES/EBU 110ohm Digital S/H | 625 | 449 |
| Siltech SPX10 0.5m mains cable New Boxed | 105 | 55 |
| Spectral MH-330 15ft Interconnected RCA-RCA x-demo | 800 | 499 |
| Spectral MH-750 15ft Interconnected RCA-RCA x-demo | 1400 | 799 |
| Spectral MI-350 20 ft Speaker cable x-demo | 2100 | 1199 |
| Soundstyle 5 tier table Black gloss/Glass S/H | N/A | 179 |
| Sicomin Platform 50cmX50cm Carbon Fibre S/H | N/A | 119 |
| Transparent Music Link Super 1m RCA S/H | 599 | 299 |

Tuners & Tape decks, power supplies

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Was</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnum Dynabab FT-R Remote Switcher for FT101A/lude (new &amp; boxed)</td>
<td>450</td>
<td>279</td>
</tr>
<tr>
<td>Tandberg TD20A Reel to Reel (just serviced) S/H</td>
<td>N/A</td>
<td>250</td>
</tr>
<tr>
<td>Rega radio 3 Silver X-demo</td>
<td>398</td>
<td>279</td>
</tr>
</tbody>
</table>

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Mark Levinson ML33 Reference Power Amps ( audio)

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Hi-Fi World writers have extensive audio industry experience - from designing the best valve amplifiers, engineering bespoke pro audio installations and mastering digital discs to classic and modern hi-fi retailing. No other magazine has such a diverse wealth of editorial talent. No other magazine is able to combine the new and the old, the classic and the modern, the affordable and the expensive, the raw and the cooked with such authority:

**DAVID PRICE**
A passion for music from an early age got DP hooked on hi-fi. His writing career began in 1990 with *New Musical Express* and, after working for *Hi-Fi World* he joined the Doors team at *The Sunday Times* and was the editor of the High End Equipment section of *The Month* alongside this magazine. A compulsive record collector, vinyl is David's favourite audio too - as his encyclopaedic knowledge of Japanese hi-fi end arias.

**NOEL KEYWOOD**
A leading technical journalist, his rigorous reviewing - informed by empirical measurements - has made him an icon in the UK hi-fi scene. After editing *Hi-Fi Adjusters* in the 1970s and contributing to *The Hi-Fi Review*, *Hi-Fi Reminder* in the 1980s, Noel went on to launch *Hi-Fi World* in 1990. His challenging approach has famously seen men expose digital audio's technical failings, and champion the cause of his beloved valve amplifiers and high sensitivity loudspeakers.

**DOMINIC TODD**
Working in hi-fi retailing since 1991 - at all levels including sales, management, purchasing, training and marketing - has given DT a forensic knowledge of modern audio and video equipment. Living at the coal face - he's the 'face' of new kit work, best and why. and to explain the politics behind it.

**HADEN BOARDMAN**
His knowledge of classic kit is almost unmatched - enabled by him getting bitten by the hi-fi bug at the tender age of 10. Haden's tastes are very much of the valved and vinyl ilk, his system displaying a welter of hi-fi brands from the 1960s to go with his 1980s Marantz CD spinner. He's also a keen kit builder, and is not afraid to wield a soldering iron in the noble cause of superior sound.

**PATRICK CLEASBY**
After a stellar career in IT, Pat's eye for music drew him to the field of multi-channel music mastering, which is not hisocation. His exhaustive knowledge of audio, visual and surround sound theory, and product choice then perfectly placed to assess the latest DVD-Audio and SACD hardware and software alike.

**STEWART WENDEV**
A professional audio engineer since the 1970s, SW is still constantly amazed by the sheer quality of kit that some manufacturers put upon the buying public - but it is also delighted when he finds a bargain. His redoubtable experience of designing and building his own turntables, electronics and loudspeakers through the years makes him an ideal *Hi-Fi World* writer along with his obsession with music.

**LIJK SETERS**
A man whose reputation precedes him. LIJK's has had a long and distinguished writing career. Most famous for his quarter century of contributions to *CAR* magazine, he has also had over one hundred books published. A gifted, classically trained musician, his passion for hi-fi comes from an enduring love of music. A keen Radio 3 listener, LIJK's main loves include the rare hard rock bands, second only in his beloved Koenin tuner in his affections.

**WHAT IS HI-FI WORLD?**
An independent hi-fi magazine of fourteen years standing, founded by Noel Keywood - one of the UK's leading technical hi-fi writers.

**WHY IS HI-FI WORLD SPECIAL?**
Almost all hi-fi and home entertainment magazines are owned by large media corporations that publish anything that makes money, be it caravan, computer or mobile phone titles. But we're different! As the only magazine published by Audio Publishing Ltd., a small independent specialist publisher, hi-fi isn't just a business for us, it's a way of life.

**WHAT IS HI-FI WORLD'S PHILOSOPHY?**
We are the only real world audiophile magazine you can buy. No matter whether something costs 20p or £20,000, we'll tell you if it's worth having - and why. Being independent, we can write what we like, and we do. If it's recommended in these pages, it's because we've lived with it - and rate it. If we don't, then we won't gloss over the fact for reasons of commercial gain.

We don't print reviews of bad equipment - what's the point? So everything inside these pages is interesting or excellent, and usually both. Yet still we don't pretend everything is fantastic. Not even the best equipment is right for everyone - which is why go to great lengths to explain the respective strengths and weaknesses of each bit of kit.

We don't knock stuff, we say why it will work in some systems and why it won't in others - so you can make your own mind up.

Unlike some titles, we don't delude ourselves that we're the ultimate authority on everything, but the huge experience of our team ensures that we're invariably pretty close to the mark. Importantly, we back our subjective findings with technical measurements - which ensures that everything we review is a representative sample, and that we know what ancillaries are best.

We don't pretend that every new product is better than its predecessor. We're happy to recommend classic hi-fi when it's better than modern stuff. This doesn't help our advertising revenues, but it gets you closer to getting a superb sounding system for the lowest possible price.

**WHAT'S THE HI-FI WORLD SOUND?**
Go into your local high street electronics emporium, and you'll hear no end of cheap, forward, hard and showy sound bits of audio kit. As we listen to music hour after hour every day, we're not into this. We go for hi-fi - at any price - that has the ability to communicate what the musicians are recreating on a believable soundstage and a wide and varied range of tonal colours. We don't like a hard sound, nor do we enjoy the soft. It's got to be open and organic. Interestingly, there is kit at all price levels that offers this quality - although it often takes some finding. So we're happy to recommend anything from an old, long-discontinued £30 amplifier to a brand new pair of £6,000 loudspeakers - if they sound right!
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Hi-Fi World on Structural Modification

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LLOYD COLE AND
THE COMMOTIONS

RATTLESNAKES

1984

(Remastered 2004)

Hard though it is for those of us of a certain age (mid eighties students) to credit, but it really has been twenty years since the release of probably the most timeless of all the albums from that era of paisley shirts and jangling guitars. 'The Smiths' may have been more of a landmark at the time, 'High Land Hard Rain' an even more precocious debut, but the one which followed in their wake gets far more regular plays from this indie boy...

You can always tell the important musical discoveries of your life by the ability to clearly recall the moment when your ears were first beguiled by that distinctive sound. Unfortunately for me, debut Commotions single 'Perfect Skin' brings back recollections of driving past Tesco in Worksop, but that's my problem. It was then that I knew that my college days were more likely to be soundtracked by this earnest young Englishman and his Scottish band than by my erstwhile metal, prog or jazz-rock faves.

The man responsible for many of Universal Catalogue's finest reissue projects, Joe Black, initiated the anniversary re-release of 'Rattlesnakes', and despite all the necessary bits and pieces being as good as lost he and his colleagues have done their customary fine job in assembling this package — a welcome addition to the ever-expanding collection of excellent double pack 'Deluxe Editions' from the largest record label in the world. Who says the biggest can't be the best?

One of the most welcome by-products of the twentieth anniversary celebrations is that the booking of a short UK tour enabled the faithful to revisit their youth in venues such as the Hammersmith Odeon (I'm not calling it the Labatts Apollo or whatever it's known as now, for love or money). I was lucky enough to occupy the centre of the front row in the cleared stalls of that venue, and much like the band I had the most enjoyable time as they went through the entirety of this album: the best bits of its follow up 'Easy Pieces'; and a good half of their swansong 'Mainstream'. Excellent though the later albums were there is a solid reason that the band decided to rest on 'Rattlesnakes' — one senses that they knew twenty years ago, and they know now, that they had produced a classic album.

Musically the sixties influences which gave 'Rattlesnakes' much of its voguish, elitist cachet at the time of release now mean that it has achieved a similar imperviousness to the threat of being dated as many of its classic forebears. It will only be music tech geeks who will pinpoint the date of recording due to the giveaway use of the Yamaha DX7 — for the rest of us we can wallow in some of the best songs, the most musical guitar solos and the most playful lyricism of late twentieth century rock. I would be lying if I were to say that Cole's artsy reference drops didn't clang a bit with me at the time (and I was younger and more sophomoric than him!), but the passage of time enables us to be kinder to his youthful conceits, and to just enjoy the sound of a confident young band playing fresh material with an extremely sympathetic production from Paul Hardiman.

It's hard to fault this great reissue. Despite the difficulty of reassembling graphical elements from a pre-digital time long, long ago, the double digipak looks spitting, and there is an exhaustive selection of sleeve notes and band reflections on specific tracks, which will keep even the most ardent anorak happy for some time. The original CD issue (I think it was the seventh one I ever bought) followed roughly a year after the vinyl LP, and had four of the contemporaneous B-sides tacked onto the end. Here the first disc is reserved for the album proper, and those marvellous B-sides are joined by others, including their version of Television's 'Glory'. There are also demo, live and session tracks, each grouping tastefully separated by seven second gaps. Both discs were mastered in-house at Universal by Gary Moore, and the album sonics come across as much improved compared to that original CD from twenty years ago.

Everything is here, everything sounds great — if you want to know why so many forty year olds still cherish the memory of this record, check this definitive edition out. PC
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Developed for the music lover and cinema enthusiast who wants to seek out the most accurate and involving sound.

The AKURATE loudspeaker system has four distinct, acoustically matched loudspeakers. Three full range and one for bass reinforcement. They can be simply configured to comprise pitch-accurate, multi-channel sound systems for high performance music and cinema.

Featuring the unique 3-K Driver Array - a Linn designed driver configuration that creates a single point acoustic source independent of cabinet type. Any combination of loudspeakers with this technology achieve a perfectly balanced accurate result.

Designed to stand the test of time, Linn AKURATE loudspeakers are built to take advantage of new high-definition sound and vision formats.

accurate adj. faithfully representing the truth; precise.

The new Akurate Loudspeaker System. True.

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