Michell's stunning new Odyssey turntable...

BLACK ART

SYSTEM TUNING SPECIAL:
BALANCED SYSTEMS SUPERTEST
ULTIMATE AUDIO ACCESSORIES
UPGRADING, CYRUS-STYLE
ACOUSTIC TREATMENT
TOWNSEND TA565CD
CABLES UNPLUGGED
BALANCED MAINS
ARCAM SOLO

HI-FI BUYING GUIDE * CLASSIFIED ADS
Onkyo, a brand with over 50 years of audio heritage, proves that Audiophile components can look as good as they sound with the new 275 series. Call us to arrange a demonstration at a dealer near you and discover the Pure Onkyo experience for yourself.
 Shortly after my review of the Shanling SP80C tube monoblocs in March 2005's Hi-Fi World, Marantz's Ken Ishiwata telephoned from the People's Republic to tell me what he thought of Chinese valve amps. Given that KI's job requires him to spend a lot of time there, he'd obviously familiarised himself with China's homegrown stuff, and I was most interested in his opinion...

To paraphrase, Ken's verdict on the SP80C (and all other Chinese valve kit too, for that matter) was "close but no cigar". That's because, he said, they'd got most of the fundamentals right - strong transformers, chunky power supplies, good metalwork, etc. - but simply didn't have the know-how to fintle it all into musical sounding audiophile hi-fi separates.

Well, I couldn't have agreed more. While reviewing the SP80C, I was amazed by its raw power and speed, but still couldn't help but think it was in progress. In short, given a few weeks of serious component substitution, some choice tubes and carefully selected internal wiring, it would have been total dynamite.

It's this process of tuning, tweaking, fettling (call it what you like) that's so vital to how our hi-fi systems sound. With real attention to detail, you can turn a so-so product (or collection of them) into something truly musically uplifting. The good news is that it's not necessarily expensive either, but the bad news is that most people wouldn't know where to start - or worse still don't even understand the need for it in the first place...

So that's why this issue is devoted to the noble pursuit of getting 'in tune'. We've assembled three 'balanced systems' (featuring, variously, Rotel, B&W, Michell, Trichord, Musical Fidelity, Densen, etc.) and auditioned one of the most hot-rodded silver disc players yet made in the shape of Townshend's TA565 CD. We look at Cyrus's complex but clever electronics upgrade path and try Arcam's superb new Solo system-in-a-box. And as for transforming your existing system's sonics, we have a host of superb, cost-effective accessories for you - plus in-depth features about cable choice, room acoustic treatment and mains power supply.

If you want to spend huge amounts of money on hi-fi then by all means do, but not before you've got the best out of the rest of your system - and serious attention paid to this month's Hi-Fi World should yield sonic dividends. Enjoy!

David Price, editor

verdicts

| OUTSTANDING | simply the best |
| EXCELLENT | extremely capable |
| GOOD | worth auditioning |
| MEDIocre | unremarkable |
| POOR | seriously flawed |
| VALUE | keenly priced |

hi-fi world

Testers

David Price, editor

Outstanding

Welcome to Hi-Fi World's latest issue, packed with the latest in hi-fi goodness. This month, we've focused on getting things 'in tune', with a range of systems and accessories tested to help you find the best sound for your setup. Whether you're looking to upgrade or just tweak your current system, we've got you covered. Enjoy exploring our reviews and features, all designed to help you get the most out of your hi-fi experience.
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Neal Gibbons tries Zero One's £2,260 upsampling TI48 hard disk transport and Ar38 DAC combination.

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LIK Setright on his favourite Bach recordings...
Experience the perfection of purity

Marantz introduces the TT-15S1 to enhance its hi-fi series

www.marantz.com | Marantz 01753 680868
CLEAR THINKING

Clearaudio’s new Ambient is said to possess all the qualities of a truly high-end analogue turntable: quality build, selected materials and an elegant appearance. The chassis is developed from the ‘Master Reference AMG Wood’, consisting of a high-tech sandwich of ‘Panzerholz’ between two precision-machined aluminium plates. Panzerholz is extremely hard and more difficult to machine than stainless steel but when sandwiched between the aluminium plates is said to produce a combination of ideal mechanical and acoustic properties. The maintenance free main bearing uses a polished and hardened steel shaft running in a polished sintered bronze precision cap. The motor is mounted in its own separate plinth, isolated from the main chassis. Also used is a custom version of the Clearaudio Syncro electronic speed controller, with a backlit blue LCD displaying the exact speed of rotation. The 40mm turntable platter is driven via a Clearaudio ‘silent belt’. The Clearaudio Satisfy Directwire is said to have extremely high structural rigidity with ultra-low friction movement of the woven carbon fibre arm tube. The vertical bearing shaft is made out of wolfram, the polished ends of which run in sapphire watch bearings. The twin horizontal bearings use long life ceramic bearings and an unbroken run of Clearaudio’s own Direct Wire from the cartridge to phono plugs. The deck measures 535x30x150mm and weighs 3.8kg. Prices are £2,285 for the Clearaudio Ambient and £555 for Satisfy Carbon Direct Wire. For details, contact Audio Reference on 01252 702705 or click on www.audioreference.co.uk.

ACTIVE, LIFESTYLE

NHT’s new M-00 is said to be the ‘Swiss army knife’ of active monitor loudspeakers, as it’s compact, portable, flexible, and capable of functioning in a wide variety of applications. It is claimed to pack substantial output, surprising bass response and startling accuracy in a remarkably small monitor. The fully magnetically shielded M-00’s are sold individually, providing application flexibility in mono monitoring, two-channel, 5.1 or daisy-chained configurations for use in light commercial installations. For full range performance, the M-00’s can be paired with the NHT Pro S-00 Compact Powered Subwoofer. NHT Pro European distributor Mi/ have appointed Absolute Music Solutions of Poole, Dorset (tel: 01202 684500) as the primary UK stockist of the NHT Pro range. Click on www.absolutelute247.co.uk for details...

MORE ESOTERICA

Having reviewed what we think is probably the best SACD player in the world last month, the breathtaking Esoteric X-01, it was interesting to hear that the marque has a new £9,995 universal player too. The UX-1 SACD/DVD-Audio/Video player has all the features one would expect in a high-end universal player, including the ability to decode DTS96/24 format as well as Dolby Digital/DTS; a lip-sync function which corrects mistiming between audio and video; and a speaker configuration function which computes and adjusts the 5.1-channel surround sound installation environment. In addition, a Word Sync input port is provided for inputting an ultra-precise clock from the G-05 master clock generator. 44.1 kHz (up to 176.4 kHz) is supported for CD/SACD playback, and 48 kHz (up to 196 kHz) is supported for DVD playback. A TEAC universal clock (100 kHz) can be input so the video can also be controlled by an ultra-precise clock. The machine features a VRDS-NEO mechanism, high-precision disc drive system with magnesium turntable, 3-phase brush-less spindle motor and high precision bearing, pickup thread servo system to maintain accurate laser beam angle, machined aluminium disc tray and heavy weight steel chassis plus much, much more. Size is 442x153x353mm. For more information, call 01727 865188 or click on www.symmetry-systems.co.uk.
NEW Q HERE
KEF Audio has announced the latest evolution of the award-winning Q Series, comprising eight new models from the affordable entry-level Q1 bookshelf to the impressive IQ9 floorstander. All the new Q models incorporate KEF's patented Uni-Q driver technology with several important upgrades such as: titanium coated cones, much longer throw suspension (for better bass), copper clad aluminum flat wire voice-coils, elliptical tweeter dome profiles and rigid die-cast chassis. The result is a Uni-Q driver array that plays much louder, has superior bass response, significantly lower distortion and a sweeter top end. The bass units are also completely new and feature a much longer throw suspension design and twin faraday loops for greatly reduced distortion. The styling bears a family resemblance to the flagship KEF Reference models, with the Uni-Q 'pod' faired in to elliptical-section cabinets. All models have a nominal impedance of 8 ohms to allow easy matching of partnering electronics, and there's a choice of classic Black Ash, Dark Apple, Maple, Silver and new Walnut finishes. Prices range from £229.99 for the IQ1 to £799.99 for the IQ9. For more information, click on www.kef.com or call 01622 672261.

JORDAN'S RETURN
News comes that überphon has been appointed exclusive UK distributor of ALR JORDAN loudspeakers. All models from the Entry, Classic and Note ranges are now being made available in the UK, including the mini-bookshelf Entry 5 speaker retailing at £250 per pair, the Classic 5 floorstander (£1200/pair) and the top-of-the range Note 9 (£7,300/pair). Further details of ALR JORDAN and überphon can be accessed via the web at www.alr-jordon.com and www.uberphon.co.uk.

SHADOW DANCING
UK Distributor Shadow Distribution is introducing some exciting products to the UK. From Hong Kong you will see the arrival of 'Eastern Electric' (www.easternelectric.co.uk) who make a range of award-winning, beautifully hand-built valve products that include CD Players and Amplifiers (shown). The Minimax Valve HDCD CD Player at £799 redlines CD performance at this level. French based 'Micromega' (www.micromega.co.uk) returns to the UK with a renowned range of products including CD Players, Amplifiers and Home Cinema. Cutting-edge technology at a sensible price! Prices start at £399 (A60 Integrated Amp). For more information contact Shadow Distribution on 01592 744471 or click on www.shadowdistribution.co.uk.

MINI MAX
Most micro systems don’t warrant coverage in a hi-fi magazine such as this, but Denon makes fine designs for student or second system applications. When replacing the popular D-M31 Denon could have added DAB radio functionality and kept the price the same and degraded the overall quality, or build a better product and charge more. It decided to follow two paths; the D-M33 is a direct and improved replacement for the D-M31 for those who don’t want or can’t get DAB or are on a restricted budget, while the D-M35DAB is a new model offering high-quality DAB and bigger better speakers at a higher price point. The D-M35DAB is all metal construction, with a clean look, large key buttons and an intuitive layout. The large, clear dot matrix display has two rows to carry DAB scrolling text plus station info. Enhanced Timer and Clock facilities make this an ideal system for the bedroom. A power supply upgrade and new Denon speakers help the D-M35DAB to deliver a larger and more powerful sound than the D-M31, says Denon. Prices are £379.99 for the D-M35DAB system, £300 as a CD/DAB Receiver and £380 with Denon SC-M73 speakers. For more info, call 01234 741 200.
MOVIE STAR
NAD's new L 73 DVD Surround Sound Receiver is claimed to have the same level of performance associated with their full-size separates. The compact one-box L 73 supports playback of DVD-Audio, DVD - Video, VCD, CD, CD-R, CD-RW, and MP-3 discs, and the DVD section features progressive scan via the Component Video output, with an additional Component Video input for adding a high definition satellite or other set-top box. It automatically detects and decodes DTS or Dolby Digital bitstreams. Besides these modes, Dolby ProLogic II, Dolby Virtual Speaker and Dolby Headphone are included. Additionally, NAD's proprietary EARS (Enhanced Ambience Recovery System) circuitry uses DSP technology to extract the natural ambience in a stereo recording and redirect it to the surround channels, creating a warm natural reverberant effect without any artificiality. Power is rated at 5x 45W RMS, all channels driven simultaneously into 8 ohms. As usual with NAD, it uses only discrete output stages, including the surround channels. All features are easily accessed with the supplied HTR-L73 Learning Remote. The NAD L73 is available now from selected NAD specialist retailers at a suggested price of around £699.95 (including VAT). For details, call 01908 319360 or click on www.nadelectronics.com.

GOLDEN SILENCE
Originally developed for airline pilots to reduce cockpit noise, Sennheiser NoiseGard ADVANCE Noise Reduction headphones dramatically reduce the audible impact of noise and thus the fatigue of travel, on airliners, trains, buses, or anywhere that substantial environmental noise is unavoidable. The new PXC 300 boasts upgraded electronic noise reduction over the PXC250 (as our tests show), with an overall reduction of around 80% in ambient noise (up 10%). Continuous noise between 400 and 1000 Hz is reduced by approximately -15dB (up from -10dB on PXC 250), and there’s improved passive noise attenuation at higher frequencies too. It’s supplied in a better shock-resistant pouch than before, and the leatherette ear cushions are slightly more comfortable. Battery life is 80 hours from two AA cells (supplied) and total weight is just 65g. Highly recommended for trains, boats and planes, we say! For more details, call 0800 652 5002 or click on www.sennheiser.co.uk.

DRIVING THE TECHNOLOGY
Fostex Company of Japan have appointed Wilmslow Audio as their new hi-fi drive unit distributor for the UK, reinforcing Wilmslow’s position as the largest supplier of drive units and loudspeaker accessories in the country. The varied range of drive units produced by Fostex makes them an exciting addition to the self build market, with their highly regarded full range units already proving to be extremely popular for use in horn loaded cabinets. Wilmslow’s portfolio includes ATC, Morel, Peerless, Scan-speak, Seas, Vifa and Voit — all as the main UK drive unit distributor. For details and price, or to request a free Wilmslow Audio colour catalogue visit www.wilmslowaudio.com.

HEAR THIS
Following its huge success in the US, Audible has launched a UK website for British audio book lovers, www.audible.co.uk. Audible has been available in the US for the past eight years, and enables you to download your favourite audio books, comedy, drama, radio programmes and audio editions of newspapers and magazines to play back on your iPod or MP3 player. Audio books have long been a firm favourite in the US, but may also become popular here as a dazzling array of content is already available for UK customers to download. From Shakespeare to Sheila Hancock, Law in Action to Little Britain, and The New York Times to New Media Age, there’s something for everyone, including an exclusive interview with Little Britain star, David Williams, to celebrate Audible’s UK launch. Audible.co.uk allows users to download or stream audio files from the Internet to any PC or Mac. Once an audio title is downloaded, it is yours to keep with no expiration and no limitations on repeated listening. In addition, the audio books and other content are usually priced 20-30% less than cassette tape equivalents. Customers can choose to buy a single title or subscribe to a recurring title (for example newspaper, magazine or radio programme) and have it automatically delivered to your desktop computer or mobile device before you get up in the morning or leave the office for the day. A variety of subscriptions are available to suit all customers’ needs, but prices are steep; at £14.99 a month customers receive two free audio books per month, whereas £9.49 a month buys you one free audio book and one publication subscription of your choice per month. If customers commit to a year’s subscription they will receive a free digital device.

www.hi-fiworld.co.uk  SEPTEMBER 2005
Some Digital and some Analogue news. And, don’t forget the upcoming Heathrow Show ..!

Just because we are predominantly an analogue, vinyl based, retailer doesn’t mean we don’t care about digital. We realise that our customers, much as they love their vinyl collections, still need to play digital media occasionally! It’s a pity that SACD never achieved the prominence it ought to have. But then, the choice of music is still very limited. Or, perhaps it’s the other way round. Anyhow, when you get a good recording, SACD can be stunning. You guessed this was leading somewhere, and it is! Musical Fidelity have released their new kW Series SACD player. It features MF’s trademark sophisticated choke regulated power supplies, and, unusually, the SACD and CD circuits and their power supplies inside the player are completely separate. Too often, when you buy a really good SACD player you still need to retain your existing expensive CD player to get the best out of the respective media. The MF player gets the absolute best out of both media. It really is one of the only genuine dual purpose machines on the market. Other details include technical specs (signal to noise ratio and jitter) which challenge the resolution of measuring instruments, and the ability to switch between two very high quality output stages, valve and transistor, to keep both camps happy! This is their best digital player yet, and one which it will be very hard to surpass (despite what MF say in their regular newsletters - existing owners know what we mean! - if you are interested, don’t delay in hearing it as I think the limited production run will soon all be allocated. Oh, nearly forgot, the price is a whisker under £4000 - very good value indeed when you see (and hear) what you get for the money.

Staying with digital, we’ve just taken delivery of the new “entry-level” Shanling CD player - the CD-T80 at £650 - and what a brilliant player it is. How they manage to make this superbly built unit for the price they do is quite scary. The fit and finish is absolutely top class, what you might expect if you pay double or treble the price, and the sound quality is on a par or better than just about anything else up to a thousand pounds. I’m told the importer is having a problem keeping up with the demand! If Shanling continue on present form, they will be (rightfully) dominating quite a few sectors of the enthusiast hi-fi market. We refer, of course, to their two existing models, the mid-range CD-T100 (£1650) which has been around for ages now but is still very competitive and looks as stunning as ever, and the relatively new limited edition CD-T300 Omega Drive player, featured in our last ad, for £3999. This new, very modern and attractive player is attracting huge interest. Like the Musical Fidelity it is also a limited edition model. If you fancy owning a top class CD player which will have lasting value, superb sound, and totally original appearance, come and demo it before it’s sold out.

Our main business, in case you were wondering, is definitely still analogue! And, we have some exciting news on the turntable front. First, the affordable: Michell Engineering have released a limited edition (it’s all limited editions this month!) turntable, loosely based on the famous Gyrodec. However, the Odyssey looks completely different, with a jet black acrylic base, black chassis, clear lid, and a special black version of the acclaimed Tecnoarm A, finished off with a black version of the HR power supply. It also has nickel silver weights, and a clear acrylic spyder like the Orbe. This special model, which only needs a cartridge to complete it, is not only stunning looking but very competitively priced at £2150. But, the most interesting thing is the exclusivity - only 100 pieces are being made. They will almost certainly become collectable. And, sadly, due to copy dates, by the time you read this we suspect there may not be many left, so please phone for current availability.

Also new to Walrus is the Stirling Broadcast LS3/5a loudspeaker. Stirling is only one of two current licensees for this superb, classic speaker design. It might be an old design, but it still beats most other compact speakers, especially since Stirling made some small but important tweaks! Price is a very reasonable £890 to £973 dependent on finish. On demo now, please try to hear before you consider purchasing any other compact speaker.

On to this month’s Featured Accessory, the Shure SFG-2 Stylus Force Gauge. This is a very simple well made balance which sells for £28, and will last you a lifetime. It measures tracking weight between 0.5g and 3g. For anyone who regularly changes their pickup this is an absolute must, unless you’re rich enough to afford one of the swish electronic gauges such as the Martin Bastin gauge. Even if you have an arm which already has tracking force calibration, the Shure will be a lot more accurate.

Lastly, don’t forget the Hi-fi and Home Entertainment Show at Heathrow, from the 23rd to 25th of September. I know it’s a long way off, but put it in your diary now! We’ll be there with lots of our favourite stuff in room Syndicate 16, feel free to turn up with your favourite LP or CD for a quick demo. See ya there!
AUDIOLAB REBORN!

The famous Audiolab brand is back. One of the best known and respected names in eighties and nineties separates hi-fi is returning to the high street, and the good news is that it's now even better. Hi-fi nuts will remember Audiolab as a purveyor of high quality, ultra-reliable audio separates from 1983 to 1997 - until the company was acquired by TAGMcLaren Audio and its products tweaked and taken in a multichannel direction. Now, under the aegis of International Audio Group (which also owns Quad, Wharfedale and now Mission), much of the range is being relaunched. Fascinatingly, it retains all the original styling, circuit design and componentry, even down to the Elna Cerafine capacitors in the power supply stage of the Audiolab 8000S! The only change is that the finish is now silver (although a black option may be available at a later date, say IAG) and dramatically lower prices.

The range consists of the 8000S (£600) integrated amplifier, the 8000Q preamplifier (£600), 8000P stereo power amplifier (£400) and 8000M monobloc (also £400). There's also a brand new 8000CD CD player for (£600) which IAG says is far superior to the original. To give an idea of the savings, the 8000S in its final TAG incarnation (which was virtually the same bar the control knobs and feet) was £1,300 - £700 more. Surprisingly perhaps, the 8000A integrated is not being reborn, as IAG didn't feel it to be sufficiently competitive in sonic terms in today's market, and its retail price also wouldn't have been significantly less than the 8000T which sounds obviously superior.

The range is now being manufactured in China at the IAG factory in Shenzhen (not by an OEM factory which also makes many other products for many other brands), but with engineers from the original Audiolab company (and latterly TAGMcLaren) overseeing every stage from beginning to end. Audiolab says that, despite being in production for only two months, quality is even higher than TAG products, with identical Quality Control processes showing lower rejection rates than those achieved in the UK. Hi-Fi World has seen and heard the new range, and our experience confirms this - because everything from casings to control knobs are built in the factory, the finished products look and feel superb (even the tools to make the stuff is made in house).

Indeed, IAG says the products should be better than the originals, because they all include the board updates made by TAGMcLaren Audio after the original brand had ended. As part of the IAG's acquisition of TAGMcLaren Audio, the company has promised to offer full UK-based service support for TAGMcLaren products - which due to the sophisticated nature of the multi-channel stuff, is no small undertaking. This is good news for owners, who may otherwise have found their kit virtually impossible to fix were it to fail.

IAG also says that a range of new Audiolab products are under development. Because the two-channel separates market is now smaller than ten years ago, it sees Audiolab as a niche specialist hi-fi brand rather than a rival to mass market brands like Denon, and is therefore going to concentrate on stereo stuff - so expect to see an 8000 phonostage, DAB/FM hybrid tuner and even a one-box Linn Classik/Arcam solo rival over the next six months. Very soon, there will also be an affordable AV processor in the shape of the 8000AV, said to retail for around £600, and an 8000x7 seven channel power amplifier. The first of the 8000 series models should be in the shops in September.

IAG also spoke to Hi-Fi World about its plans for Mission. Asked why they bought Mission when they already have a natural rival in the affordable audio market in the shape of Wharfedale, IAG said that it was because in some markets, Wharfedale has almost no presence whereas Mission is popular - hence acquiring Mission gives access to these markets. Watch out for full reviews of all the Audiolab range in forthcoming issues: it will be interesting how Cambridge Audio's forthcoming 700 series of separates, priced right against the 8000 series, compares...
quad 99 series

Authorised Stockists

Aberdeen Hi-Fi, 01224 556719 • Basingstoke Audio, 01256 894611 • Beckenham Musical Images, 0208 6741559 • Birmingham Music Matters, 0121 4292811 • Brentwood Audio T, 01277 264730 • Bristol Radials, 0117 9441010 • Cambridges Hughes Ltd., 01223 461518 • Canterbury Hi-Fi Corner, 01227 765135 • Cardiff Sounds, 02920 472899 • Cheadle Audios Guilded, 0161 4916999 • Chichester Hi-Fi Stores, 01243 776577 • Coventry R.J.F, 0392 780172 • Coventry Frank Harvey, 0871 9852966 • Crow Sound & Music, 01706 274545 • Huntingdon Music Matters, 0432 401446 • Edinburgh Hi-Fi Corner, 0131 2207135 • East Grinstead Audio Designs, 01342 314569 • Exeter Howard's, 01392 258518 • Falkirk Hi-Fi Corner, 01324 629011 • Gateshead Intone Audio, 0191 4772771 • Glasgow Glasgow Audio, 0141 3324707 • Glasgow Hi-Fi Corner, 0141 2265711 • Guildford P.J. Ltd., 01483 504801 • Hastings Adams & Jarratt, 01424 437465 • Herford English Audio, 01445 579197 • High Wycombe Audio, 01494 558585 • Howards, 01392 258518 • Inverness The Blink, 01463 233175 • Lancaster Practical Audio, 01524 396571 • Leeds Sevenoaks, 0113 2452779 • Leicester Sound & Vision, 0116 2536567 • Lewisham Billy W, 0208 3185755 • Linea Audio, 01522 527397 • Linton Sound & Vision, 01483 504801 • London Bartlett, 0207 6072296 • London Spatial Audio, 0207 4365358 • Montrose Robert Richie, 01674 673765 • Newmarket British Hi-Fi, 01844 312775 • Richmond, 0208 9429567 • Salisbury Salisbury Hi-Fi, 01722 322169 • Scarborough Zen Audio, 01725 450850 • Sheffield Acoustic, 0114 275 6047 • Solihull Music Matters, 0121 742 0254 • Southampton Sevenoaks, 02380 337771 • Staines Sevenoaks, 01784 460777 • Stourbridge Music Matters, 01384 444184 • Sutton Coldfield Music Matters, 0121 3542311 • Swindon Sevenoaks, 01793 610992 • Winchester Music Matters, 01902 312225 • Worcester Wobester Hi-Fi, 01905 501725 • Worthington D&V, 01904 629699 • Wrexham Audio, 01978 264900 • York Wickers Hi-Fi, 01904 659099

Product of the Year 2002-2004
What Hi-Fi Sound & Vision (Full size surround speakers)

Product of the Year 2004-2005
What Hi-Fi Sound & Vision (Full size surround speakers)

Separates System of the Year
2003-2005
Hi-Fi News (99 Series)
I know this is going to grate with many of our silver disc playing readers — and to this I say 'each unto their own' — but when I had to choose a supremely capable, yet reasonably affordable system, it was a no-brainer: vinyl had to be the source.

Now, I shall respectfully ask everyone who's into digital to skip the next paragraph or three, lest they lose the will to live as I wax ('scuse the pun) lyrical about what I sincerely believe to be the highest resolution domestic music carrier ever invented (the best is reel-to-reel at 15-plus inches per second, but this is really the province of pro audio). Yes, that's right, I'm talking about the humble vinyl LP.

If this was an obscure, arcane and moribund format like Elcaset, then I'm sure you'd all be moaning, but vinyl (like punk music) is not dead - quite the reverse. There's a welter of new vinyl releases (from Coldplay to Kraftwerk), a vast number of rolling re-releases from Classic Records, Simply Vinyl et al., and the world's largest 'legacy' music carrier is also supported at every record fair and charity shop, not to mention from the classifieds of 'Record Collector' magazine (for which our own Paul Rigby writes) and indeed ebay. So that's that myth (i.e. 'death of vinyl') expunged...

Now, which example of the breed to choose? Well, everyone has their own preferences, and mine is Michell. This company's turntables are not everyone's cup of tea, but that's a debate for another day. I'm still of the opinion that — pound for pound — they're very, very hard to beat, and some recent subtle tweaks make them harder still. Despite having access to some ludicrously expensive high end decks, I struggle to think how you can attain the sort of all-round performance achieved by the Odyssey (or the GyroDec, upon which it's based) without spending a lot, lot more. If maximum sound per pound is your goal, then nothing comes close, to my ears. And so to my system: Michell Odyssey turntable (with fitted TecnoArm tonearm), Ortofon Rondo Bronze MC cartridge, Trichord Dino phono stage, Musical Fidelity integrated amplifier X-150 and Pinsch I loudspeakers. These are not the best components in the world; rather they've been carefully selected because they offer particularly keen value for money, perform way, way better than their retail price suggests and — critically — sound dynamite altogether.

SOURCE

This, by any other name, is a GyroDec. It's very lightly modified but retains almost all the basic ingredients of a deck that I still use as a reference to this day. What the Michell offers is an extremely neutral
As individual as you are

headphones for life

www.headphonesforlife.co.uk
and 'high resolution' window on the musical world, with no nasties. It can be upgraded and/or improved upon, but you'll be spending thousands and not guaranteed of such all round ability.

The £2,150 Michell Odyssey is a limited edition of one hundred, to commemorate John Michell's design of the 'Discovery' spacecraft in Stanley Kubrick's film '2001: A Space Odyssey'. In essence, it's a GyroDec with a damped chassis, additional isolation base (Orbe style, but skeletal) for extra isolation, plus a TecnoArm, plus the latest HR power supply — all in black. Finally, the gold plated brass weights become nickel silver. The sonic difference between it and a Gyro is minimal — in truth, the support you place the deck on makes far more of a difference to the sound — or even the way you set it up. Oh, and it looks stunning in the flesh, by the way ...

The GyroDec is a classic three-point suspension design. Introduced in 1980, it was a good twenty years ahead of its time in its basic architecture and topography. It was eerily prescient back then, and Michell have subtly updated it ever since, with the result that, from around 1991, it started to comprehensively outclass price rivals. It's also — in real terms — got far cheaper that it was. In 1980 it was twice the price of the Linn, and now it's about half the price despite being vastly more capable ...

It's fair to say that until its appearance, all British belt drive 'superdecks' were variations on the theme of a Thorens TD150 (and that includes the Linn LP12 and Ariston RD 115). The Gyro — just months before the Oracle — was a new paradigm: it was 'exoskeletal' and removed the plinth (read: resonance trap) from the equation. Sadly, many casual observers treat the Michell decks with disdain because 'they look so good', but as John Michell used to say, he never styled them — they look like they look because of what they are. This is to say that the bare bones (skeleton) are (is) on display, simply because there's nothing to hide them.

The platter is Acrylic (in compound with carbon), and in conjunction with the silver plated bronze suspended weights and cast aluminium subchassis weighs a whopping 12kgs. Having designed suspension systems for Jim Clarke back in his racing days, John Michell always used to say that a high sprung mass (and conversely a low unsprung mass) gives the best damping — that's why modern supercars use aluminium and/or magnesium in their wheels and suspension systems (i.e. for a low unsprung mass), to make life easier for the suspension, thus helping keeping the wheels on the ground. The subchassis is suspended from extension springs, which is inherently less stable and also more difficult to tune correctly.

Indeed, the idea of the GyroDec was always that it was like a gyroscope — with balanced weights in all planes. The platter's centre of gravity is exactly in the point of rotation of the main bearing. The motor drives the platter exactly at this height, hence not inducing tilt motions into the platter-bearing assembly. The bearing itself is a bronze inverted design, originating from the co-operation between Michell and SME during the development of the latter's SME V arm. The armboard is machined to match any given arm, bringing the total arm and armboard mass at 1kg precisely. This way the subchassis/platter/board system is always of known mass and balanced, regardless of the arm chosen. The centre of gravity of the whole floating assembly lies on the platter spindle. Drive is via an offboard DC motor, powered via the latest HR active power supply. The platter is driven circumferentially by one round-section rubber belt.

The other key part of the Odyssey package is the Tecnoarm — this time finished in black. This is a radically revised Rega RB250 complete with superior internal arm wiring, better cabling, a separate earth feed, and a remodelled rear counterweight assembly (substituting the plastic end stub for a metal affair and introducing the Michell Tecnovate, a very elegant direct coupled counterweight, locked by an Allen bolt and boasting a lowered centre of gravity compared to Origin Live and/or Rega variants, somewhat reminiscent of the Michell Focus Arm of 1978). Significantly, the armtube is also drilled — common practice in aerospace applications to increase its rigidity and lessen resonances. The result is a dynamite sounding Rega arm — not even the basic Origin Live Rega mod compares, in my view.

Last but not least is the £500 Ortofon Rondo Bronze moving coil cartridge. This is the replacement for the MC30 Supreme, a cartridge I lived with (and loved) for several years back in the mid nineties. It's an extremely well made bit of kit, with a ground wood resin body (that's far less resonant than the aluminium bodies used before), a high quality generator and Nude Fritz Gyger 80 stylus on the end of a tapered aluminium cantilever. I found the Rondo Bronze tracked extremely securely at the recommended 2.3g and went 'hand in glove' with the Tecnoarm.

AMPLIFICATION

Ask Antony Michaelson if the X-150 has been a runaway success and he answers with a resounding 'no'. But never let it be said that the market is a great arbiter of taste. In my view, this is a seriously capable little amplifier that, frankly, makes the opposition play catch-up. Just in case you noticed, it's not a so-called 'full size' separate, and for me, this is much of its appeal. It is uniquely styled and superbly built, and offers a
serious amount of bang per buck. It’s also ‘all you need’ when you’re not trying to put together a system full of sources. Rather, I can feed the latest Trichord Dino straight into one of the MF’s two (!) line inputs and, that’s it. Less is more – no complication.

Don’t be fooled by the diminutive dimensions however – this amplifier packs real power. The Musical Fidelity uses its elaborately finned black painted alloy casing as a heatsink, its ribbed enclosure maximising the surface area. Inside is a grown up 70W RMS power amplifier, which is quite enough for most modern loudspeakers. It’s a dual mono design, and there’s also an ALPS volume pot, IEC mains connection and toroidal PSU in place. The brushed aluminium fascia is lightly populated by blue LEDs, which lend it a modern touch. It features a standard phono stage (which is surprisingly good, although not the equal of the Trichord Dino and/or the Ortofon Rondo Bronze) and pre-out sockets for bi-amping, and uses conveniently chunky loudspeaker binding posts.

LOUDSPEAKERS

If there is one, then ‘the curse of Hi-Fi World’ is the vast number of wannabee loudspeaker manufacturers phoning us up from their garden sheds in Rochdale or allotments in Basingstoke, telling us they make the best loudspeakers in the world (etc., etc.) and informing us that we would be missing a monumental opportunity were we not to review their amazing fare. Well, ninety nine times out of one hundred, it’s a case of ‘beam me up, Scotty – there’s no intelligent life on this planet’.

Pinsh is one notable exception; they’re a small UK manufacturer alright, but I happen to believe they have something special – namely a superb ribbon tweeter. Of course, ribbons are something of a Hi-Fi World hobby horse, but I’d go so far as to say that – with a few significant exceptions – any loudspeaker with a properly designed ribbon is superior to one without – and I’d put Pinsh firmly in the former category. The all important point is that the Pinsh One does not contain a cheap and cheerful Chinese sourced OEM ribbon. Rather, it’s a Pinsh design, and critically, Pinsh started as a supplier of ribbon tweeters to pro audio applications. The result is a London designed and manufactured tweeter that appears in no other loudspeaker on the market – yet. I say ‘yet’, because if they’ve any sense, various other high end manufacturers could usefully use this bit of kit. I suspect they won’t, because sourcing Chinese OEM fare will be cheaper, and (as the Nick Lowe song says) so it goes...

The Pinsh One is a smallish bookshelf design of twelve litres, this one finished in black ash (cherry, maple, oak and walnut real wood veneers are options). The quality of the cabinet is excellent – no surprise, as it’s sourced in Scandinavia. It measures a compact 200x300x360mm, and the company claims a nominal impedance of 8 ohms, a frequency response of 40Hz to 40kHz and an efficiency figure of 88dB at 1 metre with 1 watt. It’s assembled in house in London, and Pinsh echo that old Robin Marshall from Epos (of ES14 fame) philosophy of the least amount of passive components in the crossover, the better. This is no hollow claim, because the ribbon is such that its frequency range permits a very ‘non-interventionist’ crossover – it works from 4,000Hz but can go much lower. The ribbon material composition remains confidential, but Pinsh says its is just 7mg, making it far, far lighter than conventional aluminium domes.

Down below is a single 5”‘OEM driver’ (methinks of Scandinavian design) with frequency response from 40Hz to 4000Hz. It boasts a 75mm aluminium voice coil aluminium wire wound, so there are no air gaps. Pinsh says the impulse response is ‘fast enough’ to follow the ribbon, but in truth it’s more about ‘damage limitation’ than anything else, as a good ribbon is very, very fast. This is aided and abetted by a single small reflex port. Now, as you know I’m no fan of ported speakers, but in a small speaker they do less harm and bring useful sensitivity benefits – so I’ll let this one pass, especially when you consider how the system sounds...

SOUND QUALITY

Anything with a source this good is going to sound special, and so it comes as no surprise to learn that this is an extremely pleasant way to pass a day. Better still, the phonestage, amplifier and loudspeaker are more than capable of exploiting the extremely ‘high resolution’ (to use the current parlance) front end... Okay, I’m being a little disingenuous, as even the Michell when poorly fettled and matched can sound mediocre - see TUNING to see how I got it to give its best.

I have to say that I get to listen to a lot of nice kit these days, but few systems of this price come close. Given a decent vinyl pressing. It gives an incredibly enjoyable insight into the music. Of course, with Quad ESL989s and Yamaha NS1000Ms at the ready, I could easily detail the failings of the speakers but this is to
miss the point — pound for pound, I doubt if anything can beat this combination for sheer listenability.

The great thing about the Michell is its massively expansive sound — it throws a vast stereo image into the room, no matter what the ancillaries are — and so it was with the MF/Pinch combo. It's truly widescreen, making simple stereo recordings sound like surround. It's not quite as neutral (in their ability to convey fear or favour, by which I mean it's somewhat hazy, edgy, monochrome digital). The Musical Fidelity X-150 is deceptively capable; as we found a year ago, it's oh-so-close to the Naim Nait 5x in grip and speed (no mean feat, this!) yet offers a fuller and gutsier presentation. This suited the Michell/Ortofon's super neutral sound — the MF adds a welcome smidgeon of warmth and weight which the Pinsh Ones seemed to relish. These are very neutral speakers too — again just a tad warm and full in the bass (all ported standmounters seem to have a tiny peak around 100Hz to give them the perception of weight, and these are no exception). The result is that legendary analogue sound: big, expansive, three dimensional, warm, smooth and extended in the treble — and what treble!

The Pinch Ones are superb. It's — just — up to the job of getting the essence of the turntable and arm out to the public without fear or favour, by which I mean it's unfallingly neutral yet intricate and involving too. It's no Kontrapunkt B (in some ways it's tonally more neutral) in terms of rhythmic drive, but it's as good as any at the price, has masses of detail, true subtlety and tracks extremely well too. It is, for example, in a completely different league to the not so very much cheaper MC25FL — we're talking Premier League vs. local Sunday five-a-side here. What I love about it is its all round competence; it's obviously more emotive than the old MC20 Supreme, and yet matches it in terms of bass grip and treble intracity, yet brings a new level of dimensionality and midband incision — all for less money too...

The Musical Fidelity X-150 is deceptively capable; as we found a year ago, it's oh-so-close to the Naim Nait 5x in grip and speed (no mean feat, this!) yet offers a fuller and gutsier presentation. This suited the Michell/Ortofon's super neutral sound — the MF adds a welcome smidgeon of warmth and weight which the Pinsh Ones seemed to relish. These are very neutral speakers too — again just a tad warm and full in the bass (all ported standmounters seem to have a tiny peak around 100Hz to give them the perception of weight, and these are no exception). The result is that legendary analogue sound: big, expansive, three dimensional, warm, smooth and extended in the treble — and what treble!

The great thing about the Ortofon Rondo Bronze is its truly finessed and intricate treble, something no digital source can give. The Musical Fidelity does little or nothing to conceal this and the Pinsh ribbon tweeters let the flavour flood out. It's a real revelation listening to high frequencies like these: deliciously silky yet incisive, airy and extended, you soon realise you're listening to true exotica. Hats off to Joe Jackson's 'Steppin' Out', for example, are delicious — and the Michell's legendary HF clarity makes them so crisp and explicit.

The theme continues right down through the midband — a fully open and detailed performance has you wondering why anyone would want more. There's grip, speed, dynamic articulation and rhythmic prowess in equal measure. The only problems arise in the bass. Or rather they would have, but Michell has just sorted this with the simple expedient of changing their belt supplier back to the original Japanese manufacturer they used many years ago! Michell replacement belts from recent years haven't seemed very happy on the spindle, wobbling around and generally protesting at having to turn the platter at all, but now we're back to the original supplier, it's so much smoother and this seems to have improved speed stability and tightened the bass no end. Although a belt drive will never match a direct driven quartz lock design, the speed stability is now very good indeed, and the strong, even, tight and propulsive bass shows this best of all.

CONCLUSION

Overall, a gorgeous system, and one that's very close to what I use myself. In terms of musicality, tonality, texturality, dynamics, soundstaging and detail, this is real class. It's expensive, but believe me you can spend a lot, lot more and not get better. And the fact that it's also stunning to look at simply makes its case even more persuasively; as someone once said, it's a veritable 'Black Celebration'...
One of the joys of hi-fi separates is being able to mix n’ match. Get it right and the overall sound quality can easily transcend the ability of the individual components. Get it wrong, however, and, as many readers will attest, the results can be disappointing to say the least. With this in mind, it’s no wonder that many music lovers go for, what should be, the safe route of buying a matched system. Whilst it’s not always the case, with most companies you can guarantee a degree of synergy by buying from the same brand.

"this is a case of the whole being more than the sum of the parts, even when the parts are already top notch…"

Components are often developed and tested together and therefore usually work at their best when partnered with matching ancillaries.

Rotel have long promoted their concept of ‘balanced design’, and whilst most Rotel products are tolerant enough to work with a wide variety of other components, a CD and amplifier should be at their best when partnered. Rotel is actually distributed by B&W in this country, so it came as no surprise that they recommended B&W speakers to complement the Rotel duo. Whilst they are a different brand entirely, commonly distributed brands often have a synergy of their own. In the first instance, many distributors are already aware of brands that fit their sonic profile and will choose accordingly. Secondly, after brands have been coupled for some time, you’ll often find development work carried out cross-brand. The latest Mordaunt Short speakers, for example, were developed with distribution partner, Marantz, supplying the electronics.

At the heart of this particular mid-range system lies Rotel’s excellent RA-03 amplifier. Reviewed in the August 2005 issue, this five globe amp has already proved its mettle. Based on the well-respected RA-02, the RA-03 features a number of upgrades aimed at the audiophile. Rotel’s own design of toroidal power transformer helps produce a respectable 90 watts power output, and there is typical attention to detail throughout the power supply. Copper bus bars are used in high current stages, DNM have designed the slit foil capacitors and there’s separate signal and power earthing. Meanwhile, at the output side of things, Burr Brown op-amps claim and, as we shall see, do, offer improved transparency and resolution. Without going over the top, pretty much every feature needed is supplied. Crucial to any matched system is a supplied remote control that will also control the basic functions of the CD player. This, the Rotel amp has.

In this case, that CD player happens to be Rotel’s well established RCD-02. Like the amp, the RCD-02 shows evidence of being well engineered and solidly built, if not exactly adventurous in the use of new techniques. At the heart of the CD lies a Burr Brown IC that provides resolution claimed to equal 18-bit. HDCD decoding is also part and parcel of the chip. The transport mechanism is a Sony design, and the rest of the circuitry shows careful choice of good quality components. As with the amp, the power supply is to Rotel’s own design, although this time it’s a frame type and not a toroidal design. Again, all the basics are there featurewise, including a coaxial digital output, track programming and random playback. Amazingly there are still some manufacturers who use different casing styles for differing products. Fortunately, as you can see, this is not the case here, with the two components perfectly complementing one another aesthetically.

The aesthetics of the supplied B&W 602S3’s finish may not be everyone’s taste, but most will agree that this is a handsome large loudspeaker. Like the CD player, the 602S3s have been about for some time now, but also like the CD they are still highly respected. A 180mm (7”) woven Kevlar bass cones mates up with a, carefully damped, metal dome tweeter. As with the Rotel electronics, the key is in the detail. The front baffle, for example, is double skinned with the outer,
polypropylene, casing being specially moulded to reduce diffractions and sharpen the imaging. The front mounted bass port features a tapered tube with surfacing detail first developed for the 800-series. Like the electronics, the build quality is good with the very professional finish you'd expect from a company of B&W's stature. Indeed, for long term durability there are few names at this end of the market that command such respect.

SOUND QUALITY

With the system all in place, I began listening to Tipper's 'Just As The Sun Went Down'. Almost immediately I was struck by the system's superb detail and its control. Ambient effects were superbly staged and projected. Each individual note had a crafted and complete quality often missing from equipment at this price range. Equally impressive was the layering of sound, which also revealed levels of detail again unusual at this level. The 602 S3's weren't quite as bassy as I remember, but then I was auditioning them on different stands [see TWEAKING] and, of course, with different components. Nonetheless, whilst I would have liked a tad more weight to the sound, the taut and tuneful bass was beyond reproach.

Josh One's 'Grey Skies' revealed a very slight boxiness to the low end. Whilst powerful enough in the lower mid-range it did lack extension at really low levels. Otherwise it was, once again, all good news. Vocals were reproduced with exceptional transparency, and the openness and spaciousness of sound was quite striking. Perhaps even more importantly than this was the manner in which the system tunefully strung the rhythms along. It showed great dexterity in handling even the most complex arrangement of rhythm. No doubt, in part, thanks to the height of the 'speaker once on its dedicated stand, the soundstage had plenty of height. Yet, this must have been more than a consequence of its physical height, as the 'arc' of sound was still there with the 'speakers placed on lower stands, too.

Moving on to The Divine Comedy's 'Bad Ambassador', I found Hannon's vocals placed well forward of the rest of the mix, yet not intrusively so. Like the other instruments, the initial guitar introductions showed fine realism. Whilst the 'speakers may not have had quite the weight of equivalently priced floorstanders, they had enough in reserve for powerful dynamics: Plenty, in fact, to build the tension and emotion necessary to get a kick from a song such as this. Also pleasing to hear was the system's ability to handle high volumes without apparent compression or clipping. That having been said, I was always aware of the tweeters metal construction, although the Rotels' did appear to have something of a calming effect, especially with the soaring strings. Key to the systems appeal was, once again, its ability to involve the listener.

Neither was Involvement lacking in Tracey Chapman's 'Mountains O' Things'. The Rotel/ B&W system managed to pull off a superb balancing act in making Chapman's vocals sound smooth and sibilant free yet still soulful and full of character, colour and texture. The system was equally good at projecting the vocals well forward of the rest of the mix – highlighting them without being overblown. Whilst the percussion lay behind Chapman's vocals it was still reproduced with precision, great timing and, again, not in an overblown or relentless way. An interesting quality that appeared with The Cardigans' 'Erase and Rewind' was that old Rotel characteristic of being able to pluck notes out of a seemingly inky blackness of pure silence. Of course, there is still some background noise but, in comparison to most rivals, noise levels are extremely low and testament to the high levels of engineering quality. When I'd reviewed the amplifier individually, I'd criticised its lack of edge or raffness. This time, however, it was not a criticism that I could level at the system. No doubt the 'speakers helped, but the excellent attack shown by the percussion was greatly above my expectations. The pulsing bass was also present, if not quite possessing the final degree of solidity needed to be utterly convincing. The well-projected vocals were forward but managed to stay on the right side of the mark, managing to still be arresting, just as they should with this song. Once again, this systems faithfulness to the original artist is one of its most impressive qualities.

The final disc, as usual, was a Classical one. Chabrier's, Suite Pastorale, isn't always as tame as it sounds, with plenty of scope to catch out napping components. Yes, the Rotel/B&W combo was one system that refused to be caught out. The metal tweeter gave delicate percussion a super level of decay and detail, yet it did also allow the strings to be not quite as smoothly portrayed as some may like. Certainly the Rotels are as smooth as they come, so if you were to find the string balance a little bright, then it is to the loudspeakers you should look. Otherwise, instrumental timbre was excellent. Other speakers may have had an advantage in terms of refinement, but when it comes to dynamic contrast and sheer cohesion they wouldn't get a look in. Dynamic, hard-hitting, yet fluent and tolerably refined when needed, just as with the other musical genres, this particular system made a pretty impressive case for itself. Yet even the best can often be improved...
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Claudio Checchi, Audio Review, Italy, July 2004

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CONCLUSION

I'd expected this system to perform well and, by and large, it exceeded expectations. Once wired up with the DNM cables and using the Atacama stands, I found the whole system just gelled. For an all in price of less than £1,400 it's difficult to see how you'd get more musical pleasure for your money. In terms of projection, timing, layering, and dynamic swings, this particular system leads the field at this price point. Bass, whilst not possessing the ultimate extension of larger floorstanders is at least tuneful and still powerful enough to convey large scale dynamic swings. The treble performance managed to get the balance between detail and transparency pretty much spot on. Yes, you could occasionally tell that the B&W's used a metal dome tweeter but, thanks to the refinement of the Rotels, any potential peakiness was balanced out. Perhaps most importantly of all, the Rotel/B&W system performed just as well with all types of music. From Trance to Classical, this combo will always give of its best - which is a rather more rare quality than you might imagine. Sonic compatibility is, of course, just one of the reasons, for buying a system. The other is aesthetics and whilst this will be of less importance to most readers here, it's still a relevant aspect. Whilst the Rotel combo isn't as neat as the Arcam Solo it doesn't exactly look ugly, and it will sound at least as good for less money (although a DAB radio's not included). The B&W's are a fine visual match, whilst this will be of less importance to most readers here, it's still a rare occurrence indeed!

For less than £1,400 it's one system that I can recommend without reservation - and as regular readers will know, that's a very rare occurrence indeed!

GROUP TEST

21
Changing TacT

Since 1998, TacT Audio products have been synonymous with state-of-the-art digital amplification and room correction receiving numerous awards worldwide.

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Hi-Fi World, June 2005

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Although tragically styled and appallingly finished ‘home made’ hi-fi separates with the ergonomics of a circuit breaker box might appeal to some, most prefer their hi-fi to look the part as well as sound it. Here, Channa Vithana assembles a system which does just that...

Remember the nineteen eighties? I do. There were some seriously cool looking bits of kit (Myst TMA, Naim NAIT, Onyx OA21, etc.) around, but some very dire ones too (names withheld to protect the guilty). In hi-fi terms, the upside of the decade was the sense of ‘minimalism’ it bought to product design – especially welcome after the excesses of the seventies. But there was also the downside, namely a rash (and that’s what it was) of British ‘cottage industry’ manufacturers offering appallingly built, wretchedly finished ‘audiophile’ separates – with safety standards literally ‘to die for’...

The nineties was not as distinctive a decade, stylistically speaking. We had the odd weird loudspeaker (Rogers dB101), a moment of madness from Arcam (remember the swoopy-fronted plastic Alpha series?) and a belated move away from black to silver. The best thing was that the cottage industry manufacturers died out [presumably having electrocuted themselves on the live rails of their own products – i.e. the casings – Ed.] and overall build got much better from UK plc. Cyrus introduced a classic diecast case design that still looks perfect ten years on and Meridian went wobbly after the glorious ergonomics and aesthetics of their seventies and eighties products. Ho hum.

Well, the good news is that now in the noughties, hi-fi has never looked better. If you’re trying to assemble a system that is genuinely capable sonically (i.e. an unadulterated audiophile product) and yet still looks striking, this is the decade to do it. Certain brands place far too much attention on aesthetics, and others far too little, but with this system you’ve got the best of both worlds...

**SOURCE**

Zero feedback isn’t recent technology, but is used extensively by Danish company Densen in their amplifiers, and also in the £1,350 B-400 Plus CD player - which has a 6watt class A zero feedback output stage [see box] no less! The B-400 Plus is furnished in Densen’s lavish, svelte aluminium case (finished in either black or ‘Albino’ silver). The casework exemplifies Densen’s approach in a minimalist understated style that disregards garish buttons, ugly monikers or flashing lighted logos. Indeed their logo/model number is confidently located on the top of the continuous L-shaped cover instead of being repeated or displayed at the front face.

The slim-line stance and elegant proportions really do strike a different chord to the bulky and clichéd norm of much of everyday hi-fi design. Build quality easily matches the design and the cleverness of the casework means that the fixing screws are located under the player. The Densen features two line outputs, digital DenLink, switchable BNC digital output, 24bit D/A converter and a customised Sony Transport with special glass laser. Vital statistics are 7.5kg and 444x 310x 64mm. All Densens, including the casework and electronics, are designed and built in Denmark. The Densen can be operated with a finely crafted extruded aluminium system remote called the Gizmo which is an option at £150. The Gizmo is a real pleasure to use as it can be operated from almost any angle and can control a whole Densen system.

**AMPLIFICATION**

Simaudio Ltd. from Canada started manufacturing hi-fi in 1980 and in 1997 began production of the Moon Audio series. Simaudio manufacture everything in-house that most competitors have to buy. This includes chassis parts, PCB assembly, and packaging materials. Moon has quite an extensive range which goes up to the 1000W/8ohm, 4000W/2ohm ‘Rock’ power amplifier at £35,000! The £1595 Moon i-3 integrated amplifier however is the company’s ‘entry level' component. It has a thick front plate (either silver or black) and finely crafted curved side heat sinks which give the Moon series its distinctive and visually attractive identity. Build quality is fantastic, while the simply laid out front panel has an excellent display which is clearly legible. There is a neat row of lozenge shaped buttons to the right for volume and input select. A small standby button situates in the centre below an eye-
GROUP TEST

SOUND QUALITY

There is something special about the way this system sounds. Violins, viola and cello were played with real verve as the Densen/ Moon/ Audiovector (i.e. DMA in abbreviation) system communicated to me the essential and enjoyable Balanescu Quartet trait of tight, disciplined yet emotionally engaging style in spades from the Nyman/Balanescu 'String Quartets' CD. The viola and cello came in beautifully to add expressive rhythmic order to the lower/mid frequency thrust while the violins were allowed to be really exciting without once defaulting into strident high frequency strain. I enjoy the way the Balanescu Quartet use the violin, cello and viola as almost sound effects within the main melodies as they pan from left to right and at no time did the DMA system miss a (violin, viola or cello) beat.

'Herzlich Tut Mich Verlangen' from the Bach Organ Masterpieces CD, was rendered deftly, enabling some rather nice low frequency notes to come forth and the good musical timing (and balance) ensured that these LF notes did not dominate the other higher up frequencies from the organ. 'Herzlich Tut Mich Verlangen' is quite a deep and darkly tinted recording which I find fascinating as it is slower paced and less bombastic than some of the other pieces on this CD. Thus the combination of the slower pace with the lower frequencies of the organ makes for a stunning end coda where the notes are left to linger for a few moments thus enveloping the room with a soothingly reverberant acoustic blanket. The measure of the DMA system is such that this end coda did not disintegrate into a subjectively distorted mess; rather it was like a warm, almost blissful rush as these notes held me in suspense!

Listening to the sleazy funk of Rick James was a delight on the DMA system. 'Give It To Me Baby', where all the instruments gelled with the vocals to sound entirely natural. The Audiovector MILs had a wonderful spatiality - no doubt due to their well ventilated rear tweeter port. Rick James provides another awesome and more famous bass line on 'Superfreak' which embarked with superb gusto and just got better as the song developed. The DMA system easily picked out the different vocal styles that Rick James uses to express a more lascivious tone when the lyrics of the song demanded it. Thus 'Superfreak' is transformed from being a great dance song with an over-familiar and much-sampled bass line into something more sexy.

Just like Rick James, The Balanescu Quartet and Bach, the elegant pop of 'Baker Man' by Laidback from the 'Trigger Happy TV' soundtrack also proved a delight as the DMA system allowed the gorgeously languid structure of this song to unravel some very nice arrangements. Both the lead and background vocals were deep, lush and enveloping. The eerie Swahili style chorus arrived and departed brilliantly throughout the song while the languid pace was not dealt into soporifics, rather just like the slow Bach piece before, the excellent musical timing made me take notice and ultimately enjoy the music. Blue Oyster Cult's (Don't Fear) The Reaper was as pleasurable as it was different to the other musical genres used earlier - as the dream-like vocals combined with the rhythms of the band brilliantly. The guitars weren't jarring either, sounding expressive and tuneful without going into subjective ringing colorations or distortion - which was especially pertinent on the explosive guitar solo in the middle. The DMA system's spatial ability was also welcome as it enhanced the epic harmony driven feel of the song.

CONCLUSION

The upgradeable Densen B-400 Plus CD player and Moon Audio i-3 Integrated amplifier are both
individually and stylishly designed pieces of hi-fi at relatively affordable prices. The Audiovector Mi1 loudspeakers are attractive, well built and carefully thought out designs that offer extensive upgradeability. As a system the Densen, Moon and Audiovector work hard for their listener, showing an at ease synergy that can play a wide variety of music keeping its respective musical identities intact yet offering an enticing, expressive (when present) and emotionally involving musicality. This system is an alluring (and unfortunately rare) exemplar of high-resolution and ultimately more rewarding sound quality. However some resolution of a higher quality DAC board. I have used the B-400 Plus in a high-end £6,000 Densen pre/power system which has a very attractive circular face plate and Audiovector P 2004 (Peerless) Bass/mid driver which uses an attractive metal basket chassis instead of the fibrous ABS type of the Mi1. The crossover is also changed to accommodate the higher quality drivers.

The Mi1 Signature has an attractively designed laminated front and rear baffle which are intended to stiffen the speaker and absorb energy from the rest of the cabinet structure. The laminated rear baffle is a work of moulded art and features mesh grilles over the large tweeter port and twin bass ports. The Mi1 Signature have the same quoted sensitivity and impedance as the standard Mi1s but measure slightly bigger 200x350x290mm, weigh more at 14kg, have narrower frequency response at 45Hz-25kHz and manage 160W power handling.

Is the Mi1 Signature worth the extra money for an upgrade? The answer is a resounding yes. They allowed a deeper and superior resolved acoustic with especially good timbral elucidation to instruments. The move to higher end speakers from the model below (hopefully) brings with it better resolution and ultimately more rewarding sound quality. However some expensive speaker designs can do this but strip away the musical and emotional involvement in the quest for higher fidelity. This is not so with the Mi1 Signatures as they do indeed reward the listener with a refined, higher resolution sound but to their credit manage an even more involving and exhilarating presentation with superior musical timing to the standard Mils.

Last but not least, the owners of the original Densen B-400 CD player can upgrade to the B-400 Plus for £300 while the B-400 Pus can itself be upgraded for £1250 to the current top of the range £2,500 B-400 XS CD player which features Densen's Plus Bit (25Bit!) technology through installation of a higher quality DAC board. I have used the B-400 Plus in a high-end £6,000 Densen pre/power system and it fits into this excited company with epic ease. I also have experience of the B-400 XS used in an £8,500 Dynavector pre power system with stunning results, which surely makes the case for the B-400 Plus all the more convincing.

TUNING
Audiovector customers can upgrade a particular speaker model range from base level to its highest incarnation. Thus the base £464 Mi1 in our review can be transformed into the £920 Mi1 Super, £1,320 Mi1 Signature or the £2,040 Mi1 Avantgarde! The customer pays approximately 15 percent of the upgrade price extra for this service and it is completed in about ten days. All the Si and Mi speakers can be further upgraded to active status using the Audiovector Avox modular electronic crossover. Audiovector has supplied us with the £1,320 Mi1 Signature finished in cherry for comparison. It is pretty much a new speaker compared to the base Mi1 as only the particle board cabinet remains.

The Mi1 Signature has a higher quality Evotech LCC tweeter (Peerless) which has a very attractive circular face plate and Audiovector P 2004 (Peerless) Bass/mid driver which uses an attractive metal basket chassis instead of the fibrous ABS type of the Mi1. The crossover is also changed to accommodate the higher quality drivers.

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GROUP TEST

ZERO FEEDBACK
Densen says that feedback in hi-fi, "is used to compare the (signal) input with the (signal) output, and for adjusting the input so that the output is exactly the same as the input. In this way, at least in theory, the amplifier itself has no influence on the signal, as these influences will be adjusted away. However the signal always takes some time to pass through the amplifier stages, therefore the comparison of input and output is not the comparison of exactly the same signal. Consequently feedback, no matter to what degree, alters the signal and the result is that dynamics will be compressed, micro details compensated away, details smeared, soundstage altered, speed slowed down, transparency smeared and so on. Naturally, you will not have these problems with a zero-feedback design. However, the reason all hi-fi designs are made this way is that without feedback it can be difficult to design and thus using zero feedback, the basic design must be (far superior) than feedback designs (to begin with), as the amplifier will otherwise not be stable. The combination of a better basic design and the zero-feedback technology results in extreme dynamics, detail level, amount of micro details, perfect soundstage, transfer speed, transparency and a wide open sound.”

MUSIC
Nyman / Balanescu Quartet 'String Quartets 1-3' (1991 / 2002)
Rick James 'Street Songs, Deluxe Edition' (1981 / 2001)
Trigger Happy TV 'Soundtrack To Series 2' (2001)
Blue Oyster Cult 'Agents Of Fortune' (1976 / 2001)
Hi-Fi World gives you the chance to win one of the very best headphones in the world, in the shape of Stax's SRS-4040 Signature System II electrostatic earspeakers. Here's what editor David Price said about them in our August 2005 issue:

"Stax only makes headphones — and they are supremely comfortable. They weigh just 295g plus cable, which is a brilliant 'wearability' enhancer... The SRM-606s Driver Unit's champagne gold front panel boasts a dual-gang volume control to the right, with one power On/Off switch and two input switches to the left. Immediately underneath are three five-pin earspeaker outputs. Round the back, there are two pairs of RCA ins, a ground, one pair of outs and one pair of XLR ins, plus the usual IEC power input. The SRM-006s now features a Class A tube output stage (6FQ7/6CG7) working with a low noise dual FET input, the amplifier using pure balanced DC configuration. It gives 60dB of gain with 300V R.M.S. (1kHz) output voltage for the electrostatic panels of the earspeakers.

As you might expect, the 4040 package doesn't sound like any other headphone. There are obvious reasons for this; electrostatic panels have super fast response times (due to the lightness of the diaphragms), in the 404s they are very well implemented... In a nutshell, these are the cleanest sounding headphones I've ever heard... the Staxes are very natural. Of course they're precise, but don't confuse precision with dispassion. The Staxes play what comes into that little amp box with eerie insight, as if a grimy window has been forced open to reveal the bright, brilliant sunlight outside. It is utterly addictive and compellingly enjoyable. All of a sudden, you've got this magical shortcut to your favourite recordings, and you start attacking your record or CD collection in earnest. The brilliance of the Stax 4040 package is that despite the sharp relief it throws on the deficiencies of your power amp and loudspeakers (rendering them irrelevant at a stroke), it is never punishingly analytical. You never feel discomfort, or the sense that you're listening to the music because you want to hear all that new detail. Rather, despite that incredible technical insight, you listen because you want to get into the music. Like the record label of the same name, the Staxes have soul... You need to spend at least £10,000 to buy a power amp and speakers capable of similar musical insight."

If you'd like to win them, just answer the following four easy questions on a postcard and send your entries by 31st August 2005 to:

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Arcam has spent more than a generation building some of the finest high-fidelity products the world has ever seen. Whether you're interested in two-channel or a complete multi-channel AV system, the Arcam DiVA series offers the music and movie lover the most complete range of high-performance home entertainment solutions from any specialist manufacturer.

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If you've enjoyed listening to music before, try listening to it through a Cyrus system. With every product tuned by ear, Cyrus represents a quality of sound, which is rare at any price. Invest in a Cyrus system and you'll be rewarded with a wealth of sound you wouldn't have thought possible.

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Project is currently one of the world's leading suppliers of turntables, with a range of models designed to satisfy all levels of expectation and budget. The range is simple to use, maintenance free and will function for a lifetime.

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Contemporary hi-fi is constantly setting new standards in sound reproduction and design. Whatever you listen to, be it Robbie Williams or Rachmaninov, Sevenoaks can recommend separate components that will bring your music collection to life and complement your home. We're enthusiasts and experts, passionate about helping you build (or upgrade) a system that will delight for years to come.

Rotel

Rotel is truly unique: a family-owned, specialist Japanese company whose passionate interest in music led them to manufacture audio components of uncompromised quality. The 02 Series is Rotel's entry-level range. The RCD-02 CD player combined with either an RA-01, RA-02 or RA-03 integrated amplifier represents true audiophile performance at an affordable price. For increased high-end performance, the RC 03/RA-3 pre/power amplifiers are available. The RT-02 tuner completes the range.

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REVIEW

To The Max

You'll have to look really hard to find a company better at tuning hi-fi products than Townshend Audio. Channa Vithana reviews this, the latest high end TA565 DVD universal player, itself a heavily modified Pioneer machine...

While most other high end audio manufacturers put an off-the-shelf transport, DAC, digital filter and analogue output stage together in their own box with a bespoke power supply, Townshend let somebody else do all that, and then take the lid off and start modifying the finished product.

It's no surprise that the £2,995 TA565 CD is a several-generations-old Pioneer budget machine. Max Townshend makes no bones about this, saying he chose it because it's the last Pioneer to have a fully discrete SACD section (that doesn't simply transcode DSD to PCM, rather keeping it separate all the way home). But then the fun starts, and the humble Pioneer gets a makeover the like of which 'Grand Designs' has never seen...

First is its Seismic Sink suspension, similar to that employed in the new Versatile Seismic Sink Stand (VSSS) in that it employs four highly compliant spring units in each of the four corners. The TA565 CD features conical springs in compression whereas the VSSS suspension uses tensioned polymer modules. Next is the comprehensively filtered DC supply for the crucial analogue and digital circuits, and then there's the piece de resistance. Townshend's own transformer analogue output stage to do the current to voltage conversion. Townshend also omit the Pioneer op-amp and filter used in the front left and right channels.

The bottom case contains the new power supply transformers and Townshend Audio also employs a special new DCT to all the printed circuit boards and all the wire, including especially the 100 metres of wire in each transformer. They use an 'enhanced Deep Cryogenic Treatment (EDCT™)' which can only be applied to components which can endure extreme heating as well as extreme cooling. Townshend Audio says this treatment is far superior to the common DCT cooling only process, and cannot be used on finished cables or assemblies as the plastic materials would all melt.

The TA 565 CD uses a stainless steel outer casing which comes in black 'crinkle' or plain brushed finishes. For £3,600, the TA 565 CD can be specified with a polished mirror stainless steel finish matching Townshend Audio's £14,000 floorstanding Glastonbury (GII) speakers. At the rear panel of the player (on top) there are the standard sockets for digital and analogue 5.1 connections along with new high quality phono output sockets connected to the transformer stages. Additionally there is a very good video on/off switch, then - DIN DC power supply input, figure eight AC input, remote control link and S-Video out. The bottom box has the DIN DC out socket to connect to the main player above with DIN to DIN cable, IEC power input and AC output.

SOUND QUALITY

With 'Blitzkrieg Bop' from 1976 on the Ramones CD, the Townshend produced beautifully timed music in a manner that wasn't just related to the sheer addition of speed. Rather the Ramones' punk-pop slant was delivered with dynamism and control. It wasn't stripped of emotion to end up sounding like lame speeded-up pub rock as some rougher punk recordings can sound. Rather the vocals were handled very well, being clear and well defined while the music as a whole was exhilarating with nicely tuneful with unreserved bass — just as the Ramones should sound. 1981's 'She's
present at the wilfully low volume setting I chose. There wasn’t a hint of smear that can afflict some digital sources either, while the dynamic swings and emotional impact of the orchestrations or percussion were left intact. As the piece builds, it changes tempo slightly and adds newer textural melodies which the Townshend conveyed with an appropriately deep and brooding sonic vista.

The seventeenth century Swedish organ on ‘Cantina Belgica’ from the Naoko Imai CD was gorgeously reproduced through the Townshend without any discernible coloration that can occasionally blight organ recordings when the more demanding notes are reached. Instead the Townshend just created a completely believable acoustic from the solo organ playing of Naoko Imai. It was, subjectively, both a high-resolution and low-distortion sound that had huge dynamic range. The Townshend was able to discern the vibrancy of ‘Ride Across The River’ where the keyboard melody was a delight while the bass was convincingly tuneful and deep.

‘Dead And Bloated’ from the Stone Temple Pilots DVD-A was surprisingly good, with huge dynamics, clear vocal intonations and wonderful electronic guitar timbre. I could not discern any harshness or glare through the Townshend; instead one could revel in the melodic but abrasive guitar rock of the Stone Temple Pilots at both higher and lower than normal volume settings without any ringing distortions. The powerful oscillating guitar melodies on ‘Sex Type Thing’ were stunning through the Townshend where the instruments timed beautifully allowing Scott Weiland’s distinctive and dynamic vocals which can go from gutturial lows to higher pitched wails to shine brilliantly.

So how does the Townshend compare in sound quality terms with the similarly priced Onkyo DV-SP1000E Universal Player (£2,800), which has become something of a hi-res reference for me of late? The Onkyo preferred to concentrate on a more internalised musical formation in comparison, while the Townshend was subjectively quieter and had more headroom. As a result the Onkyo had an upfront immediacy and thus instantly sounded more engaging, and it did have better bass extension - if not bass tunefulness - in comparison. The Onkyo favoured a slight midband stance while the Townshend simply opened up the music and excelled dynamically. To my tastes, the dramatic soundingTownshend was better overall, although many would take the
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Onkyo’s analysis – not to mention its far superior build and finish.

CONCLUSION
The Townshend was an utterly enjoyable listen and for its musical ability I can heartily recommend it. It was stunning in most aspects, and while not the world’s supreme CD player still wasn’t far off the pace of the very best – it is certainly one of the finest universal players in production. The only thing that could be improved is the build quality, which while robust does not compare to the super-slick assembly and functionality of the £2,800 Onkyo DV-SP1000E or £2,995 Linn Unidisk SC for instance. The Townshend’s S-video connection is entirely fine by me, as I have no complaints at all about its video quality. However others may be turned on by a player like the Onkyo with its more up to date video connectivity (such as HDMI and DVI). Nevertheless, Max Townshend points out how the highest fidelity in the DVD video soundtrack can dramatically enhance the whole visual experience, and he’s not wrong. Most importantly for Hi-Fi World magazine, the Townshend TA565 CD is an exceedingly musical hi-fi source component.

THE EDITOR SAYS:
Hearing high end hi res (DVD universal) players can be much of a muchness. They’re all unfailingly even, detailed, smooth and tidy in presentation, with a good deal of dynamics and speed – but the Townshend 565 CD is something else altogether. Take Onkyo’s DV-SP9000E as a case in point – it’s about as good as you’ll get from an all-purpose universal machine, quite frankly. It just does everything so professionally, and makes a great case for never spending any more money on any other disc player. But try the Townshend and suddenly you realise what you’re missing: massive dynamic headroom, tremendous speed and – what really sets this apart from everything from Naim’s DVD-5 to Linn’s Unidisk SC – amazing tonal colour. It’s not coloured per se, but rather it doesn’t refract the music through a ‘grey filter’ like almost every other universal machine (admittedly the Onkyo’s isn’t grey, it’s more champagne gold!) around. The TA 565 CD has the same gloriously wide tonal palette that makes the Sugden A215E Class A integrated amplifier so special – and this, along with the speed and dynamic articulation – is what makes it so special with SACD and DVD-Audio. This, I think, can only be down to those unique analogue audio output transformers. Its CD abilities are also excellent, but don’t hold up to Naim’s DVD-5 in terms of speed and grip, for example. I suppose you could say it’s not as impressive on CD, although in truth I think it’s more a case of being so clean that it lets hi res truly tear off into the distance. Downsides: well it lacks the Onkyo’s strong and muscular bass, and almost pedantic obsession with low level detail, and boy could it be better finished. I’ve only seen the crackle black finish, which looked a tad agricultural – but if the chrome finish of my Townshend Audio Maximum Super tweeters is anything to go by, hopefully this needn’t be an issue. DP

THE REVIEW

MEASURED PERFORMANCE

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- radical transformer output stage
- Seismic Sink suspension

AGAINST
- build and finish

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Balanced Thinking

Noel Keywood has an interesting and unusual hi-fi tweak that’s both dramatically effective and reasonably priced, in the shape of a transformer-coupled balanced AC mains supply.

Straight from your local building site comes this idea for improving your hi-fi - and it isn’t a slab of concrete to put under the turntable. Up one level in building site technology is the site safety transformer, on display in your local HSS hire shop as a big, yellow box with shuttered outlets. Inside lies a special transformer. It steps 230V mains down to 110V and has a centre tapped secondary. The idea isn’t to get a purer sound from a Kango hammer, so much as to deliver no more than 55V or so relative to ground to avoid shock, even in the wet.

Improving safety isn’t much of a priority in domestic hi-fi as it’s safe enough, but this idea, albeit in different form, has other advantages. By reducing ground currents and noise it reputedly can improve the sound of a hi-fi system quite dramatically. But like all things hi-fi, there are those who talk it up and those who pooh-pooh the idea. The theory seemed sound enough to me, all the same, and at worst I could only blow up the television, computer and hi-fi all at once, so I picked up the telephone to order a transformer...

The idea of balancing the mains to reduce noise, hum and various ills in professional sound equipment - especially studios - isn’t new, but so far it isn’t an idea that’s gained traction. If you want to read more, just take a look at http://www.equitech.com/, a U.S. company that specialises in supplying balanced power. They use toroidal transformers, however, about which I have great reservations. We ditched toroidals in World Audio Design amps some time ago, taking good advice to go back to proper frame transformers (AKA EIIs) for best results. They’re heavier and more expensive, but do the job better. I’m no transformer expert though and was prepared to take the advice of our transformer company, who not only wind fantastic audio transformers, but also happen to specialise in big power transformers, which are another area altogether.

You can see what they came up with in the picture - lovely isn’t it? I should point out that this 35kg block of iron - a two man lift - isn’t identical to a site transformer. It is similar in having a centre tapped secondary, which gives 125V relative to ground from a 250V supply, so it improves safety, but that is a side issue here. Site transformers step down the voltage; this one does not. It has a 250V output. It is also constructed specially to give a performance appropriate to its particular task, which means isolating the hi-fi from mains-borne noise as well as giving it a fully balanced supply, the two being different. What I wanted to know is, would it improve the hi-fi, or blow it up?

SAFE HOUSE?

Perhaps this idea hasn’t gained traction because it seems risky. This is ironic because it is in principle safer, but neither I nor experts at the Institution of Electrical Engineers, responsible for our Electrical Wiring and Safety Regulations, could be at all sure how items connected up to a centre tapped mains supply would respond. I asked them and they suggested any items connected should be 'suitable'. Er, yes, quite. Since the live and neutral wires of our mains supply are always treated as being live, even though neutral (blue) is earthed, it should all work well. Smoke would only appear if there was any ground referencing in the primary circuit, which there never is (I told myself)...

Building valve amplifiers has equipped me with a healthy fear of the mains and high voltages. Worse, for this project I realised I would...
How it works: the mains enters from left in this diagram, via usual Live and Neutral wires. The secondary winding, at right, delivers 250V out, but it is centre tapped to ground. This gives a balanced output that cancels ground currents, measurement shows.

have to connect a spectrum analyser to the mains, something that would produce a very expensive puff of smoke if I got it wrong. My best friend and defence in situations like this is a large variable voltage transformer (Variac) capable of delivering 4amps. With this I could wind up the volts slowly and watch or smell for signs of distress, a precaution I routinely take with prototype valve amps.

The big question was: would a balanced mains supply evaporate the hi-fi, TV and computer? Initially, I gingerly wound up the Variac, praying that I wouldn’t be greeted by that nasty burning smell you get from tortured electrical devices as they expire - but nothing happened. The Philips TV came on normally, the hi-fi had no problem with it and a whole bench of test equipment fired up and ran perfectly. Sure enough, a voltmeter showed just 125V relative to ground on live and neutral, but in spite of this complete rearrangement of working conditions everything worked perfectly. A Mac Mini computer and a home brew PC (switch mode supplies) were happy too, as were all its peripherals, like disc drives and what have you. A popped back up on the router’s DHCP Client Table, working properly. So it had survived too.

The transformer manufacturers asked me to run their beastie flat out to check voltage droop, and core and copper losses. It was specified to have superb regulation and run cool (much less than 130 degrees C) under full load, so I ran two electric fires and a hi-fi system from it for hours, drawing a full load of 10A, without the windings getting anything other than warm. The core gets quite hot though (I would guess 50-60 degrees), even with no load, because the primary is low impedance. This has to be accepted, since increasing turns would have run the core cooler at the expense of regulation. We used good grade laminations; top grade would have reduced core losses and heat a little - about 20% - at increased cost.

I could say this was a real industrial grade transformer; but it wasn’t - it was higher than that. It was audio grade, as the designer knew I wanted top dollar regulation, conservative core temperature, good lamination quality, and heavy gauge copper windings to minimise full load heating. He chose a twin bobbin arrangement to give loose mains coupling, in order to minimise noise and interference transmission. You can see this construction in the picture. Transformers are normally wound coaxially, one winding on top of the other, giving tight coupling. Separate bobbins gives more room for heavy copper windings, with lower heat retention and better regulation. This was an audio special that performs better than would normally be considered necessary, and far better than industrial grade - we don’t want any of that!

**SOUND TRANSFORMATION?**

At first, having got everything fired up I was slightly puzzled. There seemed to be a subtle cleaning and clearing of the sound, but with LP it wasn’t great, although that is not to say not useful. I then realised that the record playing equipment I was using wasn’t likely to be so affected by the reduction in mains related earthing currents and such like as modern solid-state equipment, something that measurement confirmed with surprising certainty. A Denon DVD-2900 player I use showed exactly the same benefit with CD, but to a greater degree. I should be excited, but it brought an added depth to the sound stage here that moved it up dangerously close to an Ortofon Kontrapunkt moving coil cartridge, albeit running through a lower quality phonostage.

After a while I felt that benefits were certainly there and worth having too; it was akin to using a good preamplifier. The extra sense of depth and space with CD were subtle but persuasive. I felt at this point that the improvement wasn’t as large as I’d hoped for, but suspected they were likely to be equipment related and, possibly, the items I was using weren’t efficient in their power supplies. Subsequent measurement provided some interesting support for this view.

A balanced mains supply is meant to reduce earth currents, and the multifarious problems they cause. A lot of us are blamed on earth currents, as both design and studio engineers know from bitter experience that all their best hopes and efforts can be dashed by unaccounted for earthing problems. Let’s just say that earth currents are the bane of good audio, as tech talk on all this is endless, as well as abstruse. Prodding around the system with a spectrum analyser I noted that my mains supply was delivering 250V, with 4% distortion, predominantly fifth order due to current draw at peaks by equipment outside my home, so I switched everything off before measurement. An extended harmonic structure looked much like...
digital distortion. Switching on an entire hi-fi system did not change this one bit, with or without the transformer in circuit. This surprised me a little; I expected some small change, but I do have a stiff supply, as all house cables and the street supply are relatively new, and a low impedance supply will be resistant to change (i.e. have good regulation).

But as a balanced supply is meant to affect earth currents, perhaps I was looking in the wrong place. Consequently, I inserted a 4 ohm resistor in the earth line on a system and connected the analyser across this to sense earth currents, with and without the transformer. The result was fascinating In conventional unbalanced mode I measured a paltry 100uV across it, at 50Hz, with everything blazing away. This is hardly large; I had expected at least a few millivolts, or ten times as much. But things were to get a little interesting. I switched off my WAD 300B valve amplifier and the figure dropped just 2uV or so, where I had expected it to collapse, because valve amps draw current. It proved to be my Denon DVD-2900 and Aqvox phono stage were contributing most to the earth current flowing, I presume due to earth leakage in their mains transformers. Whilst we’ve always used the best transformers possible in WAD valve amps I didn’t quite expect my venerable 300B to produce virtually no earth current, as it’s mains transformer produces massive H.T. voltages and large heater currents, raising the likelihood of large earth currents, at least, larger than you’d expect from a DVD player. So this matter of earth current isn’t quite what you might expect, suggesting the results you get going balanced will be varied and difficult to predict. But what of balanced power?

This was even more surprising; the earth current disappeared almost completely when the balanced transformer was put in circuit, measuring a miniscule 5uV across the 4 ohm resistor. Now, switching on the Denon and Aqvox had no affect, the figure stayed resolutely at 5uV no matter what I switched on or off. I was expecting the TV to be a sinner, but it wasn’t, which perhaps explains why balancing did not appear to improve picture quality, as is often stated.

Quite obviously, balancing does alter earth current behaviour quite dramatically, virtually eliminating earth currents completely it seems. In my set-up, the currents were very small, but I suppose they should be. The corollary here is that in any set-up with large earth leakage currents, for whatever reason, installing a balanced supply is going to have a large affect. So whilst what I heard was subtle but useful, especially with CD, others might gain much more. Perhaps this is why balanced power is often seen as a magic bullet, capable of curing the most intrinsigent audio ills.

I did ask the manufacturers what sort of tranny would be needed to power a house, typically drawing 60A at full trot, but was told it would need a crane. A large hi-fi and TV will likely draw 4A, or thereabouts, and a transformer of this rating (1kVA) is liftable and not too large. My little monster is a reviewer’s special, proportioned to avoid limitation. I will continue to run my system from it, but as it draws 150W or so at no load, it will be switched off when not in use; there are disadvantages too.

I intend to run two test benches from balanced supplies, as here is an area where miniscule voltages and currents are commonplace, making stray leakage currents strictly unwanted. But the reason balancing is becoming an issue in testing is because 24bit resolution digital audio demands ultra low noise, in theory down to 0.12uV if a full 144dB is to be realised. This is a little academic perhaps, but all the same it explains what’s driving the idea of balancing in audio - including the mains supply. Soon, perhaps, something resembling a site transformer will become common in the home, as a balanced supply is a good way to run a hi-fi, as well as a Kango.
However much you lavish on hi-fi hardware, the ultimate determinant of how well your system performs is how it interfaces with your listening room. The good news is that it's not all down to random chance, and that rooms with 'bad acoustics' can be coaxed into sounding far better with relatively little expense — if you know what you're doing. Noel Heywood does, and here he explains all...

Of all the tune up solutions available for a hi-fi system, sorting out the room acoustics is one of the most important in my view. It's also one of the most satisfying, because you end up with a nicely furnished room with a lovely acoustic. It's audible when you walk in and put a cup down; there's a peaceful hush and the chinking of the cup seemingly doesn't disturb it. Draw the curtains and sit down on what should be a generously proportioned settee, and the silence is almost intense. Put on the hi-fi and it'll sound sweet and detailed, as well as precise in terms of timing.

Sorting the room is something I am obliged to do before using or assessing any hi-fi system and, to be frank, I have become so aware of the mess a poor room makes of a good system, I find myself unable to listen in an untreated room. Luckily, I have learnt that applying the necessary basic treatments is neither difficult nor expensive - in fact it's cheap. You can tune up your room sometimes just by moving a bookcase or two, buying a set of heavy, well lined quality curtains or, possibly, an acoustic panel or two at a cost of £30 apiece. The improvements you can make are not small; they are large and immediately obvious. In fact, although I use a measuring microphone and spectrum analyser, I rely more on my ears for this process, plus a few simple tricks like clapping my hands and listening to the decay, and moving my head around whilst listening to the hi-fi to detect phase problems caused by unwanted reflections.

There's no need to worry too much about the theory that's always bandied around on this subject, but I should explain what you can and can't do, and why. And also what you should try to do, and why. Room dimensions affect bass quality and there's not much you can do here without calling in the builders. But I will cover this simply, all the same, since poor bass isn't untreatable. My main concern is with wall, floor and ceiling reflections that confuse the sound (a time domain problem), add a lot of obvious distortion (an amplitude domain problem) and rob a system of its basic cleanliness and smoothness, adding a coarseness that can be intrusive to the point of dominant. Then there's the sheer muddle you get from time delayed rubbish coming in late to overwhelm fine detail within the music; your ears and brain may struggle attempting to sort it all out.

There's no need to cover side walls completely to tame them. In theory, you need to put either a sound absorbing panel, or possibly a

"it's uncanny how much of a mess a poor room makes of a good system..."
FEATURE

treatment

...diffuser, at just one point. In practice I find one Auralex Studiofoam Pyramid panel, measuring 2ft x 4ft x 100mm deep, is enough to tame side wall reflections, and at £30 apiece from StudioSpares this amounts to just £60. If you have hard side walls, this is a simple and obviously effective solution from which you will plainly hear improvement. I mount these foam panels on thin MDF panels from Homebase, using double sided tape, and hang them from the picture rails. Best to make them light and movable, as you may need to experiment.

As an alternative to panels like this, you could move into position a bookcase, full of books to act as diffusers, or you could hang curtains, or rugs. I also use curtains and rugs, but two absorbers do most of the job in a controlled fashion.

Floor reflections are best absorbed by carpet. If you have a hard wood floor - popular nowadays made into a combined diffusor and light unit, to replace the standard pendant lamp. Visually, this moves the ceiling up, making it seem higher.

If you have large areas of glass, which can reflect a lot of sound, heavy curtains are the best solution. Here things can get a little more difficult, as well as expensive. Really heavy curtains need a rigid metal rail if they are to draw properly. I spent a day putting up a standard plastic rail, 14ft long, and had to take it down; the runners and rail distorted under the weight of the curtains. Bending a metal rail into place around a large bay isn’t easy. In another room I have a batten along the ceiling to avoid this problem; it gives a straight run and all works well.

To act as acoustic absorbers, curtains need to be thick and generous in the amount of material used, the rule of thumb being the curtains must be twice as wide as the window, which in my case meant 28ft of curtaing. Complete with

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definitive audio

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be absorbed or diffused to prevent comb filtering. Of the two I find diffusion gives a livelier sound; heavy rear absorbers can make the sound go almost dead, as in an anechoic chamber. However, this sort of thing can be situation dependent, so it is always worth experimenting. Again, mount rear diffuser panels on a light backing that can be moved. Cover it with a light fabric that matches the furniture.

Taming reflections in this fashion will sort out your hi-fi wonderfully, giving a superb sound. Most systems sound intrinsically a lot better than their owners people realise, including even the manufacturers, believe it or not, since comprehensively treated rooms that are at the same time representative of typical UK listening conditions are rare in hi-fi companies. Room acoustics is a subject few want to get involved in and over-treated rooms, with odd shapes, sloping ceilings and what have you generally sound weird, because they are weird. We are used to a certain sound balance and UK loudspeakers are, broadly speaking, tuned to work with UK rooms, not with funny acoustic concoctions. By the way, American homes are generally a lot larger than ours and really demand a different type of approach altogether. It is only 'small', hard surfaced rooms that have a deep reflection problem.

THE LOW DOWN
Down at the bass end it's more difficult to tame a room that's misbehaving. There's far more energy to absorb, especially in a room's 'standing waves', as set by the basic room dimensions. As a room gets smaller, it's basic resonant modes rise in frequency and become more obvious to the ear. They also become less well damped and can sound quite lively. If we take 40Hz as the lowest frequency a room should support fully, the largest dimension can be no less than 13ft 6in. Taking into account modal gain, around 12ft is acceptable. Much smaller than this a room will sound very 'modal', or resonant, even if its modes are well spaced in classic 1:1.25:1.6 ratio, or the Golden Ratio. Whatever, the ratio, modern low ceilings, at 8ft or less will produce a mode at 70Hz or higher, at which frequency it is plainly audible. There's not a lot you can do about this, short of moving out...

What to do with a small room? There's an almost impossible conflict of requirements to resolve here, as you haven't got the space to house the absorbers you may need.

However, I have found tall, fully loaded bookcases (ikea) in corners have quite an effect, as do well upholstered settees. Bear in mind that the foam used in settees is similar to that used in acoustic bass traps, so whilst the missus might be eyeing a big settee in DFS, you may alternatively see it as a great bass trap! I said earlier that all this need not cost too much. If a monster from DFS or World of Leather seems contradictory, check out Sofas and Settees on e-bay. With an astonishing 1,900 items listed you can get Harrods finest here for pocket money, providing you have a panache to collect it.

Talking of bass traps you have to think big to absorb energy and most commercial types are too small to have much effect I have found. For example, a big Bass Trap I have, comprising 3.33kgs of foam weighing 3.33kgs, cost £90 from StudioSpares, has little effect, as do a set of corner traps. Bookcases are better. And be prepared to use small loudspeakers in a small room, not just because they consume less valuable space, but also because they excite a room's modes less.

Whilst you can pressure drive a room below its lowest natural frequency with a subwoofer, forcing it to go as low as you wish in theory, quality is usually mediocre.

Medium size rooms, up to about 18ft in the longest dimension, are easier to tame. Move loudspeakers away from walls and corners to drive the room less. You need to experiment to get the right balance here; there are no hard and fast rules. Use bookcases and settees to absorb bass boom. Sitting away from a wall will reduce the sound pressure maximum it supports due to its modal influence.

Large rooms do not usually boom, as their modes - ignoring the ceiling - are usually at such a low frequency they are difficult to excite. They are also better damped. The problem here is more likely to be one of insufficient bass unless large loudspeakers are used to pump in low frequency energy. This is what big floorstanders with multiple bass units are for. If you don't have a big room, beware that they will over drive a small or medium sized room, likely sounding bass heavy and boomy.

JOB WELL DONE
Room tuning can be cheap - you don't have to buy a new home. Just use a bit of ingenuity to hide a pair of Studiofoam panels behind an attractive fabric and you may end up spending just £60 or so for a great improvement. Move a few bookcases into the right position and things will get even better. New curtains? Just what the acoustician ordered. And a big comfy group of settees will finish it all off. It's a great way to get fantastic sound quality in a room you'll love to listen in and in my view there is one of the best ways you could ever do.
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BRADSHAW ISOLATION PLATFORM £90
There’s nothing new behind the idea of an isolation platform – the breed has been around since the eighties. However, the use of materials has progressed beyond the simple expedient of screwing spikes into Medium Density Fibreboard, and we’re now seeing all sorts of elaborate materials being offered.
Acrylic is one such type, and it has a very good and proven track record – not least because Michell Engineering has been using it extensively in its turntable bases (nee plinths) and dustcovers for twenty five years now.
Acrylic (or Perspex as it is called) is actually an excellent damping material – it’s very dead and devoid of ringing, something you can’t say for any metal and even many types of wood. Trouble is that it’s very expensive and tricky to machine, so the cost is often prohibitive.
However, the Bradshaw Isolation Platform offers stunning value for money. Just £90 buys you a 450x350x400mm 20mm thick clear Acrylic base (sizes up to 450x300x600mm are also available) complete with brass spikes. The finish is superb, and the platform looks exquisite, especially with ‘skeletal’ decks such as the Michell GyroDec SE (shown). Better still, the sound is obviously improved. It’s a subtle but thorough positive transformation, one of the simplest and most effective being to place each component on a half inflated bicycle inner tube. This shows how the pressed steel and/ or alloy casing of most hi-fi separates acts as large resonator boxes, shaking the microphonic electronic components and thus colouring the sound. The inner tube damps most of this out, transforming the sonics – but the trouble is, it’s not exactly the most domestically acceptable solution! Foculpods are an excellent, affordable compromise. They look good and work extremely well. The effect is also cumulative, so the more components you isolate, the better the sound. Made from a sticky, rubbery compound, they come in five differing weights. Getting the right grade is key for best results.
Vibrapods are easy to set up, and there’s good advice on the website – we got best results by bypassing the equipment’s own feet. Placed under a standard CD player some ten years ago. Densen state the DVD Magic is a DeMagic in 5.1 digital surround and it, “cleans the entire signal path for magnetism which has been built up during playback. This magnetism results in magnetically induced distortion (MID), which degrades the audio signal. The DVD Magic sends a series of complex algorithm signals to the DVD player, then select the main menu. Once the DVD has been demagnetising process within its player”. The DVDMagic also contains further information on the demagnetising process within its main menu. Once the DVD has been placed in the DVD player, then select DVD Magic playback and allow it to

VIBRAPODS £22/4
The importance of isolation cannot be understated. It’s not a niche issue for serial tweakers, it’s the beginning and end of whether your hi-fi’s going to sound as it should. There are no small number of ways of isolating your equipment from air and structure-borne vibrations, one of the simplest and most effective being to place each component on a half inflated bicycle inner tube. This shows how the pressed steel and/ or alloy casing of most hi-fi separates acts as large resonator boxes, shaking the microphonic electronic components and thus colouring the sound. The inner tube damps most of this out, transforming the sonics – but the trouble is, it’s not exactly the most domestically acceptable solution! Foculpods are an excellent, affordable compromise. They look good and work extremely well. The effect is also cumulative, so the more components you isolate, the better the sound. Made from a sticky, rubbery compound, they come in five differing weights. Getting the right grade is key for best results.
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DENSEN DVDMAGIC £20
This new wonder disc is based on Densen’s successful 100,000-selling DeMagic. It is intended to make the same difference for audio in DVD players as the DeMagic did for standard CD players some ten years ago. Densen state the DVD Magic is a DeMagic in S.1 digital surround and it, “cleans the entire signal path for magnetism which has been built up during playback. This magnetism results in magnetically induced distortion (MID), which degrades the audio signal. The DVD Magic sends a series of complex algorithm signals through your system which removes MID”. Densen also says the DVD Magic can be used to “break-in new equipment by repeating the demagnetising track continuously for cables, amplifiers, speakers and DVD player”. The DVD Magic also contains further information on the demagnetising process within its main menu. Once the DVD has been placed in the DVD player, then select DVD Magic playback and allow it to

David Price looks at some great ways to seriously raise your system’s sound quality without breaking the bank...
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run its process at normal or low volume, which takes about three minutes and repeat as necessary. The difference through the amplifier settings showed the music had become quieter meaning that the subjective dynamic range had increased thus enabling higher volumes to be used comfortably. The music becomes focussed, clear and could handle difficult crescendos with authority and less subjective distortion. The definition of music improved as a whole and then into details, for instance the DVDMagic was able to make bass lines in particular less flabby with superior timbral qualities, while the treble gained in resolution and control. The overall effect of the DVDMagic was a discernable improvement without stifling or highlighting any one part of the music tested. For £20 the DVDMagic is great value and highly recommended for improved sound quality and as a tool for breaking-in new hi-fi.

CONTACT: Densen
+45 75 18 12 14 www.densen.com

**MICHELL ENGINEERING CARTRIDGE MOUNTING KIT £7**

Never let it be said that getting the best from a turntable is easy. In fact, it's a fiddly and fraught process that – whilst not technically insurmountable by any means – can be a downright pain. The essentials, of course, revolve around isolation, placement and suspension bounce, but then there's the small matter of setting up the arm and aligning the cartridge. But even if you get every last detail right, from your belt tension to your vertical tracking angle, if the cartridge is not tightened up properly in the headshell, it all goes to waste. It's amazing the difference that final turn can make – the sound goes from vague to vivid, ponderous to powerful, dull to dynamic. Trouble is, most mounting hardware supplied with cartridges (even illustrious names, from Shure to Ortofon) is woefully inadequate for the job of gripping the cartridge body to the headshell. The result is that thousands of pounds of fancy vinyl hardware goes to waste… This affordable and excellent quality kit from Michell Engineering Contains two 10mm and two 16mm long stainless steel Allen bolts, washers, nuts and an Allen key. They're easily strong enough to clamp cartridge and arm together like there's no tomorrow – in fact, a word of warning: you'll be able to crack most cartridge bodies and/or headshells if you're not careful. So the trick is to tighten the nuts hard, but as soon as you sense that you're applying too much torque (i.e. lots of effort, no movement) then ease off just a touch. Remember off course that it's far better to take the arm off the deck when doing this, as doing in situ can – in extreme cases – wreck the arm bearings. Instead, put the stylus guard on, remove the arm and lie it on its side with its counterweight off. This done, when you've got things nice and tight, you can be sure that your vinyl source will give of its best.

CONTACT: J.A. Michell Engineering Ltd.
+44(0)208 953 0771
www.michell-engineering.co.uk

**SUPRA LORAD 1.5G £39.99**

Most so-called audiophile mains cables on sale are effectively rebadged, rebranded OEM Chinese fare, ordered in large quantities from wholesalers, terminated with a cheapo OEM Chinese plug, given predictably naff names (think 'Dungeons and Dragons' or 1970s aftershave) and a flash piece of packaging. They are then given a silly price (think one hundred times cost) and sold to dealers with margins big enough to keep the store owner in Porsche Cayennes for the rest of his natural... but not so Supra. This company makes it all in house in its Swedish factory, under the watchful eye of designer (and boss) Tommy Jerving – an accomplished ex-telecoms engineer. As such, this sub-£40 cable represents superb value for money; construction quality is superlative at the price and it has the rare accolade of being a CE-approved design. A fully shielded cable, it boasts three 1.5 sq.mm tinned Oxygen Free Crystal conductors with short pitch twisting of the cores to cancels radiation, plus extensive, earthen screening to reduce radiated noise. The 'total coverage' aluminium foil screen also eliminates RF pickup in the mains cable. Purpose designed as a mains cable (it isn't found in doorbell wiring), it has a flexible yet tough outer covering, making it easy to position and install. Finally, it's terminated with a high quality IEC plug on one end, and a Supra gold-plated 13 amp BS-approved mains plug on the other. LoRad is already being specified for use in medical facilities, hospitals and areas where mains borne interference can be a problem for other sensitive equipment, but is also effective where other (human ear-shaped) sensitive equipment is used. At the price, we've found that very little can touch it; it's not the best mains cable in the world by a long way, but it gives two-thirds of what some of the most expensive mains cables we've heard can do, at a fraction of the cost. Compared to a standard IEC it's night and day – the Supra is dramatically cleaner, smoother, sweeter and more three dimensional with a more musical, less mechanical sound. Right now, one of the best all-rounders we've heard at under £100 per metre.

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MISSING LINK SUPPLIER £70
Mains distribution boxes are a necessary evil; ideally the damned things wouldn't exist, as we hard wired our separates straight to their own dedicated spurs. While the sort of thing you pick up from Ikea for £6 is fine for bedside table lamps and mobile phone chargers, the cheap wiring and cable, allied to lowest common denominator socketry and a noisy neon lamp, has an obvious effect — the sound gets thinner, harder and grainier, with bass suffering in weight and tunefulness. Now, there are plenty of aftermarket hi-fi designs to obviate this problem, but you can easily pay upwards of £200. Missing Link is a small specialist with a dazzling range of accessories, all of which show superb attention to detail. It claims to be the only British company that designs its own cables from the ground up, controlling every process from dielectric selection to material treatment. This said, their visual presentation (i.e. packaging) and appearance leaves a lot to be desired, but don't confuse this with the innate quality of materials, which is excellent — and ideal for the application. The Supplier 6 is a six-way unswitched mains outlet block, with the neon is then disconnected for the removal of undesirable line noise. The internal contacts are modified then hard silver-plated to reduce contact noise and pin arcing. Allied to the excellent EPS-500 plug (available separately) with silver plated fuse and a one metre run of silver plated copper Orbit mains lead (plus Ultra Clamp surge and spike protection for just £5 more), it represents excellent value. It's not the sexiest looking thing, but how it sounds is what's important here — and it is truly accomplished. There's real air and space to the acoustic, along with eerie, inky black silences and a conspicuous lack of grain or edge. Don't confuse this with blandness however, as music becomes far more detailed and yet more cohesive — things sound obviously less mechanical. Superb nonsense value for money.

CONTACT:
The Missing Link
0115 877 9089
www.the-missing-link.net

THE CARTRIDGE MAN 'CARTRIDGE ISOLATOR' £80
Unfortunately, there is a 'loop' between loudspeakers and pickup cartridges, as the latter is very venerable to any and all vibrations coming from the former. It duly picks them up (along with the stylus'/canlever induced vibrations) and sends them back out through the speakers again, polluted sound and all... How then to overcome this problem? The answer is laughably simple - remove the cartridge from the loop! Pick up arm manufacturers has been trying to achieve this by various methods since the introduction of the microgroove record. Manufacturers have tried to float the arm tube in an air bearing and have had some success. Attention to arm resonance, bearing tolerance, arm mounting and cartridge set up has not solved the problems the transducer suffers. This innocuous looking stainless steel sandwich may be the answer. It is constructed from two sheets of stainless steel, with a piece of compliant material placed between them. The top plate has two studs protruding which have nuts run down them, to attach the plate to the pick up arm. The pick up cartridge is simply adhered to the bottom plate via two small locating pins as the cartridge is placed onto the glue film. This type of mounting removes the mounting bolts from the generator/magnetic field; this is a good thing! Another advantage is that the cartridge has much better support across the complete cartridge body due to the adhesive used. To install the plate and cartridge combination is simple; all we have to do is increase the height of the pick up arm pedestal by about 4mm. Then we rebalance the pick up arm to the same tracking force as before the plate was installed. The difference is profound; the stereo image width grows, as does depth and height. Bass is crisper and more fluid. Transients are clearer and timing sharper. There seems to be much more space around the musicians with a much lower noise floor, and vinyl surface noise is often reduced to near silence. Obviously, we haven't tried it with every turntable/arm/cartridge combination, but this is obviously an extremely clever and effective little gadget, and all serious vinylistas should seriously consider trying it in their systems — at this price it's superb value for money.

CONTACT:
The Cartridge Man Ltd.
020 8888 6565
www.thecartridgeman.com

PHONOSOPHIE CD FLUX £75
German brand Phonosophie's 200ml CD FLUX bottle understandably doesn't reveal what all its 'secret' ingredients are but does state that CD FLUX contains ethanol. The directions say that the printed side of a CD should be sprayed with two short bursts of the CD FLUX fluid from a distance of 15cm and gently coated with a soft tissue. It would be recommended not to use anything other than a soft tissue, as even kitchen paper towels might be abrasive to the disc surface. Also use caution when spraying and keep contact away from eyes. Then coat both the inside and outside edge of the CD evenly and finally with two more squirts finish off the reverse side of the disc. The effect CD FLUX makes is in the order of replacing a good quality interconnect with an expensive high end one, where the music really opens up and the sound becomes, wider, deeper and gorgeously fluid. The music also times better where the above improvements result in a more natural acoustic. The CD FLUX was tried on an audio CD-ROM, DVD-A, SACD and standard CD and all the formats were obviously improved, with a subtly smoother and more three dimensional sound. It is probably best not to use the CD FLUX on self-labelled CD ROMs though. The CD FLUX at £75 is expensive compared to other CD cleaners but it is a high-performance product and lasts on a disc for about six months. Re-spraying is beneficial for two-three months intervals.

CONTACT:
Phonosophie
+44 (0)1730 261 924
www.phonosophie.co.uk
Interconnects and loudspeaker cables come in thousands of weird and wonderful flavours—but there really is method behind the madness, as Noel Keywood explains...

Once upon a time it was all very simple: you used bell wire for the loudspeakers—and they had nasty spring clips to accept it. Phono leads were thin, grey stragglily things with tinny little phono plugs at the end, topped off with a weak plastic body, and the aerial down lead was simply 'coax', onto which was soldered a coaxial plug—well, what else?

We all know that things aren’t what they used to be—and thank heaven for that! I shudder when I see some of this stuff skulking around in my loft. But equally I find the increasing pace of change in connectors and cables can be almost alarming. So what’s happening right now in audio? If you want to tune up your hi-fi, it’s worth making sure it has decent cabling from end to end. Cables do make a difference, in spite of what a few sceptics might think. For example, I use some rare-in-the-UK American Tributaries, triple shielded silver video cables on the test bench, replete with gold plated, heavy duty plugs. Not only have they withstood heavy use, but they also give consistently low noise in conjunction with the spectrum analysers, which is crucial. Good cables make a difference and it is just about impossible to make up cables as sophisticated as this at home.

In most cases it is best to buy good quality cables already made up for you and the best really are very special. In particular they are superbly soldered and very strong. Expect a general improvement in clarity and smoothness, and in particular a greater sense of general precision, as if thin veil of haziness had been lifted. Top quality items introduce a sense of background darkness too, an intriguing benefit.

Whilst I could not make up cables like the Tributaries, I do have to repair and make up all sorts of other connecting cables, and they must be half decent. I these days the choice of cables and connectors is very wide. You can get Taiwan’s cheapest at Maplins of course, and a few better grades too, like Neutrik connectors and Vandamme wire. Maplins are just about the only high street store selling such items and their prices are low. But they don’t stock some of the really glitzy plugs, like WBTs for example. “Who they?”, you might ask. Good question...

**SIGNAL CABLES**

Hi-fi enthusiasts aren’t the only ones worrying about audio cables. They...
probably use far less of the stuff than the BBC for example, or a typical music studio, it's just that they are prepared to pay more. High quality cables for audio in studios, stadiums and broadcast are made by both Klotz and Sommer of Germany, Belden of the USA and Vandamme of - believe it or not - the UK, to name a few. Go to www.vdctrading.com and you will find this manufacturer is based in the Kings Cross area of London, with factories in Italy and Taiwan. They are prepared to supply the public direct, have a trade counter in Kings Cross and product in Maplins. Where traditional pro cable manufacturers like the massive Belden, for example, shy away from hi-fi esoterica, Vandamme offer high quality silver plated OFC audio cables. But they explained to me that where large quantities are involved (they sell cable by the kilometre!), such as in studios and conference centres, cost is very much an issue, unlike hi-fi. Quality audio cables like this are priced on a per metre basis and run from £0.34 - £1 per metre approximately for signal cables and up to £3 per metre for heavy gauge OFC 'speaker cable. You can buy pro cables such as this from outlets like RS Components and Farnell (reels only), and StudioSpares (per metre).

At the other end of the scale, if not in name, lie Van den Hul of the Netherlands, who cater for the hi-fi market. They sell 100m reels of cable too, but at up to £10,000 a reel for The Inspiration Hybrid, for example - a mere £100 per metre. I use Royal Jade (monowire) and Teatrack (biwire) Hybrids as I like the easy sound of these cables, attributable to their carbon content. A good interconnect is something like The First Ultimate, price £200 for a terminated 0.8m length. You can buy Van den Hul cable off the reel from certain dealers (Centres of Excellence), like Sevenoaks Sound and Vision, if you want to make up your own cables. A popular choice, like The Wind, is a single loudspeaker cable, costs £18/metre. As you need two lines per loudspeaker when monowiring, one 3m length to a loudspeaker will cost £54, so making up a pair will cost £108. This is not cheap, but if you have a really good system it isn't unreasonable either.

There are as many theories about how cables work as there are cables it seems. And their properties, sonic and otherwise, vary widely too. Whether a cable works in a system depends much on personal taste as far as sound quality goes, as well as system characteristics. These days, hi-fi systems commonly sound bright and a bit sharp, not the ideal place to be using silver cables I would have thought, which in themselves seem to brighten the sound quite markedly. "Not so" say the folks at Wireworld (U.S.A.), Silver only "highlights the effects of inductive colourations" they explain. Their silver cables do not sound bright.

"cables are now a science everyone takes seriously..."

Interesting, no! Wireworld say flat, parallel loudspeaker cables of the sort that most of us use - including me - suffer inductive losses that blur and soften the sound. Their Symmetricox 'speaker cables do not do this. You can buy this unusual cable from Wireworld UK, as well as their own copper spade terminals and 4mm plugs to terminate it.

But Siltec of the Netherlands insist silver needs to be accompanied by gold if cables and connectors are to sound right. And Kimber Cable, Monster, Chord, Transparent Audio Cable, Ioxos and Tributaries all have their viewers too, all of which you can find on the internet - just type the names into a search engine, putting "cable" in the string to weed out Chinese manufacturers of knicker elastic and all the other strange things that come up.

It isn't practicable to make up the really expensive cables, nor wise, as they are difficult to prepare and solder, and you likely won't solder them as well as the major suppliers. All the same, I have to make up cables for a variety of strange situations, and here choice of cable, connector, solder and soldering iron are all crucial to quality. These homebrew cables need to be the best quality possible and here it isn't just the cable that is an issue but the connectors.

CONNECTORS

At the top of the food chain lie WBT phono plugs and connectors, from Germany (www.wbt.de). These screw clamp types are nothing other than impressive. Nowadays, the circular earth pole of the traditional RCA phono is giving away to a point contact design which is said to be better, incorporated into the WBT and the Eichmann Bullet.

The general consensus seems to be that simple turned brass plugs and sockets, gold or silver plated, are not ideal, even if they feel good, as brass isn't very conductive. It is strong, so
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limitation, whilst Wireworld use oxygen free copper bodied connectors. So a connector isn't just a connector any more - you've got to check the chemistry! And whilst you are doing so don't forget the insulation. There's consensus here too: PVC is passé - it sounds bad - but PTFE, Teflon and such like are good.

Switchcraft of the USA make a peculiar right angled phono plug of very good quality, using a copper alloy body, gold or nickel plated. They also make decent XLR connectors. Wireworld have a special all-copper phono plug too, just for audio. For consistent quality throughout there's little to touch Swiss Neutrik connectors. They are very well made, accept large diameter quality cables, are easy to solder and have high quality contacts. Being for pro use strength and longevity are as important as sound quality. More directed towards the hi-fi market are QED phono plugs and Eichmann bullet plugs, which use point contact like WBTs. You can find both these at www.hificables.co.uk, together with a wide range of proprietary hi-fi cables.

Loudspeaker cables are usually terminated by 4mm banana plugs, but in America they prefer spade terminals. The usual heavy duty loudspeaker binding post found on most amplifiers accommodates both, as well as bare wire. However, a European safety directive discourages use of bare loudspeaker terminals and unshrouded plugs, so the British Federation of Audio has devised the BFA plug, as used on Cyrus amplifiers, for example. It is fully shrouded for safety, but a BFA socket will not accept a standard 4mm plug. It will accept a hollow, 4mm type plug that is able to spring open, so you will this variant fitted to Van den Hul cables.

Standard 4mm plugs come in many varieties, mostly cheap and cheerful, with nickel plate that oxidises and becomes dull and dirty. Heavy duty plugs are commonly brass, gold plated, with a screw clamp for big cables. Whilst soldering gives a stronger and more stable joint over time, today's extremely thick OFC loudspeaker cables sink so much heat that they are almost impossible to solder. Only high power irons with the heater close to the tip can cope, or gas irons. Higher melting point lead-free solders make the situation worse. So if you intend to make up your own loudspeaker cables be aware of this difficulty. QED make the Airloc 4mm plug to overcome it: it is crimped in place.

Another interesting variant is the shrouded 4mm plug, which has a spring shroud that retracts as it is pushed into the socket. Made by MultiContact of Germany this neat idea prevents plugs shorting together, or to ground. Unlike the BFA plug it doesn't prevent insertion into a power outlet, for those that think this is a good idea. It doesn't accept thick cables either, a common drawback with 4mm types not designed for hi-fi use.

I've said nothing about the many other connectors found in hi-fi, from DIN plugs to XLRs. Generally though, all are improving in quality; even the humble DIN can now be had in gold plated form, with locking collars and improved pins. The problem here is that DINs are too small to accept large diameter cables. XLRs on the other hand do accept big cables and are most commonly used for balanced connections, but they are bulky.

Cables and connectors certainly aren't simple any more, but as Vandamme pointed out, these days people aren't prepared to put up with noisy, crackly cables, radio breakthrough and what have you, especially at an event like the Live 8 concert which they helped cable up. Cables are now a science everyone takes seriously. Luckily, as I've illustrated here, hi-fi enthusiasts are spoilt for choice, since high-end audio produces some of the most radical chemistries and constructions in both cables and connectors you'll ever come across. They're a great way to tune up a system - just keep a Periodic Table close by.

Wireworld's range of soft OFC copper connectors. These are strictly hi-fi.
about us

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 writing for Hi-Fi World he joined the Doors team at The Sunday Times, and now edits the Home Entertainment section of The Month alongside this magazine. A compulsive record collector, vinyl is David's favourite loopy, and he's crazy about classic audio too - as his encyclopaedic knowledge of Japanese high end attests.

NOEL KEYWOOD
A leading technical journalist, his rigorous reviewing - informed by empirical measurements - has made an indelible impression on the UK hi-fi scene. After editing Hi-Fi Answers in the 1970s and contributing to The Flat Response and Hi-Fi Review in the 1980s, Noel went on to launch Hi-Fi World in 1990. His challenging approach has famously seen him 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' makes him brilliantly placed to comment on what kit works best and why, and to explain the politics behind it.

HADEN BOARDMAN
His knowledge of classic kit is almost unmatched - doubtless helped by him getting bitten by the hi-fi bug at the tender age of 9! Haden's tastes are very much of the 'valves and vinyl ilk, his system displaying a welter of British names 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 CLEASY
After a stellar career in IT, Patrick's love of music drew him to the field of multichannel music mastering, which is now his vocation. His encyclopaedic knowledge of digital audio and surround sound theory and practice makes him perfectly placed to assess the latest DVD-Audio and SACD hardware and software alike.

STEWARD WENNEN
A professional audio engineer since the 1970s, SW is still constantly amazed by the poor quality of kit that some manufacturers foist upon the buying public - but is also delighted when he finds a bargain. His redoubtable experience of designing and building his own turntables, electronics and loudspeakers through the years means he is an ideal HFW scribe, along with his obsession with music.

LIJK SETRIGTH
A man whose reputation precedes him, LIJKS has had a long and brilliantly distinguished writing career. Most famous for his quarter century of contributions to CAR magazine, he has also had ever 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, LIJKS's home sound system is second only to his beloved Kremlin 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 we 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 trying to say. This means it must be rhythmically engaging and dynamically expressive - but must also be able to recreate 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!
Super Sonic?

Digital radio for just £99. Panasonic’s new RF-D1 neat DAB/FM portable has it all. How good is it wonders Channa Vithana…?

This cute little portable gives you both old fashioned vhf/fm, derided as hissy by the digital brigade, plus modern “CD quality” digital radio courtesy of DAB. So how does digital, with its wide variety of stations and hiss free reception, fare in a portable?

The RF-D1 uses weighty metal knobs for volume and tuning that are a delight, reminiscent of old analogue radios. It has ten presets for each band with display and memory store buttons along the front. There is additionally a ‘sound EQ’ /‘virtualizer’ button which scrolls through settings such as vocal, xbs, clear and soft to provide tonal adjustment. Additional functions include a clock, ‘sleep’ and ‘play’ timer and a dimmable display. It can be plugged into the mains using 9V AC adapter or use batteries for power and portability. However, this radio needs current, no fewer than six bulky C size cells at around £2.40 apiece, totalling £14.40.

The display is a fine dot matrix type of a sort found on many portables. It has a small DAB reception indicator, but accurate tuning is best performed by using the DAB signal quality function. This displays the frequency of the station with reception quality as a series of 16 asterisks with zero being the lowest and 16 being highest. This enables several stations within an ‘ensemble’ to be stacked up, which can then be scrolled through. Finally it has an auto store that automatically collects and sequences in frequency order, the available digital stations which can be scrolled through using the tuning knob.

SOUND QUALITY

I connected the RF-D1 to my amplifier with a Chord Co Chrysalis min-jack to stereo phono lead and selected the DAB option first. I tried Radio 3 initially, knowing it to be one of the highest bitrate DAB stations and was greeted by a surprisingly quiet and non-splashy sound, which dispelled my perceptions of DAB somewhat. Switching over to FM showed it to be noisier, but also louder. Lowering the volume to compensate revealed a superior sound quality than its digital counterpart. There was a finer balance, more vibrancy and energy to the FM, with better defined vocals. Disconnected the RF-D1 from my amplifier and using it as a portable made much better sense of DAB because here it was a logical choice over FM. With FM, using the telescopic whip aerial, the RF-D1 continued to sound a little noisy due to variable reception. The DAB signal remained consistent as before, with useful display and auto tuning functions.

Sound through the two internal speakers was adequate, nothing really special but using the ‘sound EQ’ and ‘virtualizer’ settings helped at lower levels, but anything approaching loud sounded better without them. Radio 1 through DAB in the RF-D1 was also better than its FM side when in portable mode and the multitude of different digital channels was also a bonus. You can alleviate the sometimes-noisy FM reception by switching from auto stereo to mono. Comparing the surprisingly good transmission of digital radio from my cable set top box the RF-D1 disappointed in DAB mode, sounding shut in and lacking dynamics especially with speech, sounding less rounded and synthetic. Fortunately I had no experience of sibilance through the RF-D1.

CONCLUSION

A portable like this doesn’t compare to full size components for quality, but it’s small and easy enough to use. It also clearly underlines that digital radio suits portables, giving hiss free reception, as claimed. The RF-D1 has tactile controls on its side too, plus a good quality display. With aerial sockets, connectivity is good too.

This little radio is fine value for a dual band stereo portable. For example, compared to the Pure Digital Evoke 2 which is (R.R.P) £160, it is a penny over £60 cheaper. The RF-D1 isn’t as handsomely finished as the wood clad stereo Evoke 2. With the exception of the solid control knobs and silver mesh grill, a rather cheap looking plastic finish hampers it. All the same, as a portable DAB radio it works very well; it is easy and enjoyable to use being reliable and consistent in its tuning. So I’d recommend it for those that want the programme variety that DAB offers, in a neat, portable package.
The colouration’s in the finish

Not in the music
One of hi-fi’s greatest proponents of flexible upgrade paths is Cyrus Audio, which offers existing owners the chance to extensively improve their systems through additional power supplies and DACs. Channa Vithana started from the bottom upwards...

Some readers of this magazine chop and change their hi-fi on an almost weekly basis, pausing occasionally to wonder why – despite buying the coolest kit with the best write-ups – they still don’t like their system sound. Others buy something after extensive auditioning at a dealer and slowly and surely upgrade it in ways they want – spending far less money than the former group and gaining lots more spare time to listen to music!

The former constituency won’t be terribly interested in this feature, but those with an ‘in it to win it’, those genuinely trying to get closer to the music, might. The reason is that Cyrus Audio is one of the few hi-fi manufacturers that offers clearly delineated upgrade paths, often requiring very modest sums to be spent...

It all began with the Mission Cyrus Two back in 1985. This was a stunning little £299 amplifier that came with an additional rear socket for a ‘PSX’ power supply. The addition of this dramatically improved an already superb sounding bit of kit, for the modest outlay of some £149. It was a great idea, and (what became) Cyrus Audio ran with it. Now in 2005, almost everything is upgradeable by a PSX-R power supply, and there are also additional factory upgrades too. In short, if you’ve bought a Cyrus product, unless you develop a distaste for exquisitely styled and built half-size separates with a clean but sweet sound, then you’re very likely to stay with the brand...

Each Cyrus uses non-magnetic alloy casework designed to minimise microphonic effects for an effective shield from external electro-magnetic disturbances. This also eliminates coupling of the power transformer stray magnetic fields to the sensitive audio circuitry. Silhouetted, the Cyrus casework is discretely attractive with finely crafted heat sinks and an engraved Cyrus logo above. Each case measures 73x215x360mm, and is available in silver or black – which is surely the greatest dilemma!

For just £100, you can upgrade the Cyrus CD6 CD player to the latest £650 CD6s specification, and I found the difference between the two staggering. Using the £650 6Vs amplifier driving my reference £2,000 Waterfall Victoria or £1,320 Audiovector M1 Signature speakers, ‘Sea Pictures’ had a quieter background with the new CD6s and Janet Baker’s voice gained greater texture, definition and sophistication in comparison to the CD6. When she went for the higher notes, the CD6s was definitely more convincing, showing more control and less subjective coloration with a finer feel for the emotional vocal and instrumental phrasing. The CD6s also showed a big difference in the multilayered hard rock debut from Melissa Auf der Maur, where ‘Taste You (French version)’ had deeper and three dimensional vocals in comparison to the CD6. The music had more body and when the crunching guitar arrived, there was a discernibly finer vibrancy and impactful musical presentation.

Janet Baker’s vocals had an increased sense of naturalness with the £1,000 CD8x CD player, in substitution to the CD6s. There was an enhanced spatiality to the music and vocals along with more air around instruments. Music additionally became more fluid through the upgrade from CD6s to CD8x. The vocals from ‘Taste You (French Version)’ gained in three dimensional feel, expanding further with greater interaction. The percussion and rhythmic elements became stronger and better defined especially when the composition became complex as the extra instruments came into the mix.

Adding the £400 PSX-R to the...
CD8x allowed ‘Sea Pictures’ to become quieter still and Janet Baker’s vocals became silkier and smoother as did the orchestration. There was greater depth to the vocals as she breathed in and exhaled. The music was very good for individual instruments but ultimately the 6vs was more musically cohesive.

Adding a £400 PSX-R to the 8vs did improve matters considerably, with an even quieter background and subjectively lower distortion to ‘Sea Pictures’ which invited higher volumes. The sound became more sophisticated and communicated emotion really well with greater subtlety. The music and vocals with added PSX-R on ‘Taste You (French Version)’ were also improved over the standard 8vs. The lack of musical impact and enjoyment of the standard 8vs in comparison to the 6vs was minimised and better resolution, timbre and bass tunefulness could be discerned. However for sheer musical enjoyment and emotional impact I still preferred the 6vs over the £850 8vs even with an additional £400 PSX-R!

Re-using the £650 6vs amplifier, I added another £400 PSX-R power supply to the DACX/CD8X/PSX-R (which formed a £2,900 four box combination! through the CD8X/DACX was a far superior transformation. The £650 CD6s CD player and £650 6vs amplifier would make a splendid choice inclusive of high-performance, superb style and low-slung discrete proportions. Then I would recommend the £300 Cyrus cable combination as a reasonably priced but dramatically superior upgrade which confirmed the Cyrus system synergy approach. Next a CD8x for

“unless you develop a distaste for exquisitely styled half-size separates with a clean but sweet sound, then you’re very likely to stay with the brand...”
The new £650 CD6s is a replacement to the CD6 (see our CD6 review in the July 2005 issue, p52-55). Current CD6 owners can upgrade it to CD6s for £100. The CD6s is based on the £1,000 CD8x due to the quality of components used in the power supply, DAC and analogue filter stages. Clock stability is a key element in the signal processing chain and therefore includes a remote re-clocking circuit located at the DAC threshold to maximise jitter rejection. There is a toroidal transformer with two separate secondary windings (isolating), with power supplies for the differing power requirements of the digital and analogue sections of the player. Eight stages of power regulation provide further stage isolation. The CD6s has two sets of analogue phono sockets and an optical digital output. The CD6s can be upgraded to the CD8x for £400. It weighs 3.1kg.

**Cyrus 6Vs Integrated Amplifier**

The 6Vs has 40W/8ohms output. Similar to 8Vs, it also uses voltage multiplying techniques with linear post-regulators for the power supply of the voltage amplifier stage, increasing and stabilising the supply, eliminating any trace of power supply ripple and noise. It features six inputs including tape monitor, biwirable BM speaker output sockets, headphone connection at the rear, pre-amp out and remote control. The 6Vs was featured in our May 2005 issue (p23) and is upgradeable to the 8Vs for £250. Its continuous power is rated at 40W/8ohms. Weight is 3.7kg.

**Better DACX D/A Converter**

The main differences between the £1,000 CD8x and CD6s are two toroidal transformers for the power supply with one transformer for the DACs/filters, two balanced differential DACs, electrical and optical digital outputs and PSX-R upgradeability. The CD8x also features a remote re-clocking circuit with close-tolerance crystal VCO located at the DAC threshold to maximise jitter rejection. The CD8x is also said to measure better with superior S/N ratio, dynamic range and lower clock jitter for example. Weight is 3.5kg.

**Best DA6X D/A Converter**

The £1,100 DACX effectively makes the CD8x a transport, as it is digitally re clocked by a close tolerance circuit with triple quartz references. The DACX is a two stage upsampling design where all sources are initially upsampled to 192k before analogue conversion by quad high-precision 24-bit converters operating in a fully balanced configuration. It has four coaxial and two optical digital inputs which are assignable through its display, phase inversion, two filter settings (fast and slow roll off) and with PSX-R upgradeability. The DACX features fixed level phono and balanced XLR output sockets. It is upgradeable for £1,200 to a high-end DACXP with volume control which includes a high-quality preamp and two additional analogue inputs. It weighs 3.8kg.
A Brief Introduction

Eastern Electric is a joint venture between US-based Bill O'Connell and Hong Kong-based electrical engineer Alex Yeung which began when O'Connell met Yeung in the early 1970s. Eastern Electric eventually emerged as one of his Swyc MA-I amplifiers with RGN2504 rectifier and 6LS output tubes.

The rest as they say is history and the results speak for themselves. A range of products that set new standards and a level of performance way beyond its price-point.

Eastern Electric has received world-wide acclaim, awards and praise from reviewers and listeners alike. Visit www.easteenelectric.co.uk for more information.

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Minimax Pre-amp

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Finesse Adaptability & Build Quality: Minimax Pre-amp

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Eastern Electric proves that great things can indeed come in small boxes and with our unique, 30 day money back guarantee what are you waiting for?
PRO FEEL

Stewart Wennen says the specially tweaked new London Professional pickup cartridge works as well in hi-fi as it does in pro audio applications...

Unlike the hi-fi industry, the DJ field has an enormous lack of serious pick up cartridges, so John Wright Audio Services’ decision to release a professional version of the ubiquitous Decca London cartridge must have come as a nice surprise. Better still, it’s also well worth any audiophile’s attention.

Based upon the London Maroon, the Professional differs in that the ride height has been increased along with a change to the vertical compliance. The only visible differences are the colour, which has been changed to a very bright yellow; there is a black cueing line down the front of the cartridge, and the addition of another tie wire on the bottom of the transducer (there are now two tie wires). Using an ancient conical stylus profile the London Professional tracks at 2.5g, which - amusingly - puts it amongst the lightest tracking DJ cartridges around!

Providing you follow the set-up instructions to the letter, the London Pro is reasonably easy to get working well. Tracking appears very good, although setting the bias compensation is a particularly intricate operation - it’s either right or it isn’t. As you’d expect, hand cueing is easy too, even though the body of the cartridge seems rather large to my eye.

Impressions were extremely favourable. Image height was very good, and the Pro gave enormous stage depth, with image width to die for. All of the London cartridges sound much better than they measure and so tracking proved solid and secure, although it’s never going to be the match of similarly priced designs with Fine Line diamond profiles, such as Ortofon’s superb-couth sounding MC25FL, in this respect.

Ashford and Simpson’s rendition of the classic ‘Bourgie Bourgie’ was one of the crispest I have ever heard via so-called professional equipment. Horns were rock solid with the piano riffs delicately reproduced. The Beach Boys’ ‘Here Comes the Night’ sounded glorious. Rich and sharp with a full bass, this transducer made it sound like a contemporary recording instead of a late seventies one. Indeed, whichever record you play, this cartridge has a tremendously big hearted and buoyant sound - one which makes bespoke hi-fi designs (such as the aforementioned Ortofon) sound frigid and pedantic. The London Pro is not anywhere near as incisive or tonally neutral, but it’s a lot more fun.

There’s something special about classic cartridges with conical styli - they don’t make them like they used to. This is good and bad; in some ways the London Pro is an anachronism and an irrelevance; it’s a crude and unsophisticated device [and one with questionable groove wear - Ed.], yet is also immensely musically engaging in a way that not even the superb Shure V15X4MR can match. As always with vinyl, you pays your money and makes your choice...

This Decca is ‘professional’ as in Club use, hence the lurid yellow colour. Tracking force, at 2.5gms, is above that recommended for hi-fi models (1.5g-2g) and the stylus is spherical. All the same, our response analysis clearly shows it tracks the short wavelengths of inner grooves well, with slight loss above 10kHz only. Like other Deccas, this one is substantially flat in its frequency response, due to a low impedance generator. Even on outer grooves there’s just a small lift in output above 10kHz of +2dB at 20kHz - almost inaudible at these frequencies, so the Professional will sound tonally neutral and likely highly detailed right across a disc, from outer to inner grooves.

Lateral tracking at low frequencies caused the Pro problems. Like the old Blues it triangulated the signal, generating strong third harmonic distortion, mistracking at a low threshold. This is an amplitude problem though, because at 1kHz lateral tracking was superb - better than most. So the Pro is best kept away from heavy bass culls, but it will handle strong vocals.

With 7% lateral distortion and 5% vertical at 45um peak amplitude displacement the Pro distorts badly, sharpening the sound. This will help it sound incisive and fast, but also hard and brittle. Modern audio Deccas don’t do this any more.
With no less than ten tubes on display, anybody with a passing interest in valve amplifiers is bound to be impressed with this festival of glass and steel. American company Cary have a strong reputation manufacturing high value valve amplifiers from their factory in North Carolina. However, they are more famous for single ended power amplifier designs, rather than push pull integrated. This particular bit of kit is available for a very reasonable £1,700.

The amplifier provides inputs for three line level sources, CD, Aux 1 and Aux 2. There is no provision for tape outputs, however on the output side of things four and eight ohm loudspeakers are provided for at the flick of a switch, a headphone socket with speaker mute switch, a line level sub woofer output as well as remote control volume control. Utilising a pair of 6550 output tetrodes in fixed bias mode requiring periodic checking with a voltmeter, the output stage is switchable between ultra linear operation, and triode operation. Power drops to 50 watts in triode mode, still pretty healthy. A low value of negative feedback (~4 dB) is taken from its own separate winding on the output transformer. The makers claim a full power bandwidth 19Hz to 23kHz +/- 0.5dB. All quite impressive claims, but see MEASURED PERFORMANCE. Phase splitting is provided by a 6SN7 double triode, with the input being handled by a 6922 double triode. Unusually the power supply rectification is provided by a pair of SU4 valves; most people would have just stuck a couple of diodes in, but purists will tell you the "softer" response of a valve rectifier, and lack of high frequency noise balance less efficiency and lower long term reliability (like all valves, eventually one is going to fail).

Instructions were detailed enough, with a good description of the designers’ goals; specifically "overload recovery" and how the amplifier behaves when entering clipping. Very large, especially considering the use of valve rectification, 1,200 uF capacitors are used in the power supply, something we will come back to later.

Build wise the amplifier is quite impressive; the chassis is very well finished in a textured black finish, with neatly anodised black knobs, and complimentary steel toggle switches. Speaker impedance selector switches are located at the side of some very nice five way binding posts, and all inputs are routed through good quality phono sockets. Mains input is handled via an IEC socket. The front panel offers up mains on and off (with the ubiquitous blue LED, nicely time delayed!) input selection, balance, motorised volume control, headphone socket and speaker mute. On top of the chassis two toggles switch between triode and ultra-linear operation.

SOUND QUALITY
I wired the amplifier in to my Marantz CD 12, and popped a set of vintage Tannoy 12” Monitor Golds (Chatsworth cabinets) on the end. Signature interconnects and Rumour speaker cable from Chord Co, with Russ Andrews power cables & mains filters were used throughout.
Thankfully the importers had run the amp in for two hundred hours, and the amplifier had been fully set up, shipped to me with "tubes" in place, so set up was a two minute job. I left the amp on for an hour or so to warm up before any serious listening began when it really sounded better. Although ultra-linear mode was tried, triode sounded marginally better and was used for the bulk of the listening.

First track on was from Leonard Cohen's album 'Ten New Songs'. 'My Secret Life' is quite a weighty number, simple in its arrangement, with great backing singers complimenting Leonard's sombre vocals. The track kicks off with a weighty drum beat, as I have heard this track hundreds of times before. Indeed I was somewhat surprised at the extra weight that had suddenly developed. Cohen's voice was exactly where it should have been, and the backing singers well presented. Even from the first track, it was clear we were dealing with an amp with quite a lot of personality here - this thing really does have an obvious sonic signature.

An old classic in the form of Cat Stephens LP helped get the amplifier into its stride. The softly produced vocals had an immediacy to them, as handled with ease and finesse. As a recent convert to Gospel music (hard work for a devout atheist I can tell you) I have recently been enjoying The Black Boys of Alabama 'Atom Bomb' album. Unlike the previous material, this did not suit the Cary. Something in the form of Cat Stephens LP helped get the amplifier off, be it in a warm lump. Originally I had thought the speaker's resonance was having an adverse effect on the amplifier and had taken charge, but the more loudspeakers I tried, the more I realised that it was in fact the amplifier itself that had this laden sound. Any track with a strong bass line set the amplifier off, be it classical, jazz or drum & bass. The bass just took over, delivering a veil over the entire soundstage. Not wanting to read between the lines here, but m6 own theory is that the high value of the reservoir capacitors used are perhaps not providing the best time constants.

So far a glorious midrange, but a less than impressive bass. So how about the high frequencies? Although not as good as the mid-band, it was still quite listenable. Treble was, soft, lacking in edge, and almost a tad restrained. There was a slightly compressed quality, just slightly held back. The amplifier created big soundstage, but one that was very much held between the loudspeakers.

The difference between ultra-linear and triode was not vast. Triode mode had less gain (obviously) and more air to the soundstage, with no less bite. Bass quality remained very similar whatever mode was selected. I have never understood the point in offering this kind of option; why not simply optimise the amplifier for the best mode of operation? The Cary book of words recommends triode, which I agree with. So why bother with ultra-linear mode? Why not optimise the expensive output transformer for triode operation, just my two pennies worth on that particular debate!

Comparisons to similar priced products proved hard. On hand was a budget valve amp, about half the price, a Musical Fidelity A5, and the new Cyrus X power stereo/AV pre. The Cary amp had much more of its own sound than the other products listed to; specifically that amazing midrange and compromised bass.

CONCLUSION

Well specified and nicely built, in the right system with the right music the Cary SLi80 Signature can really sing. The trouble is that as a real world proposition it is poor - it has one of the nicest midranges I have heard - and what a compliment! - only to be spoiled by that heavy, ponderous bass. No matter what speakers were used, any tune with a modicum of boogie and rhythm became spoiled, the amp taking over and overpowering that glorious mid band. Treble is not as good as the midband, and I must admit I am somewhat sceptical of the power bandwidth rating...

So if you value vocals above all else, then you simply must listen to this amplifier - designs at twice the price cannot get near. But to counter this, those wanting speed and accuracy had better give it a wide birth. Ultimately, I was frustrated by this product. By my usual standards, it was simply too flawed to live with long term. Careful audition is recommended here. I feel it must be tried in situ. It really is a love-hate product, and something of a flawed diamond.

"It was clear we were dealing with an amp with personality here - this thing really does have an obvious sonic signature..."

MEASURED PERFORMANCE

This Carey, like others I have tested, had output transformer problems. At 1W output from the 4ohm tap the SLI-80 looked good, as valve amps based on 6505s can, producing 0.04% distortion (0.02% into 8ohms) across the audio band, rising to 0.2% (2nd harmonic) at 1kHz. At full output though (50W, not 80W as claimed) it produced around 1-3% into 4ohms, depending on frequency, dropping to just 0.2% (1kHz) into a higher 8ohm load - a huge difference. At high (10V) output in the midband (1kHz), distortion measured 1.1% into 4ohms but just 0.17% into 8ohms, showing clearly that the amplifier was hampered by load mismatching. Otherwise, frequency response was flat from 4Hz to 40kHz and free from peaking, and bass distortion was low, so the transformers performed well in these areas.

The SLI-80 looks good in principle, but it doesn't get near Carey's claimed performance. What to do, what to do...
This is not the first compact system aimed at the audiophile, but with their typical attention to detail, Arcam's new Solo could well be the best yet. Dominic Todd downsizes for the day...

It was Linn's Classic that started it all. For around a grand, the guys from Glasgow provided the committed music lover with an amplifier, CD player and analogue tuner all wrapped up in Linn's typically exquisite and compact casing. Arcam knows this, and take one look at the Solo, and you'll see just how well.

To say that the Solo is comprehensively equipped is something of an understatement. Rather cheekily the amplifier section is rated by Arcam at 75 watts in to a 4 ohm load. The industry standard is usually measured into an 8-ohm load and, as you'll see from our measured performance, the truth is a power figure that's actually around half Arcam's quoted figure. Nevertheless, this is still a reasonable output. and Arcam have gone out of their way to make the Solo compatible with the widest range of speakers possible. To do this they've used what Arcam refers to as a 'bass correction system'. This may sound like nothing more than a fancy loudness control, but purists can leave it be - and there are still plenty of signs of Arcam's usual build integrity. High quality capacitors and a toroidal transformer show that Arcam hasn't lost its audiophile credentials, whilst much the same can be said of the CD player. As with some of the separate Arcam CD players, the Solo marries a Wolfson 24-bit Delta Sigma DAC to a Sony transport. CD Text is compatible, as are CDR/W discs.

Perhaps the Solo's greatest selling point over its Scottish rival is the inclusion of a DAB/FM tuner. Seeing as Arcam was the first UK company to produce a DAB tuner this, perhaps, isn't all that surprising, but it does give the sorts of flexibility that's crucial in a product such as this. Furthermore, Arcam have always been well renowned for their tuners and, taking a look at the Solo's specification, there's every chance that the tuner will be a highlight of the package.

As an indication of the likely buyers profile, a front-mounted input jack, designed to take the output from an MP3 player, sits alongside the headphone output. Around the back there's also an input labelled 'game' alongside two others and a tape loop. A phono stage is not standard, but there is a PC keyboard input, an optical digital output and multi-room socketry. Those using the Solo as a second system may also be interested in the sleep timer, clock and alarm functions. There's little to fault about the simple, timeless styling or the fine build. Not everyone will relish the fact that the Solo is, at least present, available only in silver.

SOUND QUALITY

Using the Solo proved refreshingly straightforward, although I would have much preferred a proper volume knob to the push button affair.

Once under way, though, with B&W's DM602S3 'speakers, the Solo impressed. With Rejksopp's 'Alpha Male', it soon became apparent that Arcam fans wouldn't be disappointed by the sound quality. Typically of the brand, the balance was smooth, refined and focused. It also picked up the pace when needed and was energetic enough, even though bass extension wasn't especially strong. That said, the lean lower frequencies did at least allow for decent timing. No doubt Arcam would also argue that the bass correction system could be used, but in doing so I found that other aspects of the music were compromised - at least with the B&W 'speakers. As far as the soundstaging was concerned, there was very good width, but not much in the way of projection. This, I would have thought, would lend the Arcam towards partnering more forward sounding 'speakers.

This lack of projection was also noticeable with the Scissor Sisters 'Mary'. Considering the price, piano timbre was excellent and the vocals were well defined, textured and full-bodied - what a shame then that they weren't better separated from the rest of the mix. The staging could also have used a bit more height. The rolling bass lacked a bit of power and, over all, I felt the dynamic response to be not as good as that of a decent separates system.

With Blondie's 'Happy Dog' it was more a question of attack, or at least the lack of it. Although the guitars were nicely defined they simply sounded too polite. Likewise, the percussion lacked the impact...
needed to make this song truly compelling. Otherwise there was good separation and the smooth vocals were free from any harshness or excessive sibilance. Whilst the song was pleasant enough to listen to, it did come across as rather bland — again suggesting the need for an upbeat sounding partnering speaker.

As has long been the case, the Arcam was happier with pastoral Classical music. Finzi’s ‘Eclogue for Piano and Strings’ provided a piano timbre with decay and body that would be hard to beat at the price, even from a good separates system. The smooth, articulate strings were certainly on the warm side, but managed to remain beguiling rather than cloying. The music ebbed and flowed in a fluid manner that most systems of this size, and even price, often don’t get close to matching. If you’ve heard enough of stilted, mechanical sounding systems, then you’ve heard enough of stilted, mechanical sounding systems, then the Solo could be just the tonic.

Sound quality with DAB was, as ever, limited by the lack of bandwidth with the medium and dependant upon individual stations’ bit rate. Most stations output at 48k kbps (about the same as standard MP3). Listening to the pop music station, Core, I found that processed pop music sounded surprisingly bouncy and reasonably spacious. You’d be hard pressed to call it hi-fi, but the Arcam certainly did a better job than other tuners I’ve heard in this bit rate. Virgin radio did better than most with a bit rate of 160 kbps, and boy could you tell. At least female vocals now had a bit of detail and there was some stage to speak of. Timing however, remained a little slow and stilted. Best of all, with a bit rate of 192 kbps, was Radio 3.

There was no doubt that this sounded best of all, being reasonable transparent and focused. However, a quick flick over to the same station on FM, proved just how inferior DAB sounds. The analogue transmission instantly brought the music to life. It was like lifting a veil from the front of the speakers, with a great deal more realism and intimacy being realised from the music. Do bear in mind that this is not a reflection upon the quality of the Arcam’s tuner; it’s merely a limitation of the DAB format. Chose DAB for speech and background music and you’ll be more than happy. The bonus with the Solo, though, is that excellent quality FM tuner on board, too.

CONCLUSION

If Arcam’s aim was to create the most-rounded, best value, complete system under £1,000, then they’ve certainly succeeded. With the possible exception of a phonostage, the Solo wants for nothing. Perhaps more importantly, both the CD player and tuner sound extremely good. The sound from both is smooth, cohesive and reasonably well detailed. Yet, whilst the sound quality is first rate by system standards, it still doesn’t compete with a decent quality separates system at the same price — and nor is it up to Linn Classik standards (which has a grippier, more propulsive and musical sound across all sources). To better the

The Solo’s amplifier produced 66W into 8ohms, rising to 80W into 4ohms. However, current limiting kicks in quickly with a 4ohm load, pulling steady output right down to 12W, likely to prevent overheating, as there’s little cooling capacity, so this isn’t a unit to be driven hard into modern loudspeakers, most of which use 4ohm bass units. The limiting looks a bit severe to me, considering this fact.

Distortion levels were low at 0.02%, with mild crossover generating a little second and third harmonics totalling 0.03%. Input sensitivity was a very low 40mV.

The CD player is a good one, with Arcam’s characteristic treble roll off that gives a smooth, cohesive sound. Distortion levels were down with the best, so there’s no scrupling here; it’s a proper hi-fi unit. Jitter was very low, below 25pS, below 20kHz.

The VHF tuner section is obviously part of a Radioscape SDR DAB module. It has an unusual performance for VHF/FM, with wide channel separation, few spurious products, flat audio response to 15kHz (-1dB at 1kHz) and very low distortion at all mod levels. Sensitivity is extreme, with full quieting down to 33dBuV — considerably better than conventional tuners. Hiss is a little high at -63dB (IEC A type), although I’ve found the peculiar bubbling, popping background noise of this SDR tuner not very audible in practice. Expect excellent clarity and extreme insight, if a slightly hard presentation. Impressive to hear, all the same.

The Solo looks better than good — technically it’s advanced. Only early current limiting into low loads may be a problem, since all loads are low nowadays. NK
Zero Heaven?

Is an expensive PC-based audio system worthy of the label 'high end hi-fi'? Zero One certainly seem to think so with their new no holds barred £2,260 upsampling Ti48 hard disk transport and Ar38 DAC combination. Neal Gibbons decides...

A

lthough I rather imagine not everyone will agree with me, the idea of a PC-derived CD playback system is an appealing one in my book. I can see potential sonic benefits in eliminating the conventional CD transport and replacing it with an 'ideal' hard disk drive, along with convenience bonuses too - it saves space storing many CDs on one HD and brings easy access to a large music library.

I was in for a shock when unpacking the Ti48 and Ar38. In today's world of electronic miniaturisation and size reduction I was not quite prepared for the physical enormity of them. The Ti48 hard disk system measured a large 450x350x170mm and the Ar38 DAC a slightly more manageable but still considerable 450x350x75mm! Fitting these onto my equipment rack was going to take some thought... The chassis seem to be well made, looking like it could stand several earthquakes. Finished in a pleasing grey gloss paint with a nicely machined 10mm thick Champagne grey front panel they looked elegant in a minimalist sort of way.

Neither the Ti48 or Ar38 have any fascia controls; the Ar38 has blue LED indicators on the front to indicate power and signal lock for S/PDIF or I2S while the Ti48 has a large blue alphanumeric display and DVD-ROM drawer. Power switches for both are rather inconveniently located around the back - given the size of the Ti48 and its possible location in the middle of a rack it would make sense to place these on the front panel I think. On the rear of the Ti48 there is an RCA S/PDIF, TOSLINK connector and I2S interface. Also present are 3.5mm jack sockets for analogue input and output but they were non-functioning on the review sample. The Ar38 has the same S/PDIF, TOSLINK and I2S connectors plus the RCA analogue outputs and a toggle switch to select between S/PDIF and I2S.

Inside the Ti48 is a bespoke PC utilising a professional audio soundcard powered by its own regulated low noise, linear and opto-isolated supply. This is shielded to minimise external interference and the card draws its power via a shielded cable and is further shielded itself. The soundcard performs no digital processing or digital to analogue conversion - it's only used to relay digital audio information from the CD transport to DAC, usually used internally with the S/PDIF interface used to connect externally. I2S - what's that, I hear you ask? Inter-IC Sound is an electrical interface standard used for transmitting PCM data from CD transport to DAC, usually used internally with the S/PDIF interface used to connect externally. I2S separates the clock and data signals making it an extremely low jitter (time dependent error) interface where as the S/PDIF interface is subject to variations and generally a high jitter performance. A low jitter
rate is desirable as it causes distortion of the signal during the digital to analogue conversion process, hence Zero One's use of I2S between the Ti48 & Ar38. The Ti48 runs Zero One's own custom audio software that performs all the digital processing and is the key part of the system. It uses 64-bit floating-point maths making it more accurate than a normal off-the-shelf chip they claim. There are user selectable digital processing functions which include 4 digital filters, 3 dither functions plus variable upsampling and oversampling to 192kHz, variable 16 bit to 24 bit conversion (word-length) and 3dB attenuation setting (for better system matching). I could see I was going to have fun trying out all the combinations come listening time... All functions are controlled and set by the supplied IR remote, speaking of which, for a serious system with a keen eye on accuracy the supplied remote left a lot to be desired - being a cheap plastic affair with confusing labelling, more of which later... A full 250GB of data storage is provided, allowing up to 350 CDs to be stored in full uncompressed 16bit/44.1kHz format - so the Ti48 features no compression at all. My better half wryly asked me, "what happens when you run out of space?" and "what happens if a disk crashes?" With a standard PC you could easily back up your music or add more storage, but that's not so easy with the Ti48 - but I suspect Zero One could easily add a larger drive or even provide some sort of redundancy like a backup disk or perhaps disk to disk mirroring.

The Ti48 has been optimised for 'near-silent' running, with low noise cooling fans and a low resonance enclosure design featuring a damped chassis base made up of a foam layer sandwiched between two aluminium sheets of differing thickness. The hard disk and DVD-ROM are mounted on rubber grommets to further reduce noise. In use I could only just hear the Ti48 from my listening position and at no time did I feel it was intrusive.

The Ar38 DAC is listed as Zero One's entry level DAC but it still has some impressive features - and indeed it may be the only external DAC available with an I2S interface. Inside a Burr-Brown multibit PCM1704 DAC is used with a high accuracy custom made TCXO clock. The output stage is Class A single ended with zero global feedback, built using discrete components only, no op amps here! All the analogue stages are DC coupled meaning there are no signal degrading capacitors in the signal path and the design is a true dual monaural one. The Ti48 and Ar38 DAC are designed to be used together but can be used with other transports and DACs if required. The Ti48 has a SPDIF output that is limited to 24-bit, 96kHz when used this way due to the SPDIF standard. The Ar38 SPDIF input will up-sample all data to 24/96 using its own CS8420 chip. The CS8420 is not used when the Ti48 is connected to the Ar38 DAC via the I2S interface.

IN USE
It took me a while to get used to the user interface (UI) of the Ti48, I felt it wasn't intuitive at all. Despite reading the manual several times I found the key combinations and remote control labelling awkward to use especially when it came to entering non recognised CD artist and title information. Indeed at one point I was in fear of early hair loss! Zero One have thoughtfully included the excellent FreeDB CD database but when a new CD is introduced to the system and not found in the database you have to enter some information to describe it. The buttons of the remote are laid out 'mobile phone style' except there is no predictive text to help you! Zero One say they will update users every quarter with a new database sent on CD but I can't help thinking that as the Ti48 is essentially a PC they should have a way of connecting it to the internet so as to access the new database on the fly. Zero One also have a web page where they will have a database of new CDs for the Ti48.

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I had other 'niggles' with the UI like the display dimming after only 10s, not being able to scroll around menus and having to select 'rack' and press 'OK' to go to the previous menu. There was also a 'key bounce' problem on the remote. If pressing the down key to select an item from a menu sometimes it would jump two selections. I am sounding picky and a little negative about the UI but it really lets the side down. It's the only way to interface with the Ti48 so it needs to be easy to use and intuitive in operation or Zero One need to include front panel controls.

It's time they bought themselves an iPod to learn how make lots of functions instantly and easily accessible...This said, archiving CD to hard disk is a breeze once the control logic (!) is mastered - simply open the DVD-ROM draw, close it, go to the CD Player menu, if the CD is recognised select 'Grab Disk' and press OK! Five minutes or so later, and the operation is complete and it's ready for playing.

SOUND QUALITY

While I copied a selection of CDs to the Ti48, I put the Ar38 through its paces via my modified SqueezeBox and SPDIF interface (which regular readers will know is not far off the considerable heights of a Naim CDX CD player) I was presented with a very smooth and open sound that had good stage depth and width. Compared to my upsampling MF A3.24 DAC the soundstage was better defined and larger, percussion came across with great detail and delicacy, female vocals especially, like Katie Buckhaven where reproduced with great detail, air and emotion. There was a small degree of grit or edginess with the A3.24's presentation that was missing on the Ar38. In the bass I felt it was not quite so successful, the A3.24 really drove along Mark Knopfler's 'Why Aye Man' underpinning it with an easy to follow bass line and rhythm, this was a little lost on the Ar38 and the track seemed to lack drive. On The Be Good Tanya's 'The Littlest Birds', bass was again a touch light losing the 'drive' but vocals came over with fine timing and separation - this is a difficult track to get the timing right yet the Ar38 handled it well enough.

Next it was time to try the Ti48 and Ar38 together and get into those user selectable filter settings. Hooked up via the 125 cable and with word length set to 24bit, TPDP Dither on, 192k upsampling set and 'purist' filter mode engaged I was greeted with some very strange sound effects! The settings can be changed on the fly and the effect of each setting heard immediately. It states in the manual that some combinations are not desirable for a pleasurable experience or long term listening, and quick conversation with Zero One set me on the right path as I settled on 24bit word length with no dither, 176k upsampling and the HQ2 filter set.

I think Zero One could improve this by eliminating or blocking some of the non-compatible combinations and give better descriptions for some of the filters. HQ1 to 3 provide differing filter cut-off rates, HQ3 is the classic CD brickwall filter with sharp cut off at 22.05KHz, moving through HQ2 then to HQ1 and ultimately to 'Purist' changes the cut-off frequency and rate, getting less steep as you move along. The 'Purist' setting is aimed at acoustical material. Perhaps Zero One could add some predetermined combinations that are known to work well for differing material (i.e. settings for Rock, Blues, Jazz, etc.)

Once I had found my preferred setting, it was obvious these two units where made for each other, the benefits of using 125 where clearly audible. I started off with Cara Dillon and was sucked straight into the music. 'Donald of Glencoe' came over clear and detailed, underpinned by a clear bassline. Cara's accent and voice inflections clearly discernible, the presentation was very even from top end to bottom. Next I tried Mark Knopfler's 'Why Aye Man' again, this time the bass line was easily followed pushing the track along with vigour, the soundstage was wider and I could pick out more detailing that was masked before.

On 'TV Screen' by Goran Begovic, the opening drum 'whack' with the voices of the choir soaring upwards and backwards during the chorus - captivating stuff. Peter Green's Splinter Group's 'Heart of Stone' saw his heavy nasal vocals coming over with real presence and clarity, the track again showing great rhythmic drive and timing The Harmonica playing in the chorus had depth and space with uncanny realism. Finally I tried Jack Johnson 'Brushfire Fairytales' and ended up transfixed, just listening to the whole album...

CONCLUSION

User interface 'niggles' aside, the Zero One Ti48 & Ar38 are very fine sounding pieces of hi-fi equipment indeed. Anybody reading this could say 'well it's just a PC in a fancy box', but that would belittle Zero One's achievement. Yes, the main component parts of the Ti48 are available off the shelf but at its heart there is a very clever piece of digital audio processing software, which coupled with the innovative use of an external I2S interface into a well-designed external DAC really works. Using hi-fi terms to describe the sound quality doesn't do the Ti48/Ar38 justice either, as the longer I had them in my possession the more I appreciated the musical quality and cohesive performance they offered. This combination bettered my modified SqueezeBox / MF A3.24 set-up by some margin, and I'm not going to miss them!

WHO IS ZERO ONE?

With commercial high-end aspirations, Alvin Heng set about designing a standalone hard disk based Audio Jukebox to better his Naim CDX. Employing the help of two engineers, he first demonstrated the audio jukebox at the Heathrow Show in 2002. The sound quality and functionality where well received but the looks left something to be desired. It taught him that there was demand for such a product but sound quality alone was not going to make it a success. It took him three more years to get the software stable, to improve the casework aesthetically and to further improve upon the sound — but the effort is obviously worthwhile.
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PATRICIA BARBER
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MOBILE FIDELITY
Mobile Fidelity Sound Labs is a label that's famous to every analogue addict who lived through the seventies, and it's not without a reason. The company has been almost religiously preoccupied with the sonic potential of vinyl and as such has been behind some superb releases [and some not so superb ones! – Ed.] These two Patricia Barber discs are cut at 45RPM in a bid to lower the noise floor and overload margins, and thus improve the signal to noise ration — and it works. Since 1977 MFSL has released two Patricia Barber 45RPM sets. She's a cool jazz singer, doing imaginative arrangements of classics like 'Alfie' and 'Bye Bye Blackbird' amongst more likely songs such as 'Autumn Leaves'. Her delivery always demands your attention, however. Thoughtful yet never predictable, Barber shines on these 45rpm sets.

It is interesting to compare both the MFSL 45rpm releases and those released via Classic. It is pleasing to report that, whilst a direct A-B comparison cannot be made utilising the Barber sets, the sound quality via both company's mastering techniques is outstanding. The MFSL releases have a clear advantage in packaging, however. Because 45RPM discs tend to span more than one disc, 45RPM sets cannot be wholly retained within an original sleeve. Hence, MFSL box sets. Classic use a relatively clumsy outer plastic sleeve affair. It also provides standard, hard white sleeves with plastic coated paper inners. MFSL has a more stylish, non-scratch, soft plastic sleeve option where one side of the plastic is encased by a paper stiffener. Serious stuff.

NEWPORT REBELS
JAZZ ARTISTS GUILD
PURE PLEASURE/CANDID
Politics is often cited as the cause of all things bad that result, but here we have a superb album of jazz that bucks the trend. The Newport Festival was initiated in 1954 after Elaine Lorillard, a wealthy socialite in Newport, told her friend George Wein, "Oh, it's terribly boring in the summer. There's just nothing to do." The result was a jazz festival to bring a little life to the place. The festival did very well until a group of more progressive jazz musicians, frustrated with the festival's increasingly unadventurous programming, organised the Newport Rebel Festival and held it simultaneously. This is where this album derives, including Charles Mingus, Max Roach, Roy Eldridge and Jo Jones. It was a unique period as Nat Hentoff, who wrote the original liner notes in 1961, explains, "It was exhilarating for the musicians involved to realise that for once in their careers, they were capable of formulating and sustaining their own ground rules without booking agents, impresarios and other middlemen. The rebels handled advertising and promotion; alternated as announcers of the rebels and took tickets... Mingus roamed the grounds besides, asking for payment from freeloaders outside the fence."

During that same year's festival, a race riot broke out in the town of Newport. The violence it created was to be echoed, country wide, in later years. The festival shut down for a year and never quite recovered its footing. Yet the quality of the music is very high. Roy Eldridge sets the album alight with his gutsy trumpet playing on 'Mysterious Blues' and 'Me and You'. His magnificent solos are a highlight to a landmark album. Also look out for the guest appearance by Abbey Lincoln on 'Tain't Nobody's Bizness', who opens up her former intimate club style. Technically, too, the sound is spot-on. Fortunately, the album is a direct-to-two-track recording which means that, for a jazz fan, the looked-for natural sound is not contaminated with unnecessary production paraphernalia. This is enhanced by the present day mastering, on 180gm vinyl via Pure Pleasure. The transfer is clean and considered, retaining the atmosphere of the original recording.

PERERIN
HAUL AR YR EIRA
AKARMA/ GWERIN
Yes, this is an Italian record label re-issuing an obscure Welsh, '80s folk/rock album! It would come as no surprise that you haven't heard of
the album, haven't heard of the band and, come to that, may not have even heard of the record label. However, that's exactly the point of reviewing this album… One joy of CD is how, in addition to new works, it has attracted, magnet-like, reissues of rare and obscure works from the spectrum of musical history, which is something the original dominant vinyl format never did with any conviction. Suddenly, we were finding rare demos and works in progress from Elvis and The Beatles, expanded versions of original albums from The Everly Brothers and lost gigs from Joy Division. When the hi res formats of DVD-A and SACD entered the commercial fold it was hoped that, in addition to their inherent sound benefits, these formats would continue CD's good work. However, this hasn't really happened. With new bands looking at their tight budgets, simultaneous new releases have been few and far between.

This leaves the dedicated muso looking for something more than the typical CD can provide and turning, once again, to audiophile vinyl. New vinyl issues are a regular occurrence, of course. Now, however, audiophile versions of new releases are making an appearance. Audiophile vinyl is also a principle source for expanded and enhanced original albums – Sundazed's recent Byrds release, 'Another Dimension', was a precise study of the popular Byrd album, 'Fifth Dimension'. Obscure re-releases are also a prime target for audiophile vinyl, as this Akarma project illustrates. A rare record, even during 1980, the year or its original release, the album blends Welsh language folk with psychedelic rock (it even includes a Welsh language lyric sheet, for you to sing along). Mixing soaring ballads with ethereal guitar riffs, this is a beautiful album – Akarma should be congratulated in digging it up. Recommended to folkies out there, the rock elements will also attract fans of early Peter Gabriel-era Genesis and Jethro Tull. And the meaning of the band's name, Pererin? We think it is Welsh for Pilgrim – but maybe one of our Welsh speaking readers can confirm that point?

KRAFTWERK

The best gig I ever attended was a Kraftwerk in Liverpool's Royal Court 1981 [my best ever gig was Kraftwerk, Oxford Apollo, 1981 – Ed.] Notorious perfectionists, Kraftwerk have a reputation for cancelling gigs if all the necessary conditions are not absolutely correct. So we were doubly lucky I remember the sense of anticipation. As the lights dropped, a hall of high-speed electronic vocal and musical 'chatter' assaulted the audience. When the curtains opened what was revealed was an improvement on the bridge of Star Trek's Starship Enterprise. Technology oozed from the stage: lights flashed, buttons glowed impressively, an alchemical 'otherness' was poised to strike. Behind a bank of keyboards stood, silent, unmoving, the four members of Kraftwerk. Standing immediately next to each member, in exactly the same stance and pose, was a mannequin replica of that band member. Seconds passed and nothing happened, and this was the scary bit – as not one member of the audience could distinguish between plastic and flesh and blood. Heady stuff.

Indeed Kraftwerk have been wowing audiences for many years and this four disk box set commemorates the fact. The latest band line-up of Ralf Hütter, Florian Schneider, Fritz Hilpert and Henning Schmitz toured the world, last year, playing 69 shows. This live set contains 22 tracks recorded throughout Europe, Japan and the US. The compilation features the classics such as 'The Robots', 'Tour De France', 'The Man Machine', 'Pocket Calculator', 'Autobahn' and, the track that launched a thousand techno dance bands, 'Numbers'. The set itself is presented in a sturdy box that, when opened, reveals four slabs of vinyl individually presented within their own sleeves. Each vinyl sleeve is illustrated with a photograph of the band 'in action', with a unique backdrop. The rear of the box gives a full track listing plus notes of the venue and date the gig was played. A band of immense importance, and this superbly produced vinyl box set shows why.
Single ended purity

Our Parallel Single Ended (PSE) power amplifiers offer the ultimate in sound quality. Each monobloc has two highly acclaimed 300B triodes delivering 20 watts into an 8 ohm load.

The front end consists of a 6A86 pentode feeding an ECC82 driver.

The ultra-quiet power supply uses a 5U4 rectifier combined with a custom 10H choke. Both mains and output transformer are purpose-built complex layer devices that are so linear that feedback (a normally unavoidable compromise to reign in and control most amp) can be completely switched out.

This facility, operating in pure Class A is available only on a few world-class machines and produces a sound so open and dynamic that has to be heard to be believed.

Push Pull Power

Sharing the same chassis and look as the PSE the push pull (PP) version is designed for people who prefer a little more power. Producing 26 watts it can handle most modern loudspeakers with ease. Again without feedback this version uses a 6A86 pentode for input but a 5687 as a phase splitter.

The Purist's Dream

Our newest amplifiers in the WAD fold are the KiT and KaT 300. A stereo single ended 300B amplifier available in two configurations - the power amplifier: KaT300 and the integrated version: KiT300 with line level inputs and tape loop circuit.

KiT300 has volume and input selector knobs controlling a high quality ALPS Blue pot and a long life rotary wafier switch respectively.

The front panel is our usual 6mm anodised aluminium panel punched to suit either the KiT or KaT variant. The chassis is manufactured from 2mm thick aluminium with our black powder coat finish. Extra space has been allowed at the front to enable upgraded pots to be fitted if required.

A minimalist circuit capable of delivering 9 watts per channel consists of 5U4 rectification, input into the designer's choice, the dual triode 6SN7GT driving the classic 300B.

The signal path, short and clean greatly simplifies construction without compromise as our philosophy of using high quality custom transformers and large choke still ensures that the sought after and much imitated WAD sound quality survives.

Dimensions: 18Kg. 390mm wide, 330mm deep and 200mm high (with valves).

Available to pre order now, full details in next month's DIY Supplement.

WAD. We're proud of our Sound
KEL84 is an affordable 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 transformers are our own high quality Ultra Linear design made in the UK. Up front, the circuit employs an ECF80 input / phase splitter valve which contributes to the KEL84's extremely smooth sound.

For simplicity the KEL84 is built on a printed circuit board. A strong steel chassis is then fronted by a 3mm thick anodised aluminium front panel and brushed aluminium knobs.

There are two versions available, a single input version with volume control and an integrated version with five line level inputs and tape loop. The integrated version also features an ALPS blue volume control and chrome plated transformer covers as standard.

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 valve amps and is rare at this price point.

KEL84 weighs 10Kg. External dimensions with valves are 300mm(w)x270mm(d)x150mm(h).

Single Input version £285
Integrated version £335

Our 6550 series amplifiers are built around the rugged 6550 beam tetrode that’s popular in America.

This valve is widely available and at a good price. This enables us to provide a high quality amplifier kit at realistic price. Producing no less than 40 watts our 6550 is a power house.

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 Groves. With it’s custom designed and made transformers it is a cut above many 6550s, with enough power to drive most loudspeakers, including insensitive electrostatics for example.

The 6550 is available in two versions, the integrated KT6550 with ALPs volume control five line level inputs and a tape monitor circuit or the KT6550 power amplifier for use with a separate pre-amp.

The amplifier weighs 19Kg. Dimensions are 390mm(w)x330mm(d)x220mm(h).

Prices shown include valves. Also available without valves on request.

KT6550 £615
KT6550 £580

The Headphone II amplifier is a beautifully simple design using Mullard ECL83 valves, a triode and power pentode in the same envelope.

It works from any line level source i.e. an amplifiers tape or pre amp out sockets. The circuit uses high specification EI output transformers that can drive any headphone load from 16 ohms to over 300 ohms depending on how the secondaries are wired.

The Headphone II is a pure Class A single ended design with the power pentode connected in triode configuration for sonic purity and 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.

Dimensions are 270mm(w)x275mm(d)x155mm(h).
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Until recently I would never have considered rearranging my mains supply to improve sound quality. This has always seemed a step too far, a bit akin to calling the builders in to re-build your living room because it doesn't sound right. At some point your friends are going to think you've lost the plot and this must be getting pretty close to that point! But the audio world is going balanced everywhere else, so balancing the mains seems like an idea of its time.

What changed my mind was the sheer common sense of it all. Dropping mains volts from 240V to 120V relative to ground is quite a radical transition, not the sort of thing I would have thought casually possible before this idea surfaced. It's still a lethal voltage, but not as bad as 250V, that's for sure. In simple terms if you touch live and ground you get half the current through your body and, from what I've been told by Americans accustomed to 110V, it makes quite a big difference. Touching live in the States is no big deal and, from what I've been told by engineers and electricians and likely have had a 110V 'belt'...

I couldn't quite persuade my myself to try this out personally as I already know what an electric shock is like. But then this is one reason why dropping the mains to a lower voltage appealed to me; it's the common sense bit, rather than the hi-fi bit. I doubt that many people die of electrocution in the UK each year, but there have been a few high profile cases recently and they don't make pleasant reading. Having pulled a friend off a metal cased power drill that went live, I know what the impact is and have an interest in safer systems. The dilemma of whether to earth or not (earth bonding is mandatory I must point out) isn't solvable either and can be a contributory factor in electrocution, if you to touch something that's live with one hand and something that's earthed with the other. Only an RCD can help here but I'm not sure many houses have them. Mine doesn't and it was rewired in the 1980s.

It was Americans again that lectured me once on how dangerous the British system was, after a friend of theirs had been mauled by it. 'Tis a pity that this is a debate we don't seem to have in Britain, or should I say Europe. Since the U.S. seems to get along well enough with a 110V supply, why can't we? Why does my house run at a stonkingly high 250V I wonder? To reduce resistive losses in the network? I have a suspicion there's a political reason somewhere. Does America suffer more electrical fires because of (I squared R) heating effects? Or is this how it once was with old Victorian cabling and we are just suffering the hangover?

Whatever, the prospect of turning my whole home over to balanced working did occur to me; I became convinced in advance that it was the simplest yet most sensible idea I've ever come across. But there are practical difficulties I discovered. I don't know what sort of transformers the Electricity Board uses, but my little jobby consumed 150W at idle, which doesn't make it the greenest thing going and it delivered just 10A. Not only would a 60A transformer suitable for supplying a home be a big chunk of metal that three strong men could hardly move, it would run fairly hot and waste a lot of power. All the same you could conceivably, I pondered, install a step-down, centre tapped 110V transformer and buy U.S. domestic equipment. You would then have a house where electrocution was all but impossible, as live would be just 55V. All the bulbs would go dim and your razor would probably slow to half speed, however...

Temporarily at least, I've dropped these flights of fancy. But there might be mileage in there all the same. I can't help feeling balancing the mains is fundamentally sound in principle and even the Institution of Electrical Engineers found my experiments interesting, as none of us could be quite certain what the outcome would be. I thought they'd treat me as a raving lunatic, but happily they did not!

Unfortunately, my luck ran out in the end. It was late, I was tired and unthinkingly put a ground test connection on a floating live terminal whilst making distortion tests. There was a sizzling spark and a nasty phut from deep inside the spectrum analyser. Yes, we all fiddle with the mains at our peril! I didn't die but my poor old spectrum analyser did, joining the great analyser heaven in the sky. Before it departed though, I'd managed to hang three humbling great motor start capacitors of 20uF apiece off the secondary (delta connected) and confirmed by spectrum analysis that they were suppressing incoming noise and rubbish very effectively. So there's definitely mileage in this mains balancing malarkey. I can't help feeling I've a lot more to learn.
it's outrageous that Ofcom are considering this proposal

Steve Green is an expert on digital radio and modern communications systems. He'll be writing regularly on broadcasting issues, including audio in TV, the cellphone network and the internet.

Next month Steve talks about a modern radio scheme being chosen in preference to DAB.

Up to now, Ofcom have regulated the audio quality of radio stations on DAB by enforcing minimum bit rate levels, because it is the bit rate that sets the nominal level of audio quality for digital radio stations. In a public consultation held earlier this year, however, Ofcom proposed a move away from this method of regulation and, instead, to use a measure called "diff-grades", which, in layman's terms is a measure of how much the audio is allowed to be degraded by the MPEG data compression process.

In principle, this isn't an unreasonable way to regulate audio quality, but what is so galling is the motive behind the proposal and the audio quality levels that they want to allow, because this clearly shows that Ofcom could not care less what the general public wants on digital radio.

Ofcom's motive for this proposal, as they have freely admitted, is to allow the commercial radio groups to lower the bit rates they use for stereo radio stations from the current minimum bit rate of 128 kbps to 112 kbps so long as they buy some new, slightly improved MPEG encoders. So, in effect, it is a lowering of the bit rates by stealth.

The commercial radio groups have been lobbying Ofcom for such a change for some time for the simple reason that it would allow them to carry ten stereo radio stations in each multiplex instead of nine at present; and more stations mean more profit once DAB has become a mass market. From the listener's perspective, however, it means degrading the audio quality of eight radio stations in order to fit in one extra station that they probably won't listen to anyway.

The BBC installed the new MPEG encoders in question for their stations on DAB at the beginning of this year, but I'm afraid that the audio quality on Radio 1, Radio 2, 6 Music and 1Xtra is still decidedly poor at 128 kbps, so I dread to think what radio stations will sound like at 112 kbps!

The problem with the audio quality at such low bit rates is caused by the fact that DAB uses the outdated and inefficient MPEG Layer 2 audio codec (MP2 for short), which was designed to be used at bit rates of 192 kbps and higher — with 192 kbps providing FM-like levels of audio quality. And, in fact, the BBC does use 192 kbps MP2 for Radios 1-4 on all of the digital TV platforms. It's also interesting to note that all TV channels on Freeview use bit rates of 192 kbps or higher for their audio streams, with the BBC using 256 kbps for the audio on all of its TV channels apart from BBC News 24 — CBeebies has a higher audio quality than Radio 3 on DAB!

The justification that Ofcom are using for putting forward this proposal is that a market research survey carried out by the DRDB (Digital Radio Development Bureau — the marketing arm for DAB in the UK) found that 95% of new DAB radio owners that responded rated the sound quality as being 'satisfactory' or better. However, this market research was carried out in June 2003, when over 95% of all DAB receivers being sold were of the small portable radio variety. So, Ofcom are proposing to make an irreversible change that will permanently allow low audio quality on a radio system that will one day replace FM, based on the opinions of people listening to small portable radios that are completely incapable of reproducing hi-fi sound. This is utter lunacy.

What is most outrageous is that Ofcom are completely ignoring an important finding from a market research survey they themselves commissioned, which asked people that currently listen via analogue radio, "What do you see as the main advantages of listening to digital radio?" to which the two most-cited responses were "better sound quality" (63%) and "extra stations" (21%).

So, Ofcom's proposal to allow the broadcasters to add one station by degrading the audio quality on eight stations is clearly in direct contrast to what the general public actually wants from digital radio. Moreover, in response to Ofcom's public consultation earlier in the year, over one hundred individuals expressed their opposition to Ofcom's proposal and not a single one supported the move. Yet, at the Radio Festival in July, Ofcom's Chief Executive, Stephen Carter, dropped a major hint that they would still be going ahead with their proposal.

It's outrageous that Ofcom are considering this proposal, so blatantly against the wishes of the general public, and I'd urge anybody who opposes this to write to their MP (i.e. via a website designed for contacting your MPs, such as www.writetothem.com), because if this proposal goes through then it would be the final nail in the coffin for audio quality on DAB in the UK.
todd

"today's products are better value, better sounding and better finished than ever before..."

Unless you've been at Guantanamo Bay for the past year, you can't but have heard how tough it is for retailers right now. Unless you're Tesco's, the news has been almost unrelentingly harsh this year. Hi-fi retailers haven't been spared the slow down in consumer spending, but the news isn't as bad as it might be...

First, many hi-fi retailers actually recorded poor figures last year and, therefore, this years results are often no worse or even marginally better than the previous year's. Another aspect often overlooked is that stereo hi-fi retailers deal with a smaller market and one, it's turning out, that may offer less competition and therefore healthier margins as dealers can maintain higher prices.

Check the internet price comparison sites and you'll see that whilst competition is rife amongst sales of plasmas, LCDs and MP3 players, traditional hi-fi components hardly get a look in. Select a CD player to price check and, whereas a year ago there would have been four or five retailers, these days you'll often find just a solitary dealer. It's also worth noting that although sales and profits may be down, most of the retailers are still turning a profit. If they weren't, they simply wouldn't be in business.

Whenever I hear of the tough times faced by retailers I can't help but think they've got it easy compared to many of the manufacturers. Even though, as a nation, we may have thought that we actually stopped making things in the 1980s, the closure of Rover has reminded us that the UK still has a residual manufacturing industry that does actually employ lots of people.

Although nothing like as big as Rover, in some respects Mission has a similar status within the UK hi-fi fraternity. It must therefore have come as quite a shock to hear that the company went into receivership at the beginning of May. At the time of writing the receivers are running the business as usual whilst looking for a buyer. Uncertain times follow, then, but not necessarily without hope. Mission's ownership has already changed hands at least three times in its twenty eight years of trading, and it's not been unusual for other British hi-fi companies to have had a similarly turbulent past.

When a company finds itself, as Mission has, in financial trouble, there are several outcomes that can arise. In some cases a loyal and, often brave, management team will attempt a buyout. Although the financial situation was very different, that's exactly what happened at Arcam several months ago. Since then, although the business has yet to be tested, their product range has gone from strength to strength.

Sometimes when a company dies, it does so without trace, but this is rare these days. In most cases some form of buyout is made. This can occasionally take the form of the company lock stock and barrel buyout, with the continuation of business as usual or, in most other cases the buying of the brand name itself, with other assets being sold off. To varying degrees this is exactly what has already happened to a number of great, British hi-fi brands.

The Chinese owned IAG group already owns Wharfedale and Quad and, it has to be said, has been a fine custodian of the marques—at least in terms of product—and now Audiolab beckons, too. Similarly the London based Audio Partnership has swept up brands as diverse as Ariston, Gale, Mordaunt Short, TDL and Cambridge Audio and, by and large, given them a positive future. Cambridge Audio and Mordaunt Short, in particular, have never received so much praise as in recent years. Of course, the aspect of jobs is a prickly issue, for whilst both these companies employ UK staff, the actual manufacturing is generally, with the odd exception, based in China.

Either a management buyout or takeover by IAG are possibilities for Mission. Again, at the time of writing, the Armour Group, which owns a number of brands including Myryad, has also shown an interest. Whatever the outcome, it would be very surprising if Mission didn't continue manufacturing and, at least in some form, manufacturing within the UK—at least with their high-end 'speakers. So where does this leave the rest of the industry? Well, by and large the manufacturing side has settled down and accepted current economic conditions. Low volume manufacturing can still make sense within the UK. Premium UK brands such as Linn and Naim have diversified their ranges and have proved that with good product there is still a market for UK built hi-fi at the high end.

No one can predict what will happen to the hi-fi industry in the future, but the one thing that is for certain is that, without the complacency that has existed before, the product available to the consumer is better value, better sounding and better finished than ever before. It may be tough out there, but it's certainly not dull!
“except in that personal sense, there is no such thing as correctness in music”

O
n BBC Radio 3 this morning, that admirable collector and critic of recorded music Rob Cowan invited listeners' views on the performance of Bach. It made me think of that transcendent recording of the double-violin concerto by Fritz Kreisler and Efrem Zimbalist, a supremely supple and musical performance about which I wrote in HFW a couple of years ago, calling attention to 'all the beautiful things that resentful post-1945 fashion has grimly expunged from performance practice'. It made me think of the extraordinary facility of the pianist Rosalyn Tureck for picking out the Bach note that really matters while giving due attention and sympathy to all the others, and of the sheer Bach excitement engendered by another pianist lady of more recent provenance, Joanna MacGregor.

It also made me think of a couple of damned Dutch dullards who occupied but scarcely enlivened Radio 3 recently with their academically 'correct' exposition of the Art of Fugue. They are not the only ones to be infected by that post-war pestilence of the latter 20th century, which caused the limitations of 'contemporary' performers to override the dreams and ambitions and possibilities inherent, whether the composers knew it or not, in the music they presented. Even some of the best of recent and current players - Tatiana Nikolayeva, Keith Jarrett, Andras Schiff - seem trammelled by their comprehension of what things were like when the music was written; even Glenn Gould, a man unlikely to be trammelled by anything, and who regularly displayed welcome measures of imagination and sheer cheek, seldom achieved real grace. There is a parallel in the wearing of neckties: even the selection and knotting of the things can be inhibited to the point of stultification by the overwhelming compulsion to be 'correct'. Yet I am compelled to ask, is correctness what we really want?

Consider the music of electronic instruments - guitars, Moog, drums, Ondes Martenot, whatever: who can say how they should sound, or how they were meant to sound, either in an auditorium or out of recording and reproducing equipment? Can there be any such thing as an authentic sound from something artificially contrived by such technical means as were available - to the composer, to the player, to the man on the mixing desk, to the recording engineer, or for that matter to the hi-fi manufacturer and his installer? The appallingly loud and characterful sounds of the symphony orchestra, in one of the huge halls for which it has been developed: is it, in that context, more 'correct' than the slighter, more characterful sounds of the symphony orchestra of 1920, when horns and woodwind were clearly differentiated in their tone spectra, after the French fashion, rather than made to blend as they are today in the German fashion? Which would you rather hear performing Holst, Respighi, even Tchaikovsky - and where? Would you rather hear a recording of that performance through Tannoy Westminsters or through BBC LS3/5As? Go through all the permutations and could you yet identify any of them as being 'correct'?

What you want to hear is what will seem correct for you, but it may not serve, impress, or even please, anyone else. Except in that personal sense, there is no such thing as correctness in music. There cannot be, because there is no absolute standard by which to measure and judge it. Sure, there is a good case to be made for philosophical pitch (middle C=256Hz) as a tuning standard, but even that is not fixed, and nothing else in music can be. The composer is not a god but merely somebody who has had an idea available for cogitation, interpretation, variation, inspiration, by any musician who cares to handle it. Swing musicians do this all the time; jazz musicians sometimes.

Nothing is fixed, and nothing can be: listen to a computerised rendition of the composer's original dots and what you hear may be supposed correct, but it will not be music; it will be nothing more than the skeleton to which the performer, the recording engineer, and all the rest of them, may add flesh. One might even add fancy dress; it, too, might be 'correct' - and even if not, it might yet be musically preferable. Did you ever hear the Swingle Singers perform Bach?

Once, long ago, I heard a couple of their recorded tracks. One was so-so; the other, the opening sinfonia from Bach's second Partita, was startling. It dug deeper, and came out with more expression of more wonderful ideas that lay buried in the dots, than any of the other performances that I have heard. It may not have seemed, to those who approach music as so many do, correct - but it was miraculous.
If podcasting could yet provide the most significant shake up in the mobile music market to date...

patrick cleasby

It has been a busy month in the world of internet downloads, both legal and illegal. The legal side of things is the most easy to cover briefly - as ever it is predominantly concerned with things Apple, as they continue to dominate the marketplace. All the usual marketing brouhaha has been applied as they build towards 500 million tracks sold just over two years - it is impressive to watch the rate at which the onscreen counter climbs at Apple's home page.

Less prominent are their next moves - concealed within the new 4.9 version of iTunes are a couple of significant advances. Firstly, as expected, Podcasting support has been added. More covertly, by connecting their current Motorola phones some observers have noted that support for Motorola iTunes phones is already in the software, even though the truly specialised phones are still to hit the market. This could yet provide the most significant shake up in the mobile music market, if the network providers can be convinced to run with Apple.

Podcasting support may be seen to be controversial as the navigation and search hook into the iTunes Music Store methods. This has lead commentators to note it would seem inevitable that Apple will seek to 'monetize' (horrible American jargon word, I'm sorry) Podcasting as soon as they are able. This seems contrary to the movement's freewheeling ethos, and would eventually render Podcasts little more than regularly refreshed audio books. Suspicions were only reinforced when the RSS and XML hounds complained that Apple's code seemed to indicate that they intend to bring in a proprietary document type in their Podcast programming - once again contrary to the intended use of such open-source systems. It will be interesting to see how this pans out - it is unlike Jobs et al to deliberately provoke the ire of the open-source community, but there is a lot to play for. Statistics are already showing impressive usage rates for prominent programs - particularly in the states, where some of the key BBC Podcasts are evidently just as popular as they are here.

Over on the illicit side of the fence, further moves have been made to tempt the genie back into the bottle on both sides of the Atlantic. In the states the courts have decided that there is a case to answer in that the suppliers of a couple of the prominent peer-to-peer clients may have been guilty of incitement to breach copyright law. So a couple of the originators of the dodgy download enabler before last get sued out of existence - so what? There are plenty of alternatives around, particularly BitTorrent, which endures despite movie industry attempts to close down the websites which list the torrent files.

Far more likely to succeed (i.e. force the casual downloader to go legal), are the continuing moves to penalise serial uploaders. In this country the BPI have drawn attention to cases of large scale downloading by teenagers. Probably much like their parents they often do not realise that the default settings of many of these pieces of software mean once you have downloaded your pile of tracks you are automatically making it all available from your computer to fellow dodgy downloaders - marking you as a serial uploader in the authorities' eyes. Once a few parents have been stung for a few thousand quid the exposed rump of dumb dodgy downloaders may well recede, as it has in the states.

But the savvy computer-head will be wise to these newbie traps, and will undoubtedly be using torrents and newsgroups to locate compressed (or even lossless) digital versions of whole albums available in one place, rather than as the disparate tracks you tend to find spread across peer-to-peer networks. There are lone voices in the wilderness of the music industry now suggesting that the battle is already long lost, and revolutionary thinking is necessary to address the serious threat to musicians' livelihoods. One of these is the legendary Blue Oyster Cult producer Sandy Pearlman, who was heard on the 'Today' programme recently around the time he was due to speak on the same subject at Patti Smith's Meltdown festival. His simple concept of a low (£5 cent) charge for every track downloaded everywhere may be nice in principle, but would seem impossible to implement - and received little credibility on the radio when set against the man from the BPI's 'we will prevail' bluster.

In my view there is room for a practical happy medium, and barring a few of the concerns voiced above, it would still appear to be Apple's paid-for download model. Ask thousands of people around the world about the ease and rapidity with which they were able to get hold of a decent copy of McCartney's Live8 version of Sgt. Pepper's - they know the score.
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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** 1986 (£1500)
Inspired Stan Curtis redesign of Philips CDI04, complete with switchable digital filter. Lean but tight and musical performer.

**CAMBRIDGE AUDIO CD45E** 1998 (£200)
A touch soft in the treble and tonally light, but outstanding in every other respect.

**LINN KARIK III** 1995 (£1775)
The final Karik 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 1x4 DAC-super musical

**MARANTZ SA-I** 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 (£959)
Beautifully-built two-box with preamp stage. Very musical although not as refined as modern Bitstream gear. No digital output.

**MUSICAL FIDELITY TRIVISTA** 2002 £4,000
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 CDI00. 1x4 DAC never sounded so good, until the MCD Pro arrived a year later.

**NAIM CDS** 1990 (£N/A)
Classic Philips 1x4 chipset with serious attention to power supplies equals grinning inducing sonics.

**SONY CDP-101** 1982 (£800)
The first Japanese CD spinner was powerful and involving. Brilliant transport more than compensated for 1x2 DAC, and you even got remote control!

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

**SONY CDP-701ES** 1984 (£890)
Sony's first ever bespoke high end audiophile machine used a 1x2 DAC to provide a classically incisive sound; supreme build quality allied to the pure unadulterated luxury of a paperback-sized remote control.

**YAMAHA CD-X1** 1983 (£340)
Nicely built 1x2 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**

**TEAC VRDS-T1** 1994 (£600)
Warm and expansive sound made this a mid price hit. Well built, with a slick mech.

**ESOTERIC P0** 1997 (£8,000)
The best CD drive bar none; TEAC’s Tokyo boys pushed the boat out in style. Brilliantly incise, ridiculously over engineered.

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

**DACs**

**CAMBRIDGE AUDIO DACMAGIC** 1995 (£89)
Good value upgrade for budget CD players with extensive facilities and detailed sonics.

**DACS 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.

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

**QED DIGIT** 1991 (£90)
Budget bitstream performer with tweaks aplenty. Positron PSU upgrade makes it smooth, but now past it.

**TURNTABLES**

**ARISTON RD11S** 1972 (£49)
Modern evolution of Thorens' original belt drive paradigm. Scotland's original super-deck was warm and musical, albeit soft. Sell capable of fine results today.
PIONEER PL-12D [1973] £36
The beginning of the end for the British turntable industry. When vinyl was the leading source, this brought new standards of noise performance and stability to the class, plus a low friction S-shaped tonearm. Later PL-112D was off the pace compared to rivals.

**DUAL CS505** 1982 £275
Simple high quality engineering and a respectable low mass tonearm made for a brilliant budget buy. Polished, smooth and lightly bland sound.

**GOLDRING Lenco 88/09** 1963 £15.65
Simple, well engineered midsized with soft, sweet sound and reasonable tonearms. Good spares and servicing support even today from specialists.

**LINN AXIS** 1987 £253
Simple, centre-price version of the Sondek, complete with LVX arm. Elegant and decently performing mid-price package. Later version with Akito tonearm better.

**LINN SONDEK LP12** 1973 £86
For many, the Brit superdeck; constant mods made it that early ones sound warmer and more lyrical than modern versions. Beguilingly musical but now off the pace.

**TECHNICS SP10** 1973 £400
Seminal Japanese engineering. Sonics depend on plinths, but a well mounted SP10F will give any modern a hard time, especially in respect of bass power and midband accuracy.

**MARANTZ TT1000** 1978 £600
Beautiful seventies high end belt drive with sweet and clean sound. Rare in Europe, but big in Japan.

**REJA PLANAR 3** 1979 £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 £119
Heavy metal - tremendously strong and articulate with only a veiled treble to let it down. In many respects, better than the seventies 'superdecks' that succeeded it.

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

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

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

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

**TONEARMS**

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

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

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

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

**HADCOCK GH228** 1976 £46
Evergreen unique with lovely sweet, fluid sound. Excellent service backup.

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

**NAIM ARO** 1986 £875
Truly endearing and charismatic performer - wonderfully engaging mid-bands makes up for softened frequency extremes.

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

**SME 3009** 1959 £118
Once state of the art, but long since btered. Musical enough, but weak at frequency extremes and veiled in the midband. Legendary serviceability has made it a cult, used prices unjustifiably high.

**DELTEC** 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.

**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.
MISSION CYRUS 2 1984 (£239)
Classic eighties minimalism combines arresting styling with clean, open, lively sound. Further upgradeable with PSX power supply.

NAIM NAIT 1984 (£350)
Superb rhythms and dynamics make it truly musical, but tonally monochromatic. Fine phono stage, very low power.

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

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

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 curio, 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!

NAIM NAC23.5 1978 (£N/A)
The Salisbury company came of age with this, their classic high end pre. Brilliantly fast and incisive sound that's a joy with vinyl but a tad forward for digital.

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

ROGERS A75 1978 (£220)
The prototypical Audiolab 8000A - lots of sensible facilities, a goodly power output and nice sound in one box. The later A75H and A100 versions offered improved sonic and were seriously sweet and open to listen to.

SUGDEN C51/PS5 1976 (£130)
Soft sounding early Sugden combo with a plethora of facilities and filters, complete with seventies-tastic DIN socketry. A sweet and endearing performer as you'd expect, but lacking in power and poor load driving ability, so partner carefully.

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

A&R A60 1977 (£115)
Sweet and musical feature-packed integrated; the Audiolab 8000A used its blueprint to show Rugged, professional build and finish allied to a lively and punchy sound. Extremely reliable.

MUSICAL FIDELITY A: 1985 (£350)
Beguiling Class A integrated with exquisite styling. Questionable reliability.

NAIM A1 1985 (£1,400)
Authentic reproduction monoblocs still more than cut the sonic mustard. High price but worth it.

MISSION CYRUS 2 1984 (£239)
Classic eighties minimalism combines arresting styling with clean, open, lively sound. Further upgradeable with PSX power supply.

LECON API 1973 (£N/A)
Cylindrical preamp used ES86 pentode power amplifiers for 'tower of power' pretensions, but it wasn't. Poor build, but decently clean sounding when working.

MARANTZ MODEL 9 1997 (£8000)
Authentic reproduction monoblocks still more than cut the sonic mustard. Highly expensive and highly sought after.
The first of the current dumpers is a capable \textit{One} capable of the theme with greater detail and incision. The warm, atmospheric sound is further proof of Naim's proficiency with tuners.

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

**MUSICAL FIDELITY XA100** 1996 [£1000PR] 200W of sweet smooth transistor stomp in a grooved tube! Under-rated oddity.

**QUAD II** 1952 [£22] 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.

**QUAD 303** 1968 [£55] Bullet proof build, but woolly sound. Off the pace, but endearing nonetheless. Some pipe smoking slipper wearers swear by them!

**KRELL KMA-100 II** 1987 [£7,750] Luciduous monoblock version of the giant KSA-100 is one of the seminal eighties transistor power amplifiers. Massive wallow allied to a very clean and open Class A sound makes this one of the best amplifiers of its type, ever.

**PIONEER M-73** 1986 [£1,200] Monster 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.

**PHONO STAGES**

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

**Linn LinnK** 1984 [£149] Naim-designed MC phono stage built to partner the original Naim NAIT - yes, really! Fine sound, although off the pace these days.

**MICHELL ISO** 1980 [£N/A] This Tom Evans-designed black box started the trend for high performance offboard phono stages. Chartmastic, musical and punchy - if lacking in finesse.

**TUNERS**

**MARANTZ ST8** 1978 [£353] Marantz's finest radio moment. Warm, organic sound plus an oscilloscope for checking the signal strength and multipath.

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

**SONY ST-S950** 1977 [£222] 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.

**TECHNICS ST-8000** 1976 [£180] National Panasonic's specialist hi-fi brand was a big hitter back then, and this is no exception. Superb FM stage makes for a very clean and smooth listen with lots of detail and depth.
**CLASSICS**

**ANALOGUE RECORDERS**

**YAMAHA TC-800GL 1977 [£170]**
Early classic with ski-slope styling courtesy of Mario Bellini. Middling sonics by modern standards, but cool nonetheless!

**SONY WM-D4C 1985 [£290]**
Single capstan transport on a par with a Swiss watch, single rec/play 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 16x4 DAC!

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

**PIONEER PDR-SSSW 1999 [£480]**
For a moment, this was the CD recorder to have. Clean and detailed.

**MARANTZ DR-17 1999 [CI 100]**
Probably the best sounding CD recorder made; built like a brick outhouse with a true audiophile sound and HDCD compatibility.

**KENWOOD DM-9090 1997 [£500]**
Serious and sophisticated sound thanks to well implemented ATRAC 4.5; surprisingly musical MD recorder.

**SONY TCD-8 DATMAN 1996 [L599]**
Super clean sound makes this an amazing portable, but fragile.

**SPENDOR BC1 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.

**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.

**KEF R105 1977 [£785]**
Three way Bextrene-based floorstander (complete with castors!) gave a truly wideband listen and massive (500W) power handling. A very neutral, spacious and polite sounding design, but rhythmically well off the pace. The quintessential nineteen seventies loudspeaker.

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

**DIGITAL RECORDERS**

**SONY MDS-JESSES 2000 [£900]**
The best sounding MD deck ever, thanks to awesome build and heroic ATRAC-DSP Type R coding.

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

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**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...

**TANNOY WESTMINSTER 1985 [£450]**
Folded horn monsters which certainly sound good if you have the space. Not the last word in thinness but can drive large rooms and image like few others.

**Jr 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 LS3/5a. Doesn't play loud, needs a powerful transistor amplifier, but rewards with fine clarity in imaging.
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Johann Sebastian would have been very proud.

The Kontrapunkt series from Ortofon. Named as a sign of respect for possibly the greatest, and the last, of Johann Sebastian Bach's works - The XIXth Contrapunctus. From around £400 and available from most quality Hi-Fi stores.

Distributed by Henley Designs, 01235 511166, www.henleydesigns.co.uk
MAGNEPLANAR SMGAI92X (£800)
Technological loudspeaker with genuinely musical abilities; fast, smooth, open, dry.

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

MISSION 752 1995 (£695)
Cracking Henry Azima-designed floorstanders combined HDA drive units and metal dome tweeters with surprisingly warm results. Benign load characteristics makes them great for valves.

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

CELESTION SL6 1984 (£250)
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 coarse at high frequencies and limp in the bass. Speakers would never be the same again...

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

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

YAMAHA NS1000 1977 (£532)
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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Absolute Demos

Audiogram MB2- Integrated Amplifier £265.00
Audiogram MB1- Amplifier £219.00
Audio research VT100 MkIII - Valve Amplifier £4650.00
Audio research 150.2- Class T digital amplifier £1404.00
Audio research 150.5-Class T 5 ch digital amplifier £4025.00
Copland CSA301 MKI - Valve Preamp £699.00
Copland CSA303 - Hybrid Preamp £850.00
Copland CTA504 - Valve Amplifier £1099.00
Copland CVA 535- 5 X125W amplifier £1700.00
Jadis Orchestra - CD Player £399.00
Krell KAV250P - Preamplifier £1495.00
Krell KPS 25Sc-Preamplifier/CD player CAST2 £1899.00
Krell KSL - Preamplifier £2000.00
Martin Logan Odyssey - Electrostatic Loudspeakers £4700.00
Martin Logan Quest - Electrostatic Loudspeakers £2400.00
Martin Logan Script - Electrostatic Loudspeakers £1225.00
Mintchocn C200 - 2 chassis Preamp £4200.00
Mintchocn MC2900 - Ltd. edition Valve Amplifier £3900.00
Mintchocn CR16 - Multizone control system £2299.00
Mintchocn CM56 - Amplifier £1719.00
Mintchocn CM202 - Amplifier £1999.00
Mintchocn MHT102 - Home theatre processor £509.00
PS Audio Ultrasil - DAC £599.00
PS Audio Reference Link -Digital Preamp £1999.00
Sonus Faber Concertino Home Loudspeakers £399.00
Theta Digital David II -CD/DVD Drive £2999.00
Wilson Audio CUB - Loudspeakers Silver £2900.00
Wilson Audio CUB II w/stands Black £5499.00
Wilson Audio System 6 - Loudspeakers Cashmere £12500.00
Wilson Audio Witt II Loudspeakers Black £14999.00
Z Systems RDQ1- Transparent Digital Equalizer £1850.00

NO GREY IMPORTS - ALL EQUIPMENT COMES WITH 1 YEAR FULL WARRANTY
world standards

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...!

<table>
<thead>
<tr>
<th>TURNTABLES</th>
<th>STANDARDS</th>
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<tbody>
<tr>
<td><strong>ANTTI ARM ONEIQI 1998 £725</strong></td>
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<tr>
<td><strong>REDESIGNED SYSTEMDEC IIX NOW OFF THE PACE, BUT THE ARM AND CARTRIDGE ARE BOTH STAR PERFORMERS.</strong></td>
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<tr>
<td><strong>LINN LP12/ LINGO 1973 £2100</strong></td>
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<tr>
<td>The quintessential belt drive superdeck offers a beguilingly musical midband at the expense of lumpy bass and nebulous imaging. Latest Linos brings a new lease of life, with even more punch and polish.</td>
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<tr>
<td><strong>MICHELL TECNODEC 2003 £575</strong></td>
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<tr>
<td>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.</td>
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<tr>
<td><strong>MICHELL GYRODEC SE 2002 £870</strong></td>
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<tr>
<td>Its beauty is more than skin deep - superbly build and finish allied to clever design equals class leading performance. Latest DC motor with 'Never Connected' PSU make it all the more unassailable.</td>
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<tr>
<td><strong>MICHELL ORBE SE 2002 £1916</strong></td>
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<tr>
<td>Cost-no-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</td>
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<tr>
<td><strong>PROJECT DEBUT II PHONO SB 2002 £170</strong></td>
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<tr>
<td>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.</td>
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<tr>
<td><strong>REGA P3 2000 £298</strong></td>
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<tr>
<td>Great entry level audiophile deck with fine bundled tonearm. Tweakable, and responds well to careful siting on a Base platform.</td>
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<tr>
<td><strong>REGA P25 2001 £619</strong></td>
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<tr>
<td>Until the TechnoDec, the best mid-price turntable package. Fine build and elegant styling. Clean, open sound but limited at frequency extremes in absolute terms.</td>
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<tr>
<td><strong>SME MODEL 10A 1995 £3333</strong></td>
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<tr>
<td>Exquisitely engineered deck and arm combo, but dry and clinical sounding compared to rivals. Accomplished performer with classical music, nonetheless.</td>
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<tr>
<td><strong>CLEARAUDIO REFERENCE 1996 £4070</strong></td>
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<tr>
<td>Fine bass articulation and power allied a 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.</td>
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<tr>
<td><strong>ORIGIN LIVE AURORA GOLD 2004 £1,470</strong></td>
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<tr>
<td>Sensual '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.</td>
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<tr>
<td><strong>GOLDRING GR-I 2004 £140</strong></td>
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<tr>
<td>Essentially a Rega P2 built down to very low price and bundled with a decent Goldring MM, this is cracking value for money. Head and shoulders above its immediate rivals, it offers a surprisingly musical and detailed sound that will stun those new to vinyl - which is precisely what it was designed to do.</td>
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<tr>
<td><strong>THORENS TD190 2003 £290</strong></td>
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<tr>
<td>Ease of set up and use, allied to fully automatic operation mean that, although hardly the last word in performance, this deck is most certainly a model of convenience.</td>
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<tr>
<td><strong>ROKSAN RADIUS 5 2003 £750</strong></td>
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<tr>
<td>Fantastic value allied to intelligent, interesting and 'out of the box' design makes for a wonderful entry-level superdeck. Open and musical sound is more inviting that Michell TechnoDec rival, and the bundled Nima Unipivots arm is a superstar.</td>
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<tr>
<td><strong>MICHHELL TECNOARM A2003 £399</strong></td>
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<tr>
<td>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 if not at four times the price. Runs SME V very close in all except bass, and better for musicality. Stunning.</td>
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<tr>
<td><strong>ORIGIN LIVE AURORA 2003 £1600</strong></td>
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<tr>
<td>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...</td>
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<tr>
<td><strong>CLEARAUDIO REFERENCE 2003 £4,000</strong></td>
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<tr>
<td>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; superlative pitch stability; stunning build and styling - Michell Orbe does most of this at half the price, however.</td>
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<tr>
<td><strong>TECHNICS SL1200III 1973 £395</strong></td>
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<td>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.</td>
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<tr>
<td><strong>HADCOCK 242 SE 2000 £649</strong></td>
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<tr>
<td>Latest of a long line of unipivots, with added mass, revised geometry and better finish. Musical like few others at or near the price.</td>
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<tr>
<td><strong>LINN EKOS 1987 £1700</strong></td>
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<tr>
<td>Subtle 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.</td>
<td></td>
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<tr>
<td><strong>ORIGIN LIVE ILLUSTRIOS 2002 £1570</strong></td>
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<tr>
<td>A modern superarm with battlewides build. Extremely strong, even and open sound in the mould of the late, lamented Zeta, plus fine tonal colouring. Exquisite.</td>
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</tbody>
</table>
STANDARDS

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

ORIGIN LIVE SILVER 2502001 £625
This fully developed and expertly fettered 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 Mosh Marketing, this is capable far beyond its price point, with a tight, lean and detailed sound. Responds brilliantly to Origin Live crounseweight modification, and well to rewiring.

SME 309 1989 £1767
Entry level SME complete with cost-cut alu-

minium armtube and detachable headshell. Tight, neutral sound with good tonality, but lacks the IV's pace and precision.

SME SERIES IV 1988 £1127
Offers nine turns of the SME IV's magic at just over half price. Exquisitely built and fin-

ished, and a design classic. Faces stiff compe-
tition these days, but lovely nevertheless.

SME SERIES V 1987 £1614
The so-called Best Pickup Arm in the World isn't, but comes close. Vice-like bass with incredible weight, ultra clear midband and treble. Does everything except beguile the listener.

CARTRIDGES

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

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

DIGITAL DISC PLAYERS

CREEK CD501 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 Maranta rival to challenge it.

CYRUS CD8 2003 £1000
Highly incisive, engaging, gripping and dynamic sound, but needs careful matching to smooth ancillaries. Optional PSX-R adds bass and dimensionality.

Linn CD5 1999 £195
Undeniably fast, lithe, musical and fun - but some won't take to its dry, wry character. Works best in all-Linn systems, where it really rises to the challenge!

ARCAM FMJ CD33T 2003 £1300
Superbly detailed midband allied to excellent bass extension makes this a powerfully musi-

cal machine in the best traditions of Arcam CD spinners. Nothing to criticise at the price, everything to recommend it!

MUSICAL FIDELITY 2003 £1200
Superbly neutral and expansive sound makes this our top pick of the year. Nothing to criticise at the price, and the styling bang up to the minute. Blistering value for money.

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 Maranta rival to challenge it.

DENON DVD2200 2003 £699
Superbly neutral and expansive sound makes this our top pick of the year. Nothing to criticise at the price, and the styling bang up to the minute. Blistering value for money.

Creek Maranta rival to challenge it.
Pioneer DV-688AVI 2003 £799
Pioneer’s most accomplished mid-price machine to date, this boasts full DVD-A/SACD playback, a weather of facilities and the all-important HDMI video and i.Link audio digital outputs, making it nigh-on future-proof. Factor in fine - if not outstanding - sound and superb pictures and it's practically impossible to fault.

SONY SCD-XB790 2003 £250
Quite unlike any other budget CD player. Sony CD spinners 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’s 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 couth sound allied to fine build and attractive styling makes this a worthy upgrade to entry-level designs.

ARCAM DV78 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 640C 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 £1,400
Classic Japanese ‘battleship’ DVD universal machine does practically everything superbly, with no obvious weak points except the indistinguishable CD sound. Top value.

EXPOSURE 1010 2003 £1,200
One of the most ‘analogue’ CD players, second only to the Shanling. Wonderfully beguiling balance leaves you looking for the tube output stage.

LINN CLASSIC MOVIE SYSTEM DI 2002 £500
Superb ergonomics and performance from this one-box beauty. The best ‘home theatre in a box’ you can buy.

LINN UNIDISK 1.1 2004 £6,500
Surely the ultimate universal DVD player; superb in every department, but its CD playback shines brightest considering it’s not a bespoke Red Book machine.

MARANTZ CD7300 2003 £350
Superlative build and styling for the money, and the sound is as good as you’ll get below £600. Smooth, detailed and engaging beyond its price.

MUSICAL FIDELITY X-RAY V3 2004 £900
Striking looking mid-price stormer with very even, accurate and even sonics; perfect for those seeking detail and neutrality over character and/or colour.

NAIM CDSI 2004 £825
The most engaging mid-price CD player on the market, but with a surprisingly velvet smooth sound. Delightful build and iconic styling make this one of Salisbury’s true classics.

PIONEER DV-8481 2003 £800
The best mid-price universal player right now; CD sound is respectable, SACD and DVD-A impressive and the video truly special. Does everything very well for the price.

SHANLING T-200C 2004 £2,150
Superb SACD player with tube output stage; arresting looks and truly special sound; be sure to go for 3DAcoustics version for best sound and UK aftersales support.

SONY SCD-XA3000ES 2003 £600
Surprising mid-price SACD spinner with multi-channel capability; sweet sound, not the best at the price but certainly the most versatile.

SONY SCD-XA9000ES 2003 £1,600
Sticks, beautifully built high end SACD player with very transparent, if rather dry, sound. Unexpectedly sweet CD playback but not the most gripping at the price.

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

DIGITAL RECORDERS

APPLE IPOD 40GB £399
Genre-defining best of breed, tons to supremely ergonomics and build allied to fine sound.

PIONEER PDR-409 2001 £200
Brilliant value CD recorder that makes excellent recordings from its digital inputs. Half decent digital converters, too.

PHILIPS DVDR880 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 sonic, but there’s a digital output!

YAMAHA CDR-HR5ES2002 £600
HD means MD-style ease of editing, but compromises recording quality ever-so-slightly. Add decent CD replay and it’s a fine all rounder nonetheless - top value.

PHONO STAGES

CREEK OBM-21SE 2003 £250
Musically 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 much more speed than the Delphini 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-LS 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 velvet smoothness to an already refined and engaging performer. Neutral to a fault - some will mourn the passing of the charismatic ISO.

MUSICAL FIDELITY XLPVS2 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 upgradability for just £250, 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 braille.

WHIST AUDIO PS.20 /MSU.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 gutier feel of the Trichord Delphini.

GRAHAM SLEE ERA GOLDV 2004 £450
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 fare - decency 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 incision. Low, low power means speaker choice critical.

AUDIO NOTE SORO SE 2000 £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.
STANDARDS

CYRUS 6 2003 £600
Cracking do-it-all mid price design, bringing sweet sound, good connectivity and upgradeability and stunning style and build.

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

IRECTION 5D 1999 £839
Direcional speakers with a top-heavy sound. Obvious front speakers are a bit disappointing.

MERIDIAN 551 1994 £895
Evergreen midsized speaker pack with good detail and dimensionality.

SAGGED 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.

SUGDEN A21 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 VS5/520 2003 £2,895
The Naim NAP250s tube-based analog channel integrates with the Naim 5i preamp and NAP200s power amp to create a balanced and cohesive system.

UNISON RESEARCH S6 2002 £1,625
A novel and effective preamp, with a balanced input and output. Perfect for systems with turntables and digital inputs.

UNISON RESEARCH S6 2002 £1,625
A novel and effective preamp, with a balanced input and output. Perfect for systems with turntables and digital inputs.

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, but makes up for it with excellent build and world-class components.

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PREAMPLIFIERS

SAGGED HEADMASTER 2003 £600
Brilliant value budget passive, giving little away in sonics to far more expensive designs. Connectivity and build aren't great, but what you expect at this price?

UNION RESEARCH S6 2002 £1,625
A novel and effective preamp, with a balanced input and output. Perfect for systems with turntables and digital inputs.

MUSICAL FIDELITY A308 CR 2003 £2400
Superb transistor behemoth, worth partnering with any high end CD player or preamp. Oodles of grunt served up with poise and power aplenty. Iconic styling and great build complete a very pretty package.

MF AUDIO PASSIVE PR3003 2003 £1500
Novel and effective pre with switchable gain via a transformer, and balanced operation. Open and inclusive sound, yet makes at most active rivals sound edgy by comparison.

NAIIM NACI12 2002 £640
Affordable admission ticket to the Salisbury high end experience. Detailed and dynamic, if tonally rather lacklustre.

LINN LK140 2000 £800
Dry and grey sounding, but decently dynamic and musically engaging all the same. A worthy worker in a budget Linn system.

MUSICAL FIDELITY A308 CR 2003 £2400
Superb transistor behemoth, worth partnering with any high end CD player or preamp. Oodles of grunt served up with poise and purpose.

MARANTZ SM-17 2001 £700
Useful budget power amp with plenty of clean transistor power. Not the most transparant, but sweet and clean all the same. Fine build completes a great value package.

NAIIM NAP150 2002 £795
Driven by a decent source and a NACI12, 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 super value all the same. Lovely build, finish and Quad's legendary service are nice.

CROFT TWIN STAR 2003 £1750
With a taste of both of both tube and transistor, this latest update of the Croft classic is a truly enduring experience.
Graaf GM20 OTL 2003 £3,300
Awesome output transformer-less valve power amp gives dazzling speed and incision, with an ethereal soundstage and delicious filigree 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 MusicMaster 2003 £1,300
Quintessential Class A. Sugden sound it is not warm as many expect, but extremely neutral and open with real tonal colour. By comparison, tubes sound bloated and standard solid-state hazy and brittle. Superb when partnered with efficient loudspeakers like Revolver R45s, but many will find it underpowered.

LOUDSPEAKERS

B&W CD1 NT 2002 £750
Fine clarity and imaging allied to pleasing warmth and great rhythmic cohesion make these standmounters an accomplished all-rounder that gives a real taste of 'super-fi' at a reasonably affordable price.

Castle Conway 3 2003 £930
Superbly smooth and crisp performers, with a big hearted musical sound. Ultimately coloured though, with a slow, plummy bass.

Cyrus CLS70 2001 £800
Charismatic performer with a fast, tight and open midband, but lacks cohesion and scale.

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

Linn Ninka 2001 £995
Major on rhythms and dynamics, making them an involving listen. Reasonably refined, too - but totally disappointing.

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

MISSION 781SE 2003 £900
Bright and tight 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.

Revolver R45 2003 £699
Wonderfully easy to drive floorstanders that are a dreamboat for tube amplifiers, and great for party-minded transistor users too. Great attack transients, fluid and musical bass and midband and couth treble make them fine all-rounders.

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

Mordaunt Short 9142002 £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 grippy 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 soundously.

Pergee FX-1L 2002 £5000
Charismatic Aussie ribbon design with deliciously open mid and treble, allied to fine bass weight. The right room and ancillaries essential. Engaging, musical and powerful sound. Superb.

Tdk S-80 2002 £90
Ingenious Nxt multimedia sub system has a wonderfully open and even 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 that's not the point - that deliciously fluid and intricate midband wins great respect.

Tannoy Eyris DCI 2003 £699
The combination of dual concentric treble/midband drivers plus supertweeters 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 £2,395
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.

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

KEF Q4 2004 £400
Hard to argue with the value of this small footprint floorstander; very couth, even, and detailed and sounded 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 M22 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 colour and texturality.

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.

Revolver RW16 2004 £400
Outstanding standmounter with tonal accuracy and speed that totally belies its price; good sensitivity for a small box, with nicely etched treble. As always, tonally dry.

Spendor SJ/SE 2004 £950
A natural successor to the BBC LS3/5a, whose impressive neutrality, imaging and evenhandedness makes this a superior, if less charismatic, loudspeaker.

Townshend MAXIMUM 2003 £800
The best affordable supertweeter we've heard - you'd be amazed at the difference it makes! Classic 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
Superb build allied to a smooth and musical bass. Smooth, detailed and musical.

Sennheiser PX-100 2002 £29
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Sennheiser HD-650 2004 £250
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INTERCONNECTS

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Excellent mid-price design with a very neutral, silky and self-effacing sound. Superb value for money.

CHORD CO. CHAMELEON 2 £90/M
One of our favourites, these are musical performers with a smooth yet open sound.

VDH ULTIMATE THE FIRST £260/M
Carbon interconnects that help you forget the electronics and concentrate on the music. Miraculous transparency! Tight and tuneful bass mixed with air and space results in a cracking cable for the money.

DNM RESON £40/M
Neutral and transparent - a steal!

TCI CONSTRUCTOR 13A-4 BLOCK 2003 £120
Top quality 'affordable' mains outlet block, with fine build and good sonics. Well worth the extra over standard high street specials, which sound coarse and two-dimensional by comparison.

NORDOST BLUE HEAVEN £150/M
Some of the fastest and most transparent cable around.

TUNERS

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 DT81 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.

DENON TUT-260L MK II 1998 £130
If you want the best FM sound at the lowest possible price, then this ancient tuner remains peerless after all these years. There are better analogue designs around, but are either near-impossible to find or are now long-deleted.

CYRUS FM X £500
Great for Cyrus users, but its dry and precise sound can’t match the best of the rest at the price. Worthy, nonetheless.

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.

SYSTEMS

DENON TU-260L MK II 1998 £130
If you want the best FM sound at the lowest possible price, then this ancient tuner remains peerless after all these years. There are better analogue designs around, but are either near-impossible to find or are now long-deleted.

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...

NAD 5400 2003 £600
Highly accomplished specialist high end analogue tuner with a deliciously open and lucid sound, but it can’t quite match the Myryad all the same.

PRIMARE T21 2007 £600
Seriously accomplished design with mature sonics, great styling and fine build.

MYRYAD MT 100 1999 £600
One of hi-fi’s nice surprises, this is a beautifully designed and built bit of kit with a deliciously sweet and sweetie sound which really does justify its high price.

PIONEER NS-DV990 2003 £799.95
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Letter of the Month

TOP LINE

I own a Leak Troughline tuner and couldn’t agree more with your review. The sound quality of Radio 3 - BBC willing - is simply superb. How this can be when programme is relayed to transmitters digitally at only 32kHz/13 bit I leave to others to explain!

I bought mine from Classique Sounds. It had been serviced and realigned by One Thing, and modified for use with their outboard stereo decoder. The latter uses the best performing decoder chip ever made, the LM4500A - it sounds superb and offers a CCIR weighted signal-to-noise ratio of 76dB. The poor stereo performance of the review unit in this respect presumably arose from whatever decoder GT Audio use. It isn’t down to the Troughline - the only hiss I hear is already on programme, or is very faint and is only heard at very high volume settings in quiet passages.

The only failing of the Troughline is its poor selectivity. It must be fed not just a strong signal but a clean one too. This is no problem here in Norwich, but it highly susceptible to adjacent station interference and multipath distortion. And don’t expect an unserviced unit to perform well - forty or more years will have taken their toll. Though valves, bases, capacitors and resistors can be renewed or upgraded without affecting alignment, any amateur tampering with preset or transformer cores will be met by disaster. One Thing offer a repair and realignment service which is both superb and reasonably priced. They only replace defective components, but complete renewal is unnecessary anyway.

I have made several modifications to both the tuner and decoder. I upgraded all the power supply capacitors to Cerafines and Blackgates, and installed a 20H choke after the input power supply capacitor. This is large, so I bolted it to the rear of the tuner. I revised some of the earthing arrangements, and upgraded the final two signal coupling capacitors. The unit was originally the stereo model (with the original poor decoder removed), but still had the original ECC84 front end; I modified the latter to use a 6922 for greater sensitivity (this involves rewiring the valve base, shortening L7 to 4 turns and adjusting R5; it doesn’t affect alignment though). I replaced both the ECF80s with much less microphonic E80CFs (this can eliminate spurious low frequency noises).

Finally, I replaced the preset on the input of the decoder with two resistors, chosen to give maximum level but without distortion due to decoder overload, and upgraded the power supply to the decoder with Schottky rectifiers and a Black Gate after the voltage regulator, fed a.c. from an unused output of my Musical Fidelity X-PSU v3!

Some other points may be of interest. The stereo Troughline was basically a Mark III and like the latter has the lower distortion discriminator fitted, better than the earlier Version IIIs. (The better version has transformer cores with hexagonal holes, not slats). Whatever model, it sounds best to take the "multiplex" feed for a decoder after the cathode follower, provided the deemphasis network is removed first (R42, R43 and C50 - replace with a 1M resistor. Take output from after C53). The multiplex output provided on the Mark II and mono Mark III is taken from before the follower (at the junction of C51 and R30), and is not ideal.

Though each step above paid dividends, I’d need an unmodified unit to accurately describe the overall improvement. The infuriating thing about tuners in this respect is the lack of control over programme, making comparative listening over time impossible. This is particularly irksome when trying to minimise/ eliminate small background noises such as hum, buzzes and a "breathy" sound caused by imperfect tuning (I needed to master fine tuning of the discriminator transformer to eliminate the latter). The problem was self inflicted and I won’t go into it here. It is possible to fine tune this transformer by ear alone, and if there is any difference at all between the sound with AFC in and out this probably the cause).

I’m not an engineer and despite the above I’m pretty ignorant of rf circuit design. I was only able to make the modifications with the help of an expert. I’d love to acknowledge him, but I feel he suffered enough unsought attention already! He knows who he is - thanks again.

I’ve also built my own preamp (phono and line), and a single-ended power amp which uses fixed biased WE300Bs, driven by a 6545 via interstage transformers, and powered by a choke input, valve regulated power supply. It’s very similar to the two stage version of the Border Patrol SE300B, and sounds superb. Apart from the
Thanks Paul. Not bad considering you are "not an engineer". Just as well, as we'd all be out of a job! I hope your letter inspires others to run this venerable tuner, but as you so usefully point out, it is a labour of love. Listening to a good condition Troughline is like being in the studio though - it is almost uncanny. What a pity a great experience like this is almost unknown to all except a few dedicated enthusiasts. However, the worth and value of second hand will continue to rise as more people come to understand that all that has been built in the past isn't junk - far from it in fact. I've just come back from Duxford, with its eternally wonderful fly pasts of pristine condition warbirds, like a flight of the most beautifully restored pristine Mustangs holding tight formation in a steady fly-by. Apparently the number of 'flyers' (serviceable planes, that is, not humans with goggles on) is rising progressively as people restore them and even Tom Cruise has one. It's what you put in your garage when you have everything else! Classic hi-fi is similarly a valuable part of our heritage, one that can be enjoyed today. Glad that you're doing it. NK

Fred S. Llanelli,
S. Wales

No, don't have your T de P Troughline decoder altered, because it is quite unique. Tim made the main channel (L+R) all-valve; only the stereo difference signal (L-R) is solid-state. Since much of what you hear is mono, or L+R in tuner parlance, you effectively have a valve decoder. It's a neat idea, very T de P and effective too, so best to keep hold of it in my view. I somehow doubt you would be able to improve much on this, although I have not carried out comparative listening tests. For tape recorder repair, contact Phil Pimblott at Audiolab (Leeds) on 0113 2440378 or Brian Reeves at 0161 4992349.

RARE TUNER FISHING

Thanks for the "air waves" special last month! Comparing Graham's Troughline with Tim De Paravicini's worked over Troughline with his external FM decoder, a Hi-Fi World Design from some ten years ago, which one would be better? Do I have to ask Graham to re-do my Tim De Paravicini's Troughline?

And another question to Noel: you did a special on an open reel tape recorders (esp. the Revox G36) in an issue early or mid 90's and had an address for a guy, I think in the Midlands, for fixing, tuning and upgrading classical tape recorders (from valve Revox's to Elcaset machines). Any chance of digging out that contact, please? All my HFW mags are currently in storage in Sweden, so my "reference-library" is a bit impaired.

regards

Fred S. Llanelli,
S. Wales

usual SE attributes, it provides "solid state" bass (has to heard to be believed of a 8W SE amp). I owe a great debt to Gary Dews at Border Patrol who has advised me over the years. And I've just acquired some pre-built (normally supplied as a kit) Hammer Dynamics Super 12 loudspeakers - single full range drive units with super tweeters, sensitivity 97dB. Again superb. And the amps and speakers just love the Troughline...

Paul Needs
When your Tivoli booms, it's curtains for your rooms...

Use quality connectors too, like the Neutrik Profi plugs shown here.

different versions of nice... silver and gloss look nice apparently, so do Parlington Dreadnoughts! Confused by that one, anyway I digress.

The reason for the e-mail is that due to the hi-fi negotiating a new home, my existing speaker wire is no longer long enough, various lengths of Cable talk, QED, Ixos, etc. sit in the drawer waiting for a day to be useful.

All this change has led me back to 'home made' hi-fi, especially interconnects and mains and why not speaker cables! It has led to a degree of mild stress in speaker cable pursuit to get more information on the 'RS Pink cable' mentioned in this month's letters page, with reference to a letter in the May edition. Guess what, I started re-buying Hi-Fi World from the June edition and it's looking like a subscription is looming on the horizon now, as the other established periodicals don't really cater to the home tinkerer or those that can't just pop £3k on a CD player, or that feel three pages covering 25 CD players doesn't give subjective depth of what the product really is. Back to the point. Can you provide any more information on said Pink cables? I would be very grateful for any information you can provide.

Jason (born again tinkerer)

The cable spec is PTFE insulation 190.15 pink cable at £13.80 per 25m reel + VAT, or £16.21 total. Stock number is 359-510, from R.S. Components and I found it on page 1-115 of the latest catalogue. This is a silver plated copper equipment wire with nineteen 0.15mm diameter strands, and an outside diameter of just 1.35mm, which is thin for loudspeakers. It is rated at 9A all the same. R.S. Components are industrial suppliers and only supply cable by the reel. This range of cables normally come in 100m reels, but you can get black, pink, red and yellow in 25m reels at what is a very reasonable price. I presume pink doesn't sound better, but I am prepared to be corrected here!

PTFE insulation is quite highly regarded for its sonic properties, as is silver plated copper, but these are standard copper wires, not Oxygen Free Copper. R.S. also do OFC loudspeaker cables at slightly higher cost, but at fairly prosaic spec. The sheath is PVC and the cable is not silver plated; they likely come from Taiwan, looking much like Shark Wire to me. You can also get this from Maplins. Don't ignore the quality of your plugs. Our article on Connections highlights the fact that there are some very well thought through audio connectors available, using materials and techniques superior to those found on everyday commercial connectors. They should add the finishing touch to what may turn out to be a very good sounding cable. NK

BASS-IC ISSUES

I finally moved in to a brand new one bedroom top floor shared ownership flat in March of this year. I was of course excited at the prospect of plugging-in the stereo into the quite large 20x20 square living-dining area. But instead of the best room acoustics ever, all I got was a horrendously booming and indistinct bass, and not wanting to disturb my neighbour below I tried different room and speaker arrangements and cutting the bass on the amplifier to zero - all with no real improvement.

The Tivoli Audio One in the kitchen is also unaccountably boomy and I have concluded that the problem probably lies with the construction of the walls and floors. In despair I have disconnected the bass driver from the speakers and now listen to CDs and the tuner through just the tweeter and a mid range driver. It sounds a bit like my old Dansette; slightly more listenable - but not really hi-fi any more. My friends think I have lost the plot.

Please can you advise on possible remedies? I have installed wall-to-wall carpet but not yet put up any curtains: is this likely to help? Or should I purchase some new speakers? Something much smaller with a very tightly restrained bottom end perhaps? I haven't auditioned speakers since the early 1980s but am intrigued with descriptions of Elac's ribbon tweeters and Mission's smaller boxes. Can you suggest anything to get me started?

My current set-up is Heybrook HB3 speakers bought in 1983, A&R A60 integrated amplifier from same period, Musical Fidelity E50 tuner, various CD players, currently enjoying a late 1990s Technics portable which has no soundstage but plenty of bounce - good for Swing, 60s/70s Rock.

Stuart Dunbar-Dempsey

This seems a little surprising, because although your room is square, dimensions of 20ft give it a basic modal frequency of 27Hz, which is low. I would not expect your loudspeakers to excite this strongly, since they likely reach 40Hz or so. And big rooms do not tend to be boomy, partly because they are naturally well damped due to the mass of air in the room, and partly because our ears aren't too sensitive to frequencies as low as this. Since the ceiling is likely to be 8-9ft high I don't see any modal sensitivity here...
either. So the structure could be booming, but in my experience lightweight partition walls act to suck out bass rather than reinforce it. And floors bounce at around 5Hz, because of the mass of timber in them.

I can only suggest the problem is a lack of damping in the room, and that you travel down the heavy furniture route, using well padded foam settees to absorb bass. Curtains and carpets won’t do much, but tall bookcases in the corner, stuffed with books do seem to work, I find. I think your HB3 has a sand chamber in it. Filling this with dry silver sand (B&Q or Homebase) could well make a big difference, as it really tightens bass. Or you could try smaller loudspeakers, but I don’t feel confident about the basic nature of the problem to predict an outcome here. It’s probably worth trying a pair of good quality small loudspeakers, like the new KEF Q1s, as they may well suit and hardly break the bank. NK

SLIPPERY CHARACTER

I have just finished reading my last copy of Hi-Fi World and checked-out your website for the first time. I came across NK’s article from some time back about his Garrard 401 and the bad initial rumble. I own both of the above turntables (3x301 and 1x401). Only one of the 301s has been in constant use for the past 12 years and can be seen on my website www.blueangel-audio.com. I recently heard a bit of rumble and living in Cape Town, there are not too many possibilities for an oil change and tune-up service. After some careful degreasing of the idler wheel and inside of the platter, I used a syringe and added a few drops of Castrol Final Drive EPX 85W140, which I purchased after checking out various automotive lubricants. This was done about a month ago and cured the rumble within a few RPMs.

In my cartridge test room, I have a Micro Seki BL-51 (rescued out of a car boot and in shocking condition). The belt was one mess of rubber goo twisted around the drive spindle and the cover was cracked. About ten days after my purchase, I fitted a newly made clear Blue Angel blue Perspex cover, a new drive belt (new old stock - a packet of 10 for about £1) and polished the plinth and the aluminium fittings. Now, it looks like the day it arrived from the factory.

My other audio toys are Leak Stereo 20 (in daily use), turntables from Ariston, Rega, Dunlop Systemdek, Michell and a B&Q 4002, all carefully restored and made like new again. Also in daily use is a piece of mystery equipment which I have had for several years: a Nagatron Model HA-9000 phono preamp. This can also be seen next to my turntable on the website. It is battery powered, taking 8 C cells which lasts forever, even in daily use. So much would like to find the specs for this equipment and have searched the many internet references to Nagatron but never found any reference to this phono preamp. Have you heard anything of this equipment? Any info or web reference would be appreciated.

Andre Hanekom
South Africa

Thanks for the Garrard tip Andre. I like the Cape Town headshot on your site and your own impressive looking cartridge. It’s not something I would like to try! If any readers can help with your Nagatron query please email in to us. NK

SQUEEZE-Y Does It

In reply to Dominic Gallagher, Hi-Fi World July, the SqueezeBox is only as complicated as you wish to make it. My goal, as I stated in the review, was to better my existing Naim CD set-up. This I did in an admittedly tweaky sort of way. However, it’s really no different to the way many people re-clock their existing CD players for improved performance.

It’s not necessary to use additional power supplies or external DACs as I did; the sound is perfectly acceptable as standard. However, SlimDevices have not stood still; they have released a SqueezeBox MKII that has addressed the sound quality issues I set out to improve upon. The new SqueezeBox MKII is a very capable device straight from the box, much more so than the SqueezeBox MK1 as reviewed. It still has the ability to link into an external DAC but many users would probably not feel the need to do so.

There is no scripting needed in EAC. The parameters I mentioned are a setting inside the software. The software gives you examples of what options to use; its very easy and simple to do - no need for MySQL! The SqueezeBox can hook up to a Mac for all those with a PC phobia, the Mac mini would be ideal, but why oh why would you want to control it with a mobile phone or PDA? The SqueezeBox remote is as complicated as it needs to be!

To round off, the SqueezeBox has great sound quality, is versatile and very easy to set-up and use. You don’t need to be a PC geek to get into PC music!

Neal Gibbons
World Audio Design B.B. moderator
THE GOOD, THE DAB & THE UGLY

After reading your articles on Tuners and Radio Reception options in the last issue I have some comments. Last month I purchased a Sony ST-S900 DAB/ FM tuner. I, like others only use the supplied wire antenna as I live in a rented house and don't know how long I will be here. I think the DAB reception is quite good! It does not have the tone of the FM but is clear and has no background noise. And it does this with a small bit of wire attached for the antenna.

I realise that in the ultimate set-up a top flight FM tuner with outside antenna will be miles better but it seems to me that it will be very few people who will be spending their cash on these tuners. Let's remember, I would think from most people's point of view, the radio is a means of listening to many varying types of music to see if you would like to buy the album.

And you commented on the fact that the Digi-Box's supplied for the digital Television reception give better bandwidth than DAB. I then went and had a look at my digi-box and you're right. But what did occur to me is that maybe the equipment manufacturers could produce a tuner (type box) which could use the frequency the digi-box uses but only decode the channels marked "Audio"? What rule states we have to listen to radio broadcasts on the DAB frequency? Of course the question then comes up, when they start allocating more TV stations to the Digi-box frequency, where do we think they will cut back to add these? Of course the Audio channels, because the digi-box frequency only has a limited bandwidth too.

I work in the computing networking field so am quite familiar with the audio compression codecs used for many transmissions (Music, Video & Voice over IP). There are always going to be new and better codecs produced all the time. Surely at some point we must realise this, and think we will cut back to add these? Of course the Audio channels, because the digi-box frequency only has a limited bandwidth too.

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In a broadcast monopoly situation as exists with the BBC, the use of technology that degrades sound quality, for whatever reason, is unheard of. It is progress backwards! Neither DVD, HDTV or today's high quality MinDV camcorders have sold successfully on anything other than the promise of better quality - and they are selling well. It was always possible to produce an extensible system that could be upgraded at transmitter and receiver, but the dogma of the time - i.e. digital is perfect - precluded any consideration of this possibility. In real life commercial terms DAB is just thoroughly poor engineering, as we now realise today as digital encoding and delivery systems move on. You'll find Steve Green's column on Subscription Radio offers further fascinating insights on all this. It also shows how we are being hoodwinked and bamboozled by rigid European Broadcasting ideas, largely emanating from an atrophied EBU, whilst the rest of the world quietly moves on. Yes, DAB is good, but only for hiss free radio. It has little to offer quality wise, as you will discover if you try to listen to violins in a decent classical broadcast. NK

TAKING THE TUBES

I need your help regarding valve amplifiers. I have recently tried at home a Tube Technology Unisis amp against my Musical Fidelity XP100 and XAS100. I found the valve amp at only 35W far more powerful than the Musical Fidelity, and when I put the Musical Fidelity back into the system it sounded very tinny. I also have an MF X-Ray CD player original and Acoustic Energy AE1 speakers. Can you recommend any other valve amps for me to try at around the £2,000 mark that would give better sound than the above or any other useful information, as I have not used valve amps before and need your insight, rather than a dealer whose objective is to sell...

Mick

With a budget like that you could well try the much admired Unison Research S6, from which you will have spare change. For a gutsier if not more subtle sound, then an Audio Research VS155 is an interesting choice. Nowadays with valve amps it is best to get one with a 4ohm output option, since modern bass units are now nearly always 4ohm and, if you are to suffer a load mismatch with valves it is better that it is a higher impedance than ideal, rather than a lower one. So a 4ohm amp is better driving an 8ohm load than an 80hm amp is driving a 4ohm load.

You've heard the benefits of a valve amp. The drawbacks are higher running costs. However, both the S6 and VS155 are a fairly a straightforward proposition in this respect. The output valves, EL34 and 6550s respectively, cost £30 or so apiece, according to quality, matching etc., and they will last 2000 hours or so at least. A new set of four (two per channel in a push-pull amp) will set you back £120 or so, not a fortune every few years. A well designed valve amplifier is a durable item and should trundle on for years. The worst that can happen is that an output valve will, sooner or later, short out, potentially burning out the output tranzy, cathode resistors and all. It's a rare occurrence. Fuses in each H.T. line can prevent such a collapse, so you might like to check that such things exist. Only fixed bias amps need bias adjustment, by the way and for simplicity I would suggest you steer clear of these. I don't want to scare you but whole batches of output valves have been leaving East European factories...
Audio Research VSi55 – you’ll never miss transistors...

PORTABLE PLEASURE

I always enjoy reading Hi-Fi World with its uniquely descriptive analyses (even if I have worn out my second dictionary) but after many years, I am drawn to the conclusion that if it sounds good, it is good.

In your July 2005 issue, you looked at portable ‘trannies’, for want of a more esoteric term, but to my mind the best sounding VHF portabi...
DC power supply above 13.8 Volts. A 13.2 volts unit should be just perfect. Eventually, search for a finely adjustable unit (voltage can be adjusted within a given range, typically 12-14V). This way you can experiment different settings. There's no need to spend a lot of money, 25 UKP or so would buy you an appropriate PSU unit. Another option would be to use a sealed lead acid battery (SLA). Even a motorcycle battery would be fine (provided voltage and current are appropriate). If still in trouble, browse the RS or Maplin catalogues. I, for example, use a ZetaGi HP145 power supply.

You can find info and pictures here: http://www.zgitaly.it (also in English). As for the flat soundstage—wait and see what a decent PSU can do to the T-Amp!

Jonathan Ives

Some people have written to ask what I think of the MAs. I've reviewed them, but I don't have any review written yet. However, I can say that I've been very impressed with them. They sound fantastic and are very easy to drive. I would definitely recommend them if you're looking for a good quality pair of loudspeakers.

PSX-R power supply [see our Cyrus Planar 3 and Aura VA100 here, as your description fits in with my recollections of their sound. The Aura amps were smooth and easy sounding, quite natural and 'nice'. On the other hand, the AB5 is more coloured, heavier sounding and more enclosed. You have become accustomed to the former rather than the latter. I really don't think you can retrieve the sound you once knew - and so carelessly threw away! - by replacing the loudspeakers. It is the amp that should go. Modern day Cyrus amps are pleasantly smooth, and they've a beguiling sense of space with the PSX-R power supply [see our Cyrus upgrade feature, p57 – Ed.]. Otherwise, try if you can a Cambridge Azur 640A, which is open and dynamic at the same time.

You may well try altering balance by changing cables but I am not at all sure it's the right thing to do. It seems to me that the AB5 is a very fine sounding amp and sound pods. It all came through within two days but two months later so did a bill for £13 Duty. Not exorbitant but worth being aware of.

Of course the other thing about this amp which gets forgotten is it plugs a very useful hole in the market. You have a PC with cheap powered speakers. You have an old pair of hi-fi speakers that you'd like to use with the PC. Was there a small, simple amp on the market to assist you in this purpose? No - hence my first T-Amp. Because it runs off 12v you can even power it from an unused 12v top from the PCs internal power supply, though these are not considered fit for critical hi-fi listening. Mine runs a pair of Gennexa LX5s as PC speakers for music, games etc. Of course remember not to use non-shielded speakers too close to a monitor! The internet site www.48hz.com has some interesting kits in this space, by the way.

Jonathan Ives

Everybody's talking about Sonic Impact T-Amp...

T-TIME PART 2

Having not bought any hi-fi mags for some time I was tempted into buying the June issue. I have been following the Sonic Impact T-Amp on the internet and have two I use at home. I was starting to attribute the lack of magazine space on this subject to a conspiracy of silence, so well done for breaking the mould.

I can only agree that within its "envelope" this is a very fine sounding amp; even driving a pair of inefficient LS3/5as at modest levels it sounds very good. This of course highlights the lack of affordable high efficiency speaker kits - there appear to be lots of reasonably priced horn kits in Sweden and Japan - that would partner this amp well I would have thought. The T-Amp upssets the usual economics of buying a system that's for sure, I'll be interesting to see the first Class-D budget amps to emerge.

A couple of things I'd mention: ThinkGeek are a very good company to deal with and mine came through within 2 days, but be aware that some weeks/months later you may get a bill for UK duty from DHL to be paid on this item. I purchased the speakers in a set with the equally mind-boggling cardboard speakers and sound pods. It all came through within two days but two months later so did a bill for £13 Duty. Not exorbitant but worth being aware of.

Of course the other thing about this amp which gets forgotten is it plugs a very useful hole in the market. You have a PC with cheap powered speakers. You have an old pair of hi-fi speakers that you'd like to use with the PC. Was there a small, simple amp on the market to assist you in this purpose? No - hence my first T-Amp. Because it runs off 12v you can even power it from an unused 12v top from the PC's internal power supply, though these are not considered fit for critical hi-fi listening. Mine runs a pair of Gennexa LX5s as PC speakers for music, games etc. Of course remember not to put non-shielded speakers too close to a monitor! The internet site www.48hz.com has some interesting kits in this space, by the way.

Jonathan Ives

If it's a choice between cock-up and conspiracy, then in most cases it's the former rather than the latter. In our case there's no conspiracy of silence, so much as an avalanche of interesting things in audio to cope with - and we can't cover all of it, or at least, not properly. It looks like Class D will become an enthusiasts play area though, as totally packaged chip solutions are developed where only big output inductors and power supplies, plus a snazzy case are needed. NK

RIGHT NEXT TIME?

A few months ago, I had the chance to buy a mint Arcam AB5 amp at a silly price and, unable to resist, I took the plunge, it probably being my only chance to buy a 'better' amp in this price bracket. It came with a pair of Castle Stirling floorstanding speakers which, because the finish didn't fit in with our decor, the wife 'suggested' we sell, keeping our existing Monitor Audio Silver S5s, even though the sound of the Arcam/Castle combination appeared to gel nicely. The MAs were chosen over a long auditioning period and fitted well with our system (Marantz CD6000KII, heavily modded Rega Planar 3 and Aura VA100 Evolution amp with QED interconnects and Mountain Snow biwire speaker cabling, at the time.

Whilst I don't feel that I made a mistake in buying the Arcam, I seem to have lost the synergy of the original system. On CD in particular, the music seems to be confined by the speakers, as though struggling to burst into the room, lacking the transparent 'hear through' quality and detail that I seemed to have with the Aura/MA combination. There seems to be a lack of presence and a thickness to the sound which I find a little unsatisfying. Vinyl duets are taken care of via a Graham Slee Gram Amp 2SE through the Arcam and fare rather better sound-wise.

Could you please suggest alternative floorstanders that would give us back our system balance? Or would fine-tuning with a change of cabling achieve the desired sound? The listening / living room is small (4m x 4m) and we are forced to have the speakers around 2.5m apart and fairly close to the wall to fit everything in! Any advice gratefully received.

Paul Leonard
confident you can radically alter the sound of the A85 by this method. It may be worth trying the RS silver cable talked about earlier in the readers letters, as this might help, but don't blame me if your Mountain Snow biwire - well regarded - sounds better! Wireworld claim their coaxial speaker cable is a better amplifier load than other constructions and this again may just make the A85 a useful bit happier and more to your liking, but again I am speculating furiously! You may like to try it and see, in the best traditions of audio DIY. Good luck.

NK

Hi Paul – I’d say you’ve ‘side-graded’ your amp, and you’re not convinced that it’s an improvement, although it’s certainly a change. It’s a classic example of speculative purchasing, because of the ‘perceived value’ of the product in question as opposed to its real sonic character. What can I say - I’ve heard this happen a million times… I’d counsel you find a good dealer, bring your speakers (or conversely borrow the amps) and audition the Naim Nait 5i, Cyrus 6vs and Musical Fidelity X-150, DP

SOURCE DIRECT

I am from India and a regular reader of your magazine. I was going through your May 2005 issue and came across a letter ‘New Innovation’ from Andrew Miller. I am about to buy a tube amplifier made by an Indian hi-fi manufacturer Cadence. The manufacturer says that the amp has an EL34 power section and the preamplification is done by a very high-end volume pot. This configuration uses the gain of the CD player to feed the power section and works very well as all CD players of today give at least 2V output, which is enough to drive the power section. Now my question is: is this a normal design? Will there be a problem in running other sources like cassette player or tuners or world space?

Saradindu Bose

You need to know the input sensitivity of the power amp to judge whether it is sufficient to handle cassette decks and such like. Most power amps - valve and solid-state - have an input sensitivity of 1V or better. This can be driven by CD directly through a passive volume control, as CD players always give 2V out, as set by Philips standards. Few other sources come close though. At the low end of the scale are old (legacy) tuners and cassette decks which typically produce 0.3V out. Very few power amps can reach full volume from such a small output. It is highly likely the Cadence amp will be unable to reach full output with such sources. You will need a preamp with gain, and most preamps have x3 gain or more.

DISORDERLY COMPULSION

A couple of years ago, more or less, I was just looking to upgrade the cartridge on my Rega P25. It had been quite a while since I did anything with my (then) simple, moderate set-up. I guess I was happy enough. But as I flipped through your magazine and one or two others, I found I’d caught the audio bug again. One thing led to another, within a few weeks, along with a new cartridge, I got myself a phono stage, a CD player and a lovely new amp that came about a month or so later.

The new CD player and amp are the Marantz CD6000 KI and the Sugden A2 I’ve bought largely on your recommendations. I’ve been collecting records for nearly 20 years, since I was 14 and first came to live in London. I know about Marantz’ reputation with their CD players and was using one myself, an early, top-loading model which I had bought 2nd hand in the early 90s. Half the size, twice the weight and sounded better than most of the players of the day. So when I read, in World Standards, about the CD 6000’s “vinyl-like and voluptuous” sound, I decided to get one. And, yes siree, it sure is voluptuous.

As for the Sugden, I managed to get one loaned to me for a few days (again, after seeing it in World Standard). And, wow, what a revelation! It also seemed to get on very well with the Marantz and my Pro-Ac Tablette 2000 loudspeakers. Then came the review where you had it among valve amps and that nailed it. I traded in my Naim Nait 3.

This new set-up put me over the moon. My other bits being the aforementioned P25, Rega super Elys, Graham Slee’s Gram Amp ZSE, Chord company’s Rumber cables and Silver Siren leads. Still, I couldn’t shake the old bug off. I wanted more. More verve. More dimensions and definitions. I did the sensible thing of trying out the more expensive, supposedly better Pro-Ac models (I’ve been told that Sugden themselves tend to partner their amps with them at hi-fi shows). But somehow they left me cold; I’d wanted something British and never really liked floor standers. After a few trips to demo rooms, I found what I was looking for in the Spendor SP3/1s. I’ve now been with them for about eight months and I love them dearly. With the Sugden, they provide such marvelously realistic sound. Voices and instruments are now much truer, with more spaces between them. I really could live happily ever after with the set-up, but there’re just a couple things I thought you might be able to help with.

With the Spenders, the Marantz now sounds a little too lean and dry with early 60’s pop things like Beatles/Stone or Motown. I’ve tried a couple of players in hopes of getting a bit more ‘cream’. They sounded good but couldn’t match the Marantz’s finesse. Is there a compromise, without going over a grand?

A bit more serious this one. I tend to get these sort of piercing sensations in my ears if I spend some time in the listening position (with both sources), after 20-30 minutes minimum with the pain increasing if longer. It goes away about an hour or so from when I stop listening. This never happened with the Pro-Ac, which I run the A2.I with for nearly a year. The Spenders are placed exactly in the same spot (on filled high mass stands). I don’t usually have it that loud and hardly ever go near the halfway point on the Sugden’s volume knob. The room is smallish but with high ceiling. The seats are about 6ft away from the speakers. Is there something not right with my ears (I had them checked and so far they’re okay)? Or is it the amp/speakers combination? Something else? A dealer encouraged me to go for different (and rather costly) cables, but I’m not yet sure if
that's the real case. I've also tried to talk to Spendor, who weren't really that helpful. I thought they sounded a bit over-defensive (and may be they should be so). I don't really want to have to change anything dramatically if I can help it. I think they (the amp and speakers) are both very special and charismatic products. But I don't want to end up getting something noisy - like tinny. Your help would be greatly appreciated.

Lastly, just to say how fab I think your magazine is. It has this sensible, unpretentious quality not found in other hi-fi mags. And, it must've been said a thousand times over now, there's always something for everyone. Though I think the CD versus vinyl battles are something for everyone. Though I think they (the amp and speakers) are both very special and charismatic products. But I don't want to end up getting something noisy - like tinny. Your help would be greatly appreciated.

...and I've also got a couple of fine examples of recent-ish (non-audiodile) releases - the Ry Cooder/Manuel Galban Mamba album (lavishing artwork and presentation) and Little Black Numbers by Kathryn Williams (an 220g vinyl - talk about unbreakable - and was, remarkably, the same price as the CD copy). See if the CD versions can beat these for their super smooth and may be what you have unknowingly aspired to. NK

Thanks for an inspired letter Mr. 'S', and glad you like the mag - although you're on a yellow card for the beginning of the final paragraph, which is blatant 'toadying'. As you know, these overly effusive communiques are regarded with extreme suspicion by me, as they artificially inflate my sense of importance in the great scheme of things. Too many of these missives, and I'll be dreaming of feigning holding back a tear as I accept my going at an industry awards bash ("I'd just like to thank everyone who made this possible" - you know the thing...). Oh and aren't such "your mag is ace" letters the province of our esteemed rivals - if they bother to have letters sections at all? DP

Speaking again

Suffering a piercing sound in the ears for one hour after listening is an affliction I've not heard of before. But since you didn't have it with the last 'speakers', and only with the Spenders, they must be the cause. As loudspeakers are passive (i.e. they can't produce signals) I can only assume their treble is somehow setting off this reaction. Proacs always did have very good tweeters by the way, so you may well be attuned to quality. I have become almost oversensitive to treble quality too and can understand reacting strongly to problems here. Unfortunately, there really is no alternative other than to change the 'speakers; I somehow doubt a cable change will cure this ill, although I could be wrong. Van den Huf's 'The Third', using all carbon construction, will give a very damped, smooth sound, but it's a little expensive.

There's not so much choice these days in small loudspeakers with ultra smooth treble, but Mordaunt Short's 912/ 914 are accomplished in this area. KEF have worked to improve the quality of their metal dome, they say, in the new Q Series, and they may be worth checking out too. I could also mention Castle Conways, but I suspect they would be too big. We plan to cover quality small loudspeakers in the next issue, and this includes ribbon tweeters, which can be super smooth and may be what you have unknowingly aspired to. NK

Hi Kevin - rest assured, we shall do a classic speaker special, but - as ever - these classic issues take ages to prepare, because we have to source the kit, transport it, (sometimes rebuild it), measure it, audition it, etc... In their way, KEF 105s are super speakers, but only an amp of the massive muscle of the Musical Fidelity kW500 will ever show it. With anything less, the KEFs just make the amp wince, huff and puff - and the noise is not nice. And as for valves, forget it! DP

SPEAKING AGAIN

I am writing in response to the article last month on making your own interconnects. Maplin sell a pseudo balanced cable (the return has one strand less) in pure silver (Shark cable) that when used as a single line interconnect with silver bullet plugs outperforms Audioquest Jade to the bass) and driven by the Musical Fidelity kW500, and I haven't heard anything yet that convinces me to part with huge sums of hard earned cash, that will improve on these old gerns.

Kevin Wood

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- Denon DCD600 x-demo
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- Mark Levinson No360S DAC S/H
- Meridian 608 CD S/H
- Naim Audio CD3 S/H
- Primare V10 CD/DVD Player x-demo
- Sugden CD21 Graphite S/H
- Sony CSD-XE67 SACD Player S/H
- Tag Magen CD320R Transport S/H
- Theta Generation V Balanced S/H
- Theta Pro Basic II DAC with Osram/Balanced S/H

**Analogue**
- Dynavector XV1s 200hrs S/H
- Audio Research P-33 (Phono Stage) x-demo
- EAR The Head MC Transformer S/H
- Herd Quartz 2 Box Modal 80 Record store new
- Krett KPE Reference + PSU S/H
- Kuzma Stabi/Slogo S Turntable New& Boxed
- Project Phone Box LE S/H
- Roksan Xeres XPS/1 Alphason HR/100 S/H
- SME 20A Turntable S/H
- SME 30A/1 Turntable S/H
- Triplanar Series VI Tonearm S/H
- Transfiguration Temper MC 600hrs S/H

**Preamps**
- Audio Analogue Bellini Remote Preamp Amplifier x-demo
- Audio Research LS16 Preamp S/H
- Bryant BP25 Preamp Amplifier, balanced, silver, remote
- Convergent Audio Technologies SL1 Reference Preamp S/H
- Electrocompaniet EC4R Balanced Preamplifier S/H
- HiVi PP100 Preamp Amplifier S/H
- Krett KIC Preamplifier S/H
- Naim SuperCap Power supply 1995 S/H
- Mark Levinson No380 Preamp S/H
- Rega Cursa Preamp Amplifier Black x-demo
- Spectral DMC 30s Reference Preamp Amplifier S/H
- Spectral DMC15 Preamp S/H
- Tag Magen AVR320RSTL 1.1 processor S/H

**Amplifiers**
- Audio Analogue Donizetti Mono Power Amplifiers x-demo
- Audio Research VT60 Re Valved S/H
- Audio Research VT200 Mill Valve Power Amplifier S/H
- EAR 509 MK1 (huge amount spent) S/H
- ECI E11 Mono Amplifiers (pair)
- Jeff Rowland Model 301 Monos (new&boxed)
- Musical fidelity A100x3 S/H
- Krett KAV400x4 Silver x-demo
- Krett P310Mx3 Mono Amplifiers S/H
- Naim NAP 180 X S/H
- Red Rose Spirit Integrated x-demo
- Rega Mola Power amplifier Black x-demo
- Sugden Masterclass Integrated S/H
- Tag Magen AVR320RSTL 1.1 processor S/H

**Loudspeakers**
- ATC Active 10 SL x-demo
- ATC SCART Cherry x-demo
- ATC SCM50 AS1 Active Loudspeakers Birds Eye Maple S/H
- JM Lab Micro Utopia Anigre with Stands S/H
- JM Lab Mini Utopia Anigre with Stands S/H
- JM Lab Sib XL with Stands S/H
- Lumbury reference2 Signatures Mahogany x-demo
- Naim Audio Intro Black Ash S/H
- Peak Consullo Inca 303 x-demo
- Quad ESL 63 Brown just serviced with stands S/H

**Suppliers and Installers of High Quality Audio Systems**

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<tr>
<th>Product</th>
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<td>Quad 67CD - nr mint, 0/w remote</td>
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<tr>
<td>Quad 99CDP - nr mint, boxed, remote</td>
<td>699</td>
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<td>Meridian Morontz COI 7 KI - nr mint, due in Call</td>
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<td>Meridian Morontz DV4100 OSE - nr mint, remote, boxed</td>
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<td>Meridian CD46 - ex, remote</td>
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<td>Audiolob 8000 Transport and DAC - ex, remote</td>
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<td>Arcam CD72T - nr mint, remote</td>
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<tr>
<td>Arcam Alpha 7SE - nr mint boxed, due in Call</td>
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<td>AH! Njoe Tjceb 99 - ex, Morontz based tube player</td>
<td>199</td>
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<td>AH! Njoe TjoebCD4000STD - ex, boxed remote, 6 months old c/w de mat</td>
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<tr>
<td>Advantage CD5 - nr mint boxed</td>
<td>1199</td>
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<td>JPW 204/200/208 - 5.1 Speaker package new bargain, save over £ 200!</td>
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<td>TEAC DV50 - no denier dom</td>
<td>SAVE OVER £20000</td>
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<td>Sony XA20ES - ex, boxed, remote</td>
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<td>SAT CDFix - nr mint, boxed, dedicated remote, superb</td>
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<td>Resolution Audio Opus 21 - nr mint crated 2 boxer, beautiful</td>
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<td>NVA The Transparent Statement - vgc, crated, ultimate NVA</td>
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<td>NAD  C541 i - nr mint, boxed with remote</td>
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<td>DPA Renaissance - nr mint, boxed</td>
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<td>Rotel RCD991AE - nr mint boxed</td>
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<td>Rokson Caspian M series - ex dom, save £ 350!!!</td>
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<td>Rokson Caspian original - ex, remote, just serviced</td>
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<td>Musical Fidelity Rayfen plus 2xTyphoon - nr mint fab powerhouse</td>
<td>379</td>
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<td>NAD 610C/630D - nr mint, pre and monos, we love these to bits</td>
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<td>Quad 66EM - nr mint, 379</td>
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1. Not everyone is honest - Buyer Beware!
2. Don’t send cash!
3. Accept no verbal guarantees.
4. Have you heard the item or something similar? If not, why do you want it?
5. Don’t pretend to have knowledge – it’s your fingers that will get burnt!
6. Is it working? If not, why not?
7. Has it been modified and, if so, have notes been kept?
8. Was it any good in the first place?
9. Don’t send cash!
10. If you are in the slightest doubt, arrange an audition (see point 5). If it’s too far, wait for another time.
11. Either buy it or don’t; vendors are excusably impatient with ‘consultation’ exercises.
12. Don’t send cash!

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**OCTOBER 2005 - 5TH AUGUST 2005**

**NOVEMBER 2005 - 8TH SEPTEMBER 2005**
Perhaps because I grew up when it was still fashionable, I have never been averse to what today's fashion-mongers decry as 'big-band Bach'—all titanic forces, stolid tempi, and the implacable inevitability that came with heavy-handed conductors who were convinced that everything Bach wrote was religious. I remember as though it were yesterday the full complement of the BBC Symphony Orchestra back around 1950, belting out the Suite No 3 in the Royal Albert Hall, with that vast and kindly trumpeter Ernest Hall (a fine teacher, I believe) floating out his solos like Noah sending up his dove from the Ark. I loved it.

That is not the only way of playing Bach. I have records of a variety of his works performed by Walter Carlos on the Moog synthesizer, by the Paris Saxophone Quartet, by the Swingle Singers, and by umpteen very different pianists from Rosalyn Tureck to Keith Jarrett, and (like Kipling's nine and sixty ways of constructing tribal lays) every single one of them is right. So are the academics, the organists and harpsichord-bashers and even the disarmingly expressionless and frequently out-of-tune habitués of the period-instrument sect. The music of Bach can accommodate them all.

Composers from Mozart to Grainger have made transcriptions of Bach. Why not? Bach did it himself, often. Along comes Joshua Rifkin, though, and we cannot talk about transcription. The man who with his own hands once gave us all a famous new insight into ragtime now appears as an earnest musicologist with some meticulously developed views on the performance of Bach cantatas. Half a dozen favourites from the church cantatas are gathered on a brace of CDs under the L'Oiseau-Lyre label to illustrate his views of what is intrinsic and what is potential in them; they need to be heard.

It is no hardship, I assure you. Although his orchestral forces employ 'authentic' instruments, there is nothing niminy-piminy about these performances, nor anything to cavil at in the quality of the recorded sound. The voices are all good, too, perfectly competent and gratefully musical—but there are never more than four of them.

This is the nub of the matter, as Rifkin sees it. We all know that each of the parallel lines of a Bach composition is not to be deemed an instrumental part or a vocal part but a 'voice' in the abstract disembodied sense of an element to be blended into (but to remain identifiable in) the music. Many of us know, or think we know, how and by whom these cantatas were performed when Bach wrote them. Rifkin, however, is not concerned with whatever liturgical conventions or limitations applied to those original renderings in St Thomas's at Leipzig; his object is to present the music in a manner that allows us to hear it, not only as faithfully but also as intelligibly as possible.

There is no chorus, struggling to balance an unholy rabble of boys on the top line with a sturdy bunch of adults on the others. Every vocal line is sung by one adult and admirable voice—soprano, counter-tenor, tenor and bass-baritone—regardless of whether it was written for chorus or for soloists. Thus the voices are always perfectly balanced, the lines are always clear, the music as a whole structural undertaking always lucidly integrated. It is, throughout, a pleasure to listen to it.

This may not be the proper way to perform it. From my LP assortment of Bach cantatas I might select the Archiv Privilege recording (actually made in St Thomas's at Leipzig in 1966) of Ein Feste Burg—if only because the same cantata is among the Rifkin selection. Here we have the full chorus of that church, plus four superb soloists (topped by the heavenly Agnes Giebel, who surely did Bach's soprano lines better than anyone else ever) and the scrupulous Leipzig Gewandhaus Orchestra, and the feeling that Creation took place so that in due course this LP might be made available to those who had the wit to buy it. This is the proper way to perform that work; Rifkin's is a necessary way to hear it. LJK