Opposites attract they say?

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Opus3 from Sweden

Silver Arrow from the UK

Clearcover from the UK

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Readers of this magazine are likely to fall into one of two camps. The first is people into using hi-fi that gets them as close to the music as possible. The second is the same, but who also love the rumour, gossip and politics too.

Well, if you're the latter persuasion, then you'll doubtless remember the 1980s - when CD hit the High Street, it was time to wear your audio allegiances on your sleeve. The LP was under siege and if you weren't with vinyl, then you were against it. Indeed, right up to the end of that decade, I frequented specialist dealers who wouldn't even have a CD player in their shop. (The ever-erudite Nigel Pearson - now of Garrard, then of Westwood and Mason hi-fi dealers in Oxford - memorably described digital as, "good for doing the hoovering to" - his point being it's got a repeat function and when the vacuum cleaner's on, it's noisy enough anyway...)

Twenty years on, and analogue aficionados have won the argument - inasmuch as the new hi-res formats are the material embodiment of what we were saying about CD's poor digital specification all along.

This issue is devoted to getting the best from both formats, and examining the relative merits between the two. To wit, you'll find an in-depth look at Musical Fidelity's epochal M1 turntable on p12, our long-awaited tonearm supertest on p17 and Sony's SCD-XA3000ES SACD spinner reviewed on p34. Then there's a fascinating comparison between Unison Research's tube CD spinner and Pro-ject's ultra-modern RPM9X turntable on p38, a look at the latest Decca London cartridge on p54, and then on p58 four leading audio industry experts join the great debate.

We all love analogue here at Hi-Fi World. But if you're wedded to digital, then we'll happily show you how to get the best from this too. The good news is that there's never been a better time to get into either format. Times have changed. Things move on and the war is over.

David Price

how we test the products:

- Hi-Fi World has its own advanced test laboratory and acoustically treated listening room.
- Hi-Fi World has a dedicated in-house team of experienced listeners. We review thoroughly by extensive auditioning, rather than by quick-fire group listening tests.
- Hi-Fi World's engineering team designs a wide range of products in-house. No other hi-fi magazine is so expert and dedicated.

WORLD VERDICTS:

As a rule we only review products we find interesting, so don't expect too many low scores. Likewise, five globe awards will be few and far between because there's only one superlative product of its type. The £ sign denotes great value for money.

- OUTSTANDING - Simply the best.
- EXCELLENT - Extremely capable.
- GOOD - Worth auditioning.
- MEDIOCRE - Unremarkable.
- POOR - Seriously flawed.
- VALUE - Keenly priced.

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reviews

analogue special

MUSICAL FIDELITY M1 TURNTABLE 12
It isn't easy to design a class-leading disc spinner from a clean sheet of paper, especially if you've no previous 'form', but Mr. Michaelson has done himself proud, says David Price.

TONEARM SUPERTEST 17
It took months to organise and weeks to complete, but at last we can bring you our much-vaunted pick-up arm group test of seven of the best from SME, Linn, Origin Live, Roksan and Hadcock. Hi-Fi World's resident 'tone-meister' Stewart Wennen is the man in charge of bending cantilevers...

PROJECT RPM9X VS. UNISON UNICO 38
A straight fight — the latest £1,000 turntable and CD player face off. One is soft and warm, the other tight and punchy — but all is not what it seems... Dominic Todd investigates.

DECCA SUPER LONDON CARTRIDGE 54
Stewart Wennen gets into the groove of the latest Decca, but Noel Keywood goes off on an altogether different track...

ORIGIN LIVE SL1200 ARMBOARD 70
A couple of years back, pro audio engineer Stewart Wennen came up with the idea of a high quality armboard that let any Technics SL1200 accept a Rega tonearm. Well, if imitation is the sincerest form of flattery, then Origin Live's Mark Baker was most kind to SW, as he has now productionised it! So we let Stewart, now a regular HFW scribe, return the compliment...

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Albert Lee wields his hacksaw to show you how to make one of the best sounding turntable supports around, for under £30!

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SONY SCD-XA3000ES 34
We were most impressed by Sony's budget price SCD-XB790 SACD spinner a few months back, but can its mid-price bigger brother repeat the formula? David Price listens in...

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...In which Roksan's new Class AB integrated meets Anatek's novel Class A design. David Price blows hot and cold about both...

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TRICHORD DINO+ 71
Albert Lee listens to the latest power supply option for the leading mid-price phono stage.

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CLASSIC CUTS 75
This month sees Patrick Cleasby revisiting that seminal early nineties outing from Lee Mavers and co., The La's eponymous debut album.

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Patrick Cleasby rounds up the latest high resolution multichannel digital music software releases.

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ALL NEW PSU 99
Neville Roberts plugs into the new Origin Live Ultra Turntable Power Supply.

competition
Win Creek's superb CD50/11 CD player in this month's great competition!
Developed for the music lover and cinema enthusiast who wants to seek out the most accurate and involving sound.

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**MEET ELEGANTE...**

Mission has a new range of high end multichannel loudspeaker systems. The elegante's styling has been strongly influenced by Mission's flagship Pilastro, with luxurious Granja cabinets claimed to optimise sound dispersion. All speakers feature a seven-layer highly polished, hand-lacquered anthracite finish with black cloth grilles. Three elegante systems are available, in 5.1 and 6.1-channel home theatre configurations, with a simple option to upgrade to 7.1-channel. The e80 system is the smallest system, consisting of four bookshelf e80 loudspeakers, an e8c centre-channel and a compact e8as1 subwoofer. Price is £2,490 for a 5.1 system and £2790 for a 6.1 system. The e82 is for medium to large-sized rooms, consisting of two slimline e82 floor-standing loudspeakers, two bookshelf e80 loudspeakers, and an e8c centre-channel, plus the e8as1 compact subwoofer. Prices are £3,490 for a 5.1 system and £3790 for a 6.1 system. The largest e83 system has two e83 floorstanding loudspeakers, two e81 bookshelf loudspeakers, an e8c centre channel and a 500W e8as2 subwoofer that features four Pilastro-type 8" bass drivers. The price had not been confirmed at the time of going to press.

For more details, call 01480 423700 or click on www.mission.co.uk.

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**RAY OF LIGHT**

ColdRay Isolation Feet are the brainchild of Lars Kristiansen, designer of the acclaimed Nordost Pulsar Points, and extend his design using either a steel or ceramic ball held in a small cup over which a turned aluminium cone is placed. They deliberately eschew damping, instead acting as tuned resonators at the same frequencies that violin designers look for in their instruments. Claimed to increase the contrast in an audio system, they cost £49.95 for a set of three ColdRay Steel Ball Isolation Feet, or £94.95 for a set of three ColdRay Ceramic Ball Isolation Feet. Call 0870 241 2469 or click on www.hifisales.com for more details.

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**BACK IN BLACK**

Black Rhodium's Super Mains Power Management block has an extruded case and an advanced 2-stage high frequency filter for greater attenuation of high frequency noise and a clearer sound. It sports eight 13A mains sockets, and is terminated with 2m of Super Mains 25 high current, low impedance mains cable, made from 19-core stranded wire of 0.45mm diameter silver-plated copper and is insulated to a very high voltage with silicone rubber. The internal wiring within Power Management is of the same high quality silver-plated wires insulated in silicone rubber that are used in Super Mains 25. Additional protection against excess voltages is provided a Voltage Dependant Resistor that clamps the supply voltage to a predetermined level, making the unit very suitable for use with computers as well as with hi-fi equipment using sensitive digital electronic circuitry. Price is £330. For more information on Black Rhodium, call 01332 361390 or click on www.blackrhodium.co.uk.

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**HI, RESOLUTION!**

Christchurch-based Resolution loudspeakers has a new transmission line design intriguingly entitled, 'Resolution'. Claimed to sound, "purer than science can measure" no less, it has high-quality 26kg enclosures with finishes in mahogany and gold plating. A patented single tri-axial drive unit is featured, claimed to use very rigid metallised diaphragms and powerful magnets, supported by an 8 foot sound-absorbent pipe, folded up inside. Price is £1,200 per pair. The company’s unprepossessingly named website, www.resolution-loudspeakers.co.uk, has full details — or you can call direct on 01202 470184.
KEF Audio has announced its new KEF Instant Theatre (KIT), a new complete DVD-based system with everything required to experience 5.1 digital surround sound from just two compact front speakers and a hide-away subwoofer. Its fascinating speakers are hybrids of KEF’s proven Uni-Q® ‘point source’ driver array with a unique new application of NXT® flat panel technology. The vertical NXT flat panels behind the main arrays create virtual rear effects speakers, while the Uni-Q drivers create a perfect ‘phantom’ centre speaker right in the middle of the screen. The acoustic illusion of all three virtual speakers, rear and centre is accentuated by the Uni-Q driver front-channel configuration, which spreads the sound image over a much larger area than the narrow ‘sweet spot’ of a conventional speaker. Hefty bass punch comes from a 250 mm (10”) bass driver, and the subwoofer contains the system’s five high-power amplifiers, allowing the DVD player to be exceptionally compact. The head unit is about the same size as the front speakers, and styled to match. Whatever is played - DVDs, CDs or MP3s, it automatically recognises what’s been loaded. The decoding circuits also give the full benefit of Dolby® Digital, Dolby Pro Logic® II and DTS surround sound from any other equipment played through the system. With clear VFD displays and intuitive controls, the unit also has an AM/FM radio with RDS, alarm and sleep functions. With built-in amplifiers for all channels alongside the 250 mm (10”) bass driver, the omni-directional subwoofer can be placed wherever it suits the user – behind the TV or next to a wall. KEF instant theatre recognises whatever type of disc is loaded and automatically configures the system accordingly. Complete with a full-function remote control, expect to pay around £1,200. Call KEF on 01622 672261 or click on www.kef.com for details.

LaCie has got seriously stylish. After years of distinctively styled — if a little wide-of-the-mark — computer peripherals, it has contracted the services of Porsche Design GmbH for its latest range. The result is a range of deliciously crisply styled bits of kit spanning a complete line of hard drives, ranging in capacity from 40GB to 250GB for PC or Mac via USB 2.0 or FireWire, plus CD-RW and DVD+/-RW drives, featuring a mirrored door that opens. For further information, click on www.logie.com.

The price of the MEL AUDIO RECHAV II CD player reviewed in February 2004’s edition is Euros 2,980 £2,091 (Sterling).

Acficionados of what many consider to be the very best Japanese turntable ever made — the Trio L-07D — will find this site a ‘compulsive click’. Created by a US-based fan, it makes for interesting reading for both the technically and non-technically minded alike. Anoraks will be delighted to hear that at CES in January, an L-07D was spotted in action on the Hovland stand – not bad for a deck that first surfaced nearly twenty five years ago! www.L-07D.com

Spotted – Hi-Fi World’s very own high res digital guru Patrick Cleasby, at Ronnie Scott’s in early January. “Tired and emotional” after listening to all those freebie discs, PC can be seen unwinding like a spool of Ampex…
GOING DUTCH
Philips is calling itself 'the first major CE brand to launch a portable DAB radio'. The £149 DA1000 is the first portable Digital Radio from the Dutch electronics giant. Weighing in at just 100g, its sleek design incorporates a backlight for clearer viewing, and a joystick for simple control. The dot matrix LC display shows the text that accompanies most DAB broadcasts, including programme information, the latest news and sports scores. Six EQ settings and a built-in FM radio also feature, complete with signal strength indicator and 20 DAB/FM presets. The DA10000 is powered by two rechargeable AA batteries that offer up to ten hours of playback, or AC mains. A carry pouch is provided for comfortable portability.

Philips also has a new music jukebox to compete with the iPod mini. The £169 HDD060 has a 1.5GB hard disk drive that stores up to 375 MP3 or 750 WMA tracks and can also be used to transport data files. The single lithium ion battery is claimed to give ten hours of listening time between charges, and a large display presents information clearly, even in bright conditions, thanks to a white LED backlight. Music file transfer is done using a single, high-speed USB 1.1 connection. The HDD060 weighs less than 95g thanks to its die-cast moulded magnesium body. For more information, call 0870 900 9070 or click on www.philips.com.

FUTURE SOUND OF IRELAND
Digital Theater Systems, Inc. has announced a major research collaboration with Queen's University Belfast's Sonic Arts Research Centre (SARC). Jointly funded by Invest NI, a development agency in Northern Ireland, the project will focus on the development of new multi-channel audio technologies. SARC will conduct joint research and experimentation with DTS' Research & Development facility based in Bangor, Northern Ireland. "SARC is quickly becoming one of the world's leading research institutes in the area of multi-channel audio systems, and DTS has always been a company dedicated to developing new audio technologies," said Paul Smith, Vice President, Research & Development for DTS. "Working together is a natural fit, and we look forward to integrating our resources for this project." Dedicated to the research of music technology, SARC is a newly established facility within Queen's University Belfast. Uniting internationally recognized experts in the fields of music, electronic engineering and computer science, this unique interdisciplinary centre features a 20-person research team and a state-of-the-art sonic laboratory. This auditorium is a highly innovative structure allowing sound to be moved throughout the space, and is the only fully 3D studio of its kind for sonic art performance and experimentation.

SILVER SERVICE
It seems the old days of gunmetal grey NADs have gone for ever, as the company is introducing more 'silver' Titanium finished systems. Latest off the production line is the highly acclaimed £329.95 C542 CD player, which can now match the excellent £349.95 NAD C352 integrated amplifier, also now available in the new livery. The latter also includes some circuit refinements over the original, specifically an improved DC servo circuit, claimed to tighten the amplifier's bass response. For more details, click on www.nad.co.uk.
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IKEA LACK COFFEE TABLE

The princely sum of £19.95 buys you this 95x55x45cm bit of clear lacquered, birch veneered MDF. It looks very neat (far better than the price suggests), has very crisp and clean proportions and best of all, sounds great — particularly when used in conjunction with the Crystal Cloud Isofloat. No matter what you put on it — turntable, CD player, DVD machine, you’ll find it a relatively neutral and benign support. You will of course get better results with bespoke hi-fi furniture, but then you’ll pay hundreds of pounds more... Check out www.ikea.co.uk

SONY RECHARGEABLE BATTERIES

The problem with rechargeable batteries is that most available in the High Street aren’t of the best quality. Sony’s NHAAB2C AA batteries are — they’re premium priced, but we’ve found they last nearly five times longer than standard alkalines, and can be recharged 500 times over. The snappily entitled Super Quick Refresher Charger (model: BCG34HRC4-UK) gets the best from them, thanks to its clever ‘discharge’ function. At the touch of a button, it gradually drains the batteries down to empty before recharging them, thus countering the memory effect. It charges fast, too, reinvigorating 4 AA or AAA batteries (NiMh 2100 mAh) in just a few hours. Factor in the safety timer, voltage regulator, temperature monitoring function and automatic shutdown (should non-compatible batteries be loaded), and this is a clever bit of kit. For more information, click on www.sony.co.uk
Time was, in the late eighties, when many hi-fi journalists found themselves — upon reviewing a new record player — writing things like, "this could be the last turntable ever made". How wrong they were. When a company like Musical Fidelity, with hitherto no immediate association with black vinyl, makes such a resounding commitment to analogue, you just know there's something in the air. David Price goes for a spin...

**Musical Fidelity** is not famous for its turntables, because — ermm — it's never made any before. Of course, Mr Michaelson is quick to point out that he and his are avowed analogue aficionados, and he is right to do. (MF has always used vinyl and open reel tape among its source references, and has consistently designed products with serious phono stages, as opposed to token gestures.) Still, unlike Michell Engineering or Clearaudio, the company has not forged its success from any direct association with the black stuff. To wit, it would be perfectly sensible — given the marques enduring edge with CD spinners and amplification — to not venture into the viper's den of vinyl. Let's face it, manufacturing consistently successful audio electronics is one thing, but designing and producing top turntables is another. They're an altogether different problematic — that of mechanical engineering down to minute tolerances. I'm not saying there's anything about MF that makes the company unsuited to this (quite the reverse in fact), it's just that if you think you can waltz into the world of high end vinyl with no previous experience, then you're mad as a fish...

Let us consider the evidence. A turntable has to revolve at precisely 33.33RPM. It has to isolate the record, arm and cartridge from as much external vibration as possible, while locking the internal vibrations (i.e. the groove modulations) in as tightly as possible. Oh, and it has to look good, because no one's going to lavish £3,000 on something that looks like an old Dual 505...

To fulfil the aforementioned design briefs, it has to be [a] intelligently and creatively designed with no weaknesses and [b] manufactured using expensive materials like acrylic, carbon fibre and/or aluminium, and [c] made to exacting tolerances that require meticulous machining and quality control. All of this is flipping expensive, and makes CD player manufacture look like a stroll down the street. That's why I think Musical Fidelity's decision to 'get into the groove', so to speak, is bold and/or foolish.

**THE DESIGN**

First things first, and the MI is not a conventional Linn/Thorens-style enclosed subchassis,'plinthed' design, but close in spirit to SME's Model 30 - with the chassis sitting on a double, decoupled acrylic (nee Perspex) base. Acrylic is brilliantly suited to turntable (and indeed all anti-microphonic) applications because of its very low natural resonance, and MF has taken the idea further by giving each chassis...
plate a different mass, thereby putting their natural resonance points at different frequencies. The double pole isolation system between both chassis plates is both vertically and horizontally compliant thanks to rubber suspension, also with a very low natural resonant frequency.

As for the bearing, MF says it has spent time researching the best way to get an extremely low noise high performance long-life unit, the result being an inverted type manufactured from milspec high carbon steel ground to better than 5 micron tolerance with a 0.1 micron surface finish. At the top of the shaft is a high quality ball bearing in milspec high carbon steel, machined to a spherical accuracy of better than 2 microns. The surface finish is better than 0.1 microns. The outer shell is made from high tensile stainless steel with a milspec brass insert which has a tightly toleranced lubrication spiral. The contact point between the outside shell and bearing is an extremely closely tolerated PTFE pad.

Speed stability is achieved by an impulseless DC motor (what MF calls, "the most expensive brushless (DC) motor available" no less), with accuracy controlled by an optical sensor mounted on the motor which continually monitors the shaft speed. This is fed into a 16bit microprocessor running a 'fuzzy logic' algorithm to control the DC drive voltage. MF claims this guarantees speed accuracy within 0.2%, with excellent longer-term speed accuracy. Interestingly, there's a rotary pitch control fitted giving a semitone (i.e. 6%) of adjustment, with a centre detent to indicate precise speed. As is common practice these days, the power supply is in a separately shielded box, along with the electronics which drive the motor. And so to the brand new SME M2-9 tonearm that comes fitted to the M1. Now firstly, let me say that the Musical Fidelity is an 'integrated turntable system', inasmuch as it is not going to be sold as a 'motor unit' without tonearm in the way that Michells, Origin Lives, Linn's, etc., are. Antony Michaelson is emphatic about this — he sees the M1 as a package for those who want to play music rather than spend their waking hours wielding Allen bolts, alignment protractors, drills and the like as they bolt and unbolt various arms. As such, the M2 is the ideal companion. This £582 arm has already been spotted on a T+A turntable, so it's not exclusive to the M1, but it seems the ideal — almost the natural-partner.

Put crudely, it's an updated 3009S2. It has a straight, internally damped stainless steel/alloy arm tube.

NOTES:
- the M1 is relatively easy to set up, but screwing the M2's self tapping arm screws into the M1 armbase is a chore
- the pitch and speed knobs, previously seen on MF's X-CANS v1, are a tad fiddly and don't look the part
- the M1 comes with a beautiful little spirit level and even a soft dustcover sheet
- the height adjustable pillars can prevent the belt sitting in the belt groove cut around the edge of the platter; an annoying foible
- the M2 arm is an excellent performer at the price, with a beautifully liquid sound, but is no Series 309, IV or V
The first time you hear your sound system with Chord interconnecting cables will be the first time you've really heard it. Be warned - the effect can be shattering. Your eyes and ears will be opened. Your music will never sound the same again. Specify Chord cables - Hear the light!

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**CD:** ACCUPHASE, Audio Synthesis, Bel Canto, dCS (Elgar, Delius Purcell, Verdi), Sussurro, Waldorf, Vinyl, Bass, Clearaudio, Crown Jewel, DNM, Graham, The Groove, Lehmann, Michell, Supro Blue Point Special, Transfiguration.

**AMP/PHIERS:** Accuphase, Advantage, Bel Canto, CAT, DNM, Gamut, Holland, Magico, Sonnette, Spectral, SudGen.

**LOUDSPEAKERS:** Audio Physic, BK5, Ethos, Neat, Totem, Verity AUDIO TUNERS: Magnat Dynamic.

**CABLES:** Argento, Chord Co., DNM, Nordost, Siltech, Vertex, Yamaha, Churchill.

**ETC:** SUPPORTS: Arcic, Vertex, Siltech, Stands Unique.
with a new, detachable, angled headshell. Interestingly then, it's not the ubiquitous "SME headshell" that every Japanese arm of the 1970s (Accus Lusure, Audio Technica AT-1010) seemed to use. The machined bearing housing looks pretty familiar to vintage SME watchers, but with height adjustable via a thumbwheel mounted at the armbase, and tracking force set by a calibrated counterbalance weight. The weight and pulley' bias compensation system is retained (with 0.25g increments) -- some commentators, such as Hi-Fi World's own analogue anorak Stewart Vennen believe this to be the most sonically desirable choice (as well as being the cheapest), although it looks crude. Life/lower height is adjustable, as is azimuth (SME Series 3-style, at the headshell).

The M1 has an incredible feeling of solidity and engineering excellence. The motor, the bearing, the plint/suspension isolation system are all spot on. The SME M2-9 is also excellent -- finish is up to the company's usual superlative standards, and the arm is a model of user-friendliness and adjustability -- it's a sort of Series III without SME's moment of 'ultra low mass' madness. By only criticism is the poor quality cartridge mounting hardware supplied -- decent stuff is available from the SME parts list, but should have come as standard.

**SOUND QUALITY**

Out of the box fitted with the bundled SME M2-9 tonearm, the M1 sounds beautiful. Until the M1, Antony Michaelson used a Thorens TD124/SME 3009S2 in his own personal system, and it's spooky that the M1 sounds very much in the same vein, except with vastly superior transients, detailing and transparency -- think of it as a twenty first century TD124.

If you've not heard this Thorens classic, then let me elucidate. Some ten years ago, we put a Loricraft rebuilt TD124 against a Loricraft rebuilt Garrard 301 with fascinating results. The Garrard was all power, muscle, punch, push, drive, guts. The Thorens seemed to be lacking the Garrard's bottom octave of bass, but in other respects had the legs on its classic rival -- it was deliciously open, smooth, neutral, enough said. Back to the M1. and starting from bottom to top, it's lighter and faster than both Michells, lacking their vast, breathtaking scale and power -- but it has less overhang too, making things sound just a tad faster. Moving up to the midband, and it's even-Stevens with the Orbe. I think the M1 is just a touch more lyrical lucid -- it has that 'naturalness' that makes everything seem like an effortless flow of music, whereas the Michell is more about scale and image articulation, to convey the last detail of the recording (including stuff which frankly, you don't want or need to hear). The MF has capacious left to right imaging, but doesn't seem to run the recorded acoustic quite as far back behind the speakers as the Orbe. The treble on both decks is superb, open, even, smooth, neutral -- enough said.

The quintessence of the M1 is that light, airy, spacious soundstaging and flowing, fluid, liquid musicality. The Orbe is more 'technical', more concerned with forensic detailing -- it's Fisher Dieskau to the M1's Frank Sinatra. That's high end turntables -- the point is, and -- here's its killer punch -- you choose your poison! The point is that the M1 is absolutely and incontrovertibly superb -- it gives nothing away to the best of the big hitters at (or indeed above) its price point, and -- here's its killer punch -- it's a 'plug and play' deck-and-arm package, that requires merely the addition of a decent cartridge to start delivering the goods. It's a vicesless, no-holds-barred enthusiast's high end deck, but ready to go with a lovely acoustic quite as far back behind the speakers as the Orbe. The treble on both decks is superb, open, even, smooth, neutral -- enough said.

**REFERENCE SYSTEM:**

Michell Orbe/Origin Live Illustrious turntable
Michell GyroDec/SME Series IV turntable
Ortofon Kontrapunkt C, Dynavector DV20X-H, Shure V15VxMR cartridges
Trichord Delphi NC phono stage
MF Audio Passive Preamplifier
Quad 909 Power amp
Quad 989 loudspeakers
Towshend Maximum Super Tweeters

**VERDICT**

Superbly open, lucid and musical sound allied to beautiful build and an excellent bundled arm makes this the turntable to beat.

**MUSICAL FIDELITY M1 £2,999**

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Amplifon is new to the UK, and you will be hearing a lot more about them! These exceptional value for money amplifiers, designed and manufactured in Poland, put to shame more expensive opposition in sound quality, build, and finish. All three models have automatic biasing, so there's no fuss when it's time to change tubes, they all feature heavy toroidal output transformers with a wide bandwidth and 4 and 8 Ohm taps, and the WT30 II and WT40 operate in Triode mode Push Pull, Class A. They have classic valve amp attributes, sounding sweet and natural, but with enough power in reserve to rock when required.

The Trichord Dino (£299) outsells every other phono stage. Why? It sounds clean and clear, it's fully adjustable to virtually any MM or MC pickup, and when you fancy an upgrade, the Dino+ add-on power supply fits the bill, for an extra £225 (or buy them together from the start for £498).

If you prefer, the Tom Evans Microgroove (£450), suitable for MC pickups, is a worthy alternative, giving a level of detail retrieval difficult to better unless you spend an awful lot more. The Microgroove Plus (pictured above) at £800 is even better, and the famous Groove (£1900), below, has been described in various reviews as being state-of-the-art of phono stages. Like all products of it's standing, don't expect to walk away with one - it needs to be configured by the manufacturer for your particular pickup!

The Michell Gyro SE (£895 + arm) remains one of the most successful turntables of all times, and for good reason. Sound is fast, neutral, and open. You have an upgrade route via the HR power supply, and the Orbe platter kit. Popular arms include the Regas, the Tecnoarm, the Origin Live Silver, and of course, the SME. Compare the Gyro to the Spacedeck and the new Roksan Radius in our studio.

Cawsey (top) may not be the best known cable (others spend more on advertising) but it's quite possibly the best sounding. We have been selling these Australian made silver interconnects for several years and can recommend them without reservation. From £250 to £900 per metre set.

Slinkylinks (bottom) are solid silver air dielectric cables with the latest bullet plugs, fantastic sound at an amazingly low price: £195 for a 1.2m set!

Duevel loudspeakers with their unique reflector system may look strange at first sight - don't let this worry you! Just put on your favourite recording, close your eyes, and enter the amazing three dimensional soundstage these omnidirectional radiators recreate. Starting from £1960/pair for the Venus.
Black Magic

It's probably because they're so darned hard to organise that you rarely see a group review of top tonearms, but we were hell-bent on finding the best. So our own intrepid Stewart Wennen set about the long, laborious process of listening to seven models from Origin Live, SME, Linn, Hadcock and Roksan. And here, with only one cantilever bent, are our findings...

For something as apparently innocuous as a length of metal that sweeps a stylus across a disc, there's an inordinate amount of interest in the vexed subject of turntable pickup arms. Because they're so rarely compared, there are more myths and legends about these than most bits of hi-fi kit. And they really do excite great debate amongst analogue aficionados, which is curious for something that's — strictly speaking — merely a 'mechanical measuring instrument', designed to let a cartridge trace a record groove with minimal interference.

Of course, it's easy to make a cheap tonearm, but not a good one. In designing and — no less pertinently — manufacturing one, you need real theoretical skill, thousands or hours of listening experience and meticulously tolerated manufacturing facilities. Then there's the question of synergy. Different types of arms suit some decks and cartridges better, and respond differently to the way they're set up. As such, it's a veritable minefield out there for anyone wishing to buy one. How can any analogue addict gauge the relative merits of the models available? Well, we decided to have a go...

The first problem was how to get consistent results using different turntables and pick-up cartridges? It was obvious that I could not hope to achieve any type of consistency if these conditions were left to the manufacturers, as they would prefer their own pickup arms to be used with their own turntables and cartridges, which would make nonsense of an objective review. So, to hear any difference between components, it is vitally important that only one change takes place in the system, otherwise the results will make a mockery of the procedure. To wit, I'd use the same host turntable for the entire pickup arm selection, with the exact same cartridge.

Which to choose? Well, we opted for the Origin Live Aurora Gold, as it's one of the most neutral turntables available right now. OL's Mark Baker duly agreed to offer us a deck and his engineering support, in the shape of bespoke armboards which had to demonstrate identical characteristics mechanically and audibly, and be accurately cut for all arms. Of course, we'd be reviewing OL arms, but I am satisfied that the Aurora is an excellent platform for any arm, such is its innate balance. As for the pickup cartridge? Well, I chose the very well regarded Ortofon MC25FL, which offers an almost flat frequency response works well in a large variety of pick up arms of very different design.

Of course, I am sure there will nay Sayers, criticising the methodology (the choice of deck and cartridge, and invariably my politics too...) But we simply had to draw a sensible, considered line in the sand and find one good deck and cartridge we could get to work with all the arms — and so we did. The debates about synergy, system matching and so on and so forth can be saved for the letters pages next month! As I would be listening to so many different arms, I'd have to make very careful listening notes, and tabulate the results. I'd also have a 'backup' to confirm my findings over a period of several days, and to demonstrate them to others! To wit, I used a digital recorder. Now, I know you're going to tell me that 16/44 isn't good enough to intricately assess analogue, and on its own it's not — but it proved an excellent 'backstop', to firm up my findings at the end of the (tortuously long) review period. Enjoy!

REFERENCE SYSTEM:
Origin Live Aurora Gold Turntable c/w Upgrade transformer
Ortofon MC 25FL moving coil cartridge
Trichord Dino/ Dino + phono stage
Trichord High performance power interconnect
ATC SCM 35 floorstanding monitor loudspeakers
Crown DC 300A power amplifiers as a triamp rig
Custom built passive preamplifier
Custom built Connectronics Musilex and Miniflex interconnects
all review equipment on individually spiked stands or rack mounts
isolated mains power supply

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other unipivot design with an effective length of 212.8mm, this latest evolution of a classic tonearm sports an aluminium armtube which is different to all of the other arms in this test, as it is very slender. The headshell is fashioned from cast aluminium and is attached to the arm with a single cap head bolt. This enables the user to change cartridges much more readily. The chromium-bearing pedestal is burnished to a very fine finish. The pedestal supports the arm lift assembly (which is one of the best I have ever used!) as well as the anti-skate mechanism. The rear arm stub is of the de-coupled variety and carries two balance weights. These counterweights are also decoupled and have the same finish as the pedestal. The effective mass of the arm is 10g. Pickup arm alignment is accurate and the headshell-offset angle is 23 degrees. At the pivot, the pivot point mates with a special patented housing in the top tube.

The GH242 Export can accommodate almost any cartridge with a weight within the range of 3-12gms. The top arm can be completely detached, because of this feature it is extremely easy to mount cartridges, and has a rectangular socket that plugs into a corresponding connector in the pedestal assembly. Arm wiring is of first quality with a pair of flying leads equipped with phono sockets so the user can interchange cables between the RIAA and the arm. The arm also has a separate earth lead, which is grounded to the rear of the RIAA. This is a very fine arm as far as aesthetics go, and its build quality is second to none.

SOUND QUALITY
First on the turntable was a mono recording of John Williams playing his flamenco guitar. The arm displayed all of the weight I associate with a well-played guitar. Room size was easy to hear, along with the fingerings on the fretboard. The Hadcock tracked the cartridge with ease and displayed a grip of the music that is rarely equalled. It also presented subtle details as well as a very wide dynamic range. James Brown on the track ‘Get Up Offa that Thing’ was delivered with tremendous clarity and verve. Bootsie’s bass playing certainly drove the song along. Stereo imaging was enormous, with the image melting the listening room walls away. Image placement was rock-solid with a very smooth frequency response, meaning this arm delivers all the musical clues.

Supertramp’s ‘Crime of the Century’ was next on, and it was yet more obvious that I was listening to a very fine piece of British engineering. The GH242 allowed the music to burst from the monitors with tremendous aplomb. Percussion and bass instruments were boldly portrayed with real vivacity and little or no bass overhang. Such seamless transparency is the mark of a top pickup arm - treble to midrange balance was very smoothly displayed. Indeed, an airy spacious sound was evident with all my reference recordings.

Overall then, I was delighted with the Hadcock. It has such a large, feisty and vibrant sound, yet is a natural music maker. It has an ability to get you into the groove - and indeed the ebb and flow of the music - that is infectious. It makes the already fine OL1 sound frigid, constrained, pernickety - although the OL did show it as just a tad too warm on female vocals. It’s a versatile, well thought out and flexible tool that justifies its price premium over all the cheaper arms here, thanks to an even more expansive sound.
This is the ultimate evolution of what many think 'the original superarm' – the Linn Ittok LVII. It is primarily designed for use with the Linn Sondek LP12 turntable, and it is to Linn's credit that they were happy for us to try it 'behind enemy lines' so to speak (although they added the disclaimer that they could not guarantee the results). It uses a variation of the Audio-Technica pick up arm mounting plate, and is different to the others in this test in that its effective length is 211mm and has a cartridge overhang of 18mm. It also has a different type of stylus tip pressure arrangement. Stylus tip pressure is achieved by balancing the arm with the counterweight and then dialling in the tracking pressure on the adjuster on the right hand side of the arm pedestal. This "dynamically balanced" system uses a high quality spring to apply the force.

The arm tube and the majority of the components are manufactured in Scotland, and the Ekos is hand assembled at Linn's own factory in Glasgow. The headshell design has strengthening fillets added to the rear sides to avoid the unwanted vibration effect due to the cartridge. All components have been bonded together using an advanced adhesive technique. The bearings have a tolerance of 1 micron and have all been matched. This latest arm is supplied with Linn's silver 'T-cable', which is terminated with high quality phono plugs. The easiest arm in this test to set up, thanks in no small part to its dynamically balanced design, fixing the vertical tracking angle was an absolute breeze. It's also a joy to use and feels just nicer in the hand even than the illustrious.

**SOUND QUALITY**

John Williams was first on the turntable, and the Linn proved quite distinctive. As with many products from this company – especially from the mid-eighties when the arm was originally designed – it was brilliant at some things and quite disappointing at others. It's best described as being 'the antithesis of a unipivot', in as much as it's very tight, taut and grippy with great musicality but poor imaging and lacklustre tonality. Indeed, the Ekos proved almost unmatched in its ability to play tunes, while at the same time making the recorded acoustic in 'Bop Till You Drop' quite curtailed - the width, depth and height of the image were limited to the outer edges of my ATC SCM35s.

Back to John Williams and the guitar was portrayed at centre stage, tonally correct, but with little indication of the scale of the instrument. The reverberation in the recording studio was almost completely absent. As the music moved along, I could not detect any change in Mr Williams breathing. Johnny Guitar Watson's 'I Don't Want To Be Alone Stranger' (Fantasy F-984A) again revealed a truncated stereo image quality. Surface noise was commendably low in level however, and the cartridge tracked in the usual exemplary style.

Overall, the Ekos proved a disappointment in this context, which is of course outside the one it was designed to work in. Yet on an LP12 there's no doubt it sings, and the editor reports fine results on a Michell Orbe too. The Sondek doesn't major on spatial articulation and scaling, so maybe the Ekos's performance in this area is less apparent when it's 'au naturel'...

What's undeniable is the way it carries a tune, lending an almost supernatural sense of where the song is going. I could hear this via the Aurora too, but there was less synergy. This arm comes highly recommended for Sondek users, but owners of other decks should audition carefully.
This is Origin Live’s stab at building the finest pick-up arm possible. The fundamental design objectives were good old-fashioned strength and rigidity. A static balanced design with bias compensation applied via a weight supported by a fine thread, its armtube is machined from a solid billet of very high-grade alloy. Effective length is 240mm, with an effective mass of 14 grams.

Very low friction comes courtesy of bearings of the highest order, sat in an extremely wide yoke made from highly specified material. The Illustrious’s arm bearing casing has been designed to offer high mass in the horizontal plane, whilst the mass in the vertical plane is commendably low for good tracking ability.

Headshell design has had the same precise attention to detail lavished on it, with minimal flexure. Arm wiring is similar to the OL Silver, except that the wires have been cryogenically treated and consequently require a longer running in period than normal. The lead out wiring is terminated by Eichman bullet phono plugs. Finish of this pick-up arm is exemplary — up there with SME Series V standards, which is no mean feat. It has the strong but precise feel of the very best manual SLR camera or shooting pistol. Detail has been attended to - even the arm lift lever has been ergonomically designed — although I can’t say I thought the finger lift was long enough!

**SOUND QUALITY**

After the recommended forty hours burn in time (for the arm cables) this arm produced an almost immersive sound experience. All dimensions of the stereo image were clearly described, depth being tremendous. Height of the image was one of the most realistic I have been privileged to hear. The apparent width of the perceived image was enormous, as the image was so large that my living room walls seemed to melt away. This was complemented with a precision of spatial characteristics that made listening to the Illustrious an absolute pleasure. Oh, and surface noise was almost non existent!

Pink Floyd’s ‘The Wall’ had a character that I have not experienced before. The mixing on this album is such that lesser arms make it sound flat and two dimensional, but the top OL revealed it as vast and panoramic. Moreover, the extra dynamic range over all the other arms here was simply stunning. As a consequence, the level control was set at about a third possible volume and the system still portrayed this piece of work as, quite possibly, the finest multi-tracked rock album of the 1970s. Along with firecracker dynamics, something SME V users will know, it possessed a seamless rhythmic ease and flow which SME V users will not! This is a beautifully fluid listen, yet gives nothing away to any other arm in terms of grip, detail and focus.

Ry Cooder has an awe-inspiring delicacy of play, and this arm had the ability to transfer this into my living room. I can hear his band working very hard behind him, the rhythm section driving the music along. Likewise, James Brown came over with a precision that is very rarely heard from any hi-fi component. Image transparency and transient recovery were without doubt very special, while timbral qualities and the breadth of its tonal palette are amongst the very best I have ever heard. This is the big league, where the equipment isn’t just ‘self-effacing’ or ‘uncoloured’, but literally dissolves before your very ears. It has very little character of its own and presents the music as the musicians really intended. The Illustrious’s performance befits its name all right, bringing almost all of the fluidity of the best unipivot with vastly improved grip and incision — the best of both worlds, if you like.
In the beginning, there was the Rega RB250 - well, actually it was the RB300. Introduced in 1983, it put the cat amongst the pigeons by sounding almost as good as many superarms (Linn Ittok, Syrinx PU3) at one third of the price. Then, some fifteen years later, Origin Live came up with a "structural modification" that addressed the arm's biggest weakness - its floppy counterweight. Then, OL's Mark Baker correctly 'discovered' that the RB250 actually sounded better than the more expensive RB300, thanks to its lack of tracking force spring and more solid bearing mounting. Thus was born the OLI, a modded Rega RB250 complete with new internal wiring.

The OLI modifications transform the rather sterile standard pickup arm. OL starts by removing rear end stub counterweight decoupling rubber washer, and bolting on a new rear stub in its place. Standard RB250s are dynamically balanced (just like the Linn Ekos) and this type of structure can be deleterious to sound quality, so the spring is removed and the armtube reassembled. The rear weight has also been modified as it is considerably larger than the original and the new counterweight has an offset mounting hole to let the counterweight present a lower centre of gravity, with the added advantage of lowering the amount of transferred inertia.

The tapered arm tube has been shot peened and then anodised. Standard armtubes have a powder coat finish applied by Rega, which over damps the tube considerably. While the armtube is on the bench, OL upgrade the bearings to a much higher standard also allowing the pick up arm to be, mechanically, integrally stronger. Internal wiring is Litz cable with silver plated copper cartridge wire and a very low resistance cryogenically treated cable. Phono plugs are again replaced with high quality connectors.

**SOUND QUALITY**

The key to this arm is its all round competence, which is remarkable at the price. Although decently neutral by the standards of most tonearms, the OLI is characterised by a little lower midrange warmth. This is a good feature, as at this price most people cannot afford to install a very expensive pickup cartridge. Tracking ability is very good, as my assault course showed - there was no hint of the cartridge letting go at any time. Stage depth and width were wider than the standard Rega arm, which was also tonally more curtailed at frequency extremes and more one-dimensional.

Solo guitar is reproduced with panache, the arm correctly displaying the size of the room and the timbre of the music. Despite that aforementioned gentle lower midband bloom, the OLI is generally unobtrusive. Multi tracked rock albums are handled in a way that's remarkable considering its budget origins - sounding detailed and analytical but never sterile. This arm captures the emotion and pace of the recording.

It's possible to criticise this arm for a slight lack of charm or character, and curtailed frequency extremes, but then you remember how affordable it is. It's skill is how it does everything so competently, at such a low price. It's less charming and beguiling than the Nima, but a damn sight easier to set up and - most likely - match to cartridges. I was amazed at this humble arm with its ability to replay the music with so much accuracy. Of course, it's a league below the likes of the Illustrious, sounding a vague and two-dimensional by comparison - but its genius is that it never sounds obviously compromised in any way. By contrast, even the tremendously powerful and commanding SME Series IV at three times the price seems a tad over-analytical. Think of the OLI and the phrase 'giant killer' springs to mind...
At first sight, this looks similar to the Rega RB300 - but looks can be deceptive. The OL Silver is a complete redesign, and can be substituted for any OL or Rega arm as the designer has used the same geometry. This pickup arm has an effective mass of 13.5 grams and has a total weight (excluding pickup cartridge) of a respectable 448g. Internal wiring has seen the use of high quality Litz cable. Headshell wiring uses stranded silver with individual PTFE sheathing, terminated with sprung gold plated cartridge tags.

Mechanical construction sees a variety of changes to the norm. Arm tube material is best quality aircraft alloy. A new headshell has been fashioned which is decoupled and at the same time rigidly attached to the arm tube, although the rear bearing stub is the same as the acclaimed OL RB250 modification. Horizontal bearings have been changed for much higher specification components. The horizontal bearing yoke has also been changed for a wider unit aiming to reduce the mechanical resonance and increase torsional stability. External arm interconnect is of the captive variety (but if you want to substitute arm leads a DIN socket can be integrated by OL), and uses high-grade cable terminated with quality phono plugs. This is not wired in a semi-balanced fashion but is of the single ended type. An infinitely adjustable vertical tracking angle adjuster is included with this pick up arm.

**SOUND QUALITY**

This arm has an ability to throw an accurate stereo image into the listening room. Tracking ability was exemplary with no hint of the cartridge leaving the groove at any time even with my audio assault course. It has very little character of its own, so accordingly has lightning transient recovery, although tonally it's very slightly warm.

The music of Donald Byrd's album 'Stepping into Tomorrow' (Blue Note BN-LA368-G) had all the dimensional characteristics I'd expect from a top tonearm. Spatial clues were all there as well as an evenly portrayed frequency balance which bodes well for the reproductive process. Bass instruments had drive and rhythm. The rhythm section kept the band on course with deftness and assured control that is rarely found in modern music. The alto saxophone of Gerry Bart floated majestically, right centre, over the other instruments.

John Williams' transcription of Suite Number 3 in C for unaccompanied violoncello (Delyse ECB 3149) was on next. Although this piece of work was recorded in mono, in 1958, the spatial characteristic was boldy presented. Guitar was centre stage and the finger work was obviously portrayed. Subtety was the order of the day with this piece of music and the OL Silver did not disappoint. The acoustic of the recording studio was clearly audible and with very little overhang this music certainly shines.

James Brown's 'Get Up Offa That Thing' certainly had an enormous amount of drive and vivacity. The whistling on the title track was rock solid in the stereo image, with the trumpets accurately to the right of centre, letting the feel of the album shine through. Indeed, the Origin Live Silver coped extremely well with all types of music that was put on the platter, bearing out this magazine's prior opinion that it's a gifted all rounder that's just shy of the very best arms around - but at a dramatically lower price. Still, it does lack that beguiling fluidity of the unipivots, so if you've got £600 to spend on an arm then you'll have to decide whether you ultimately want analysis or swing.
Conventional pickup arms such as Regas and Linn's use three bearings. This type of mechanical structure has many pitfalls for the design engineer, including matching the vertical and horizontal bearings for identical coefficients of friction—which has to be very low to enable the cartridge to track the record. Another way of allowing the arm to pivot is to use only one bearing, such as in unipivots like the Nima, which drops bearing friction to very low levels. This arm has an effective length of 240mm with an overhang of 17.5mm, plus an effective mass of 10grams with a decoupled counterweight. The rear stub is set well below the arm tube level in an attempt to lower the arm's centre of gravity.

Main bearing material is stainless steel and is critically machined to extremely tight tolerances. The unipivot is contained within an acrylic pedestal and the pivot has a fine adjustment available at the top of this housing. Unlike the Hadcock—the other unipivot here—the arm tube is of very wide diameter alloy. Interestingly, the headshell material is Acrylic, accurately machined to enable the cartridge to sit square to the record. Roksan has included a very flexible printed circuit board (just like the type found in most digital watches) with no less than five tracks on it. The cartridge connectors are gold plated and very sturdy. The arm lift has a well-weighted feel to it and works well. Bias compensation is courtesy of a free weight suspended by fine thread. A little bit of confidence is needed with the set up procedure, which is simple providing you follow the well-laid out instructions carefully...

**SOUND QUALITY**

James Brown was first on the platter and the reward was an open, airy treble to midrange allied to a very good bass slam. The stereo image had good detail retrieval as well as an extremely wide sound stage. The percussion was striking as the quality of reproduction was of the highest order. The "Godfather of Soul" was singing with his usual passion with his band pushing the music along. Unusually for such an inexpensive arm, this one coped very well with almost all the music that was put on the platter. Ry Cooder was certainly present with a delicious portrayal of vocal timbre that is his trademark. His band stretched from wall to wall with an extremely realistic portrayal of stage depth and height.

The transient ability of this arm is very good, along with a realistic decay which is very important for instruments like pianos and strings. Low frequencies are of the highest order, with superb lower bass grip. Furthermore, its bass to midrange balance is almost seamless—as is the mid-to-treble transition. So it's a smoothie, but not soft around the edges in any way.

In absolute terms, the Nima is a tad ragged in the high frequencies, and lacks the forensic detailing of the more expensive arms here. But its natural musicality allied to superb soundstaging (by comparison, the OLI sounds shut-in, constrained and generally distant) makes it fantastic value for money. A unipivot such as this is a different way of listening to music than a conventional multi-pivot—a bit like the gulf between tube and transistor, if you will. Setup is a little fiddly, but with care and attention gives super results.
If there is any tonearm here whose reputation precedes it, it is this. The Series IV appeared in the latter half of the eighties, as a slightly cost-cut version of the mighty Series V whose fluid damping system, silver Litz headshell wires and sprung tracking force system it lacks. Interestingly, these are all features of debatable, if not deleterious sonic merit anyway, and there are those who feel that (given the Series V's wiring) the IV is actually superior. The only obvious demerit is the slightly lower tolerance bearings, but the IV's are still so high that again this is an arguing point.

The arm itself was so radical when it first came out that it may as well have come from outer space! Constructed from a cigar shaped, one-piece magnesium tube, it had echoes of Rega's revolutionary RB300, but SME had moved the game along further. The IV boasted a massy counterweight locked close to the arm pivot, easy azimuth adjustment and superb low-friction, high strength bearings. Hand cueing this arm is an amazing experience — it feels like the best Leica camera to the touch. It's also extremely easy to set up very accurately, and the instructions are exemplary. As soon as you unpack this arm, you're aware you're using a legend, and the sound is no different.

**SOUND QUALITY**

Best characterised as neutral and self-effacing, this arm brings unbelievable clarity to vinyl replay. Imaging and soundstaging are superb, while frequency extension is unmatched - bass is extremely tight and controlled, treble glass-clear. The only criticism is the rather dry, analytical sound; there's a conspicuous lack of euphonic coloration, and this can be a little stark for some tastes. The upside of this is the brilliant 'deconstructive' talents of this pickup arm — it can scythe through any mix to tell you precisely what's there and how it was recorded.

For example, Supertramp's 'Crime of the Century' gained a mastertape-like quality that none of the others so far possessed. While the Hadcock was deeply impressive in its musicality and the OL Silver commendably detailed, the SME V didn't seem to have any discernable character at all — aside from one foible I shall elucidate upon subsequently. The result is that it gave an amazing insight into all aspects of this classic nineteen seventies recording — from studio effects to multi-tracked vocals to the background train announcements in 'Rudy'. Bass is stunning. It's rock-solid, vice-like and possessed of tremendous energy and articulation. Midband is three dimensional, with brilliant image placement. Treble is smooth and open and wonderfully extended. Dynamics are gobsmacking, and I found myself looking for big, impressive sounding productions to amaze myself with hit!

The trouble is that the SME Series IV has a certain "mechanical" nature to the way it goes about making music that actually makes it obviously less listenable than, say, the Hadcock. It's great at giving a seat-of-the-pants, whiz-bang sound, but proved strangely unrewarding just listening to music — much like CD, in fact. To wit, James Brown on the track 'Get Up Offa that Thing' wasn't such a moving moment as it had been on the Hadcock, Roksan or OL Silver. Some folk will think this really is 'the best pickup arm in the world' — it is not an overly ambitious claim — but others simply won't take to it. Whilst (you'll subsequently read that) the Ekos is great in one respect and poor in several others, the SME is great in most but poor in just one — but that particular aspect, many analogue addicts will believe, is the most important. Close, but no cigar.
rinking up the rear of this test was the Linn Ekos, which was one of the very best here in terms of tunefulness, but - on our test deck at least - was unable to correctly describe the soundstage in depth, width or height. It’s obviously not an all rounder, and is voiced in such a way as to appeal to a select group of listeners (LP12 owners) who know what they like and what’s not important to them. It’s a beautifully made and designed bit of kit, but not right for everyone.

Next was the Origin Live OL1, which has the ability to present an extremely large sound stage, with correct timbral detailing. Ultimately it’s a bit warm, a bit tonally and dynamically curtailed, but is brilliant value and streets ahead of a standard RB250. The beauty of this arm is that it’s a middle ranking arm at a rock-bottom price — thus letting you spend more on your turntable and cartridge.

Roksan Audio was next with the Nima. This was one of the surprises of this group. At its price point, it’s an astonishing piece of kit. It is quite difficult to set up but a little care and attention to detail rewarded me with a panoramic sound stage and superb tonal accuracy. It has a natural ease and grace that only the Hadcock matched — I can see why unipivots are cutish!

The OL Silver had an even wider stereo image than the preceding arms. Timbral detailing was more accurate, along with a much more believable portrayal of the musical event taking place in my living room. The pace of the music was correctly displayed with the panache and passion of the musicians very well displayed. Again, it’s much better than it should be at the price — something of a recurring theme with OL. For many, this is all they’ll ever need.

The Hadcock GH242 Export, which has been ignored by much of the hi-fi press for years, proved a veritable ‘wolf in sheep’s clothing’. I did not expect the imaging to be as precise, or transient to be as fast. On solo piano it proved exemplary, adding little of its own character to the overall experience. In many respects like soundstaging and depth perspective, its performance was right up with the SME IV. Only in the SME’s traditional areas of strength the Hadcock falter, with a slight image foreshortening, an obviously ‘warmer’ midrange and looser bass. But it had a wonderfully natural, fluid and beguiling character that was never other than charming — something the SME lacks! The downside is that this is the fiddliest arm you’re ever likely to own, and requires extreme care and patience to set up properly.

The SME Series IV is next. This is one of the most *stunning* tonearms I’ve ever heard, but the initial euphoria settles to leave you rather cold. It is relentlessly incisive and forensically detailed, with firecracker dynamics and almost ‘architectural’ soundstaging. In hi-fi respects, it will leave the strongest devotee of digital audio speechless — given a serious turntable and arm it sounds ten times crispier than 24/192. Yet it lacks ‘that old black magic’ — charm, basically. Now, the jury’s out on whether this ‘charm’ is actually ‘euphony’, or whether it’s actually in the groove in the first (I suspect it is), but the point about the SME is that it’s more like the ultimate measuring instrument than the greatest musician. In other respects - build, engineering, feel, ease of set-up, packaging, instructions - it is sublime.

And the winner is... the Origin Live Illustrious, a pick up arm that is quite simply breathtaking. Its ability to display a three dimensional stereo image is above criticism, as is its transparency and lack of artifice. It also has amazing tonal accuracy, which lets the ‘flavour’ of each instrument or voice flood out of the speakers. This is the respect in which it was most obviously superior to the SME. The only area which is falls down — if that is the right phrase — is the bass. The latter’s lows were just a tad tauter and more ‘vice-like’, but by any other measure the Illustrious was sublime. On any deck — OL, Michell, Notts Analogue, Clearaudio – this is surely the best.

**THANKS TO:**
Bob Polley at ATC in Gloucestershire, for their loan of the ATC Studio Control Monitors.

For more tonearm talk, including a look at how the tested models relate to other established designs, see DP’s column on p83.
here's your chance to win
one of the best mid-price
CD spinners on sale, a
purpose-designed audiophile digital disc player
from one of the acknowledged masters of the art. In Hi-Fi
World's review last month, Albert
Lee opined:
"The new Creek CD50mk2
looks similar to the earlier CD50 but
is actually a very different machine...

The mk2 has a new transport and
the circuitry is improved and with
symmetrical layout and shorter signal
paths, and a higher frequency clock
oscillator is used that's synchronised
with the micro controller and buffer
clock to minimise internal
interference. There are two discrete
transformers for the digital and the
analogue power supplies. This
feature, along with separate
grounding, enables the player to
achieve much lower noise
performance than the mk1. There are
12 regulated power supplies along
with an entirely separate power
supply for the CD drive mechanism.

Detailing was excellent — along
with percussion, hi-hats, rim shots,
cymbal strikes and wood block shots,
I was able to tell the difference
between the ride and crash cymbals
with ease. With many mid-price CD
spinners, this disc sounds confused,
probably because of the amount of
information in the mix, but with the
CD50mk2 the sound was extremely
well presented. For example, 'Street
Scene' saw the flautist was finely
etched in space as if it had a life of
its own... Through the Creek, the
music had obviously more life in it,
and that veil had been lifted... The
CD50/I1 had an obviously better grip
of the recorded acoustic, being
better able to differentiate the
musicians and the instruments they
were playing.

It possesses the ability to
describe the room in which the
performance took place and the
musical event itself. To put it in
perspective, you'd struggle to find a
DVD-A or SACD spinner under
£2,000 that comes close to the
Creek (on 16bit CD) — which
suddenly makes ye olde Compact
Disc look a surprisingly worthy
format once again. One of the very
best CD spinners at the price, this
offers a captivating musical
performance and clever future-
proofed design."

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magazine, Unit G4, Argo House,
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CONGRATULATIONS
...to Mr. Robert Swain of Southampton, the winner of our February 2004 competition.
A Sugden Headmaster Headphone Amplifier/Pre Amplifier is on its way to you!
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ROKSAN upgrades its entire CASPIAN range

Roksan's CASPIAN range of Hi-Fi and Home Cinema components was originally introduced in 1998 and, having remained almost unchanged since, it was clearly time for an update.

The design aims for the new 'M series were to improve reliability, enhance the aesthetics and, most importantly, improve sound quality. And it seems these updates have been successful with What Hi-Fi? Sound and Vision magazine concluding "Roksan's calculations were spot-on... The Caspian M Series-1 is well worth the extra money." January 2004.

www.sevenoaksoundandvision.co.uk

Product NEWS

ARCAM'S entry-level DiVA DV78 DVD Player

Arcam’s latest DVD player in the DiVA range is the DV78. The result of over four years’ development, it uses the design team's insight and understanding to engineer their most affordable player ever.

The cost saving is substantial, but Arcam are proud to say that they have video performance which is truly world class. They have also used their expertise to ensure that the audio quality reflects the audiophile heritage, which is at the heart of every Arcam product.

The quality of components is identical to those used in the more expensive models, the DIVA DV88 Plus DVD player and DIVA DV89 DVD-Audio player. What has changed is the simplified construction and assembly techniques, which have substantially reduced both build and test times. The player comes equipped with a new remote control as well as a new navigation button.

Call your local Sevenoaks store for a demonstration and confirm that the DV78 provides reference class performance on both music and movies.
TURNTABLE I RB300 TONEARM

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MISSION
782 SE SPEAKERS
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"Well, with the exception of the alderwood-veneer finish, these floorstanders look identical to the standard model, although there's a new tweeter and crossover design. One of the advantages of the three-way configuration is that each driver deals with only a narrow section of the frequency range, and the designers optimise each unit to perform its respective task. Mission's engineers have excelled in this area: these elegant floorstanders sound beautifully balanced and few rivals under £1000 can match their wonderful levels of clarity. The 'special edition' tag is overused but these talented floorstanders are bona fide sonic stars."

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KANDY KA1/III AMPLIFIER
QUAD
11L SPEAKERS

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Awarded five stars in a recent What Hi-Fi? Sound and Vision group test, the Kandy KD1/III CD player was described as "offering a great array of talents - team it with its amp stablemate and you have something close to the ideal visual and sonic combination."

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HI-FI SYSTEM 3 - NOT IN CONJUNCTION WITH ANY OTHER OFFER OR PROMOTION

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MONITOR AUDIO SILVER S6 SPEAKERS

HI-FI SYSTEM 4

CYRUS CD8 CD PLAYER & 8 AMPLIFIER
MONITOR AUDIO SILVER S6 SPEAKERS

Another very popular combination that's more than the sum of its already talented parts - and that's before you've examined the upgrade options. The CD8 is a magnificent player (Best Buy - What Hi-Fi? Sound and Vision Awards 2003) and like most Cyrus products its performance can be maximised with the addition of a Cyrus PSX-R power supply

The beautifully crafted Silver S6 speakers from British speaker specialists Monitor Audio complete the package.

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HI-FI SYSTEM 5
SAVE £169

ARCAM
CD73T CD PLAYER & A65 PLUS AMPLIFIER
MONITOR AUDIO
BRONZE B2 SPEAKERS

SYSTEM PRICE
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"The D-30 was exemplary, as its three What Hi-Fi? Sound and Vision Awards clearly show. The D-31 is even better, making it phenomenal value for money."

"The Classik sounds simply marvellous. Boasting fine impact and drive, it retains its grip even as it thumps out rock and dance tracks. Ask it to play quiet acoustic music and its smooth, liquid presentation impresses still further. The Classik offers the performance you'd expect from high quality separates in one lovely package - this is a very superior product."

Arcam and Monitor Audio both have an enviable reputation for producing great sounding kit without breaking the bank. This system shows why with a well balanced sound that's both musically involving and enjoyable.

At the front of this package is Arcam's upgradeable CD73T CD player - a What Hi-Fi? Sound and Vision 'Product of the Year 2003'. We've coupled this with Arcam's complementary A65 Plus integrated amplifier and Monitor Audio's beautifully balanced 'Best Buy' Bronze B2 speakers. According to What Hi-Fi? Sound and Vision (Awards 2003), these compact speakers "Sound superb... Speakers don't get much better than the B2s."
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Founded in 1972, Sevenoaks Sound & Vision is one of the largest and most successful hi-fi and home cinema retailers in the country. Each Sevenoaks Sound & Vision store stocks a wide range of quality products, covering all categories of specialist home entertainment, from Hi-Fi separates and systems to DVD players, widescreen plasma televisions and projection systems, all at highly competitive prices.

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We were most impressed with Sony's budget SCD-XB790QS SACD player a few months back, finding it a beguiling performer with quite an 'analogue' sound. What then of its bigger brother, the entry-level model in the prestige ES series? David Price tried the new SCD-XA3000ES.

It's a sad reflection on the British market that a machine such as this should be labelled 'high end'. In Japan, Sony's ES range forms the mainstay of its hi-fi separates range — it's a sort of 'BMW 3 Series' of audio — classy but commonplace and not regarded as particularly esoteric. Here though, there was a considerable period of time in the mid-nineties when Sony UK was not importing any ES components at all to the UK. Shame! Instead, the company chose to rely on its budget 'Q series' to form the entirety of its separates sales. There was nothing particularly wrong with these, other than that Sony fans had nowhere to go if they (and I count myself in) wanted something more!

Fortunately, we're now blessed with not one but two ES machines — this, the entry level SCD-XA3000ES (which sort-of replaces the 333), and the XA9000ES which has just been launched in the UK as I write this (watch this space for a review). Selling for around £600, the 3000 occupies the classic Sony mid-price CD player segment of yore [see box]. You don't get the stunning copper plated, Black Gate encrusted internals of the top ES models (previously the 777 models, now the 9000), but you get a very nice box and a fair smattering of designer label discrete componentry inside.

This is one of the most attractive Sony digital disc spinners I've seen for many a year. I loved the late eighties CDP-X557ESD and CDP-X77ES era models, which were very clean and purposeful, but for a long time Sony's stylists haven't known whether they're Arthur or Martha — and the result has been variously cluttered or bland boxes. This looks cool, clean and contemporary — and exquisitely well finished. It's only when you open it up that you realise it's a case of 'plus c'est la change, plus c'est la meme chose' for the Japanese giant.

To wit, the casing comes off — rather less neatly than the beautifully hewn aluminium front panel would suggest — to reveal a sight that looks remarkably familiar to the Sony CDP-X333ESD (1990 vintage CD spinner) that I still have in my spare room. On the outside, it looks like an over-engineered Japanese battleship player, but inside it's — well — just a well engineered machine built very carefully to a price. In fact, close inspection reveals it actually has a lot of commonality with Sony's budget SCD-XB780 and XE680 machines, inasmuch as it shares the same main board! The company hasn't even decided to disguise the fact — as the names of these players are printed on the PCB, while that of the SCD-XA3000ES is omitted.

So the XA3000ES is an extensively 'breathed on' budget machine, getting an altogether larger (430x290x124mm) and sturdier (8.2kg) casing which is presumably less susceptible to sound-degrading resonances, upgraded Twin R core mains transformer (with separate analogue and digital supplies) and peppering of middle-ranking Nichicon and Silmic capacitors all the way from downtown Akihabara.

To this, we can add all the standard bits from the other budget machines — including a reasonably quick access (by SACD/DVD standards) transport that plays CD, CD-R/CD-RW and SACDs, a defeatable fluorescent display complete with CD Text and 'music calendar', the 'Multi-jog' knob for track selection, gold plated headphone jack with volume control, a litany of playback modes including (32 track) program play, random play, all tracks repeat and one track repeat. Round the back there's a coaxial digital output, optical digital
output, six RCA phono sockets (i.e. multichannel analogue output) and one pair of RCA phono sockets (as a stereo line output).

SOUND QUALITY

This player is an interesting conundrum. Superficially it has quite a bright, punchy and upfront sound — just like Sony 'three series' CD players of yore. That means incision, grip, attack and no small degree of listening fun. On another level though, it is not the 'digfest' that earlier mid-price Sony silver disc players have been. Whereas players as far back as the CDP-X33ES (1989, £600) have been very mechanical and obviously digital in their presentation, the SCD-XA3000ES has a fluidity (if not a tonality) that's quite analogue in its style — precisely what we concluded about the XB970 a few months back, indeed.

When I say analogue, don't confuse this with soft, warm, mushy, laid-back or any of those other tired epithets. The 3000ES isn't any of these. Indeed, it's actually more upfront sounding in both CD and SACD modes than the Pioneer DV-868 DVD universal player I had on hand for comparison purposes. This machine actually sounds more laid back and tonally warmer than the Sony. But the Sony does have a lyrical character in the mid-band which gives it 'listenability' that the Pioneer lacks.

In defence of the Pioneer, of course, the Sony doesn't play DVD movies, DVD Audio discs, MP3 CDs, VCDs or any of the other weird and wonderful digital Frisbees. This is an out-and-out hi-fi separate with CD and SACD as its sole remit. Although the Pioneer is about £200 more expensive, though, I thought it was a fine comparative tool, as potential Sony purchasers will invariably be thinking 'do I get a universal player or keep to the SACD straight-and-narrow'.

Of the two machines, I'd choose the Sony. Here's why. Let's put aside the Pioneer's brilliant connectivity (HDMI, iLink, etc.) and DVD-A compatibility for a moment. If you've committed to SACD (and CD), then the Sony is simply the better listen. It's also dramatically better to look at, ergonomically superior, easier to use and has the joyous bonus of not requiring connection to a video display. If you slot in a Roxy Music 'Avalon' SACD and you want the 2-channel mix, you press the MULTI/2CH button and it switches to stereo, instead of requiring the negotiation of seventeen sub-menus (I exaggerate for effect) to get your desired mix. Even the disc tray feels more solid.

Down to the nitty-gritty. I started the session with ye olde 16/44 CD. Steely Dan's 'Do It Again' was a deeply engaging listen — albeit sharp enough to slice your ears off at 20 paces. Actually works better in the context of today's smoother systems than it did back then.

THREE IS THE MAGIC NUMBER — SONY £600 MACHINES THROUGH THE YEARS

(CDP-X33ES) [1987]
One of the first Philips TDA1541 aspirated machines, this sturdily built 16x4 affair was a deeply engaging listen — albeit sharp enough to slice your ears off at 20 paces. Actually works better in the context of today's smoother systems than it did back then.

(CDP-X77ES) [1989]
The first of the Bitstream Sonys wasn't, strangely, as smooth as you'd think — that was left to the top-of-the-range CDP-X77ES. It was very clean and detailed, but a tad cold, just like its forbear, and also quite mechanical. Great late eighties 'black box' styling, though.

(CDP-X505ES) [1991]
This was much more like it — Sony produced a very slick sounding machine with fulsome bass, open midband and very cough treble, allied to a hitherto unfamiliar (for Sony '3 Series' designs) musicality. Nice — well worth seeking out even today.

(SCD-XA3000ES) [1999]
Sony now had an SAC player to do occupy the role of its £600 mid-price separates machine, and very good it was too. If anything, on CD it was a bit loose and indistinct — obviously poorer than the X303ES, but then it did SACD as well, and decently too.
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Fagen located well back behind the plane of the speakers) was all there to be enjoyed. Switching to the Sony, and the bass was a tad drier, the vocals a little forward (coming out in front of the plane of the soundstage) and the upper midband and treble just ever-so-slightly brighter.

Round one to the Pioneer, then? Well no, because the Sony was more engaging. Not only did instruments start and stop with greater precision, making for a punchier and more gripping listen, but the vocals were more believable. The keyboard playing was much more of a ‘live event’; you really got the sense of how it was important to the structure of the song, its significance in the great scheme of things. This struck me as more significant to the overall experience than the Pioneer’s superfluous nicer tone. There was a sense of the Pioneer doing what the Unison Research Unico CD player does [see page 30], albeit to a greater extent, which is appealing to listeners simply by virtue of its sweet ‘analogue-esque’ tonality. The Sony, by contrast, was altogether more upfront and musically engaging.

Moving to Simple Minds’ ‘New Gold Dream’ on CD, so the pattern continued. The Pioneer conjured a really rather impressive soundstage, with Jim Kerr’s ethereal vocals hanging back with admirable reserve (just as they should, if you’ve got the original vinyl pressing). Switch to the Sony and it was more upfront and in-your-face, although never bright or strident. The vocals shifted forward again, and there was just a hint of upper midband glint that, maybe, shouldn’t be there (this album always did sound like it was recorded in a studio lined with cotton wool, after all). But again, the musical performance was more engaging. Tonality aside, the SCD-XA3000ES was better able to convey the song’s beginning, middle and end. You got the sense of a musical event, progressing and building to a climax. One could say it was more ‘emotionally resolved’, conveying the scale and power of the performance. Dynamic contrasts were more explicit. By comparison, the Pioneer was just a little bit too middle-of-the-road. In a sense, voicing a ‘universal’ player this way is correct — but if you’re more into serious, ‘take no prisoners’ audiophilia, the Sony’s presentation was more appropriate.

What then of SACD? Well, both players made distinctly nice noises with Propaganda’s ‘A Secret Wish’. Their respective characters, that CD had so explicitly signposted, remained but interestingly there was a narrowing of the gap. The Pioneer remained the tonally richer and rhythmically more louche, whereas the Sony proved more engaging, detailed and incisive. But the superior resolution meant the Pioneer sounded less musically ‘plodding’ than before, turning in a seriously nice ‘hi-fi’ sound with oodles of bass weight, treble extension and fine dynamics. Again, the Sony was the more upfront and embracing, with more energy and clarity. Its bass assumed a good deal more weight, and this made for a more enjoyable listen — ‘P Machinery’ sounded powerful, gppy and dramatic. There was that same fluid midband, that same sense of a musical occasion, but more of the niceties you’d expect from SACD (warmth, space, depth, dimensionality).

Roxy Music’s ‘Avalon’ was no less impressive. This much talked about disc was obviously more impressive on the multichannel mix, but even 2.0 proved powerful and propulsive in a way that the Pioneer was not. Once again, the DV868 relaxed and sat back, happy to give a commendably spacious and atmospheric rendition that the Sony simply couldn’t equal. But likewise, the Sony took the music by the seat of the pants and got into the groove. It was ‘arresting’ and ‘emotive’ to the Pioneer’s ‘smooth’ and ‘sumptuous’. At this point, I thought I’d cue up my turntable (which costs some six times more expensive than either digital disc spinners here) to see how it should be done. And surely enough, we got the Pioneer’s depth and dimensionality allied to the Sony’s natural musicianship and dynamics — oh well then, you can’t have it all for £600, can you?... Overall, it’s a very accomplished machine, the Sony. If you’re into music (as opposed to hi-fi) then you’ll gravitate to this, much in the same way that you’d take a Naim NAIT 5 CD over the Unison Research Unico CD for precisely the same reasons. You know it’s not quite as ‘pleasant’ to listen to, but frankly neither is a live concert. In fact, it’s actually a little brighter and more bracing than the SCD-XB790QS (at half the price), but altogether more musically coherent. Methinks that with a nicely neutral interconnect (Wireworld, LFD SpiroLink) and some Sorbothane feet to ‘tweak’ its tone down slightly, allied to a decently smooth integrated amplifier (Roksan M-integrated) and big, sumptuous loudspeakers (Castle Conways), you’d have the ideal mid-price digital system. Recommended.

VERDICT
Not quite as smooth as some, but a very musically engaging and communicative design nonetheless. Brilliant ergonomics, nice build, fine CD playback and great SACD sound make it superb value.

SONY SCD-XA3000ES £999
Sony UK Limited (+44 (0) 1932 816786 www.sony.co.uk

REFERENCE SYSTEM:
Michael Cl September turntable
SME Series IV tonearm
Ortofon Contraforce C cartridge
Chord Chorl Delphini NC phonostage
MF Audio Passive Preampifier
Quad 969 power amplifier
Quad 989 loudspeakers
Townshend Maximum supertweeters

MEASURED PERFORMANCE
Sony always engineer CD to a high standard, offering the best specs possible and this player is no exception. With CD it produces little distortion, with SACD it’s minimal, our Rohde & Schwarz analyser reading SACD’s noise floor. SACD will resolve signals below -100dB and our 5% distortion reading is actually noise. SACD bandwidth reaches 38kHz (-1dB) before output rolls down to -3dB at 45kHz. Although there is output at 96kHz it is low. SACD manages the usual figures, with a super flat response to 21.2kHz (-0.01dB) with continuous signals, but only to 5kHz with an impulse, suggesting digital processing and a softer sound than usual (Sonnys are normally glassy bright). The player had very low distortion of 0.2% at -60dB resulting in large 112dB EIAJ dynamic range value. Output was low at 1.80V. There was a little programme related jitter, peaking at 100pS, not large but not as good as possible. I suspect this player will sound unusually smooth and easy going. Sony seem to be trying to tame the hardness of CD to bring it into line with SACD’s presentation I have noticed with other players. That seems to be the case here. NK.

Frequency response (-1dB)

2Hz-38kHz

SACD
2Hz-38kHz

5-21kHz

CD

Separation

110dB

Distortion (-60dB)

SACD

0.08%

CD

0.2%

Noise (IEC A wtd)

-164dB

Output

1.80V

Dynamic range (CD, EIAJ)

112dB

www.hi-fiworld.co.uk
APRIL 2004 HI-FI WORLD & COMPUTER AUDIO 37
When the decidedly digital Unison Research Unico CD player met the absolutely analogue Pro-ject RPM9X turntable, it was war — says Dominic Todd.

You have around one thousand pounds to spend on the best sound possible, and no prejudices about whether it's digital or analogue. All you want is the ultimate sonic performance at the price, from the format best able to provide it. So which do you choose? We decided to put two brand new, similarly priced new products from famous and well-respected European specialist manufacturers against one another — the only difference being that one was digital and the other analogue...

UNISON RESEARCH UNICO CD

Just as vinyl enjoyed a revival as Compact Disc became the primary hi-fi source about fifteen years ago, so CD seems to be undergoing something of a renaissance now, with a host of interesting hardware launches and some great value software reissues. One such machine is the newly launched £1,195 Unison Research Unico CD, imported into this country by Italian hi-fi experts UKD. As one would expect, there's nothing very ordinary or mainstream about this player, and it features everything that you'd expect from a brand seemingly obsessed by the presence of wood and valves. At 11kg, the Unico is heavier than many integrated amplifiers, and the generally solid build quality inspires confidence.

Cosmetically, there's little to get excited about. The slab-fronted panel is sturdy and, the now obligatory, silver. There's a neat wooden badge, and a rather unusual display. Unlike most other displays the Unico uses a large LC Display that features a 64 kb flash memory, allowing it to be personalised. The effect is rather attractive and not unlike using one of the better hard disc recorders. Fortunately, although clear, it's also far from intrusive, which is just as well as it can't be turned off. If you're impressed by the display, then you're even more likely to be bowled over by the remote control. Considering the price of the player, this is one of the nicest I've seen. Fashioned from solid wood, the effect is extremely high end, and the ability for the remote to "stand up" is a further neat touch!

This is all very well, of course, but if the electronics inside don't match up, then the exercise will have been a waste. Fortunately as much effort appears to have been put into the internal gubbins. Of immediate interest to the audiophile will be the two ECC82 valves. Rather as Luxman did in the early 90s, these are used in the amplifier stage. Fully balanced, and running in triode mode they should offer a considerable input into the overall sound quality. The rest of the machine is less exotic, but well specified. There's a 24/192 Crystal DAC with three digital filters. The CD-ROM mechanism allows the machine to play most copied discs and track access is extremely fast. The downside is that it takes an age to initially read the disc, and then there's the inevitable zoom and whoosh noises that remind you that this transport could also sit happily in a cheapo desk top PC! Perhaps
only available as digital output is coaxial, so you'll struggle to connect a personal MiniDisc recorder. Overall though, for its £1200 price tag the Unico is a very solid and competitive product. Rivals around this price are many, including the superb Cyrus CD8 (£1,000), Meridian 507 (£1,200) and Naim CDS (£1,200), so it faces stiff competition.

With the Unico plugged into my reference system, I began by listening to Royksopp's 'In Space'. The analogue quality, learnt by the valve output was immediately apparent, and most soothing. Bass had good depth and a reasonable control. However, there are plenty of rivals that would show how it's possible to tighten things up noticeably at the bottom end, whilst throwing greater weight into the bargain to. Still, whilst rivals may have a more convincing bass response, they'd all be rather too polite, and so it turned out to be, and it's here that either a Cyrus or Meridian would show the Unison up most. Likewise, the percussion was far from being the sharpest, and would have benefited from a crisper definition. Better, however, was the piano's timbre which sounded natural and, unsurprisingly, rather analogue in its fluid response. Going back in time, yet up in tempo, with David Bowie's 'Ziggy Stardust' found the Unison less than happy. I had feared that it would be too polite, and so it turned out to be. Bowie and Ronson’s guitars were simply far too refined, and subsequently failed to really engage the listener. Similarly the drums lacked impact and there simply wasn't the dynamic scale needed for a song such as this. The effect this has is that the listener will turn the volume higher and higher in order to try and connect with the music, but never quite getting there, even at ear splitting volumes. The timing did rather appear to drag it's feet, and whilst there was little actually at fault with timbre and staging, the over all sound was simply too smooth.

Moving forward to something a little more up to date, The Divine Comedy's 'Perfect Love song' proved more suited to the Unico's presentation. The laid back stance saw the vocals set a little too far back within the sound stage, although the texture was especially good. Those keen to hear detailed nuances from the lead vocal would be pleased by the Unico's ability to portray the details clearly without analytically stripping the voice bear of emotion. There was fine separation of instruments even during the more complex sections, when it can be a struggle to depict details such as a faint violin sound; no problems here for the Unison. Despite the fine resolution though, the lack of drive did once again let the player down. The bass response simply lacked the weight needed to underpin the track.

Much the same balance was evident with Classical music. Vaughan Williams' 'English Folk Song Suite', conducted by Adrian Boult, showed decent timing and some wonderful detailing. The decay of the triangle, for example, was superbly portrayed with the delicate instrument well supported and far from being over looked. Another strength was the mellifluous string tone that ebbed and flowed in a sweet, almost vinyl-like, manner. Yet these qualities came at the expense of the dynamic scale, which simply couldn't compare to rivaling machines at this price. The brass lacked attack, and the tension and drama in the piece couldn't help but sound somewhat rose tinted and softened.

That the Unico CD player is special at this price point is beyond doubt, but it is not the very best sounding player. The designers have obviously voited it for a very analogue sound, and the tube output stage is testament to this. As a result, its natural and expressive balance works particularly well with vocals and strings. Likewise, the frequency response appears well covered with no sonic nasties, and certainly no excessive sibilance. This is a player, that with the right music, one could listen to for hours on end without it ever becoming intrusive.

However, you don't get an analogue sound by simply adding few valves to a CD player. This player has an obvious lack of pace and impact that could prove annoying for some listeners, especially if one's system is...
already biased towards a smooth sound. Detail retrieval can also be patchy, good at times, but slightly stifled at others. There were also times when the generally good sound staging became a little too reserved and recessed. Separation and height of sound, however, never turned out to be an issue. It's an impressively smooth machine, voiced in a very particular way that some will love and others will hate. How then does it compare to its closest analogue price rival, Pro-ject's RPM9X turntable?

**PRO-JECT RPM9X**

As far as the Pro-ject range is concerned, this is as good as it gets. It has subtly updated the range-topping £1,000 RPM9 with the effect of making their skeletal deck even more - skeletal. The MDF plinth, as used by the RPM9 reviewed by Hi-Fi World in May 2002, has been changed for a transparent Acrylic. It still houses three adjustable feet and an inverted type bearing, but now has a far more high-end look. Completing this is the existing 3.5kg Acrylic platter, although this is translucent. As before, the AC motor is wisely mounted separately from the plinth. It is metal cased, and sits atop a heavy metal stand not unlike the record clamp. Speaking of which - the brass clamp remains, and can be a real pain to use. Unlike some clamps it doesn't use a screw thread, but doesn't sit straight onto the spindle either. The upshot is that a twisting motion is needed to fit the thing, and if you don't hold on to the plinth hard enough, it can knock it out of kilter with the motor housing. Although the gauge will soon have things lined up, it's annoying none-the-less.

The tone arm is much less frustrating. This is typically Pro-ject in that it offers much for the money, but not the best of finishes. The carbon fibre arm tube adds to the impression of something special, and you can adjust the VTA and azimuth. Anti skating is adjusted by the good old-fashioned (and arguably sonically superior, as there's no spring) means of a swinging weight. Best of all, the good quality tube cable is terminated by gold phono sockets, allowing the listener to choose their own interconnect. The finish is fine, but it's definitely no SME and even struggles to match Rega. Overall though, I found the deck easy to set up, good looking and with a true high end specification and not quite a true high end price. The finish is still not quite in the same league as some rivals, but still a great improvement on Projects of old. And so to battle. Could the RPM9X work some that fabled 'analogue magic' and better an already very sophisticated CD player? The first disc to hit its twelve inch platter was Coldplay's 'Spies', and it immediately became clear that Pro-ject's tweaks have raised the game a notch or two. The precise and bold staging gave the lead vocalist a sense of 'being in the room' that the Unico could never quite replicate. For the price of the player, vocals were as good as they get, with real presence, texture and coherence. There was a slight touch of sibilance, although this may have been able to be tweaked out by a different cartridge to the Ortofon MC20 Supreme I used. Rather like the vocalist, the guitar was beautifully resolved, with the reproduction being both detailed and precise in timbre. After the Unico, the bass came as something of a surprise. For ultimate weight the CD actually eclipsed it; and, perhaps more surprisingly, was warmer in texture too! Yet in terms of timing and tautness, the Project was in another league. Whilst it didn't have the sheer weight of the decks from the class above, it possessed a pace that could really underpin the music, and drive through music in a particularly well integrated manner. In comparison to the Unico it was as though someone had lifted a veil from the speakers...

Grace Jones's 'Pull Up To My Bumper' showed similar control and insight. Bass certainly wasn't the deepest, but the Project made up for it in other respects. The percussion fairly leapt from the speakers, yet it managed to pull the whole track together without sounding stilted or disjointed. Key aspects were the fine timing and excellent mid-range clarity that, no doubt, the acrylic platter has done much to clean up. The upper-mid band detail was truly exceptional for a player of this price, despite a new-found alacrity of sound; the texture and involvement didn't suffer. It was interesting to find that with Donald Byrd's 'Dominoes', the vocals almost sounded a tad too strident. There wasn't the warmth here that I was used to from the Unico. Having said that, of the two it was the Project that was more accurate if not necessarily the more pleasant to listen to. One aspect they had in common was a similarly smooth portrayal of strings. Neither were exactly analytical here, yet both could soothe with a smooth and fluid response. Yet again it was the bassline that showed the real differences between the rival formats. Whilst the RPM9X's proved addictedly buoyant,
although not especially deep, the Unico was far more sluggish in its response.

The Divine Comedy's 'Everybody Knows' had a bite and attack that proved engaging. The key to the Project's success here was that it allowed each type of instrument its own voice, without laying too heavy a colouration of its own across the board. Hence the stringed instruments were sweet and natural whilst the electric guitar was far more raw with extra stridency and sheer oomph. At times the vocals were almost a little too harsh, but Hannon's vocals stayed just on the right side of brash for me. Had they been any mellower, then they could be the perfect tonic to listen to after a hard day at work. Yet in many ways it's remarkably similar to the Pro-ject, with a fluid and beguiling sound that could be the perfect tonic to listen to after a hard day at work. Yet in terms of timing, sound staging and sheer presence, the Pro-ject is in another league. Both have a likeable and musical sound, but it's only the Pro-ject that will keep you up all night rooting through your music collection. Now, just stop and think for a minute. Whatever would we be thinking if, back in 1984, we knew that twenty years later a brand new analogue turntable would have beaten a valve-aspirated digital Compact Disc player? The world is upside down.
Letter of the Month

LO-FI - MY PART IN ITS DOWNFALL

I am continually indebted to your excellent magazine, which I started to read regularly in the summer of last year; I quickly realised that Hi-Fi World is in a different league from your many competitors, mainly due to the independence and integrity of your editorial policy and the sound technical knowledge of your contributors. It was with this background established that my listening world was totally transformed beyond my wildest dreams by the purchase of your October 2003 issue - but the story begins forty years ago, when I managed in my early twenties to save up £40 (about one month's net income) as my budget for a new pair of loudspeakers.

Incongruous as it will seem, I was advised at the time by F. Cave & Son, running a very small but well-informed hi-fi dealership over a greengrocer's shop in Putney! When they had established that my main interests were in the fields of classical, operatic and choral music, I was then given the most wonderful piece of advice - go away and save up another £20 and then you'll be able to buy a pair of the speakers you liked the most when you listened to them - the Quad ESL57s. So I did just that, and a couple of months later I started my life-long love affair with my Quads - mind you, I wasn't too enamoured with the bronzed grilles!

A few years later, Quad themselves realised that dull bronze was not the most lounge-friendly colour, and much to my chagrin, changed the grilles to black, which not only looked much better, but stopped friends holding their hands out in front of them on coming into the house in cold weather! A few years later I bought a Cyrus DVD 7 player - a superb compromise between the excellent CD7 player and a machine which also gives excellent pictures too! With a large CD collection, the quality of CD sound was vital, which the Cyrus delivers in spades!

Readers who have followed my story thus far will therefore readily appreciate my great excitement at seeing a picture of my beloved Quad ESL57s on the cover of your October 2003 issue, with the wonderfully uplifting caption - "Quad's Joyous ESL57 Reborn". Within a few minutes of buying your October issue, I was reading about the ultimate ESL57s.

Sorry to have to launch into superlative-drenched prose but, "a good pair of second-hand Quad ESL57s fully rebuilt by One Thing Audio is the best loudspeaker value I've ever come across. For around £1,500 you'll have one of the greatest ways of hearing music yet devised." For those of us reading those words who already owned ESL57s, the investment is even less, since your costing includes the purchase of a pair of used Quads in order to start the process.

Having read three of four monthly issues of your magazine before the fateful October issue in question, I had formed the impression that you were not an Editor to throw superlatives around willy-nilly, and I would have been impressed had you said, "you'll have a great way of hearing music", but it was your choice of, "you'll have one of the greatest ways of hearing music", which really caught my eye.

After all, who amongst us who have read in awe of the many tens of thousands of pounds required to buy Linn, Naim, Krell, Macintosh, Wilson Audio, B&W Nautilus, Wilson Benesch, Musical Fidelity, Meridian et al, would ever have dreamt that for about £20,000 LESS, we could own one of the greatest ways of hearing music yet devised!

I can hear many people reading this saying - surely an additional outlay of another £20,000 would produce a better sound, but if your true quest is to achieve the closest approach to the original sound (pace Peter Walker) I think you would be obliged to concede that a top of the range audio set-up costing upwards of £20,000 sounds different, but it would be a very brave soul to insist on saying that it sounded better than my fully rebuilt Quad ESL57s. (courtesy of first-class workmanship by One Thing Audio of Coventry). I should like to make it quite clear that I greatly respect the manufacturers of all top hi-fi equipment (i.e. all those I have listed above), but Tom Heinitz was right when he said - you don't need to spend a small fortune to achieve a very pleasing result.

For Yes - you've guessed it! Just like the man in F. Cave forty years ago, I instinctively felt that you were very sincere in your recommendation to proceed with a rebuild of ESL 57s, and now I can tell your readers that you were right to use superlative-drenched prose when describing the result - my rebuilt Quad sound simply state-of-the-art! And of course, my sub-woofer is now totally redundant! But as you might have guessed - thanks to your November 2003 issue, I was quite fascinated to read Noel Keywood's article on the Classique Sounds rebuilt Leak Stereo 20 which you yourself said sounded staggeringly good and again, you were spot-on, as I am now the proud owner of the amplifier I really wanted in 1967. I visited Paul Greenfield of Classique Sounds in Leicester, who I found to be very knowledgeable. What's more, I felt him to be completely trustworthy, which was even more reassuring! Anyone who wishes to have reliable advice on pre-owned valve amps, pre-amps and crucially - what goes really well with what - should beat a path to his door.

In addition to my buying my Leak Stereo 20 from Classique Sounds, he also found me a pre-owned mint condition Rothwell Indus passive preamp (at a £500 saving on the new price!) which is a quite wonderful partner to the Leak. I found Andrew Rothwell of Rothwell Electronics extremely helpful about reasonably priced interconnects - I bought Rothwell River interconnects for £85 per pair and a pair of Rothwell Metals interconnects and one year's FREE subscription to Hi-Fi World.
speaker cables for £200 — from my perspective, these amounts on cables will buy good quality with excellent sound.

I can promise your listeners that my Quad (£1,175) with my Leak Stereo 20 (£600) and my Rothwell preamp (£350) and my Cyrus DVD 7 (£1,000) set-up sounds like a £20,000 system (obviously without the sheer power available from huge power amps, and without the ability to satisfy headbanger rock music addicts) but for voices, strings, pianos, and orchestral music in an average domestic setting, I would eat my speakers if they were not truly EC-STATIC, as the Oct 03 Hi-Fi World cover put it, with the sound quality! I would be pleased to encourage any of your readers to correspond with me by email to aidanjones@ntworld.com if they wish to discuss any aspects of my letter.

Aidan Jones, Colchester

Aidan, I’m delighted you’re happy with your system. And to everyone else reading this – yes, I know it’s a bit of a ‘toadying letter’, but I just had to make it LOTM because this guy is obviously over-the-moon with his purchases – and it’s a ‘good news’ story in the middle of a grim winter. And I can see why Aidan’s so happy - the One Thing Audio modded ESL57s are superb, in my humble opinion. Having moved to a brand new pair of ESL89s (plus Townshend Maximum super-tweeters), I can honestly say that – in some respects – the modded 57s win the day. They certainly sound less clinical and more punchy. (Still, I reckon the 989s are exquisite, all the same). I’m using the NS1000Ms as my secondary reference speakers these days, simply because Noel and I were of the view that I should be running contemporary products as a reference. When I had the One thing modded 57s (often powered by the Audio Research Vs15 – "kowabunga!"), I didn’t find myself yearning for the Yam’s visceral ‘thwack’. Now, with the 989s, I do – they’re an altogether politer and more refined experience. But I have to say they’re the best sounding loudspeakers I’ve ever seen – especially in the ‘Granny’s Knickers’ finish mine are in... Oh, and by the way – Paul Greenfield from Classique Sounds is indeed a diamond geezer, and readers could do with giving him a buzz before bidding on an overpriced bit of tat on eBay! From now on, however, ‘toadying tomes’ will automatically be disqualified from LOTM – hit me with the big issues, guys. Speaking of which... DP

### MOVING TO MULTICHANNEL

I am considering making the leap from stereo CD reproduction to surround sound, but am having a few problems interpreting some of the jargon despite being technical. I have come across a number of recordings from the 1950s and 60s which were only originally recorded in 2 track (e.g. Miles Davis ‘Kind of Blue’), being sold as DTS 5.1 surround sound? How can this be, I didn’t realise it was possible to separate sounds/instruments from a single recorded track even in the digital domain? What is the definition of true surround sound and does a recording have to be made with surround sound in mind to produce the proper result? I ask this with respect to the remastering of old multitrack recordings as well as two track.

The reason for my doubts is that I fear the advent of SACD and DVD-A although admirable, will give the record companies yet more opportunities to mess-up by inaccurately describing the recording or production process. Also, in cases where the original artist cannot be present, remastering for surround sound will require more subjective decisions on the presentation of the music, maybe producing a result the artist would not have liked.

Another problem in the past has been record companies practice of not using original analogue masters to make CDs, even when available. Can we be sure this will not happen again, as this would infuriate the audiophiles they are trying to appeal to. What a cynic, I hear you say - go on take that leap into the 21st century! Some people still swear by 78s! Could the struggling record industry be about to shoot itself in the foot yet again?

Julian Davies

Our correspondent Patrick Clesaeb is actually a DVD mastering engineer by trade (eighties music fans look out for his multichannel remastering of John Fox’s ‘Metamatic’, out soon), so I thought I’d defer to his God-like genius on this point. Excuse me while I put the kettle on, and – whatever he says – I couldn’t agree more! DP

There is indeed a veritable minefield to be negotiated in trying to find your way to a ‘true’ surround mix. It’s one of the reasons that we try to select and review the best examples of the genre for you. With a few exceptions (see this month’s Depeche Mode review for a discussion of ‘faux surround’) we will only present you with true ‘ discrete-mixed’ titles for consideration. In my experience, very pleasing results can be obtained by remixing most multitrack material, even that from before the quad age. Sophisticated surround reverb may well be used in the digital domain as part of the process, most commonly using a TC Electronics TC6000. As you mention, it can be mystifying defining how mid-20th century recordings have been ‘expanded’ for 5.1, but if you’re interested, the Sinatra DVD-A sleeve describes the process from a 4-track start point, or the Beach Boys DVD-A explains the complexities involved in syncing the separate vocal elements to the instrumental from their respective tapes.

’Kind Of Blue’ was reputedly remixed from a three-track master, and the assumption has to be that the (minimal) rear channel ambience is artificially created. Who knows what Miles would have said? There are fine examples of surround mixes...
based on copy masters through necessity - although the bulk and expense of 2" analogue means that you are much less likely to find a copy master unless a digital safety copy was struck at some point - albums such as 'Aja', 'Forever Changes', 'Close To The Edge' and 'Who's Next' are currently all stuck at the first hurdle with some or all their reels missing. Fear not and join the party! PC

Surround sound can be derived from stereo, although not from mono. The process of derivation from stereo is described at some length on the Dolby Labs web site (www.dolby.com), with relation to the workings of Dolby Pro Logic. These days, with the benefit of good steering logic, this processing yields impressive results; I often prefer Pro Logic surround-sound to stereo from CD. What you have to bear in mind here, as wise minds have pointed out, is that stereo is not theoretically perfect. Microphones fold ambient information into the front channel, which strictly isn't correct, and the sound stage is constructed in your head by a trick we all just accept. So there's nothing too perfect about stereo, although it does a fine.

Yes, modern surround-sound schemes are a contrivance, part of the production process - they are not faithful recreations of a sound field. All the same, you'll find most surround mixes are engaging or even dramatic. They are also a lot clearer than stereo. It's best not to get too snitty about all this and just listen - I think you may well enjoy. NK

"I refer the gentleman to the answer I gave some moments ago". You're right, the One Thing Audio panels do sound - and measure - differently; but better in my opinion. I'd say that your last sentence is a rather 'reductive' appraisal of the mods - things aren't as simple as that. As for the clamp - well, myself and ex-Eds Jon Marks and Simon 'Popemeister' Pope all agree that the clamps don't do the sound any favours, and even the Quad boys themselves mutter the same quietly, under their breath, strictly off the record, you understand... Still - each unto their own; I'm not claiming my ears are definitive (no more than anyone else's). I stand by my warm words about the modded ESL57s. DP

The original ESL63 clamp circuit, which was a self powered limiter in the audio transformer primary circuit, introduced muddle and compression as volume was wound up - I remember it well! Quad acknowledged this and in the end came up with high voltage clamp diodes in the secondary that did a much better job.

I have always measured Quads out at around 82dB, never 86dB. Manufacturers often veer into extreme optimism here!

I personally liked the ESL-57 rebuild and was very impressed by the way it measured. No problems here.

SAMPLE THIS

It's been some time since you published my ranting as your 'letter of the month', summer of 2003. I still think the same about the Philips Motional Feedback 'speakers, and did buy a second set to keep as spares to keep them going. These come with a turn bass driver and real shabby cabinets. I patched the cone up with wood glue, applied sparingly and teased the fibres out and together, let it dry and tried them. Believe it or not, they not only worked but sounded superior to the other pair by a fair margin! I believe they call it 'product variability' or something like that?

Now if this is consistent with all products, what chance of getting two the same let alone buying something that sounds like the demo model? I wonder how many manufacturers or distributors select the samples they let out for review? Call me cynical but I would guess it's fairly common. Any chance of covering this as a subject in the future and seeing how much a product varies during its production life?

The Philips have been put away while I find time to build new cabinets for them and improve and replace the DIN sockets. I am using a pair of Dalesford Ds, circa 1978, and an old Proton 930 receiver in the meantime.
The Proton truly excellent, if anything warranted inclusion in the classic section, this does. Smooth, detailed and powerful beyond its 30W rating. As you are probably aware it’s made by the people who first mode NAD gear, just powerful beyond its 30W rating. As you section, this does. Smooth, detailed and warranted inclusion in the classic mode the AMC range also I believe?

I bought the Dalesfords after trying to buy a sensibly priced pair of JR149s, they aren’t half bad and were my other choice way back in 1978 when I did buy a pair of JRs - wish I’d kept them, be worth a fortune now. My free LOTM cables? Not bad, but after a lot of A-Bing I still prefer the ones I use on the CD player and the jury’s still out when used on the other sources. Speaker cables are a home brew version of the many cat5 projects on the ‘net - any of you guys tried them and if so what do you think? They successfully outperformed some QED silver coated stuff I bought. Anyway enough of my rambling, work calls. It’s the bane of the drinking classes you know! Would appreciate any feedback on the above.

Gary Francks

Hi Gary,

Sample variability? This happens far more than we think. And it’s not just between two different samples from the same batch (which will throw up differing component tolerances), but different batches change subtly as component suppliers change or minor mods are made to the design in the name of reliability (or cost saving). For example, I’ve had several Sony CDP-101 first generation CD players. The first one I bought was one of the best sounding silver disc spinners I’ve ever heard, bar nothing. The next one wasn’t bad, but sounded thin and grey by comparison. I spoke to Eric Kingdon at Sony and he said that they’d changed something minor mid-way through the product’s life, and – yes – the earlier ones did sound better.

Does this then mean that manufacturers cherry pick the samples they send to magazines? Well, who knows? But I’ll say that it’s more often ‘cock-up’ than ‘conspiracy’. If I had a Cliff Richard single for every time we’ve come across a faulty and/or duff review sample, then I’d be Radio One’s very own Mike Read, pop-pickers! As tantalising as it is for us to suppose that nasty, inscrutable manufacturers are constantly tweaking stuff for magazine reviews, in my experience it is not the case. More prosaically, they occasionally hold back review samples to run them in, because certain (other) hi-fi magazines have been known to review them after having just plugged in brand new, never used products... Ho hum, enough said.

As for JR149s – time was when they were fifty quid in second hand shops, and now suddenly everyone thinks they’re the ultimate! May I remind folk that they’re just bodded LS3/5a, which are great little mini-monitors, but not flawless (sorry AL!). Give me Linn Kans any day... DP

Origin Live Illustrious tonearm, the JP Montoya of the turntable world...

WAITING IN VAIN

Thanks for putting my query in the February edition of *The* magazine (uh oh – another ‘toady alert’ – Ed). Since that email, I have been busy listening to many turntables and arm and cartridge combinations:

[3] SME 10 + IV + Shelter 901
[4] Musical Fidelity M1 + Shelter 901
[5] Linn LP 12 (Akkio + Dynavector DV10) & (Ekos, Lingo, Akiva)
[7] Orbe SE + OL Encounter + Transfiguration Temper V
[8] OL Resolution + Illustrious + Lyra Helikon

I have come to the conclusion that, as you already mentioned in your response, the Orbe is the best compromise. I am still waiting for your response, I have been busy listening to the Ard Vokere (and or the Sequel) but this will only be possible (in London anyway) at the end of this month and this is probably the only one that could steer me away from the Orbe. Anyway, what I wanted to ask you was what is your opinion of Origin Live (Encounter & Illustrious) and SME arms (IV & V) with regard to their sonic characteristics and their strengths and weaknesses (assuming you’ve heard them)?

My views on the above combinations are mixed and varied, but I find the Shelter cartridge slightly too soft and warm for me. It does sound very good, but in these combinations, not quite right for me. The two that impressed me most were [7] and [8], with [7] winning due to the Transfiguration cartridge. It is more in line with the balance I prefer, though I wonder whether using the Illustrious or SME V would produce more bass?

Whilst waiting for your response, I went on holiday to Hong Kong and bought a temporary cartridge upgrade for my ageing Sansui SR 212 - the Shure V15VsMR came up very cheap and I couldn’t take it up (your Dynavector was double the Shure in price). Anyway, will this Shure serve as a starter cartridge for the Orbe and one of the OL/SME arms until I can save up for something like the Temper? Please do not publish this in the magazine ... I can’t wait another 3 months!

Chi

Hmmm. Nice simple query – that’s what I like! Right, first things first. OL vs. SME arms. I haven’t ‘happened upon’ the Encounter, so can only speak of the Illustrious. Right now, I have two reference vinyl sources – a Michell Orbe/OL Illustrious/Ortofon Kontrapunkt B and a Michell GyroDec/SME Series IV/Dynavector DV20X-H, both going through a Trichord Delphini NC. The OL arm sounds very different to the SME, although bizarrely quite similar. Both scavenge vast amounts of detail, both have very authoritative and commanding bottom ends and extended highs. Both are highly dynamic, yet very incisive with low level nuances. So they both press all the right buttons, yet their respective characters are so much at odds.

If I may use a Formula One analogy, if ever there was a Michael
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Schumacher of tonearms, it is the SME IV (and V — they're virtually identical sounding). It is so darned efficient — it just goes in and does the job, without complaint, totally consistently, time after time, with dazzling results. Yet you can't help but feel it's all a little, ermm, boring. Now the SME isn't a boring listen — far from it — it's just that its sheer all round efficiency makes it so easy to listen to the music's own tonality shine through. The Illustrious, however, is far more of a JP Montoya. It's fiercely capable, yet obviously more emotional in the way it plays rhythms — it's an obviously discernable character for you to share how much pleasure this little deck has brought me. Having previously owned LP12s and a couple of Regas, I have to say this deck knocks spots off them! Okay, it may not be built to the same Linn quality but in terms of sound in my ears and ears it's way ahead. It is crisp, clear, has great imaging and stage depth with low colouration, and it has upgradeability built in, as the arm will take far costlier cartridges than the Ortofon OM10, and it comes fitted with along with electronic speed change if you want it. This deck sings through my Sugden A21 amp and Quad II, speakers. I suppose the moral of the story is you don't have to spend serious dosh for great sound.

Tony Hodgkinson
Coventry

THE MORAL OF THE STORY IS...

Hi Alan — in a nutshell, I'd go for the Castle Howard S3. If you liked the big 'physicality' of the Perigees, then you'll find the Castles do the same — albeit on a slightly reduced scale, one that should work well in your room. The Howards are also ideal for jazz and soul, as they're full, rich and creamy with what my father would call 'a good tone'. They're easy to drive and with bass aplenty, but shouldn't boom unless you put them too close to a rear wall.

Sony CDP-101 — like many hi-fi separates, not every batch sounded the same...

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Sony CDP-101 — like many hi-fi...
I hope to try at some later date. I am also scouring and bidding on eBay for a good SME 3009 arm and am considering a cartridge upgrade (advice please). For the moment though my Thorens is spending much of its time on its side or being dismantled while I try to squeeze every ounce of performance from this brilliantly designed turntable. Many of these modifications should work well with any suspended TT such as Ariston, Linn LP12 and Systemdeks as well as most Thorens. Careful experimentation and research will lead you down the path of audio Nirvana. Oh! And by the way, the rest of my system consists of Quad 67 CD player; Quad 34 pre, Quad 306 power and Shapphire Super Elf speakers. All the speaker cables and interconnects bar those used for the turntable are home made using quality components. Finally, thanks to the magazine for introducing me to this fascinating and interesting hobby.

Garnet D Newton-Wade
Wiltshire

Sounds like you’re having fun, Garnet! You’re right — the Thorens mods should work with any suspended subchassis belt drive (Linn, Systemdek, STD, etc.) as they’re all close variations on the same theme! For your forthcoming SME 3009S2, get a Goldring G1042 (£120) MM cartridge, or if you can possibly afford it, a Shure V15VxMR (£350). When all this is finished, you should have a superb sounding deck. Don’t forget the support though — you might be interested to see page 72! Do write in and tell us how you got on. DP

GETTING BETTER ALL THE TIME?
I am thinking of upgrading my CD player. I have a Marantz CD 63 SE and am thinking of a Marantz CD 60000SE LE or NAD 541. Are they significantly better than my ’63 SE in their sound quality? Which sounds better - the NAD or the Marantz? I have two Rotel power amps; upgraded B&W 330i floorstanders, volve preamp and Kimber 8TC cable. Any advice would be greatly appreciated.

Steve
Via email.

No, they’re not significantly better! Indeed, even the new CD7300 isn’t. Don’t ever think that just by buying ‘the latest version’ of your existing machine, you’ll get better sound. You’ll probably get better ergonomics, more features, a nicer finish in a contemporary colour, etc., but you’ll likely not get dramatically better sonics. That’s because great sound comes from a mixture of clever design and high quality components – and whilst the former may be improved slightly, the latter will only have got better if the price has gone up significantly. To wit, if you bought a Marantz SA-1751 (£1,400) you would get dramatically superior sound – but just replacing your ’63SE with the latest model would change things – as opposed to improve them. Of the two, I’d say they’re pretty evenly matched, with the NAD having possibly just a smidgeon more life and the Marantz just a tad warmer. The cheapest upgrade you could make is a CD6000 Ki Signature (under £500 discounted), which would bring greater depth, power and expression – but for a comprehensive upgrade I’d go for a Meridian 507 (£1,100). This will yield an altogether more sophisticated and organic sound, with a rich and warm bass, beautifully lucid midband and smooth and spacious treble – by contrast, your Marantz will sound just a touch mechanical and two-dimensional. Good luck!

Mike

I read with interest your reply to Ben (May 2003 letter of the Month - sorry I am a little behind with my reading) and whilst I am sure that your advice is valid there is one vitally important area I feel you have neglected. Some time ago I took the opportunity to purchase a second-hand Musical Fidelity Nuvista CD player at a very good, but still huge, price. This was run bi-amped through a MF F16 and P270-2 (I have been searching for another good 2nd hand F16 for months without success - if anyone has one for sale, please contact me on 07971 445704) which has the same circuitry as the F16. Having forked out the readies I was very disappointed with the result. So much so that I let the CD player go again at the same price I bought it for.

Some time later, I had the opportunity again to sample the delights of the Nuvista on similar equipment to my own, other than the fact that rather than my budget £25 interconnects, Cardas Cross was used. The difference was quite staggering and I have once again gone down the Nuvista route but using Cardas golden cross interconnects. Not cheap, but the results are well worth it. I am currently experimenting with speaker cable to link to my Kef 405/3s. Generally I believe your system is only as good as its weakest link and that when considering an upgrade all areas need to be considered. Cables, all of them including power, form an equal part of the system and, as a rule of thumb, I would suggest that at least 25% of the total system cost should be invested here. No matter what you spend on your amplifier, CD deck, etc., you are heading for disappointment if you try to use the cables that come with the unit.

Peter Bennett

Hi Peter — yes, I take your point. You’re absolutely right that poor cables can spoil an otherwise superb machine or system. But my low opinion of cables in general comes from the fact that the cost of manufacturing a £200 1 metre pair of interconnects is, I’d say, about one tenth of that of making £200 CD player, amp or speakers. I have no hard facts to substantiate this, other than anecdotal comments that certain manufacturers mumble to me from time to time. For example, cable manufacturer A will complain that speaker cable to link to my Kef 405/3s. Generally I believe your system is only as good as its weakest link and that when considering an upgrade all areas need to be considered. Cables, all of them including power, form an equal part of the system and, as a rule of thumb, I would suggest that at least 25% of the total system cost should be invested here. No matter what you spend on your amplifier, CD deck, etc., you are heading for disappointment if you try to use the cables that come with the unit.

Peter Bennett

Audio interconnects - essential accessory or get-rich-quick scheme?
for that matter! So that's why I'm predisposed to being a sceptic. Which is not to say that all cables are rubbish, as there are patently some superb designs out there from established and not so established brands alike. You just have to listen to the cables in the context of your own system, with your music, and your ears – don't just buy on the strength of rave reviews. DP

I remember the Tandy LX5s, and recall hearing two completely different speakers in one box – a lovely, sweet and open tweeter allied to a boomy and flatulent woofer with little in the way of midband. But that's just me. If there's any one out there with help for "Tandy man", please do write in...

DP

Sony SCD-XB790 SACD spinner – creamier than a bottle of Baileys.

IMPROVING THE TANDY LX5

Some months ago I read a couple of articles on the Internet published by Larry van Wormer and Eric Wallin, regarding improvements to the little Tandy LX5. You remember, the little reflex box with the Lineaeum ribbon tweeter? I have a couple of pairs of these great little units which, for the price, for outperform any normal box speaker I have heard. The main drawbacks were always an understandable lack of deep bass and a peaked midrange. The Internet articles suggested that changing the bass/mid driver to a SEAS unit worked well and brought about much more detail, smoothness and better power-handling. Additionally, a simple crossover modification could improve things still further.

So I swapped the stock drivers for the SEAS MCRY14P units expecting a minor revelation (they dropped directly in without needing any alteration). Shock horror – smooth yes, but what bass the originals did have has now completely vanished! Tests showed that bass response now falls off a cliff face below 300Hz. The originals got down to about 120Hz before starting to roll off. Now I am no speaker designer and assumed that the crossover, which I have not touched, would simply manage the interface between the bass and treble drivers and therefore make no significant difference to the depth of the bass response. So why has the bass disappeared? The wiring is in phase, the new drive units have been checked out OK. I have no way of contacting the publishers of the articles, despite placing this issue on various newsgroups etc. Has anyone else tried this upgrade and did they experience similar problems? Any help would be greatly appreciated. Anon.

(CLOG) COUNTRY LIFE

Due to domestic circumstances, I listen to my stereo through headphones a lot. My dad gave me his Wharfedale Isodynamic headphones because he never used them anymore. They must be some twenty five years old, but still sound nice. But what is Isodynamic, or is (was) it just a marketing thing, and how were they rated in their days? Friendly greetings from clog country,

Hans Bakker
Nederlands

As I remember it, they used a lightweight diaphragm onto which was printed a conductor that carried the audio current. The resultant varying magnetic field interacted with a static field generated by magnets. It's not a new idea by any means and it works tolerably well, but a step down transformer is often required and the whole is often bulky and expensive.

NK

NATURAL MAGNETISM?

I've been recently concerned with a number of people reporting problems with their TV picture when hi-fi speakers have been placed next to the TV. I have a pair of floorstanding TDL G30s, and one of the speakers is next to my widescreen Sony TV. I've had these speakers for a number of years and therefore cannot remember if they have magnetic shielding. I've searched the internet and tried to find technical information for these speakers, however have had no luck so far! Can anyone offer any advice?

Prafull

If there is a problem you will see it by 'walking' it and watch what happens to your picture. If it changes then you should move the speaker away. NK

BLOW UP!

I was interested in purchasing the Sony SCD-XA3000ESN A SACD player as the reviews rave about its smooth and rounded delivery. I listen to much rock and pop which often doesn't sound too great - thin and bright; and even if there is bass the treble can still be too unruly. Good hi-fi can often ruthlessy reveal these imperfections but it doesn't have to be like this. I have the new Sennheiser 650 headphones and they make everything sound wonderful - natural, warm, and easy to listen to, much better than the 600s. I wish I could find speakers that sound like these. After your fabulous review of the Sony SCD-XB790 I wonder if I might be better off with something like that?

Although the SCD-XA3000ESN SACD player may be more revealing I would always prefer something more easy to listen to in the long run - like the wonderful 650 headphones. So perhaps the XB790 may be a better bet. I might have to wait until you have reviewed XA3000ESN A - what do you think?

Kevin Blow

With an unusually soft and creamy sound, the XB790 is quite unlike any budget Sony CD spinner I've heard, but methinks you'd do better to hold out for the more expensive SCD-XA3000ESN if you can afford it. I've just heard one driving the PA at Ronnie Scott's jazz club in Soho, and it was very convincing indeed. We've got this on order - so watch this space for a full review - and I'm now looking forward to hearing the new SCD9000 soon, too. Still, if you want the smoothest and sweetest SACD spinner that mere mortals can afford (just), I'd wager that Marantz's SA17 is it. DP

Can TD160 tweaks take it up to Thorens Reference standard?
Not to put too fine a point on it, there are two types of transistor amplifiers in this world — those biased towards Class A and those not. Anatek Audio’s new A50 integrated is the former, while Roksan’s new Caspian M Series-1 integrated is the latter. David Price works up a sweat...

Life is never simple, and in hi-fi this rule is all too apparent. This isn’t the story of a ‘good’ amplifier versus a ‘bad’ one — George ‘Dubbyah’ Bush wouldn’t approve. Rather, it’s a tale of two tribes of audio amplifier design, all the more striking because this isn’t about a small specialist British manufacturer versus the best a massive Japanese multinational can offer, but of two — errmm — small specialist British manufacturers...In the red corner we have Anatek Audio’s A50 integrated. It’s from a tiny specialist ‘start-up’ manufacturer, looks like a bag of bits in a box and gets very warm when switched on, thanks to its Class A design. Opposite, we have Roksan’s new Caspian M Series-1 integrated, which is from an established and respected small-to-medium size manufacturer. It looks swish, is beautifully presented and is much more of a Class AB-biased device.

ANATEK

Never heard of Anatek? No, I hadn’t either. But pulling it out of the box, I was struck by an uncanny feeling of déjà-vu - as I was magically transported back to the late eighties, where the likes of Exposure’s X and NVA’s AP30 ‘super integrateds’ reigned supreme. Aside from the blue power LED (which I assume hadn’t been invented then), it was pure 1988-style minimalism. This isn’t necessarily a bad thing, but these days even Naim’s NAIT 5 is a sleek and swelle affair with electronically switched volume and inputs. The Anatek, by contrast, is — well — just as amplifiers used to be, with nothing more than a volume control, input selector (at six, thankfully a few more than standard-issue eighties stuff), tape monitor (hurrah!), power switch and err, that’s it.

Inside, designer Clive Read has come up with - so Anatek says - patented output topology that ‘resolves the performance issues associated with conventional output stages’, essentially giving Class A performance without the problem associated with pure Class A output stages, that of excessive heat. Yet still the amplifier is not biased towards Class AB operation, which is cooler but produces sonically deleterious crossover distortion. Still, while it’s true that the A50 runs far cooler than classic Class A designs like Musical Fidelity’s A1 and Sugden’s A21a, it is not true to say that it ‘runs cool’, for it does not.

The Anatek’s output stage is direct coupled, eliminating the need for sound-degrading electrolytic capacitors in the audio path. The circuitry is designed to have low dc drift, so thermal memory effects - the momentary distortion caused by loud transients - are negligible, and the amplifier has a single low frequency time constant, the input coupling capacitor, for fast bass. A non-invasive electronic protection system is also featured, that shuts down the output stage when the output current reaches 12 amps. Finally, the inputs, outputs and mains inlet of the A50 all have RF filtering, while all amplifying stages have minimal gain at RE Round the back, it’s much of a muchness — save some distinctly poor and weedy looking speaker terminals.

ROKSAN

Now, if the Anatek sports pure unreconstructed Eighties ergonomics...
and styling (although, methinks, not self-referentially so), then the Roksan is 'state-of-the-art' late nineties high tech. It's a truly well packaged product that looks cool, feels great to use and never obstructs what the user wants from it. The fascia is silver metal, with a centrally inset display window which subtly shows which source is selected or whether it's muted or not, while the red LED on the volume control tells you how loud it should be. And all this is mirrored on a small, slick remote – which is one notable thing the Anatek lacks. As for the aforementioned heat issue, this amp runs cooler than James Bond in Casino Royale, by which you can infer that it won't provide much of a boost to your central heating.

This, the latest incarnation of the Caspian, is marginally more expensive than its predecessor, but boasts a lot for the money. Aside from the aforementioned swirl styling and ergonomics, inside you’ll find a new, ‘super-quiet’ transformer – a massive toroid that puts the Anatek's already decently sized donut to shame, with four regulated supply rails. The PSU makes up much of the 12kg weight, which is a little higher than that of the Anatek. There's also improved speaker switching and protection software, new mains filter circuitry and more efficient venting. Measuring 432x350x80mm, the M-integrated’s casing is marginally slimmer than the Anatek. Round the back, you get chunkier speaker sockets than the Anatek, plus five pairs of RCA inputs plus a single tape monitor loop – and an IEC mains input with switch (the Anatek is, in a nod to convenience, switched on and off on the front panel). There's also a handy preamp output – for bi-amp or upgrading, whereas the Anatek is 'like it or lump it!' Upon switch on, the M Series-I goes into mute mode, signified on the front panel by three flashes of the display and the 'mode' beacon glowing orange. Then, when ready for action, it goes green.

**SOUND QUALITY**

It's a tricky one, this. Both amplifiers are truly excellent products, giving deeply impressive results, but they're so different that I'm struggling to judge which is 'better'. If that sounds like a cop out, then it’s not – and here's why. As with all audio equipment, nothing is intrinsically right. Take the Quad '989 loudspeaker for example – it’s so amazingly capable in some respects, but for a £6,000 design is quite mediocre in others. By contrast, my other loudspeaker reference – Yamaha's NS1000M is far better at the frequency extremes, but lacks the superb across-the-range integration of the Quads. Can I adjudge which is better? I think not. Same here – these two amplifiers have great abilities, but they don’t ever overlap.

First the Anatek. Rumour has it that this is a 50 watt but you could have fooled me. With my two aforementioned reference 'speakers' it was out of its depth simply because of lack of power. What these did show, however, was that what little power it has, it uses to great effect. The Yams -- with their glass-clear sound, instantly told me it has a generally 'dull' sound. But it's dull only inasmuch as it's not bright, brittle, chrome plated or clangy. Indeed, when you listen at length, it's quite spacious and there's an amazing lack of midband mush. Compared to the Roksan, it's gutless, low on power, curtailed at both frequency extremes, but boy doesn't that midband impress! Oh yes.

Move to the M-integrated, and it's obviously brighter. Actually, it's by no means bright in absolute terms, because I still had to turn up the tweeter level controls on the Yams a tad to get a good tonal balance, but it has obviously more upper midband and treble energy than the Anatek. Yet most noticeable is the bass – which is dramatically more impactful and better controlled. Essentially, it's like pressing a 'loudness' button compared to the A50. But this isn't because Roksan has voiced the M in a strange way, but more that the A50 is rather soft downstairs and lacking up top – the Roksan is actually a tonally a very well balanced and even sounding amplifier, with just a touch of that trademark transistor 'brightly lit' upper midband.

Corduroy's 'Out of Here' was first on the CD player, and the Roksan sounded obviously more engaging. Bass was fast and powerful – not in Naim NAIT 5 territory by any means, but it was still admirably taut and tight, with plenty of power and real articulation. I'm sorry to say that the Anatek proved completely unable to get any real bass out of the NS1000Ms, so I moved to my trusty Mission 752s for the rest of the review. With these easy-to-drive, high sensitivity loudspeakers (the Yams are the latter but most explicitly not the former), the Anatek really began to sing. Its bass isn’t the tightest, nor the most dynamic but it proved even more fluid than the Roksan - I was impressed. By comparison, the M was stronger, tighter but ever so slightly slower and more mechanical – like a massively powerful luxury coupe compared to a small, light sports car.

Moving up to the midband, and again the Roksan impressed greatly. It's very open and even, with an impressively varied tonal palette. Warm recordings such as 808 State's 'Lift' sound warm; colder ones like Rush's 'New World Man' sound cold. There's also a good degree of timbral and textural detailing on acoustic music, with real rasp to the brass stabs on UB40's 'Love is Alright'. This is all placed into a wide and expansive soundstage, with strongly placed images and fine front-to-back detailing. It's very hard to fault at the price – not far behind Marantz's power, curtailed at both frequency extremes, but boy doesn't that midband impress! Oh yes.

Move to the M-integrated, and it's obviously brighter. Actually, it's by no means bright in absolute terms, because I still had to turn up the tweeter level controls on the Yams a tad to get a good tonal balance, but it has obviously more upper midband and treble energy than the Anatek. Yet most noticeable is the bass – which is dramatically more impactful and better controlled. Essentially, it's like pressing a 'loudness' button compared to the A50. But this isn't because Roksan has voiced the M in a strange way, but more that the A50 is rather soft downstairs and lacking up top – the Roksan is actually a tonally a very well balanced and even sounding amplifier, with just a touch of that trademark transistor 'brightly lit' upper midband.

Corduroy's 'Out of Here' was first on the CD player, and the Roksan sounded obviously more engaging. Bass was fast and powerful – not in Naim NAIT 5 territory by any means, but it was still admirably taut and tight, with plenty of power and real articulation. I'm sorry to say that the Anatek proved completely unable to get any real bass out of the NS1000Ms, so I moved to my trusty Mission 752s for the rest of the review. With these easy-to-drive, high sensitivity loudspeakers (the Yams are the latter but most explicitly not the former), the Anatek really began to sing. Its bass isn’t the tightest, nor the most dynamic but it proved even more fluid than the Roksan - I was impressed. By comparison, the M was stronger, tighter but ever so slightly slower and more mechanical – like a massively powerful luxury coupe compared to a small, light sports car.

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When a kettle drum is pounded, it struggles from the speakers
Because we take your interest seriously we'll go out of our way to demonstrate it.
Michell Orbe/OL Illustrious/Ortofon Kontrapunkt B turntable

references. Put simply, it sounds very special about the Anatek — to from the speakers, whereas with time and time again, you can simply, it’s a hoot to hear —

The other, and in my opinion more significant, advantage of the Anatek is its midband fluidity. Although the Roksan is a very musical amp — thanks in no small part to the grippy and muscular bass — the Anatek is more so, despite its absence of taut, punchy lows. It has a valve-like lucidity that makes listening to the music a more emotional and less cerebral (or physical) thing. It has a brilliant command of the complex rhythms on ‘Out of Here’, or the lazy but very infectious groove on ‘Love is Alright’. Much in the same way that Lin’s Ekos tonearm impresses with its speed, control and dynamics, so the Roksan is a commanding and powerful listen. And likewise, just as Naim’s ARO tonearm is softer and more curtailed at the frequency extremes with less dynamic light and shade — but far more emotionally engaging — so the Anatek pulls you in and keeps you there. Put simply, it’s a hoot to hear — time and time again, you can listen to A50 at either full tilt or as background music and it always seduces, yet never offends.

Moving up to the high ranges, and again the Anatek falls behind. It’s soft and a bit rounded off. It’s certainly sweet, with oodles of gentle, filigree detailing — but simply doesn’t project well. This means its suits bright loudspeakers and/or CD players down to a tee — ideal for budget to mid-price stuff but not for extremely neutral reference systems like mine. The Roksan is obviously more ‘zingy’, but in the great scheme of £1,000 amplifier HF performance is still admirably clean and crisp. It’s in no way harsh or hard, but lacks the superb intricacy of the Anatek. I found this was extremely impressive when being driven by my turntable [see Reference System box] — being a far more synergistic match to vinyl, whereas the Anatek didn’t mind the extra ‘zing’ from digital in the least.

So which wins? Neither, or both. Give me the bass of the Roksan, the midband of the Anatek and the best aspects of the treble from both, and you’d probably have the best amplifier under £2,000. As it stands, you have two very capable and well executed — but different — solutions to the problem of the £1,000 ‘super integrated’. So sorry about that — no What Hi-Fi-style ‘hard-as-nails’ conclusion, but what I’m less unequivocal about is that the fine sound, serious power and excellent ergonomics and styling of the Roksan M-series I make it marginally better value for money.

**VERDICT**

Wonderfully lucid midband, but modest power and uninspiring styling make this the choice for focussed audiophiles only.

**ANATEK AUDIO A50**

Many new to the market amps don’t measure up - literally - in one way or another. Usually, a crucial property like distortion is off target, but the Anatek looks good here. It produces little distortion at all frequencies and power outputs, and what little there was pure second harmonic - a very interesting property. It’s also suggests a consistent transfer function which bodes well for sound quality. Other good points were wide bandwidth and useful power output of 55watts, rising to 100watts into 4ohms. The only questionable result was very low input sensitivity of 0.85V - fine for CD but too low for 0.3V-0.5V sources, of which there are many. I would expect a smooth, relaxing sound though, one likely to lack colour or hardness. NK

**ROKSAN CASPIAN M SERIES-1**

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Now you may think I have completely lost my sanity. After all, Decca cartridges are supposedly rubbish - they cannot track a record and they damage precious vinyl. Well, both of these statements were true, in the past...

To understand a little more we have to return to the 1960s, when to own a serious high fidelity reproduction system was up with owning a Rolls Royce motor car in the 'status symbol' stakes. This was due to the cost of equipment and its relative rarity (it was extremely expensive in relation to the average weekly wage). There were plenty of records being sold but, sadly, very few shops selling hi-fi. A real hi-fi system generally consisted of a turntable, radio tuner, tape deck and amplifiers. Loudspeakers were the size of a small wardrobe and were very efficient but were extremely coloured with an uneven frequency response. The sound quality these systems reproduced was (and still is) magnificent.

PAST TIMES
One of the heavyweight companies at the time was Decca. It recorded on vinyl, marketed it, had a research and development department and even a division that supplied special products - the 'Decca Special Products Division' no less! It produced a range of things, including Decca pick-up heads, pick-up cartridges and ribbon treble units. Unlike modern companies, these products were designed to work at their best with each other. Decca had tight control over the products, as it manufactured all the components itself. It made and serviced everything, and the service department was unusual in that it turned customers' equipment around in approximately one-week - if only present day manufacturers could do the same! As recently as the nineteen seventies, Decca's re-tip service cost £15, which included post and packing.

The range of cartridges was not large, but included the Mk1, Mk2, Mk3, Mk4, C4E and the London transducer. The early cartridges were intended to be used with the FFSS or other Decca pick-up arms. The C4E and London cartridges were the only products, which were intended to be used with other manufacturers' pick-up arms.

When Decca released the London in 1976, it was a quantum leap in advance of all other pick-ups. Even so, the cartridge had a few problems.

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PRESENT DAY
These days, the Decca London is available new in Super Gold guise. My sample arrived from Brian at Presence Audio, and I felt like a little boy as I ripped the packing open to reveal the jewel box snug in its outer packing. As I have done so many times before - albeit many years ago - I mounted the London in my tonearm (in this case an Origin Live modded RB250) and cued up a record in heady anticipation. Unfortunately, this example sounded absolutely dreadful. I rechecked the set up, and there seemed to be nothing wrong - but wait, the pick-up arm lift was (just) touching the underside of the arm tube! The offending lift was dropped to enable the London to track the vinyl, and now was ready to listen to music in earnest.

The resulting sound was glorious, with superb image placement, powerful bass and detail retrieval of the highest order - all achieved at a tracking force of 1.6 grams! My jaw dropped. Believing that London cartridges can't do this, I duly set the tracking force to 1.8 grams and the sound changed to a richer, wider one, with an obviously deeper stereo image. Heaven - this is what I have been searching many years for!

I then duly ran the gamut of my record collection (not inconsiderable, if I do say so myself) and found that John Williams's flamenco guitar sounded superb, with a tremendously solid image and stage depth to die for. James Brown's 'Super Bad' album was wonderful too, with Bootsy's bass really propelling...
things along in a way that I've heard from few – if any – other pickup cartridges. This pickup also has a tremendous ability to discriminate between instruments – the drum kit is placed at the rear of the recorded acoustic, but I could still tell which cymbal was being used, for example. The difference between the ride, hi-hat and crash cymbals was so obvious that it made me wonder why I've bought so many expensive moving coils and MC step up devices over the years.

On female vocals, this device was chilling in that the sound was so realistic! Natalie Cole's voice was projected into my living room with the warmth she is famous for. The mix engineer did a fine job when he recorded her lush tones. After this session ended, I noticed my jaw was very sore because I'd been smiling all the way through. I have rarely found a pickup that plays records in such a manner. The bass is glorious, with a limpet.

Conversely to many people's findings, during this listening session the London Super Gold did not mistrack or hinder up at all. Indeed, its ability to track even the most demanding vinyl was never in doubt. [see Noel's measured performance – Ed]. These cartridges are the result of over 30 years of research and development. Their ability to transport the listener to the warmth she is famous for. The mix engineer did a fine job when he recorded her lush tones. After this session ended, I noticed my jaw was very sore because I'd been smiling all the way through. I have rarely found a pickup that plays records in such a manner. The bass is glorious, with a limpet.

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"The Pathos Acoustics Classic One is one of the finest sounding amps I have ever heard, of any era, from anywhere..."

Sam Tellig – Stereophile, Nov 2003

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**Cell Phono**

Audio Analogue's Aria is a phono stage with a difference, thanks to its 'virtual battery' operation. Dominic Todd gets totally wired...

At first this £500 phono stage appears predictable enough. As you'd expect there's MM/MC switching, good quality internal components and a solid and well finished aluminium casing. Yet the Aria has two further surprises. The first is a 'virtual battery' power supply - the outboard power supply unit supplies banks of power supply capacitors in a double reservoir system. One bank feeds power to the amplifier circuit whilst the other is charged up, and vice versa. This means that the supplying capacitors are never directly connected to the mains, so should reduce mains borne noise and instability. The six Kendell capacitors offer up 39000uf storage apiece, so should be up to providing the current without undue concern.

The second surprise is its 'tweakability'. As well as adjustments for MM/MC, there are three other sources of adjustment for perfect cartridge matching. MC gain is set at 27dB but can be adjusted from 22.5 to 33dB. One word of warning here though - changing the gain does involve soldiering resistors so, if you're uncertain of your ability, it's worth consulting your dealer first. If you're certain of your ability, it's worth consulting your dealer first. The other adjustments are easier to manage. Both the capacitance and resistance can be altered to match your cartridge of choice, done via the simple expedient of plugging different RCA plugs into the rear of the unit. Capacitor values range from 100pf to 330pf and resistors from 100R to 470R. So there's a great deal of scope for those keen to get exactly the right match with their pickup.

**SOUND QUALITY**

Hooked up to a Project RPM9X, the first thing I noticed was slightly more noise from the phono stage than expected. Even with the virtual battery power supply it wasn't as silent as some of the competition. Nonetheless, it was quiet enough and the depth and power of the bass was more than in another league from the Project's Phono Box SE or Musical Fidelity X-LPSv3. It was the sheer depth of sound that impressed. Vocals were extremely well projected, and there was excellent staging and separation of various musicians. Percussion was smoothly portrayed though perhaps a little too much so - at times it felt as though some of the finer detail had been glossed over to achieve first rate refinement.

The acoustic strains of Richard Thompson's 'Fast Food' showed an appealingly musical side. Even though both violin and electric guitar were too refined for my liking they did show excellent timbre, as did the subtly portrayed mandolin. Once again, thanks to the depth of stage, Thompson's vocals were brought well forward from the backing vocals, and each given their proper authority within the song. The strong, powerful bass came to the fore with The Cranberries 'Linger'. The downside was a slight lack of pace, and there are rivals that certainly would be fleet of foot here. Certainly the bass has a fragrant 'bloom', which actually suited the guitar, and it took the edge off a vocalist whose performance can err towards harshness on some equipment.

'Rhapsody In Blue' by George Gershwin provided a superb piano timbre that was sympathetic to the key strokes and willing to follow the change in tempo and resonance. When the full orchestra kicked in there was plenty of weight to the sound if not quite the attack. It didn't quite ever make the hairs stand up on the back of the neck, or make the listener jump with surprise. I feel this was probably down to the reproduction of the brass section which lacked a little rasp. Detail ambience, though, was first rate, with subtle decays and strokes audible even when the music was at its densest. Best of all, the sound had a pristine and effortless nature to it - in other words, it sounded most hi-fi-like, which often is no bad thing at all.

Rather like many of Audio Analogue's other products the Aria is perhaps something of an acquired taste. It lacks immediacy but boasts other qualities that really do give a taste of high end hi-fi, like three dimensional sound staging and instrumental timbre. Anyone seeking refinement will delight in the Aria's culture and polish. Add the superb build and 'tweakability' and it looks as though Aria have got another winner on their hands.
the great debate: DIGITAL

Back in the eighties, everyone was talking about the relative merits of LP vs. CD. Most assumed digital was best, and that analogue addicts were old sticks in the mud. Fifteen years later, and the vinyl revival was proof positive with a growing dissatisfaction with digital, and it seemed the vinylistas were winning the day. Now, with SACD and DVD-A, we’re into new territory yet again. So we decided to canvass the thoughts of four industry experts, from a variety of backgrounds. As usual, don’t be shy about writing in to tell us what you think...

NAME: PETER COMEAU
JOB: Director, Acoustic Design
COMPANY: Mission

Analogue is better because it is an exact trace of the requirewaveform. However the theoretical justification neatly avoids the problems of the storage medium which inevitably bring in noise and distortion. When these are taken into account the practical advantages of digital (low noise and distortion) begin to outweigh the disadvantage of never being an exact copy of the original waveform. One should always bear in mind that analogue systems mirror nature in the way that distortion increases with level, whereas digital distortion increases as level is reduced. Distortion is therefore of much greater importance to the subjective results from digital systems.

Good analogue still plays ‘music’ better than digital, so for pure pleasure I still find my turntable indispensable. However, digital is easier to use and work with, and some systems and discs get close to the finest performance from analogue, close enough to indicate that it may be possible for digital to overtake analogue performance in the future. Analogue has the advantage of natural, pleasurable sound quality over current digital systems. However, classical music on vinyl is a bind. Putting up with clicks, pops and end-of-side distortion is a pain. As for digital, undoubtedly the advent of CD improved the performance of the average stereo system dramatically. Compared to cheap turntables, low cost CD players offer much better results.

The music industry moved to digital in the eighties because it offers a multitude of advantages to the musical instrument and recording industry. The ability to manipulate and store digital music without apparent degradation is very alluring. The ease of duplication of CD has allowed completely automated manufacture of discs, reducing the cost to the manufacturer to a fraction of the expense of vinyl record manufacture. For the public, the promise of no noise and ease of use was a no-brainer for the purchase of a new format and method of reproducing it, offering a shot in the arm to a declining audio industry.

It is interesting that ‘remastering’ to digital of analogue studio tapes doesn’t often work too well. To understand this one has to look at how records were recorded and mastered to sound ‘good’ on vinyl, taking into account the warmth, coloration and other idiosyncrasies of the vinyl medium. Remastering to transfer the original master tape sound as truthfully as possible onto CD therefore doesn’t capture the result that was available from the original vinyl record (Fleetwood Mac ‘Rumours’ is a typical example). Users may be buying turntables just to recapture the musical experience from their existing record collection...

High res digital formats certainly have a future. In stereo the systems offer higher sampling rates and more bits than CD, coming closer to that theoretical ideal of analogue reproduction. But the systems need to be used wisely, throughout the recording, mixing, mastering and duplication chain, if the advantages of high res are to be realised. In terms of popularity things are more difficult for these new formats. Except for hi-fi aficionados, most users do not see the reason for anything better than CD. The high res formats offer them nothing in terms of usability over CD. The high res formats offer them nothing in terms of usability over CD. Only the carrot of multi-channel could persuade the average user to invest in new equipment. In practice the ability of new DVD players to automatically play multi-channel...
SACD and DVD-A discs may lead to an interest in purchasing discs in these new formats.

DVD-A offers the higher sampling rate and bit allocation that CD should have had in the beginning. Unfortunately the current disc storage limitations mean these specifications are degraded for multi-channel, but this can be solved by new DVD high res formats in the future. SACD is more difficult to sum up. The wider bandwidth than CD, and simpler signal path than PCM, is an advantage, and is not compromised by multi-channel, but the requirement for filtering above 40kHz to avoid a rapidly rising noise floor will prove an irritation, as is the difficulty of mixing DSD in the recording studio.

Which is better depends on the limitations of existing technology and knowledge.

NAME: MARK BAKER
JOB: Design Engineer
COMPANY: Origin Live

Theoretically each format could claim superiority if the technology behaved perfectly. However the discussion ultimately boils down to the fact that both mediums have technical issues to overcome. Which is better depends on the limitations of existing technology and knowledge. When CD was first launched, people cited the technical superiority of the medium over vinyl - better dynamic range, lower distortion etc. The same old rhetoric is being repeated for the new digital formats - In the effort to claim technical superiority and the advance of technology, the issue of subjective sound quality appears to have become merely incidental. In spite of the claims for the new formats it is plain that much is still not understood about the exact nature of digital. Things that look perfect on paper turn out to be far from perfect in practice. CDs were eventually discovered to have up to 30% distortion in the bass which is nowhere near as good as vinyl. This is just one example but there is also a raft of other misconceptions - were the designers not aware of these problems?

According to a number of expert opinions outside the digital marketing departments, there are specific technical problems with the new formats which mean that they will never outclass vinyl in terms of sound quality. One easily understood issue is the "watermark" that is put on an increasing number of digital discs to prevent copying. This severe and complex problems lie in the multitude of activities that the electronics must perform. The outcome is that the new digital formats are severely flawed as far as the human ear is concerned.

FAVOURITE ANALogue: ORIGIN LIVE SOVEREIGN TURNTABLE/ CONQUEROR TONEARM
"In my opinion, this is the closest thing I’ve heard to live music. It also looks eye-catching, with an engineering quality that begs to be listened to!"

FAVOURITE DIGITAL: SHANLING CD PLAYER
"This looks absolutely superb, and is one of the best sounding in my opinion although it’s rather on the euphonic side, and does not have the best bass quality."
Definitive Audio creates a quality of musical experience that is desirable. We achieve this using some of the world’s most splendid contrivances and by a value system that places musical considerations above all others.

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alone is known to cause significant sound degradation with no solution on the horizon. Yet another issue is the need to rectify disc reading errors - can a D-A converter really take an educated guess to fill in missing information with accuracy? A crude analogy of the problem is that of cutting up a prime fillet steak into tiny chunks - no matter how finely you cut it and try to put it back together, you still end up with a hamburger not fillet steak!

Vinyl analogue replay on the other hand has the following advantages:

[a] No sampling rate, unless you call ‘infinity’ a sampling rate!
[b] The conversion of an analogue mechanical signal into the final analogue electrical signal is much simpler than a digital to analogue conversion.
[c] The minimal errors of a cartridge do not need ‘correction’. Although distortion may be higher it does not have the nasty nature of digital distortion that is thoroughly offensive to the ear.

Unsurprisingly then, I prefer analogue! It has a fluid sound quality as opposed to digital, which can be distinctly edgy at times. The hope is that the new formats will revive sales because everyone is going to rush out and want the best sound quality available. However there are problems with this perception: The improvements are not great and will never surpass vinyl replay. The formats can be pirated - if some form of encryption is put on the format then sound quality is severely degraded and the purpose of the change is lost. The hardware necessary to play all the different formats will mean either several players or a universal player. Having more players gets expensive and space consuming. Universal players mean degradation in sound quality and additional expense.

My honest opinion is that the new formats may have limited success but are unlikely to last for any significant length of time due to the rate of change in the technology of digital storage. Soon there will be further advances in sampling rates and increased storage capacity. However in spite of a number of possibilities the fundamental technical problems associated with digital to analogue conversion are likely to remain unsolved. If the accountants and PR people made a smart analysis there is a great argument for promoting vinyl as ‘the new high end format’. The reasons are obvious:

[a] vinyl outperforms the new mediums even on inexpensive turntables like the new Goldring at less than £200. Better turntables simply run rings round most digital players.
[b] vinyl cannot be pirated without the loss of sound quality associated with CDs. People cannot produce another vinyl record whereas a digital recording can be perfectly copied.
[c] in the long term, vinyl will give far more musical satisfaction than digital formats which will mean increased sales of music.

The analogue side of the replay chain can be improved by looking at the phono stage. Listening to the GSP Gram Amp 2 SE was a revelation to me a few years ago. This moving magnet phono stage caused me to realize how many people have never appreciated the quality of vinyl simply because of the dire quality of integrated amplifier phono inputs. Phono stage design has advanced tremendously over recent years and inexpensive but excellent phono stages like the Gram amp I at £85 could be much better promoted. As for digital, the transports and mechanisms to read the discs need improvement. At present the need for D-A converters to take educated guesses to fill in the information missed by the laser is a cause of untold sound degradation.”

---

NAME: Tim de Paravicini
JOB: Designer
COMPANY: EAR Yoshino

If course, theoretically speaking, analogue is better! Its disadvantages are the lack of ease of use, and the fact that careless handling produces scratches or damaged tape - but digital is also prone to the same problems, of course. On the other hand, its advantages are of possessing the ultimate resolution. Digital needs many times the bandwidth to achieve similar results. So it is not actually as efficient. I would have to write a book to explain in detail all my reasons! The advantage of digital is that, simply, it provided a low cost solution to providing sound at a fair standard to the mass market. As a result, low cost analogue tended to suffer. As such, my argument against it is purely on a cost-no-object basis.

In the eighties, the music and audio industry moved to digital for cost reasons, and the mistaken belief that you could not copy it - pure and simple money!

In the nineties, the vinyl revival started simply because a dejected few audiophiles realised what they were missing in sonics.

---

FAVOURITE ANALOGUE:
TOWNSHEND TURNTABLE
This is a bit of a silly question to ask me, as I have many studio tape machines rebuilt to my own standards, but notwithstanding these then it’s got to be the aforementioned record player.

FAVOURITE DIGITAL:
N/A
None - and why? Because there are none good enough, period.
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analogue is superior, theoretically. A digital system will have analogue front and back ends on the ADC and DAC, and as the digital section cannot be completely transparent, a purely analogue system must be better. So, given the choice I'd rather listen to analogue masters than digital masters. Analogue still has the edge, but this edge is getting smaller and it does require a lot of work to maintain an analogue system in peak condition. Digital playback systems are pretty fuss free in that respect. That said, a lot of care is required to set a digital system up to peak performance. Specifically clocking arrangements need to be properly set up and this is a frequently neglected area.

The advantages of analogue are that it produces a result that is very satisfying musically; is a very well understood and stable technology; does not require specialist equipment to maintain; most parts are easy to multiple source, so legacy equipment is easy to repair; degrades gracefully; one has plenty of warning when things are starting to go wrong - digital breaks down suddenly with nasty results; storage media have been shown to remain playable over many decades – fifty plus years for tape and I suppose one hundred or more for disc if one considers early cylinder recordings!

The disadvantages are that analogue needs care and attention to maintain peak performance; repeated playback gradually degrades the storage media. Not so easy to manipulate in the studio as digital. Digital technology allows very sophisticated manipulation such as re-tuning, cloning, re-timing and complex editing that cannot be done with analogue. With analogue you need to have musicians who can actually play the track all the way through. Digital record/playback equipment and media can be much smaller than analogue equivalent and can also be made much cheaper.

I'd rather listen to analogue masters than digital...

Analogue media do not readily lend themselves to multichannel formats, whereas this is very easy with digital as is the achievement of extended playing times.

The music industry moved to digital en masse because they wanted a medium that would be cheap and easy to distribute, and that they thought they'd be able to adapt to prevent illegal copying. Someone also thought that a 20Hz to 20kHz bandwidth and 96dB dynamic range would give the "perfect sound forever"... In the nineties, people discovered that their CDs weren't so perfect after all, and that despite the surface noise vinyl still had something that made it a more satisfying experience than CD.

SACD has a long term future as it's very simple. You control what you listen to by pressing buttons on the player front panel or remote, without the need to get involved with complex on-screen menus. No need to have any nasty video clocks near our sacred audio systems! Having done extensive listening in studios to both DSD - the format used on SACD - and all PCM formats up to 24/192, whilst 24/192 is very good, DSD is more transparent and this is after all what the musician wants, so that his creation is faithfully delivered to the listener. Another advantage of SACD over DVD-A is that it is a secure format. You cannot bootleg the discs because of the special encoding equipment required at the factory and Philips rigidly controls distribution of the encoders and end users cannot rip the discs. DVD-A is far more complex to use as it can involve use of on screen menus. Contacts in the professional industry tell me that DVD-A disc sales are far lower than SACD disc sales. It looks like DVD-A will eventually whither, as the only strong proponent is Warner Brothers.

We can improve both analogue and digital simply by more care and attention at all stages of production. A lot of the problems with recording these days is that they are subject to too much processing. Making a good recording is like making a good meal - start with good ingredients and then do as little as possible to them! Over-processing, like over-cooking, just leaves a nasty taste in the mouth...
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The Kec182 is our latest introduction for the true beginner and designed by Andy Grove. A simple and elegant design based on the classic ECL82 valve, a triode and power pentode sharing the same glass envelope. The amplifier consists of two ECL82s per channel, the triode sections work as the input/phase splitter and the pentode sections work in push-pull for the output stage. The amplifier offers 8 watts into an 8 ohm load, the hum level is extremely low, comparison to solid state standards. The chassis is constructed of 1.6mm mild steel with a black powder coat finish, there is only one signal input pair controlled at the front by a volume control for that simple touch. The speaker controls are the standard 4mm banana type, positioned at the rear, as are the mains input which is received through an IEC lead, mains switch and earth post. We have made the construction as simple as is humanly possible with comprehensive instructions. The circuitry is based on a single printed circuit board. Ultimately this kit is for the guy who has always fancied a go at building a kit, but never dared. Simon Pope says, "It's a great introduction to the valve sound. For its humble price it delivers a full and rich sound with great detail and good depth." Kec182 weighs 9kg. External dimensions are 30cm(w) x 23.5cm(d) x 11cm(h).

These are our new 6550 series amplifiers. A pure class A design providing 40 watts into an 8 ohm load. (available in a 4 ohm version if required) A truly high end design by Andy Grove, using Svetlana 6550Cs in push-pull (any 6550 or KT88 tube can be used with this amp). It features valve rectification (5U4) a choke pi filter power supply and is hard wired. Weighs 19kg with dimensions 390mm(w) x 330mm(d) x 190mm(h) with valves or 220mm(h) with cage. Simon Pope says - "If you favour attack and rhythmic grip, together with a smoothness of sound that's incredibly easy to live with, the KIT6550 could well be the kit amp for you. The 6550 is one for those who like a valve sound married to the attack and clout of a good quality solid state design".

The Kek84 features a pair of EL84 valves per channel in push-pull configuration. They give 15 watts into an 8 ohm load. The output transformers are Ultra Linear. Up front the ECF80 input/phase splitter valve has an extremely smooth sound. The Kek84 has very low hum, for simplicity the kit is built on a printed circuit board. A strong steel chassis is fronted by a 3mm anodised front panel and attractive chromed custom made knobs. There are five line level inputs, plus one monitor input, with a tape output included, all controlled from the front panel. At the rear is a mains switch/IEC power input, earth post, phono, and 4mm banana sockets. Simon Pope says, "The quality that can be gleaned from this amp is a fine introduction to the joys of the valve sound. The Ke84 will highlight all the intricacies and depth of detail in your favourite recordings whilst retaining a warmth and fullness that is almost exclusive to pure valve amps and is rare at this price point." Kek84 weighs 10kg. External dimensions with valves are 300mm(w) x 270mm(d) x 150mm(h).

The 2A3 PSE integrated amplifier offers a seriously hi-end sound, but without the cost usually associated with single-ended amplifiers. The stereo chassis houses, on the output, 2 x 2A3 in parallel single ended configuration and a single 6SN7 as the driver tube per channel. The valve rectified power supply consists of a SU4 and a 10h choke. This feedbackless design provides 8.5 watts into an 8 ohm load, so a good sensitivity speaker is required above 90dB. It can accept 6 line-level inputs fully controllable from the front panel. We provide the excellent Alps Blue potentiometer as standard. The amplifier is hard wired so plenty of scope for tweaking in the future. Simon Pope says, "The 2A3 PSE is extremely impressive piece of kit, good imaging, wide sound stage, nicely extended on the high frequency and tremendous bass thump. Weight - 20kg, external dimensions with valves fitted - 390mm(w) x 360mm(d) x 220mm(h)."
The PRE-II is a valve pre-amplifier with six inputs, tape monitor and two sets of output sockets. It utilises a high quality line driver transformer and x5 gain. The PHONO-II is a dedicated valve phono stage that incorporates a step-up transformer for MC users. Finally, PSU-II is a power supply unit that feeds both the PRE-II and PHONO-II.

Power Supply Unit (PSU-II) £205.00
Pre-amplifier (PRE-II) £215.00
Phono Stage (PHONO-II) £110.00
Moving coil step-up transformer £27.00
Passive pre-amplifier (PAS-II) £235.00

SERIES II MODULAR PRE-AMP KIT

The HD83 headphone amplifier is a beautifully simple design using Mullard ECL83 valves, a triode and power pentode housed in the same envelope. It works directly from any source, be it CD, tape, tuner etc., or from an amplifier's tape out or pre-amp out sockets. The circuit uses high specification EI output transformers that will drive any headphone load from 16 ohms to over 300 ohms depending on how the secondaries are wired up. The HD83 is a single-ended design with the power pentode wired up in triode configuration for added sonic purity and it is as quiet as a mouse. For sound quality Jon Marks says, "The bass is punchy and controlled without becoming artificial, while treble has the crispness of the best solid-state, with the tonal purity, delicacy and speed associated with valves." External dimensions 18cm(w) x 30cm(l) x 8cm (h) weight 4kg.

The KT34 is a 32 watt stereo valve integrated amplifier, featuring a pair of EL34s, in push-pull mode, per channel, plus an ECF80 pentode/triode as input/phase splitter. The power supply is valve rectified (2 x 5U4), using a heavy duty choke to achieve exceptional smoothing. The output transformers are 14% Ultra Linear tapped to keep distortion down to its lowest level and the kit is totally hard wired utilising three tag boards. It has five line level inputs, plus a tape in and tape out, all controllable from the front. Simon Pope says, "This integrated brings together the best sonic virtues of our KT88, KT34 and top of the range 300B in an affordable package. The highlights of the sound are a deep and taut bass response, together with an open and highly detailed mid and high frequency response that only the best valve designs can achieve... a true valve classic." Weight 22kg. External dimensions with valves fitted - 390mm(w) x 360mm(d) x 210mm(h).

The HD83 headphone amplifier is a beautifully simple design using Mullard ECL83 valves, a triode and power pentode housed in the same envelope. It works directly from any source, be it CD, tape, tuner etc., or from an amplifier's tape out or pre-amp out sockets. The circuit uses high specification EI output transformers that will drive any headphone load from 16 ohms to over 300 ohms depending on how the secondaries are wired up. The HD83 is a single-ended design with the power pentode wired up in triode configuration for added sonic purity and it is as quiet as a mouse. For sound quality Jon Marks says, "The bass is punchy and controlled without becoming artificial, while treble has the crispness of the best solid-state, with the tonal purity, delicacy and speed associated with valves." External dimensions 18cm(w) x 30cm(l) x 8cm (h) weight 4kg.
KIT6550/KAT6550 mains transformers
2 inch stack, 130mm(h)x120mm(w)x35mm(d)
drop through fitting with zinc cap. Secondaries 425V-0V-425V, 350mA, 0V-5V, 6A, 3.15V-0V-3.15V,
9A Suitable for 120V & 240Vac operation

KEL04 mains transformer
1.5 inch stack, 90mm(h)x80mm(w)x 95mm(d)
drop through fitting with zinc cap. Secondaries: 0V-240V 300mA, 3.15V-0V-3.15V, 5.5A, suitable for
120/240V operation

KIT34/KAT34/KIT6550/KAT6550 choke
1.25 inch stack, 65mm(h) x 105mm(w) with fitting holes x 60mm(d), clamp fitting, 2.5H, 350mA

300B PSE mains E/I transformer
130mm(h) x 95mm(w) x 115mm(d).
drop through fitting with zinc cap. Secondaries: 380V-0V-380V, 180mA/150-0V-150V,
25mA/0V-5V, 1.2A/0V-5V, 1.2A/0V-5V.3A/3.15V-0V-3.15V, Suitable for 120/240V operation

HD38 mains toroidal transformer
80mm dia. x 35mm(h). Secondaries: 0V-165V,75mA. 15V-0V-1.5V, suitable for
120/240V operation

PSU-II mains toroidal transformer
80mm dia. x 35mm(h). Secondaries: 0V-270V/60mA/0V-10/2V,2A, suitable for 120/240V operation

TRANS1 mains toroidal transformer
95mm dia. x 50mm(h). Secondaries: 0V-370V,150mA/0V-6.3V,3.5A
300B E/I choke
65mm(h) x 70mm(d) x 80mm(w) open frame
KEL84 E/I choke
0.5 inch stack, 40mm(h) x 35mm(d)x 70mm(w) clamp fitting, 15H, 20mA

PSU-II E/I
40mm(h)x35mm(d)x70mm(w) clamp fitting, 15H, 20mA

KEL84 main transformer
1.5 inch stack, 90mm(h) x 80mm(w)x 95mm(d), drop through fitting with zinc cap. Secondaries:
80mm(wide)x70mm(height)x70mm(depth), frame type 2 hole fixing. Secondary: 0V-185V,
200mA, 0V-6.3V, 3.5A. Suitable for 110V/120V/200/230V operation. Good for low power amp, solid state rectification achieves a HT of 240Vdc. Could be used for ECL82 PPS/E stereo amp.

KECL82 mains transformer
1.25 inch stack, on a 29 size lamination, 80mm(wide)x70mm(height)x70mm(depth), frame
type 2 hole fixing. Secondary: 0V-185V, 200mA, 0V-6.3V, 3.5A. Suitable for

KECL82 PP output transformer
ECL82 push-pull ulra linear: Inch stack, on a 29 size lamination,
80mm(wide)x70mm(height)x60mm(depth), frame
type 2 hole fixing. Primary 7.5Kohm, secondary
80ohms. Max current 85mA.
Good for numerous low output pentode valves in push-pull configuration.

300B PP E/I push-pull output transformers
2.5inch stack, on a 120 lamination.
130mm(h)x95mm(w)x 115mm(d) drop through fitting with zinc plated cap. Primary impedance 4K,
Secondary 60ohm. Will suit 300Bs, 2A3 etc in push-pull configuration.

PRINTED CIRCUIT BOARDS
KEL04 Printed Circuit Board 140mm(w)x 31mm(d)x 1.6mm(h)
KEL34 Printed Circuit Board 140mm(w)x 31mm(d)x 1.6mm(h)
HD38 Printed Circuit Board 140mm(w)x 31mm(d)x 1.6mm(h)
PRE-II Printed Circuit Board 140mm(w)x 31mm(d)x 1.6mm(h)

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KEL04 Printed Circuit Board 140mm(w)x 31mm(d)x 1.6mm(h)
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80ohms. Max current 85mA.
Good for numerous low output pentode valves in push-pull configuration.

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KEL34 Printed Circuit Board 140mm(w)x 31mm(d)x 1.6mm(h)
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PRE-II Printed Circuit Board 140mm(w)x 31mm(d)x 1.6mm(h)

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Back in July 2002, Stewart Wennen outlined his idea for a superior quality armboard for the world’s most popular turntable, Technics’ ubiquitous SL1200. Since then, Origin Live has taken the idea and developed it — so who better than SW himself to assess it...

**VERDICT**

**A brilliant tweak for Technics SL1200 series turntables - essential equipment for DJs and music lovers alike.**

**ORIGIN LIVE TECHNICS ARMBOARD MODIFICATION KIT £39**
Origin Live
www.originlive.com

A couple of years ago, I discussed the possibility of replacing the very poor standard Technics pick up arm with an Origin Live RB250. This met with a lot of discussion amongst bedroom DJs as to the worth of this butchery, but the professionals in the entertainment industry welcomed this modification with open arms, as it does improve the SL1200/1210 tremendously. Now, Origin Live has made the idea a commercial reality. The princely sum of £39 (inc. P&P) buys you one pick up arm mounting plate, fixing screws and an instruction sheet.

The first step is to remove the old pick up arm, which is covered in the original article in much more detail than in the OL data sheet. Remember that you can possibly sell the redundant SL1200 pick up arm (God knows why anyone would want one, but try it!), so be gentle with it. One point that is not covered on the data sheet is that the Pocan slab that sits directly under the motor board has to be removed before the arm retaining screws can be accessed. Don’t throw these away but, when the SL1200 arm has been removed, loosely screw them into the original armbase.

Do not forget that the earth lead from the pitch control will have to be used to earth the new pick up arm! As modifications go this is an extremely good one. I modified two SL1200s and I found that it took approximately 45 minutes to mount the new pick up arms into the turntables. There is no need to align the arm, as the plate has been laser cut especially for RB250. There is also a spacer ring included with the kit to be used with cartridges like the Stanton 890 series. The only difficult part of mounting the replacement arm is setting the vertical tracking angle. Do not make the arm pillar higher than the headshell. Follow the instructions as they are written. This is very important. When the arm is mounted and earthed and the turntable is completely re-assembled, a break is necessary and after this, the listening can be started.

The first thing that struck me was the difference in the stereo imaging. The new pick up arm and plate mod had an extra four feet of width within the image, and the height was much taller and the image depth extremely deep! I compared the modified SL1200 to a completely standard turntable and the differences were staggering. All frequencies seemed smoother, and the music was projected much more easily. One knows when something is correct and this arm and plate modification makes a good turntable into a stunning transcription unit.

Bass and midrange are extremely well presented, with an almost ethereal treble register. This again proves the Origin Live RB250 is a very well made pick up arm. And it is extremely easy to ‘mix’ with, as the original Technics arm tends to jump out of the groove when being back-cued, and the resulting cue point is missed. As an arm for ‘scratch mix’ DJs, its performance is almost exemplary. OL RB250s let cartridges track much more securely, especially when ‘scratching’ and it’s also easier to visually cue with as the headshell is much smaller than the Technics arm.

**This modification makes a good turntable into a stunning transcription unit**

So if you’re in the market for any new DJ equipment, I can recommend this new Origin Live armboard without any reservation at all. It’s a neat way to fit an RB250 arm, which will dramatically improve your performance as a DJ or your listening pleasure as a music fan. A group of DJs in this country use OL RB250 modified Technics SL 1210s with glee - the mod. has paid for itself many times over and enables the music to be much more easily delivered to the dancefloor. Indeed, there’s a competition between DJs and club owners in New York to build the best sound system in a nightclub. A few of these nightclubs use Origin Live equipped Technics SL1210s as their turntables, I think that this is enough recommendation in itself.

**70**

HIFI WORLD & COMPUTER AUDIO APRIL 2004
Trichord's already excellent Dino phonostage has just been improved with the option of the Dino+ PSU and High Performance Interconnect Lead. Albert Lee tries them for size...

Trichord's new £225 Dino+ power supply is intended as the next logical upgrade from the standard Dino PSU, and contains a much larger transformer to supply the raw AC voltage. The case is crammed with electronics of a very high standard AC voltage is usually changed into DC voltage with the aid of a bridge rectifier, but designer Graham Fowler has used two, using soft recovery diodes for very low radio frequency generation. These rectifiers are followed by a resistive and capacitive filter. This filter contains no less than four 1800-microfarad capacitors! A pair of further low noise, wide bandwidth, voltage regulation circuits mean that this PSU is very, very quiet.

The new £140 power interconnect is made from an alloy containing copper, silver and gold which has been refined to 99.9999% pure (this figure means that there is virtually no air inside the metal thereby enabling the electricity to continue its path to the Dino almost unheeded). It has a plating of 10 microns of rhodium and each cable is 0.7 mm in diameter. All of the cables are individually insulated using PTFE tube and then are further encased with another PTFE tube. The assembly is then covered in a black mesh outer jacket. Cryogenically treated this piece of wire seems to hold a lot of promise.

First on was the new PSU using the standard power interconnect.

'Carmen', where the stereo image grew wider the orchestra seemed to have the correct amount of 'weight'. Next came the new high performance interconnect, and the difference was staggering. All of a sudden I was involved in the music not just listening to it! Bass instruments had a larger, truer character while midrange became even more believable, with just the right amount of treble definition.

This lead transforms the Dino into something even more special, and with the Dino+ PSU it assumes true greatness. Everything becomes more emotional and profound, with tremendous transparency given the price. If you're not into the soft, mellifluous sounds of the basic EAR 834P valve phonostage, preferring something altogether more neutral and incisive, the Dino is still the best at the price and these two mods put it even further ahead.

The only serious improvement is indeed Trichord's own Delphini with Never Connected PSU at well over twice as much. Recommended, then...

VERDICT

Excellent quality allied to low prices make these mods essential for existing Dino owners and newcomers alike.

TRICHORD DINO+ PSU £225
TRICHORD HIGH PERFORMANCE POWER LEAD £140
TRICHORD DINO/DINO+ STANDARD LEAD £498
C +44 (0) 1684 311600
Trichord Research Ltd.
www.trichordresearch.co.uk
Do you need support, but lack sufficient funds? Well, Albert Lee has the answer — a do-it-yourself turntable shelf that costs under £30 to make!

As any analogue addict knows, structure-borne resonance — or 'footfall' — is a killer. It will ruin the sound of any turntable, but is particularly parlous with non-suspended subchassis decks like Regas. So here’s the answer — a DIY turntable shelf for under £30. This stand can be used under any hi-fi equipment platform. The materials required are all available from your local DIY supplier, who will cut the timber to size. This service is invaluable because each cut will be square. You’ll also need ‘T’ nuts to suit the chosen spikes (available from Screwfix Direct) and spikes from your local dealer, The platform is 450x210x520mm. This is so that the diagrams show the main support rails are 50x25mm, and the timber list has 45x21 mm. This is so you can choose either softwood or hardwood — which has to be cut and planed to size — so choose your type of timber at this time. Now, to construct the turntable wall frame. The timber required is as follows:

4 off 2-by-1 (planed all round) — 45x21mmx520mm
2 off 2-by-1 par 45x21x1400mm
2 off 18mm hardwood ply
550x100mm
50 (approx) No 8 by 2 inch countersunk Pozidrive screws
10 No 10-by-3inch countersunk Pozidrive screws
10 rawplugs suitable for your wall type. If in doubt ask at your timber supplier.
A small bottle of PVA wood adhesive (either the water proof or ordinary type will do)

The two main supports are made from the longest lengths of timber (45x21x520mm), and need to resemble an ‘L’ shape — for further data see diagram. Pilot drill (3mm) three holes equidistantly spaced from the centre — these should extend into the rear of the ‘L’. This is to stop the timber ‘creeping’ as they are screwed together. A clearance size drill is now used in the front halves of the main support in all three pilot holes. Next, these holes will need to be countersunk 5mm deep. We now glue and screw the two parts together making sure they are flush at the ends. This is repeated for the other main support. If you can see any PVA glue on the work make sure this is sponged off, as it will stain French or button polishes and is impossible to sand these marks out!

Next we need to make the side brackets. These are cut from the two 18mm ply sections. It is most important that the marking out is accurate. We will use masking tape to mark onto. It also stops the ply tearing due to the cutting process. Check it out three times and cut once! You will have noticed there is a large hole in these panels; this is to be marked 50mm from all edges. I used a glass to get the curves as I marked them out. We now use a 12mm pilot drill at three positions close to the marked lines. Now use the jigsaw to cut (on the line) the large holes — not forgetting to don a pair of safety goggles and a dust mask! The next stage is to saw the diagonal line using a handsaw, and rub all of the timber down until it is as smooth as glass. At this point, we apply our chosen finish (French polish, paint or varnish).

Now have a pile of timber that has holes in it! Firstly, we will mount the rear main support on the chosen...
NOTE: USING POWER TOOLS CAN BE DANGEROUS! CARE AND PRECISION ARE REQUIRED. HI-FI WORLD CAN ACCEPT NO RESPONSIBILITY FOR PERSONAL INJURY OR DAMAGE TO YOUR PROPERTY AS A RESULT OF THIS ARTICLE!

ILLUSTRATION: Peter Vivian

Select the worst 'L' support and drill three pilot holes in the upright section of the 'L'. These holes should be symmetrical around the centre in height and also in width. I have found that the natural height for a turntable is 40 inches from the floor, so mark a line (lightly drawn with a pencil) using the spirit level 500mm long.

Now offer the main support to the wall, making sure it is exactly sitting on the line, and pilot drill the wall with the 3mm-drill bit to mark the wall. Load a masonry bit into the drill again - these are to be pilot holes so choose a 5mm bit. Ensure the drill is switched to 'hammer'; select the highest speed and now drill to the full depth of the drill bit into the wall.

On most wall plugs there is a gauge to help select the drill size for the plugs. So make your selection, load the drill and then drill to the full depth of the drill bit. Dip the rawl plugs into a little PVA and put them into the wall. They may need a little encouragement so lightly tap with a hammer until they are flush with wall surface. Drill the pilot holes in the main support with a clearance drill to fit three of the No 10 screws. Countersink both sides of the support rail. Screw the rail to the wall making sure that the rail is perfectly flush with the wall. If the rail is level (check to confirm this) and flush we are ready to start the assembly.

Offer one of the side panels against the wall making sure the top of this panel is flush with the rail and then mark around the edge onto the rail. Lay both panels onto the workbench and then pilot drill and clearance drill to suit. Countersink both sides of the panel. Only one hole is to be drilled in the panel. Repeat this with the other panel.

Again offer the panels up to the rail and fix into position but not too tight. Next we fix, as the diagrams suggest, the short vertical supports. These as with the main supports have to be very firmly attached to the wall. The spirit level is now sited onto the side panels and two pilot holes are drilled through into the vertical supports.

We now clearance drill and countersink, and then screw the side panels to the vertical supports. All that now remains to be done is to fix the front main support rail into position, ensuring that the rail is in exactly the same attitude as the rear rail. Now take your electric (or hand) screwdriver and re-tighten all of the screws, and put another screw next to the top rear and front topside screws to make the structure rigid. Take a step back wards and have a look at the completed structure with the equipment support panel in position. All that is needed now is your turntable or your chosen signal source, a cup of tea (or something stronger) and some time to enjoy your handiwork!
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THE LA’S
The La’s
1990

He we have the defining debut of the nineteen nineties, and probably one of the great career-closing albums too – the last will and testament of The La’s. It is an album that thoroughly deserves to rediscovered by each successive generation: any teenage Coral fan should surely be made aware of the huge influence and timeless rock classicism of their ‘scally’ predecessors.

There is a curious story about the genesis of this record which will be retold eternally, and at its root is the striving of one individual, songwriter and lynchpin Lee Mayers, to recapture the perceived magic of his demos in a professional recording. The fact that he was never remotely satisfied with the end result only deepens his mystery. This is after all a man who, much like Salinger and Barrett, receives the obsessive “where are they now?” pursuit by fans and writers which missing geniuses seem obliged to suffer.

Mayers’ antipathy to the end result is hard to fathom and makes it difficult to justify the album as a classic, but the quality of the songs is impossible to ignore. ‘There She Goes’ will be on soundtracks and anthologies forever, and will probably receive ever more horrible cover version treatments every decade from now on, but there are many songs just as enthralling as that one to be found on this record – from the sprightly lead-in of ‘Son of a Gun’ to the epic closer ‘Looking Glass’, with its yearning quality dissolving into a cacophonous close. None of us have heard ‘The Sound’ as it exists in Mayers’ head, but to these ears the recordings do a reasonable job of reproducing the massive wall of energetic sound which was The La’s live experience. You miss Mayers’ stomping, gum chewing, accelerated live delivery but over and above the still-present huge bass sound and deliberately rudimentary guitar tones the use of vintage microphones lends a harsh patina to Mayers’ hollered vocals, which admirably convey the urgent sentiments of escape, drug-based or otherwise, which pervade many of the lyrics.

‘The La’s’ was re-released in remastered form by Universal three years ago, and as my original copy suffered from the dreaded PDO Blackburn blight, the new version couldn’t help but sound much improved. As a useful sleeve note from the band’s A&R man details, the original album (with the exception of a remixed version of the Bob Andrews-produced ‘There She Goes’) is made up of Steve Lillywhite-produced versions - which must have been at least the third attempt to get these songs down on tape. Mayers would probably have continued, but the record company called time and the album was released. Although the presence on the reissue of the B sides from ‘Timeless Melody’, the second release of ‘There She Goes’, and ‘Feelin’ is a useful round-up of the easy-to-find stuff for the uninitiated, it is a real shame that none of the Bob Andrews material is featured, particularly the superb trio of tracks from the original ‘There She Goes’ EP. I’m sure there is good reason for this, but it’s a missed opportunity just the same…

As I wouldn’t mind betting that the very idea of his sound being committed to Compact Disc was anathema to Mayers, so it seems pointless to speculate about the possibility of a high resolution digital version of this record, but as the sleeve notes reveal it was recorded on vintage analogue equipment and the incredible enormity of the raw bass and guitar tones here might well benefit from a new transfer. As it will probably never happen we may have to content ourselves with what is a very acceptable CD version, as any brittleness in the sound is concealed by the deliberately primitive recording strategy. Of course if you’re hanging on to a pristine vinyl copy you are probably a very happy person.

Even if Mayers’ never releases another note of music his place in history as the originator of this work is assured. There are many of us who would love to see him return in glory, but whatever came together would almost inevitably fall apart again in a welter of overweening perfectionism, skunk-fuelled sackings and recriminations, so it is perhaps best that things are left as they are, with one indelible monument to enjoy, unsullied by the thought of follow-ups which could never reach these heights. PATRICK CLEASBY
One of the most fascinating niche audiophile products of the year is surely Fujitsu-Ten's Eclipse TD 307PA active loudspeaker. Golden eared Patrick Cleasby tried these sun-sational Nipponese mini-monitors...

Sometimes big surprises come in small packages. When two strange egg-shaped objects emerged from a nondescript cardboard box, I was prepared for novelty and nothing more. Of course, if I'd read the press release beforehand then I might have had a better idea of what to expect. It seems the 307's bigger brothers - the 512s and 508s - have gone down rather well with some top pro audio types (The Brecker Brothers, Sting's engineer Simon Osborne). Perhaps for this reason Eclipse are also not afraid of having the word "expensive" mentioned in association with the 307s...

While the bigger eggs are serious recording studio monitoring machines, these are designed for where space is at an absolute premium, and the obvious application being computers. They're also, thanks to the stunning finish, particularly suited to style-conscious buyers. Put these two categories together and you have Mac users! So it seemed entirely appropriate for a Mac-head like me [and a very stylish one, if I may say so! - Ed] to give them a go. Indeed, Eclipse are either prescient or very well informed, since although the 307s are also available in white and black, the gunmetal grey finish of the amp and speakers of this review sample sit much better next to a G5 tower than they do next to the translucent G4 styling of the current Apple Studio display as featured in the advertising. If Apple G5-ise the styling of their display, Eclipse will be right on the money and Harmon Kardon's transparent speaker/sub combo will be looking in need of an update! Of course, the Eclipses are a whole order of magnitude more expensive...

Now, before we discuss prices, options and sonics, lets put this 'style' issue to bed. Like many men of a similar Dr. Who affliction, Thanks to the wonderful ergonomics of the 307PA amp unit I can feel like The Doctor at the controls of the TARDIS — the satisfying palm-filling feel and dampened operation of the big blue under-lit aluminium volume knob is an old-time joy. Even my wife, who is quite fetishistic and judgmental about the action of computer keyboards and the like [oh yes... Ed] enjoyed a quick spin. There is not much else to the unit: a simple power switch, spring loaded gold speaker terminals, the DC power input (chunky transformer supplied), a crossover switch for when using the sub unit, and 3.5mm input and output (for the sub) sockets.

The speaker units themselves look very swish on their chrome feet, have optional speaker grilles and feel impressively substantial, containing an anchor weight as they do. Optional wall brackets are available for £50, and stands for £199, but these are more suited for...
the use of five 307s with a sub in a small room 5.1 set-up, in which context the imaging of the 307s is reputed to do wonders. There is no equivalent of the stereo PA unit in a surround set-up – you just take your 5, 6 or 7 307s and a 316SW sub and use the multi-channel amp of your choice.

**SOUND QUALITY**

I have to confess that on initially plugging the system up with my G5, I was not turned on by the sonics. This was my fault entirely, however, as I’d left the ‘Rock’ preset switched on in iTunes (and the ‘Sound Enhancer’ to boost), and the Eclipses were remorselessly revealing this nasty audio affectation. So, to check that things were set up correctly after defeating the EQ, I tried playing some self-recorded uncompressed 24/48 PCM material – and was rewarded with fantastically dynamic sounds.

Lurking in the same vicinity in iTunes was the official 192 kbps preview MP3 of Claudia Brücken (you didn’t think a month was going to go by without a mention of my favourite diva did you?) and Andrew Poppy’s self-recorded uncompressed 24/48 PCM material – and was rewarded with wonderfully dynamic sounds.

For serious listening. Now, I know that Joni Mitchell said, ‘New Age rhymes with sew-age’, but I happened to put on my encode of a twenty year old Windham Hill disc – Will Ackerman’s “Passage”, and the simple acoustic and violin formula was conveyed with wonderful precision by the Eclipse ensemble. Real music, real musicians, real musicality – and speakers to take me there.

Imaging is claimed to be the major selling point of the Eclipses, thanks to their small size, rounded enclosures and single, point-source driver – and so it was. They worked best at ear height, but if you’re not so fussy you can tilt them back on the stands so they are firing up to you. Once set up, a quick fix of the gonzo guitar stylings of Ted Nugent’s first solo album resulted in quite the most satisfying experience of that distinctive semi-acoustic guitar tone, tight drum sound and creamily authentic bass I have had for some time. All the detail in this wonderfully engineered classic rock recording was laid out in front of me. The obligatory Steely Dan test, using the CD layer from the recent SACD of ‘Gaucho’, generated an almost eerie sense of presence. The Eclipses rendered the layered precision of the Steely Dan sound with considerable aplomb. How did they cope with the carefully tailored midband of a modern rock record? A blast of Skunk Anansie’s still awesome ‘Selling Jesus’ demonstrated admirable control of a skittering bass part, and a drum kit being battered to death within sheets of Les Paul rifforama, while preserving Skin’s histrionic vocal in the verse and angelic choral backing in the chorus. ‘Little Baby Swastika’ demonstrated phenomenally the three dimensional imaging too. Switching to Porcupine Tree’s recent remaster of ‘Signify’, the edgy dampened Strat attack of the title track moved with tight efficiency whereas the hypnotic center-piece – ‘Waiting’ swung through its movements beautifully. Very impressive stuff indeed. This Eclipse system made me want to sit in front of my Mac all day, throwing different tracks at it to see how it coped.

Here’s a miniature active loudspeaker system with a difference. Its design and build quality are to the very best hi-fi standards, and the result is dazzling sonics (and styling) in a small package – ideal for multimedia and computer use. The only problem of course is that quality costs, and if you’re wanting to grow your TD307s out of their desktop domain into a fully fledged, full-range sound system, then you’ll need to spend £650 extra on the subwoofer too.

This done, the results are remarkable, but even in 2.0 form as tested, this entry-level Eclipse is dazzlingly capable.

---

**SPECIFICATIONS (QUOTED)**

**DRIVE UNIT:**

65mm full range

**FREQUENCY RESPONSE:**

120Hz-20kHz (-10dB)

**POWER HANDLING:**

24W

**SPKERM DIMENSIONS:**

120x162x160mm

**SPEAKER WEIGHT:**

1.2kg (each)

**AMPLIFIER POWER:**

2x12W

**AMPLIFIER DIMENSIONS:**

144x150x148mm

**AMPLIFIER WEIGHT:**

1.5kg

---

**VERDICT ★★★★★**

Superb visual and aural complement to the G5 Mac; these desktop speakers make a great show-off purchase for those with an eye – and an ear – for detail.

**FUJITSU-TEN ECLIPSE**

**TD307PA (SEE BOX)**

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THE WHO
TOMMY
(HYBRID SACD: STEREO AND MULTI-CHANNEL DSD)

Following on from the masterful Deluxe Edition SACD of 'Goodbye Yellow Brick Road' Universal debut another significant Deluxe re-release as an SACD — The Who's classic rock opera 'Tommy', and this one is every bit as excellent as its predecessor.

To get the first piece of good news out of the way first: for the first time ever 'Tommy' is available in digital form as a transfer from the original quarter inch stereo master. As per the previous CD remasters Jon Astley has handled the mastering chores, but as a close Who collaborator his role was always much more than just mastering. The mid-nineties CD actually bore a remix credit so I presume the stereo was recreated from the one inch eight track, but this time Astley's searches have unearthed the tapes which were previously thought to have been lost. Coupled with the benefit of a new DSD transfer this means that a whole generation has the chance to hear 'Tommy' as it was originally intended to be. But over and above that we have the work as Pete Townshend now intends it to be — in surround.

Essentially what Townshend has done is to recognise the individual brilliance of his rhythm section and push their contributions more to the fore in his surround mix. He has also decided that a much drier approach to the use of reverb is more suited to what is one of the true great rock bands playing great rock music. The original parts were so well recorded that anyone who really appreciates such stellar playing and great sounds should enjoy the new surround imagining as an alternate version of the album. A second disc also gives us the same rich bass sounds and great ensemble playing on twelve alternate versions and outakes, available in both stereo and surround, while a handful of stereo-only original Townshend demos — cough — demonstrate how complete the tracks were in his imagination before he even presented them to the band.

DVD-Audio fans should once again be aware that US Universal release 'Tommy' in that form in a couple of months time. In either format this makes a great package, and an assured first foray into surround work for Townshend - this one should ensure that future Who surround projects are eagerly anticipated. At the present time work is under way on 'Quadrophenia' — regrettably, as mentioned elsewhere in this issue in a letter response, 'Who's Next' is currently stymied by the old 'missing, lost or half-inched roll of multi-track' problem. A great shame indeed...

ELVIS COSTELLO
NORTH
(HYBRID SACD: STEREO AND MULTI-CHANNEL DSD)

For another month, new DVD-Audio releases remain thin on the ground while Universal International continue to release fine SACDs in increasing numbers. However it would appear that there are even some within the fold who remain unconvinced that the time for new formats is now, as despite 'North' being available in SACD form in the US and Europe, Deutsche Grammophon have yet to release it here in the UK. Attempts to elicit an official response as to why this should be have not been successful thus far...

The explanation could be the fact that Elvis's latest offering has not exactly set the world on fire, even among the cognoscenti. I like it, which could be because I am not a great lover of the classic Costello style of vituperative wordplay and tightly energetic rock, and this album has almost nothing to do with that. The DG emblem gives the game away that this is one of the long line of non-rock Costello projects — he has been doing it for so long now
that it is impossible to accuse him of dilettantism.

Last year's chat show circuit saw Elvis explaining how he happened to realise that he had written a song-cycle which took him from the dissolution of one relationship (his marriage to Cait O'Riordan) to the dawn of a new one (his recent liaison with Dana Krall). The result is an album of straightforward lovelorn balladry, with a pleasing arc from melancholy to hope. Beautifully recorded and subtly mixed (for both stereo and surround) by long-time studio partner Kevin Killen, the primarily piano and vocal setting foregrounds Costello's lugubrious baritone, but DSD conveys that frail instrument (and some haunting vibraphone parts) with great realism.

Bonus track 'Impatience' reunites Costello with Attractions drummer Pete Thomas and guitarist Marc Ribot, and highlights how fun surround reworkings of Costello's electric band work could be. If Killen can produce mixes like this I would like to hear his reimaginings of Costello's nineties work, even though I have never been a huge fan. Anyone who is already a fan of this album should definitely seek this SACD out from Europe or the States and upgrade forthwith. However, if you are a DVD Audio fan be advised that US Universal have a DVD-A of North slated as "Coming Soon".

DEPECHE MODE
101
(HYBRID SACD: STEREO AND MULTI-CHANNEL DSD)

It may not be immediately apparent why Mute decided to launch into SACD with this title, but last year's re-release of D.A. Pennebaker's movie of the same name on DVD must have meant that the time was right to remaster the album too. Bizarrely, although I kept up with DM studio albums both before and after the considerable career landmark of 101, I never got the live album or video, so this is a welcome opportunity to see and hear what I missed.

At the time it seemed strange to see the bunch of gangly Basildon teenagers who had gracing TOTP only a handful of years earlier turn into stadium-shagging rock gods. Looking back it seems easier to understand, as from the inter-album singles 'It's Called A Heart' and 'Shake The Disease' through the two albums ('Black Celebration' and 'Music For The Masses') which preceded this one, it is possible to trace both increasing class and increasing rock inflections in the songwriting of Martin Gore. It wasn't until after 101 that Gore added significant guitar and real drums to the mix, but you could see it coming. 101 was recorded at the Pasadena Rosebowl at the end of the US tour Pennebaker followed with his camera. Bereft of the images of white-clad Dave Gahan's gyrations causing teenage screaming, the album still works as a record of the energy the band released onstage and the adulation they received in return.

This double SACD consists of a Simon Heyworth DSD remastering of the original half-inch analogue master for SACD stereo and CD layers, and the results are very pleasing, as DSD seems ideal for conveying the fat synthesised bass and kick drum which characterise so much of this material. The original stereo was also used to create the multi-channel version by treating it with a Z Systems K6 surround processor. This approach is unlikely to generate great results for studio material, but may still be deemed acceptable for live material where a "proscenium arch" approach to 5.1 mixing is most common, with the rears only being used for ambience and audience. Many might prefer to use their own surround processing such as Pro-logic II. Most hearteningly the whispers are that true discrete mixed surround versions of the studio albums are in the pipeline - a prospect which should have all DM fans slavering in anticipation.
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**Buy/Sell**
The best we can do with digital is to give it enormous resolution so that as signals sink in level they don't rise in distortion, an unfortunate phenomenon. Hence the decision to use 24bit resolution which, in theory at least, gives minimal distortion. My measurements show that this is achieved in practice too.

For a start surface noise would take the form of a thin, spitty hiss. Distortion harmonics would seem nastier, likely making the sound more wiry. And there would be less apparent air and space, because strong low frequency noise is the signature of large-space ambience to the brain. For these reasons digital done properly could never sound like LP; the replay processes are so different.

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82 HI-FI WORLD & COMPUTER AUDIO APRIL 2004 www.hi-fiworlcl.co.uk

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When prototype Compact Disc players were first unveiled to the press back in 1982, such a thing as a laser tracked digital disc seemed so esoteric that it was the stuff of science fiction — how possibly could music emanate from a small silver slice of lacquered aluminium? By contrast, plain old black vinyl records seemed so far behind that most commentators, understandably enough, predicted its speedy demise.

I for one was fascinated with CD theory. At the time of its launch, I was working as a contract programmer for Exxon, using machine code and assembly language on the (then) new 16-bit processors in IBM PCs. Digital audio seemed a small step away from my daily travail, and an intriguing one. I soon realised that CD spinners were actually ‘mini music computers’, number crunching data read off their optical disc drive in real time.

Turntables were a very different kettle of fish. Essentially analogue measuring instruments, they possessed none of that sexy ‘high tech’ appeal of their new digital cousins. Simple, fault prone and fiddly with a nineteenth century user interface, was it any wonder that the thrusting, fashion-obsessed world of early eighties Britain simply couldn't be bothered with them anymore?

Ironically, two decades on, producing a CD spinner is not full of mystery and intrigue. Digital disc machines come on silicon chips these days. (Look inside a 1983 Sony CDP-101, jam packed with circuit boards and wires everywhere, and compare that to a 2003 Sony SCD-XA3000ES, which is a model of simplicity.) Chuck in a ‘mech’, a display and a ‘trannie’ and Bob's your uncle...

By contrast, it is vinyl which is now enveloped in myth and magic. Manufacturing turntables is actually a more complex process, as it involves handling materials bigger than chips and circuit boards, machining them — sometimes to incredible tolerances — and doing it day in, day out with a supreme degree of consistency.

We're realising that the process of dragging a tiny lump of coal along a small, bumpy plastic groove is far trickier than it seems. Turntables, tonearms and cartridges require tremendously intricate mechanical engineering (especially the latter two), and are unbelievably time and labour-intensive to make relative to a 24/7 DVD player production plant in Shenzen.

This month's tonearm supertest was a fascinating reminder of this. All the arms involved were quite superb compared to the standards of the nineteen eighties, when vinyl had its last mainstream moment. And so they should be — twenty years of Darwinian natural selection has separated the wheat from the chaff, leaving analogue addicts with a choice of fine, but quite different, sounding products.

The Rega-based Origin Live OL and Silver are now the staple of the modern pickup arm market, and are a dramatic improvement on the original RB300, boasting ease of setup and very high all-round competence. The Linn and SME serve as excellent late eighties reference points — in their respective ways, they still do what they do better than anything else (i.e. tunefulness and analysis respectively). The Hadcock is stunningly underrated in my opinion — its fiddly setup and quaint looks will deter some, but its fluidity will amaze. The Roksan Nima is a thoroughly modern unipivot with an expansive and organic sound, and the only thing to have at £350.

What then of the others we've left out? Well, the first thing many Hi-Fi World readers will be thinking is, 'why didn't you do the Naïve ARO, the Michell TecnoArm (a), the Graham, the Wheaton Tri-Planar, the Rega RB900, the SME309...' Well, we had to draw a line in the sand somewhere — and leave the others for next time!

You might have noticed that while we're fascinated by new digital developments - we take vinyl extremely seriously, and hope to bring you the most thorough coverage of the format possible. Of course, we can't do this all at once, so I'd ask eager vinylphiles to be patient, as we run the gamut of all the goodies on sale, both new and second-hand.

As for digital devotees, we'll still strive to find the most musical MP3, AAC, CD, SACD and DVD-A players around. But don't rule vinyl out as a complimentary source to your CD player. The beauty of vinyl is that you can buy a second-hand Dual CSS05 for £20, spend £20 on a new Audio Technica AT110E and £60 on a Project Phono Box LE — and you've suddenly got access to a massive archive of black plastic, much of which still costs 50p from charity shops. On one hand, we have the majesty of turntables like Musical Fidelity's M1, and on the other you can get going in analogue for under £100 — that's the magic of vinyl!
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I have just emerged from an extraordinary musical experience, which has served to remind me (not that I need reminding, but you might) how very important is the radio in our scheme of things. I have been listening to a performance, the like of which I had never heard before, of the tenth symphony of Shostakovitch. It was broadcast by the BBC on Radio 3, and it was not even a live performance but a recording made in May 2003.

To claim that I had never heard its like before might not in itself convey much, until I explain that I have been very keen on the Shostakovitch Tenth since it was new. When the score was first brought to England in 1954 I recall that a hurried preparation of it was performed in Manchester and broadcast from there. Then Sir Malcolm Sargent (or was he at that time still merely Dr Sargent?), who was very good at swotting up new scores for convincing performance, brought it to the Royal Albert Hall. I made a point of being there, having already recognised in the first movement of the symphony a new paragon of symphonic architecture, and I still remember vividly how moved I was by the whole work.

There are now four different versions (Mravinsky, Ormandy, Svetlanov and Rattle) on my LP shelves. Each differs clearly from the others, but they all have one thing in common, giving emphasis to the sneer anguish that pervades the music. That is what distinguishes them all from the performance I have just heard.

It was given by the BBC Scottish Symphony Orchestra under the direction of Ilan Volkov. Some pretty remarkable things are happening in the supposedly minor orchestras under BBC control, and this is a good example. Whether it be inspired direction or better working conditions I have no idea, but since the coming of young Volkov the orchestra has become really good. I do not believe that it can have anything to do with the ample current supply of highly-trained young musicians now available, but the same thing has happened to the BBC Ulster Orchestra (it seems almost unbelievable that it should have evolved from the old BBC Northern Ireland Light Orchestra) since Thierry Fischer started conducting it — and that orchestra has to its credit a large proportion of long-serving senior players.

What made this Volkov Shostakovitch so wonderful? I do not think he missed giving expression to any of the intense feelings manifest in the music, but he did it with something not hitherto encountered: a kind of restraint or reserve, which allowed the sheer musicality of each line or phrase to emerge, all played with exceptional accuracy and synchronicity because the anguish was not allowed to devolve into mere fury and each of the players could play with a cool head as well as a warm heart.

There was something else. The sound was downright wonderful. As I noted earlier, this was not a live broadcast but a BBC recording, which must mean that something was inevitably lost. What had been gained is a balance that cannot be heard in the concert hall: every section, every instrument of the orchestra could be heard at exactly the right volume for what it was doing. Nothing was swamped or unduly emphasised; this was a rendition more faithful to the music than anything to be heard in any concert hall capable of housing the necessarily large orchestra and an audience large enough to pay for it.

Here once again is proof that the supposed virtues of directly hearing a live performance can be illusory, and that the music can be assimilated better through that weird collection of electrical boxes that we call hi-fi. I am willing to go further: here, however the BBC engineers accomplished it, was sound better than I have ever heard from any CD, ever, and better than from the majority of LPs: when it is done well, the radio really is superb. Let credit be given where credit is due. There are some people in the BBC who deserve eternal damnation for the despicable things that they are doing, especially to Radio 3 but probably (for all I know — I seldom watch) also to television. On the other hand, there are evidently some who manage to evade all that political nonsense and to work quietly and expertly to give us a musical service such as probably cannot be matched anywhere else in the world.

Whatever the virtues of the rest of your apparatus, acquire for yourselves good tuners and antennae, my friends, and enjoy a better life.
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S sometime ago I was offered a free car. Those sceptics amongst us will immediately be thinking what's the catch and so, in truth, did I. It turned out that by offering to drive a car, wrapped in a huge plastic wrapped advert, whilst going about your daily business, the car would be yours gratis. As with most free lunches, nothing ever came of it. So whilst I now believe there is no such thing as a free car, I still believe in the free hi-fi. Such is the strength of some second hand hi-fi equipment that it is possible to buy and sell hi-fi whilst making a minimal loss. If you're lucky you may even make a small gain.

Before I go any further, let me make it quite clear that very, very few people actually make serious money from buying and selling hi-fi. Although there may be no such thing from the Times Rich List, if you want to make a mint then property, fine art, or even cars are still really the way to go. Yet for the budding hi-fi enthusiast whose constantly changing their system, the hi-fi can be far less expensive than other recreations, and may even end up costing nothing at all.

The advent of the internet has brought about an explosion in the second-hand market place of just about all consumer durables. Hi-fi is no exception, and along with the booming traditional outlets of free ads, audio fairs and the classifieds of magazines such as this, auction web sites are really driving the business. Provided you pick carefully, it's quite possible to purchase a piece of hi-fi, use it for a year or two, and then sell it for near enough what you bought it for. Some items of hi-fi have almost become a currency in themselves such is the consistency of demand. Of course, not every piece of hi-fi can guarantee you rock solid residuals, but there are some stalwarts. Ever since I've been into hi-fi, items such as Revox reel to reels, early Linn LP 12s and certain Tannoy dual concentrics have depreciated with a glacial sktchfulness. Had I purchased any of these some 15 years ago, I'd be very surprised if I didn't get at least my money back by selling them today. These days, the number of stalwarts appears to have grown still further. Despite the near invisibility of cassette, Nakamichi decks still command extremely high premiums. Even the now twenty odd year old CR machines are have stiff prices - with even the basic, and not that great, CR1 worth well over £100.

Other solid second hand investments include pretty much anything by SME, Quad's ESL 'speakers and early valve amps, and a good deal of Linn gear too. But one needn't necessarily be looking to spend a substantial amount of money to get your depreciation prove hi-fi. There is some excellent budget hi-fi out there that simply refuses to budge in price. If you want proof of this, then look no further than the NAD 3020 amp' which has hovered around the £60 mark for what seems like time and eternity. Older Arcam Alpha amps, and the budget wonder Pioneer A 400 are also of the same mould. CD players such as the Cambridge CD4 SE still make strong money, and if you fancy a piece of audio history, then an early Philips, Marantz, or Sony with a "1" in the name is, provided the laser is in good shape, a very solid place for your money.

Of course, not everyone wants to buy second-hand, but even brand new equipment can still represent excellent value. My parents always told me to buy antiques because, unlike new furniture, if times were hard one could always sell them and recoup a decent amount of cash. In some respects the same is true of hi-fi separates. Provided you pick carefully and go for discounted, end of line, products, a hi-fi system can prove to be a good investment. The best products to look for tend to be similar the second-hand ones, hence NAD, Cambridge, Naim, Linn and SME are the usual suspects. Also Mission tend to hold their prices extremely well, so much so that a pair of discounted floorstanders can actually rise in value. Recently I've seen a pair of 702's that could have been bought for £120 two years ago, sell for £140. The fact that they were also a pretty decent 'speaker is further icing on the cake, but also the reason why somebody thought they were worth £140 to them in the first place!

Always remember that something is only worth what somebody is prepared to pay for it and, as with art and antiques, one should only really buy what you personally enjoy. The key is to enjoy the hi-fi. The fact that it may make you a little money over time is simply a bonus. Who knows, it might just prove to be invaluable when you can't rent out that buy to let. Happy listening.
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LINKS GALORE
The London Live DIY Hi-Fi Circle is a big site with many pages. Members meet in a convenient pub and discuss ways of improving ordinary hi-fi without spending the much larger sums that would be necessary to replace their kit with top models. There's many home-made designs here, including big power amps and electrostatic speakers, driven directly from the anodes of the valve power amps. Scary stuff.

The Links page is excellent. One takes you to a site with more circuit diagrams, including another phono stage using the OPA637, but with completely different values for the RIAA EQ components.

FROM RUSSIA WITH LOVE
An e-mail from Vladimir in Moscow came with an attached circuit diagram of a power amplifier with no gain. No, this is not an April Fool's Day joke. The circuit is basically an emitter follower (cathode-follower for you valve fans). There are two of these circuits, each being rather more complicated than the simple theory, having as they do several transistors of each polarity. The gain? Ah yes, that is provided by a step-up transformer between the two circuits. With enough voltage gain in the transformer, the amplifier needs no feedback. A very clever design.

There's more interesting stuff on his website - which is partly in English and partly in Russian. The English part warns of copyright, but that does not stop the author from showing the reader several interesting designs. There's a phono stage using a single OPA637B op-amp and, of course, there are several valve amp circuits there too. You knew I was going to say that, didn't you!

DECIBEL DUNGEON
Here's a site that also has many sections to it. From starting in hi-fi, through modifying hi-fi, building hi-fi and upgrades, it also includes hints and tips on installation and various mods and upgrades to specific items of hi-fi kit.

BULL ELECTRICAL
Be careful of the print button at this site, it gave me 17 pages of valves with prices and the ability to add a quantity to the cart. Types include many CV numbers, but mostly don't state the manufacturer. You can get an EF86 for £3.85 but who made it? An EL84 is only £2.74 which might be a bargain, but all valves are described as "generally in original cartons and sold as-is", so caveat emptor rules here. The picture is of a big transmitting valve, made by ITT and yours for just £88.
Mike Ballance warms up his soldering iron and test kit to try out Maplin's 10 LED Stereo VU meter.

Velleman offer a number of kits, including a well-specified FM tuner and even a couple of valve amps, but here we're looking at something rather smaller. Their kits are available in the UK from Maplin, the mail-order company that now has around eighty shops around the country. Guaranteed to be bad for the wallet if you live near one! The Velleman part number for this stereo VU meter kit is K4305. It becomes part number VF91Y in the Maplin catalogue and the cost is £19.99 inc VAT. There is also a mono (single channel) version at £14.99 and a bigger version with 15 LEDs per channel for £29.99.

A neat little addition to any amplifier, or mixing desk for that matter, the unit includes two circuit boards with ten LEDs on each, and the associated circuitry. The industry standard display driver for this type of circuit is the LM3916 (the LM3914 and LM3915 are similar) but it seems they are becoming harder to buy on their own. The circuit is reproduced in the instruction book that comes with the kit. The signal passes through one of two resistors, 47k for the 'low' or higher sensitivity input and 470k for the 'high' or low sensitivity input. After that it passes through an op-amp with diodes in the feedback loop to present a DC output that corresponds to the audio peaks. This signal then supplies the LM3916 display driver chip and then the ten LEDs. There are seven green LEDs, two yellow and one red.

CONSTRUCTION
In addition to the two inputs, there is also a small potentiometer mounted on the board. This can be used to adjust the input sensitivity. With this control in mid-position, an input of 450mV (rms @ 1kHz) or -5dB is needed to switch all ten LEDs on. There is an option for the display to be dot mode or bar mode, meaning that you can either have a single LED glowing at any one time, or a bar which gets longer with more signal strength. This latter is the more usual approach, so I soldered a link in place to achieve this. It's easy - leave out this link if you want the bar mode.

The manual runs to many pages in a small booklet. It starts off with the colour code for resistors, so even if you've never made a kit before, you will find all the information you need here. The next page explains the technique of correct soldering. This is followed by a few pages on which each component is shown. There is a small check box to tick when that component is in place. It's obvious that Velleman have been making kits for a long time - they really have thought of everything. Naturally, special note is made of diodes and electrolytic capacitors, those components which must be inserted the right way round.

When all components are installed, the manual goes on to show how the units can be mounted. The board has two holes for fixing. No mounting kit is included, leaving users to make their own choices in this area. Dimensions are given for a fixing bracket, should you need one.
The descriptions of possible mountings run to several pages. The only criticism I have here is that the adjustment potentiometer will probably be difficult to access once the boards are fixed in place. Setting up is therefore best done before final assembly.

An important requirement is a power supply. You will need a supply of between 10V and 15V DC with a maximum current requirement of 250mA. I used a 12V supply for the measurements given below. Help is to hand here as well, with circuit diagrams of methods of obtaining this supply from the mains. The instruction book explains that you can either use a transformer with two secondaries, two diodes and a 1000mF capacitor, rated at 25V, or a transformer with a single secondary, four diodes (or a bridge diode) and the same capacitor. It's perhaps not as obvious as it should be that you don't need both of these supplies!

The book explains that the 'high' input is for use with speakers and the 'low' input is for use at line level, in other words the output of tuners, CD players, etc. Although it is safe to connect this unit to speaker outputs, you are warned not to connect it to high power car amplifiers as these often use bridged outputs in which neither speaker cable is connected to the car ground. Doing this would short out the amplifier and probably destroy it, so if you intend to use it in a car, do check the type of amplifier very carefully first! It should be safe to use this unit in a home system, even one with bridged amplifiers, since being powered from the mains, it will be safe, just so long as you never connect any part of the display unit to anything else, other than the mains input to the transformer and the audio coupling. Don't try to get the DC supply for this unit from within the amplifier, as the same problems will arise. In fact it is best from an audio point of view to have a completely separate supply, as noise spikes from the display unit could get into the audio system, increasing background noise levels.

**TEST MEASUREMENTS**

The claimed frequency response is 20Hz to 30kHz and this was indeed met, although the unit was -3dB at 20Hz and -1.5dB at 30kHz. What this means is that an extra 3dB of input was needed at 20Hz to get the same display as at 1kHz. This is most unlikely to have any noticeable effect - after all, we're not listening to these units! The maximum sensitivity available was 130mV, or -13dB, for all the green LEDs to be illuminated. This figure increased to 220mV, or -11dB, for all ten LEDs to be on. Considering that a CD player has an absolute maximum output of 2V (ie, 2000mV) this is much more than adequate, giving a very wide range of adjustment in use. A small quibble - the instruction book claims, under "indication range" that 0dB = 0.775mV rms. Ahem. Actually 0dB is 0.775V, or 775mV - only a typo, but don't let it confuse you.

**IN USE**

Like all good meters for audio work, this display has a fast attack and slow decay. In other words when a peak of sound comes along, the meter responds quickly. However the lights don't extinguish as quickly for two good reasons. The first is you might not notice a very quick flash, or the diode might not respond to one, and the second is that in music some sort of averaging is more helpful in determining sound levels. All things considered this is an excellent little addition to any hi-fi system, tape recorder or mixing desk for recording use.
It can be tough if you play records. Some wonder if you’re so poor that you have to buy old cast off LP’s. Others think you must have a hearing problem. As for saying you’re into vinyl, well this can get you into a lot of trouble as most people won’t realise you are talking about records!

Once those shiny bird scarers, normally known as CD’s had established themselves it was clear that an outboard phono stage was the way to go. Trying to combine a good amp with a good phono stage was bound to reduce one’s options. Enter the Linsley Hood designed phono stage. John Linsley Hood designed various hi-fi circuits and has often been published in the sober but exalted journal, Wireless World. John’s designs are very much an engineer’s, there are no boutique or voodoo components but nonetheless where there are good measurable reasons for using an advanced component, this is advocated. A current designer of a similar ilk is Bruce Rozenblit, though what John Linsley Hood would have to say about Bruce’s use of valves instead of much more ‘sensible’ silicon, I can only imagine.

JLH designed this phono stage using discrete components, not an opamp to be seen as for casework, it’s available in one or two-box setups. It’s over ten years since I built this phono stage so why am I writing about it now? Most importantly it is still available today, a good sign so it’s still a current product. It has seen me through a considerable upgrading of my record playing equipment. The fact that I’ve always been able to hear the improvements from my newer equipment suggests the phono stage is not holding me back.

When I built the kit I was using a Systemdek/Linn LVX with a Linn K9 MM cartridge. I originally road tested the phono stage with a much better deck an cartridge using Naim amplification and was not disappointed. I have now progressed to a Michell Gyro SE with Orbe platter, HR power supply and

**Ortofon Kontrapunkt B MC cartridge.** The arm is a new acquisition, Michell’s latest TecnoArm(a), it sounds every bit as good as it looks, it not better. The Williams Hart phono stage still delivers, letting me appreciate the front-end improvements I have made. This demonstrates that it must be doing something right.

Surely the technology has developed over recent years? In fact Williams Hart have needed to make only minor changes to the kit. The transistors have been replaced by new versions but these are to all intents and purposes the same as the originals. The other changes comprise lower ESR electrolytic capacitors along with improved regulators. I decided to upgrade my phono stage with the latest capacitors and regulators to bring it up to what is pretty much the latest spec. The first few hours of use were a very graphic example of how

---

**Internal view of assembled kit.**

**Power supply section as supplied.**
Phono section, as supplied.
much components develop as they burn-in. At first I thought I’d made a dreadful mistake. This turned out not to be the case.
The kit comprises two pcb’s, black painted aluminium casework and all the components you need. The resistors are metal film, non-polarised capacitors are polycarbonate, the power transformer is thoughtfully a fully shielded affair. There are two 15 volt regulators in the power supply and two 5 volt regulators for the front end of the phono circuit. The regulators are of the 78xx, 79xx variety. The power supply board has a ground lift option via a movable internal link. MM and MC sensitivity is set by flicking a toggle switch. There are AC and DC inputs, AC is for MM cartridges where you might be concerned to block some dc voltage. The DC input does not have this extra dc blocking capacitor and typically sounds better, use it if you can.
The Williams Hart phono stage is a little unusual in that it uses shunt feedback, not the more normal series feedback. The justification is that it is said this circuit topology exhibits a much higher overload characteristic. So what are the specs? MM input sensitivity is 3.7mV and MC is 0.34mV, gain being 134 and 1460 times respectively. Overload margins already said that this phono stage has seen me through significant record deck upgrades. This suggests that resolution is good; otherwise I wouldn’t have heard the benefits of my upgrades. Bass can only be described as deep and tight. There is very good clarity and there is no hint of harshness, maybe this is the payoff from the high overload margin. Fine nuances are easily heard; it’s crisp but smooth and detailed. I would describe soundstaging as good, perhaps imaging is not as strong but still respectable. To achieve excellence in imaging and impressive atmosphere you might need to consider a valve phono stage. Then again you might find there are compromises between clarity, detail and atmosphere.

Overall I would say that the Williams Hart is an exemplar of how good design triumphs over the use of exotic components in poorer designs. There is of course scope for experimentation, you could try polypropylene or paper-in-oil coupling capacitors according to your preference. The single box version gives more space for such tweaking. Replacing the electrolytics with Black Gates should be a considerable improvement but at some considerable cost. Schottky diodes in the power supply would be worth a try and finally some really good voltage regulators, sometimes referred to as super-regulators could potentially be big win. Such a fully tricked-up version would be interesting to hear. Clearly the costs involved would be high. I reckon the design justifies this, mind you the version I have is really very good indeed and is without question very good value. In fact it’s so good I’m intrigued to understand just how high-end this design can be made.

Ultimately £250 for a phono kit that delivers such good sonics can only be described as a bargain.
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The latest offering to emerge from the vinyl gurus at Origin Live (http://www.originlive.com) is a top-of-the-range power supply to power their improved DC turntable motor that I have reviewed previously. Modestly titled the Ultra Turntable Power Supply, this builds on the success of their Advanced Power Supply as a ‘no expense spared’ design using the latest and best components currently available.

As with Origin’s Advanced model, the Ultra is supplied as a kit that includes the DC motor and standard mains transformer, but with an enhanced price tag of £570 that reflects the design principles of this unit.

Obviously, the Ultra can cope with changes in input voltage from the mains, as well as the back EMF from the motor itself, which is used to control speed accurately. This minimises wow and flutter—a problem not just confined to tape transport mechanisms. As with the Advanced model, the Ultra incorporates a load compensating design that can compensate for the increased load on the motor caused by stylus drag.

However, the Ultra design incorporates features that compensate for the momentary slowing of the motor under sudden changes in load during, say, loud bursts of music. Although this effect is very small, the cartridge can amplify this effect 100,000 times resulting in, according to Origin’s literature, a loss of dynamic impact, particularly in the bass region. The circuit makes use of low impedance, low leakage capacitors, high power diodes and paralleled and closely matched transistors. All this technology is encased in a sleek, black case and finished off with a blue LED power indicator.

An upgraded transformer is also available for an additional £160 and this is also reviewed here to compare it with the standard offering that comes with the kit. The question is: can a power supply costing in excess of £700 for a turntable really be worth the expense, or would the money be better spent elsewhere in the audio chain?

The kit is supplied with detailed instructions on how to upgrade virtually any turntable, with a separate section on upgrading the Linn LP12. It also includes some washers and screws, a 2mm Allen key for use with Linn turntables, and a ‘cut out and keep’ strobe disc, with the centre hole pre-punched, for setting the motor speed.

I had already built an Advanced power supply into my turntable plinth (the subject of a previous article). The Ultra PSU and the associated mains transformers are housed in totally separate enclosures with the only connection to the deck itself being the output DC feed to the motor. This afforded me the opportunity to rapidly switch between supplies by rigging up a temporary switch on my turntable to connect the motor to either the existing internal supply or the new Ultra external unit.

As I had both the standard and the upgraded transformers available, I was also able to quickly switch between these units by plugging the appropriate transformer into the socket on the rear of the Ultra unit.

The Ultra has a 3-position switch on the front to select Off, 33 and 45 rpm speeds. The unit is designed to be powered continuously from the transformer and therefore the attractive blue LED remains lit, even when the motor is switched off. The actual speeds are set via 2 potentiometers accessed via a small hole drilled into the underside of the unit. The 45 rpm position can be set to provide 78 rpm by appropriate adjustment of the potentiometer if desired, although I would not be tempted to let your prize Hi-Fi cartridge anywhere near a 78!

Incidentally, while I had the unit upside down ready to set the motor speeds, I couldn’t resist peering inside to see what components had been used. I was very pleased to see a large Rubycon electrolytic nesting at the far end of the circuit board. As a convert to the delights of Rubycon Black Gates in my amplifiers, I was fully aware of the range of capacitors they manufacture specifically for use in high performance power supplies. When I discussed this with Origin Live, they told me that they had based their choice of the Rubycon on the fact that they simply sounded the best from their trials, rather than other factors. What better reason could there be for their selection?

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hours, according to the instructions, and about 8 hours of running to sound its best. However, I would recommend leaving it running for at least 24 hours — all of us who have installed Black Gates in our amplifiers will be familiar with them suddenly ‘popping’ into sounding good after a few hours of sounding rather flat and I didn’t want to take any chances with the Ultra. Setting the speed is simply a matter of illuminating the strobe disc from a mains powered light source, preferably flourescent, and turning the appropriate potentiometer until the correct ring of lines on the strobe disc appears stationary. This should be carried out while playing a record at about half way in to allow for stylus drag. To put all this in perspective, speed variations on most decks is around plus or minus 2% and the Advanced supply provides 0.3%, but the Ultra offers accuracy of about 0.1%.

With the new unit properly calibrated, it was time to conduct the all-important listening trials. Would there be any discernible difference between the supplies and, more importantly, would the Ultra actually sound better?

I started off by installing a copy of “Lincoln Mayorga & Distinguished Colleagues — Volume III”, Sheffield Labs SL5/SL6, on the turntable. This is a ‘direct to disc’ recording and is the closest one can get to a live recording as the disc was cut directly during the recording session in November 1973. When switching between my original Advanced power supply and the Ultra, it was immediately apparent that the imaging and accuracy of placement of the instruments was significantly better with the Ultra. Staying with the Ultra and plugging in the upgraded transformer resulted in a further tightening of the bass. What was particularly surprising was that the percussion was also clearer with the upgraded transformer. The first track on side 2, “You are the Sunshine of my Life”, positively sparkled and reverting to the standard supply for a turntable motor should have such an effect on sound quality. The Ultra is able to respond rapidly to sudden changes in load caused by increased stylus drag on load passages and thereby keeping the record speed constant. This, in theory, will result in more accurate timing of the various components of the signal from the cartridge, with a consequential reduction of errors, leading to more accurate reproduction. The importance of longer-term speed stability (although I am still referring to fractions of a second) should not be overlooked as this minimises wow and flutter, which will clearly have a beneficial effect on bass response. Given all the amplification of these errors from stylus tip to loudspeaker cone, it is therefore very understandable that minimising these could result in the improvements that were heard.

Having finished the listening tests, it was time to remove the original power supply from my deck and complete the conversion to the Ultra external power supply. One of the holes on the plinths that accommodated the original speed control switch was put to good use and I fitted a spindle adaptor for large centre 45s that had been lying around in my Hi-Fi drawer for many years. The remaining holes were blanked off with squares of black plastic that I rebated into the wood beneath the metal cover.

To summarise, this power supply offers a performance that easily rivals top-flight power supplies from other manufacturers costing twice as much. To put this into context, you may spend considerably more on a cartridge, but risk ‘cramping its style’ by ignoring the record transports. If you want to get the best from your vinyl collection, you should not overlook the importance of the turntable motor and power supply. Incredible as it may seem, it really does make a very noticeable difference. Go for it!
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Signature True SubWoofers 13 inch cube True Sub MKIV 11 inch cube and Junior Sub Woofer 9 inch cube - all with two drivers, to as low as 16hz, 116 SPL and 360 cu ins of air movement, 1200 or 2700 watt patented amp technology. Solid state power amps 2 channel (2 x 300 and 2 x 600) and 5 channel (5 x 220 watts and 5 x 430 watts patented amp technology (no heat sinks), Classic tube preamp and Theatre Grand Ill processor preamp.
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Telephone: 01270 214143

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Good sound isn't necessarily good music, but hook your favourite speakers to this beautiful hybrid integrated and you'll feel instantly connected to your music - and probably lose that unsettled urge to upgrade. There's also a phone box option!

COPLAND CDA822

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WANTED Vintage and modern hi-fi eqpt. Part exchange welcome.

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Quad ESL57 speakers. Fully rebuilt by One Thing Audio. Black finish in 5 star review in Hi-Fi World.

Other Items

NEW - B&W DA10 Electrostatic panels now undertaken. Price for one panel is £150.00 Recordconditioned (Quad ESL57 speakers from only £90.00) Have your ESL57 speakers standard cable? £375.00, Ring for info. Excl. recen ESL57 bass panel £130.00. Bilet £60.00. ESL57/ESL5 speaker stands, available in black or woodgrain £175.00 a pair.

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New socks for ESL63s £38 pr. Many other spare parts available. Please ring.

Clients made sound is very much what we are about. See the reviews on our site: http://classiquesounds.co.uk

One Thing stereo decoder (back in stock) £175.00 Ex review Hi-Fi World.

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Our agencies include: Krell. Sonus faber, Martin Logan. Copland, Transparent and finite-elemente

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Taunton: 01460 54322
e-mail: briarriv@mac.com

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Sonus faber Signum
Sonus faber Grande Piano Home
Transparent XL cables

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£1350
£POA

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X-Demo & Second Hand Items - April 2004

CD players DACs & Transports

<table>
<thead>
<tr>
<th>Model</th>
<th>Was</th>
<th>Now</th>
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<tbody>
<tr>
<td>Argento  Copper 1m RCA- RCA new&amp;boxed</td>
<td>1200</td>
<td>699</td>
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<tr>
<td>Cogan Hall EM- D 0.6m S/H</td>
<td>3499</td>
<td>1795</td>
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<tr>
<td>Audio Research CD2 S/H</td>
<td>4999</td>
<td>4249</td>
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<tr>
<td>Audio Research CD3 x-demo</td>
<td>8500</td>
<td>3999</td>
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<tr>
<td>dCS Elgar 24/192 Non Firewire S/H</td>
<td>3299</td>
<td>1695</td>
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<tr>
<td>dCS Purcell Upsampler Non Firewire S/H</td>
<td>3999</td>
<td>3250</td>
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<tr>
<td>Krell KA/280CD x-demo</td>
<td>7495</td>
<td>4995</td>
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<tr>
<td>Mark Levinson No 390 x-demo</td>
<td>2000</td>
<td>1199</td>
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<tr>
<td>Musical Fidelity Pre 24 CP Player S/H</td>
<td>1989</td>
<td>995</td>
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<td>Naim CD2 Player S/H</td>
<td>3499</td>
<td>1995</td>
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<td>Theta Carmen CD/VD Transport S/H</td>
<td>2397</td>
<td>995</td>
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<td>Theta Data Basic Transport S/H</td>
<td>6290</td>
<td>2799</td>
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<td>Thule Spirit CD balanced O/P x-demo</td>
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<td>Wadia E30 CD Player S/H</td>
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<tr>
<td>Wadia 301 CD Player S/H</td>
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Tuntables Tonearms & Cartridges

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<tr>
<td>Densen DP0 2 MC Phono Stage S/H</td>
<td>499</td>
<td>275</td>
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<td>Gryphon Legato SAP Phono Stage x-demo</td>
<td>7895</td>
<td>5999</td>
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<tr>
<td>Kuzma Stab/Stop Turntable New&amp;Boxed</td>
<td>1295</td>
<td>1099</td>
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<tr>
<td>Lehmann Audio Black Cube SE New&amp;Boxed</td>
<td>650</td>
<td>449</td>
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<td>Michell Gyro SE DC Turntable S/H</td>
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<td>McCormack Phono Stage New and Boxed</td>
<td>650</td>
<td>399</td>
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<td>Rega RB900 &quot;origin live&quot; Tonearm S/H</td>
<td>460</td>
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<tr>
<td>Roksan Arterexxes X MCM/MM Phono Stage S/H</td>
<td>450</td>
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<td>Roksan Cognoscenti Xentex Piano lacquer (Il)</td>
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<td>799</td>
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<tr>
<td>Well Tempered Ref/Reference Arm &quot;Fountainhead&quot; S/H</td>
<td>6500</td>
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Preamplifiers

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<tr>
<td>Conrad Johnson Premier 16 &quot;Mini Art&quot; S/H</td>
<td>8000</td>
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<tr>
<td>Electrocompaniet EC 4 7 Preamplifier x-demo</td>
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<td>Gryphon Sonata Allegro 2 box preamplifier x-demo</td>
<td>9739</td>
<td>5996</td>
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<td>Naim Audio NAC532 (old style) with phono stage S/H</td>
<td>N/A</td>
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<td>Naim 72 k Preamplifier S/H</td>
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<td>Roksan L2 preamplifier S/H</td>
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<td>Spectral DMC12 Line New&amp;Boxed</td>
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<td>Spectral DMC12 Phono x-demo</td>
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Amplifiers

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<td>Audio Research D100 2.0 x-demo</td>
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<td>Cyrus Straightline Amplifier S/H</td>
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<td>Denon AVCA10SE Amplifier/Processor DTS/7.1 S/H</td>
<td>1800</td>
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<td>Graaf GM100 Valve Power Amplifier x-demo</td>
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<td>Gryphon S100 Class A power amplifier S/H</td>
<td>6000</td>
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<td>Gryphon Calisto 2200 integrated S/H</td>
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<td>Linn LK 140 power amplifier S/H</td>
<td>799</td>
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<td>Naim Audio NAP140 (old style) power amplifier S/H</td>
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<td>Naim Audio NAP180 S/H</td>
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<td>599</td>
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<td>Spectral DMA100s Power Amplifier x-demo</td>
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Loudspeakers

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<tr>
<td>Avalon Eclipse Maple x-demo</td>
<td>9800</td>
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<td>Definitive Technologies 2002 Centre S/H</td>
<td>599</td>
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<td>Indigo Model Two Centre Centre Cherry S/H</td>
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<td>JM Lab Micro Utopia be Classic 6 months old x/demo</td>
<td>4300</td>
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<tr>
<td>Living Voice Avatars OBX-R Ebony x-demo</td>
<td>4000</td>
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<td>Martin Logan CLSIII Anniversary Electrostatics 7 months Old S/H</td>
<td>6700</td>
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<td>ProAc Response 15C Cherry S/H</td>
<td>1299</td>
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<td>Sonus R4 Stands S/H</td>
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<td>Verity Audio Fidelio Piano Lacquer x-demo</td>
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Cables & Accessories

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<tr>
<td>Acoustic Zen Silver Signature Balanced 12th S/H</td>
<td>2700</td>
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<td>Argento Copper 1m RCA- RCA new&amp;boxed</td>
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<td>Cardas Neutral Reference 1m RCA-BNC S/H</td>
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<td>Cogan Hall EM-0.6 9mm</td>
<td>199</td>
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<td>Finite Elemente HD02 MR 3 Tier Reference Table S/H</td>
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<td>Madrigal CZ Gel 1.5m Balanced new&amp;boxed</td>
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<td>299</td>
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<td>Madrigal MDC Typo 1m AES/EBU</td>
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<td>Digital cable new&amp;boxed</td>
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<tr>
<td>Madrigal MDC 2.1m Fatboy Digital cable new&amp;boxed</td>
<td>279</td>
<td>139</td>
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</table>

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Spectral Audio  Sonus Faber
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This months Delights

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Apogee Duettas mk2 (brand new custom finish,ring) £2995
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Conrad Johnson PVS valve preamp £595
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Counterpoint DA11E cd transport (phils cdmf) £495
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Meridian 601 dac/preamplifier (£2770) £695
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Krell 300i integrated amp £1295

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Muskelaule Trivista CD mint £2995 SH
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Krell 200i amplifier £1395 SH
Audio Analogue Master CD £895 SH
Martin Logan SL3 speakers £7995 SH
NAIM CD5 CD player ex dem £9250 XD
NAIM NAIT 5 £650 XD
GM Audio BCD table half price £675 XD
Conrad Johnson PVIOB preamp £P.O.A.
Naim NAP500 power amp £9295 XD
Krell FP8000 power amp £3995 SH
Audio Physic Calderas £P.O.A.
Transparents Reference XL 20th bal interconnect £17500 SH
Krell KAV3001. £2295 XD
Sim 2 HT3000 projector ex dem £3995 XD
Krell FP8000C power amp £3995 SH
Martin Logan CLES17 mint £P.O.A.
Tag McLaren T32I2 tuner with DAC module £1495 XD
Tag McLaren DVD32R DVD player ex dem £3995 XD
Denon DV5000 DVD player £E. 695 SH
Onkyo TX DS 989 AV amplifier £1295 SH
Krell FP8000 £6995 SH
Wilsons Symph T1 Ferrari Grey £9995 SH
Krell 250p preamplifier £995 SH
dCS Delius £2995 XD
Martin Logan Aeon ex dem £2295 XD
Graaf 13.5 preamplifier £1695 SH
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SH - Second Hand XD - EX Demonstration

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WEBSITE: www.oxfordaudio.co.uk
I referred last time to the superb little Alon Napoleon speakers which with their Thunderbolt subwoofer make a great full range speaker setup for £2.4k. Add the AVI laboratory integrated amp (£1400) and matching CD player (£1200), and few systems will match it. Obviously the various AVI speakers will also sound great, but they don’t have a subwoofer and will be more difficult to match. However if you want to hear the difference do ring for a unique demo.

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- **ALON LOTUS (FOR VALVE AMPS) SPEAKERS** £1200
- **RUARK SOLISTICE SPEAKERS (OAK-£4.4K)** £2000
- **ELECTROCOMPAET EC4.7 PSE + AW60 POWER** £1800
- **IAS BEAULIEU SPEAKERS (BEST WITH VALVE AMPS)** £500
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**V’audio** Hi-Fi Consultants
36 Druid Hill, Stoke Bishop, Bristol BS9 1EJ
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Aimee Mann - *Lost In Space* (Mol Fid) £TBC
Caravan - *Unauthorized Breakfast* £15.90
Einar Om - *Bank* (Double 10") £10.90
Electrelane - *Franz Ferdinand* £13.90
Joss Stone - *The Soul Sessions* £15.90
Lambchop - *Aw C'Mon/No You C'Mon* £16.90
Mountain Goats - *We Shall All Be Healed* £13.90
Oneida - *Secret Wars* £11.90
Red Hot Chili Peppers - *Greatest Hits* £29.90
Scissor Sisters - *Scissor Sisters* £12.90
Sia (Zero 7) - *Colour The Small One* £15.90
Snow Patrol - *Final Straw* £12.90
Stereolab - *Margarine Eclipse* £15.90
Terry Hall & Mushitaq - *The Hour Of Two Lights* £13.90
Various - *Talkin Loud 1990 - 1994* £17.90
Von Bondies - *Pawn Shop Heart* £15.90

**ALBUM OF THE MONTH:**

NORAH JONES "Feels Like Home" £18.90

Ld vinyl pressing from EMI

**NEW REISSUES:**

Aaron Neville - *Warm Your Heart (Classic)* £TBC
Birmingham Sunday - *A Message From (Akarma)* £15.90
Bob Dylan - *Bob Dylan (Sundazed Mono)* £16.90
C.S.N.Y - *Déjà Vu (Classic Records)* £26.90
Cedric Im Brooks - *And The Light Of Saba* £13.90
Duke Ellington - *1st Time (Count Meets Duke)* £TBC
Fred Neil - *Everybody's Talkin* £10.90
Henry Mancini - *Music From Peter Gunn* £19.90
Isaac Hayes - *Hot Buttered Soul* £TBC
John Lennon - *Imagine (Mobile Fidelity)* £TBC
Jonathan Richmon - *Best Of Modern Lovers* £17.90
Locomotive - *We Are Everything You See* £15.90
Peter Gabriel - *Plays Live (Classic Records)* £TBC
Pretty Things - *SF Sorrow* £15.90
Yardbirds - *Live Blues Wailing (1964)* £16.90

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<thead>
<tr>
<th>Item Description</th>
<th>Original Price</th>
<th>Sale Price</th>
<th>Category</th>
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<td>KRELL KAV 500i Int Amp</td>
<td>£4,995.00</td>
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<td>MERIDIAN 598 DVD Player smartlink (as new)</td>
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<td>£300.00</td>
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<td>MISSION 780 AS Active sub (new)</td>
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<td>MISSION 773 E (new)</td>
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<tr>
<td>DOROTHEE Valve system (amp &amp; speakers)</td>
<td>£10,000.00</td>
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HERTFORDSHIRE/NORTH LONDON Audio/Record Fair. Sunday 25th April 2004. 11.00 to 4.00. £3.90am early entry £10. At Cuffley Hall, Maynard Place, Cuffley, Herts. 5 minutes from M25 Junction 25. Tel: 07944 909 209 for details (Apr(I)

DALI ROYAL Menuet II boxed immaculate £199. ( £399). Dali SC5 centre £75 ( £150 ). ATC SCM10 walnut £275 some marks. NAD T770 boxed, immaculate ( £699 ) £150. Audio Research LS2 balanced preamp. immaculate, complete with box and instructions, £1395. Buddam@screaming.net (Apr(I)

TANNOY AMESBURY (pair). 152 HPD. Big and go deep. £475. Sony FM stereo tuner. £275 some marks. NAD T770 boxed, immaculate ( £699 ) £150. Two pairs Menuets available. Tel: 020 7237 4475 (Apr(I)

MISSION 78DS dipolar surround speakers, black ash finish, bi-wireable, mint condition, boxed £175 including delivery within the UK. Contact: magurry@supanet.com (Apr(I)

VADIS OUTPUT transformerless power amplifier, excellent condition, new valves, super quiet, lovely sound. Upgrading again. £1300 ono. Tel: 01208 872 316 (May(I)


LINN LK140 £425. Kollector £275, Keilidh (walnut) £375. All new in 2000, as new condition. Tel: 01322 436 097 or 07802 265 786 (North Kent) (Apr(I)

HEYBOURB HB100s £60, stands £30, Leak Troughline 3 Stereo £85, Leak Varsilope III £30, Leak Mono pre-amp £30, Leak Point One Plus £30. Tel: 01322 436 097 or 07802 265 786 (North Kent) (Apr(I)

MISSION 753 floorstanding loudspeakers in rosewood finish, excellent sound, original packing. Can demonstrate. £325. Tel: 01308 459 443 or Email: mikehounsell@compuserve.com (Dorset) (Apr(I)

INCATECH CLAYMORE integrated with VG phono £130. Faulty Nakamichi BX-1 (No FFwrd or reverse but plays and records fine!) Offers. Tel: Adrian 020 8699 3252 or Email: buddam@screaming.net (Apr(I)

THORENS TD160, Ortofon M20 Super cartridge. Thorens plinth and cover including manuals, in very good original condition £120. Tel: 01273 307 995 (Brighton) (Apr(I)

CAMBRIDGE AUDIO amplifiers. C70 preamp. Two A70 power amps. Used as monoblocks. 90wpc, vgc, excellent sound. £250 ono. 0114 234 4200 (Sheffield) (Apr(I)

QUAD 33/303 pre and power amps, FM3 tuner, excellent condition, original boxes, manuals. £200. Tel: 01953 601 939 evenings (Norfolk) (Apr(I)


AUDIHO INNOVATIONS Series 1000 monoblocks, new Billingtont Gold tubes. Requires attention, boxed, £500. Linn Kain preamp+phono, boxed, £500 Ruark Accolade loudspeakers, £500. Tel: 0117 909 6025 (Bristol) (Apr(I)

SPENDOR SP2/3E rosewood, mint, boxed, hardly used, £850. Quad ESL57’s, black pair, £375. Lumley ReF21 monoblocks, triode switchable, mint, boxed, reva1ed, £1100. Tel: 0113 257 7793 (Apr(I)

KRELL KSA 80B power amplifier, immaculate, complete with box and instructions, £1395. Audio Research LS5 balanced pre-amp, excellent condition, box and instructions, £795. Tel: 07973 242 975 or Email: hi@fibr@hotmail.com (Eastbourne, East Sussex) (Apr(I)

COPLAND CTA 505 power amp, new, matched 6550C’s and input valves. Triode mode. Spare 6550B’s. Fully serviced 2003. Mint (25kg!) condition, boxed, £1000 ono. Tel: Chris 020 8543 5531 evenings (Apr(I)

RB300 INCOGNITO rewired tonearm, four stainless steel sparcing washers, spanner, with all setting up instructions, vgc, £180. Tel: 01646 456 228 anytime (Cleveland) (Apr(I)

NAIM AUDIO CD3S £500. NAC102/NAP3 £800. Flatcap x3 £150ea. HiCap £350. NAP135 x2 £400pr. Headline £200. Credo’s (cherry) £650. Mana Sound Frame £130. All boxed, excellent condition. Tel: 01934 511 803 (Apr(I)

FURUTECH FP202 angled locking banana plugs. Rhodium plated, screw fixing - no solder. 3 sets of 4. Mint. Superb. £24 (£50) per set. Tel: 01752 773 369 (Apr(I)

YAMAHA NS1000-M, Orbe DC-NC, boxed. Garrard 301, SME 3009-imp, mint condition. Thornes TD-124, SME 3012-R. excellent. Orpheus Delphi- Mk1, good condition. Rega RB-300, ESL-57. Audio Research VT100. Thorens TD166-VI. Tel: 0117 955 6555 or 07979 514 450 (Apr(I)

NAIM CDX £1300. Naim 82 £1200. Naim 180 £600. Naim Hi-Cap £300. PMC OBI speakers £2000. All in mint condition with manuals and boxes, leads etc. Tel: 020 8270 9393 (Apr(I)

TANNOY EDINBURGH Prestige loudspeakers, 40" x 26" x 18" Large. Big, bold, dynamic plus crafted cabinets. Expanding family forces reluctant sale. Happy to demo. Looking for 2K. Tel: 01245 251 235 (Apr(I)

LOUDSPEAKERS FOR discerning listeners. Two pair D'Appolito Configuration £200, pair large floorstanders £300. Recently built and custom designed. Superior to comparable mass produced and kit products. Seriously good! Tel: 01943 468 835 (West Yorks) (Apr(I)

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"I have to say the Rega modifications turn this
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Rega. Instead, tonal colour is fresh, dynamics have great speed and impact, and the sound
stage is huge."

Hi-Fi World on structural modification

What Hi-Fi? gave this modification 5/5

"It's value is nothing short of tremendous."
Listener Magazine

"...if you are thinking of upgrading your system...
the OL DC Motor Kit should be high on your list for
discretionary spending."
Common Ground Magazine

"...as a drop in replacement for almost all
turntables, the OL upgrade DC motor kit offers vast
cost at a level exceeding that of arms costing over £1500!! High
performance reversion with high grade k7 wire is also
offered at an additional £70 and external rewiring
is also £70 further increasing the performance.

"I can have say the Rega modifications turn this
turntable arm into a real giant. Gone is the rather grey, sterile sound of the cooking
Rega. Instead, tonal colour is fresh, dynamics have great speed and impact, and the sound
stage is huge."

Hi-Fi World on structural modification

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discretionary spending."
Common Ground Magazine

"...if you are thinking of upgrading your system...
the OL DC Motor Kit should be high on your list for
discretionary spending."
Common Ground Magazine
TANNOY T225 loudspeakers, 10" dual concentric, glass tops, fine example of Tannoy engineering. Max spl 111dB. So possible studio/home use. Good condition. £250. Tel: 01245 251 235 (Apr/I)

MCINTOSH 6450 integrated amp, 3 years old, mint condition, boxed (£2250) £1200. Rega Radio, mint, boxed, 3 years old (£300) £150. Tel: 0117 305 2563 (work), 07974 176 634 (mobile) or Email: Ray.hamilton@kone.com (Apr/I)

MUSICAL FIDELITY XP100. Bought April '02. Occasional use. Excellent condition, virtually half price £175. Boxed as bought. Pay transit cost for sending this preamp. No time wasters please. Tel: 024 764 16979 (Apr)


NORDOST VALHALLA interconnect, 1m, phono terminated. Asking £1400, JPS, Superconductor+ wire, 5 foot pair with gold w.b. banana locking plugs. Asking £550. Tel: 01296 437 314 (Aylesbury, Bucks) (Apr/I)

QUAD ESL 63 plus stand and deliver exists £799. Quad 606 Mark I £325, Rel Strata III £299. Croft Supremicro upgraded to Epoch £299. Meridian DAC 203 £90. Tel: 01706 351 962 (Apr/I)

ACTIVE LINN System. 6 years old, as new condition. Kari, Numeric, Wacoola with Sneaky tuner, 3x KL100 power amps, Keelidhs on granite base. £4000. Tel: 01305 776 932 or Email: c.cooknell@tiscali.co.uk (Weymouth) (Apr/I)

A.VI. SERIES 21 MC4 Reference CD player, boxed, mint condition, only 2 years old. No remote. £450. No offers. Tel: 01502 518 938 (Apr/I)

CLASSIC ACTIVE system. Nytech CTA 252 XD, MM phono. Spare CTA 252 XD MC phono. Active CXA 252 XD. Arc 101 speakers. All boxed. £199. Tel: 01474 702 939 (Darford) (Apr/I)

A AND R (ARCAM) SA 200, 100 watt amplifiers. 3no, two bridged £100 each. C200 pre- amplifier £75. Minim AD10 ambisonic decoder £100. Tel: 01642 559 078 (Stockton) (Apr/I)

QUAD ESL63, brown, excellent condition £1150 ono. Upgraded to 988. Also JBL 4311 Control monitors, walnut, fair condition £250 ono. Plus Target spiked stands £25. Tel: 07970 575 547 or 01525 371 730 evenings (Apr/I)


NOTTINGHAM ANNALOG turntable, 12" Anna arm, Tracer 4 cartridge. PSU, £3200. Croft Absolute pre-amp £1500. Posselt Albatros loudspeakers £1300. All mint condition. Tel: 01604 404 499 (Northampton) (May/i)

FOR SALE Kef 107/2 speakers in walnut, excellent/mint condition with boxes, manuals and Kube equaliser, £1100 ono. Wanted: Kingston speakers. Tel: 020 7480 7964 or 07932 633 335 or Email: thevvaldons01@tiscali.co.uk (Midlands) (Apr/I)

LOWTHER ACOUSTAS with remounted PM6A drivers, original plywood cabinets, sound but scruffy. Non-matching pair. £185 ono. Tel: 020 8677 8183 (Apr/I)

MICHEL ORBE full size QC. Black clear silver. As new, boxed, instructions. Upgrading. £925 ono. Tel: 07958 944 424 (Cleveland) (Apr/I)


TAG MCLAREN DPA 32 R and A preamp with DAB (£2500) £1400 ono. G.Tee Oct 05. Myrrad MP100 pre £250. Musical Fidelity A300cr power- amp (£2300) £1150. Audiolab 8000 DAC £220. All mint with boxes. Tel: 0121 742 1270 (Apr/I)

MUSICAL FIDELITY A1 amplifier £125. NVA A80 monoblocks £300. Infinity Numerik, Vakonda with Classic PowerKord with Wattgate 320 IEI plug £45 ono. Yello power cable £17 ono. Tel: George 01262 606 089 or 07890 933 787 (East Yorkshire) (Apr/I)

KIMBER SPEAKER cable 4TC 4.5 metres £140 ono. Kimber Classic PowerKord with Wattgate 320 IEC plug £45 ono. Yello power cable £17 ono. Tel: George 01262 606 089 or 07890 933 787 (East Yorkshire) (Apr/I)

NAIM CDX, 18 months old, mint condition, box, manual, remote, £1650. Naim 282 pre, 3 months old & new Hi Cap 9 months £2800. Naim 250 £800. Arcam DAB 10 £320. Contact Richard 079756 594 104 or Email: richard.jones87@ntlworld.com (London) (Apr/I)

NAIM CDS II/XPS Flash R/C, immaculate, low usage, boxed, can dem, £2900. Tel: 020 553 1121 or Email: r.p.stop@ukgateway.net (Midlands) (Apr/I)

LOWTHER ACOUSTAS with remounted PM6A drivers, original plywood cabinets, sound but scruffy. Non-matching pair. £185 ono. Tel: 020 8677 8183 (Apr/I)

MERIDIAN 507 CD player, two months old, £600. Aloa PST II/01 pre-amp plus power unit. Aloa 15.01i power amp plus power unit. Amp power 60 + 60 watts. £2000. 4 box system. Tel 020 8531 5979 (May/I)

QUAD ESL 63's, good working order, boxes. Look good £500 ono. Tel: 01323 737 850 answerphone (Eastbourne) (Apr/I)
GNLM 05/04 and GNLM 05/2.5 (CSA 2.5) Cable with FERRITE TECHNOLOGY - A polymer material mixed with a considerable quantity of homogeneously fine high quality ferrite powder is extruded around the copper conductors. As a ferromagnetic material, it will go through hysteresis loops whenever it is under influence of an alternating magnetic field. Consecutively magnetizing and demagnetizing the material will cause considerable losses of high frequency energy. This energy is absorbed in the ferrite grains and converted into heat. The GNLM cables which in addition to the above described ferrite technology is further protected with a foil shield and a drain wire and specifically manufactured for High End audio use. Said by some to be the most neutral sounding audio ac mains cable on the market.

Fitted with IEC (Martin Kayser) and MK Tough plug. Cable can be supplied fitted to our all steel 4, 6 and 8 way distribution blocks. We can rewire the distribution blocks with Eupen cable as an extra cost option. Refer to our web site for details.

AUDUSA - OOM Silverlink OCC balanced speaker cable - stranded, silver on OFHC plus three strands of OCC (Ohno Continuous Casting - single crystal copper) for improved bass performance. Mylar infill and with designed in protection against RF and EMI, conductor of 3mm diameter (approx 8 gauge). Cable Overall Dimension: 14.72 mm.

LAT International AC-2 AUDIO AC MAINS CABLE

We have developed a cabling (weaving) pattern along with an unusual shielding/filtering system that gets rid of the garbage that contaminates your components. The difference you hear with our cord is astounding. Our power cord takes advantage of silver in its design through use of our proprietary Silverfuse conductors. The conductors are 10 gauge and with PTFE, the best insulation available. Fitted as standard with IEC / MK Toughplug. 60cm £62, 90cm £75, 1.2m £88, 1.5m £101, 1.8m £112 etc Other lengths available and off the reel. 4,6 and 8 way all steel mains distribution blocks fitted with UK, Schuko or USA sockets. CE tested & approved mains distribution units manufactured of heavy gauge steel, finished in black and fitted with high quality 13amp sockets. It has no filters, circuit breakers, surge protection, transformers, resistors, capacitors, LED’s, on/off switches, chokes, regulators, just fitted with 1m of AC-2 mains cable. From £166 for 4 way, £198, 6 way, £229 for 8 way.

LAT INTERNATIONAL Inc USA - Analogue, Digital and Video interconnects and Speaker cable better than most others at double the price.

SUNFIRE CORPORATION - Snohomish USA

New for 2003 Sunfire Ultimate - world's most powerful home cinema Receiver. 7 x 200 watts, Cinema Seven power amps, 7 x 200 and 7 x 400 Signature True SubWoofer 13 inch cube True Sub MKIV 11 inch cube and Junior Sub Woofer 9 inch cube - all with two drivers, to as low as 16hz, 116 SPL and 360 cu ins of air movement, 1200 or 2700 watt patented amp technology. Solid state power amps 2 channel (2 x 300 and 2 x 600) and 5 channel (5 x 220 watts and 5 x 430 watts patented amp technology (no heat sinks), Classic tube preamp and Theatre Grand III processor preamp.
private ads

FROM MARCH 2004 ISSUE

AVANTGARDE UNO Horn loudspeaker £350. Musical Fidelity Tr-Vista SACD Super Audio CD player, mint, boxed, £300. Tel: 020 8531 5979 or 07903 265205 (Mar/I)

COPLAND SYSTEM, CDA266 HDCD CD player, Copland CS28 amp special order black with Russ Andrews PowerChords, boxed as new with remote control. Cost £3000, sell £1400 ono. Tel: 01224 596 076 (Mar/I)

PRIME PHONO Stage preamp, Model R-20, vgc, £250. Tel: 01224 483 642 evenings or Email: barmonte@aol.com (Mar/I)

KIMBER SELECT 1011 interconnect cables. 2 pairs £200 each (£367). 1 Russ Andrews Purifier Block, 8 outlets RA Powercord £300 (£500). Tel: 01604 410726 (Northampton) (Mar/I)

QUAD 988 CE Vintage, finish, purchased August 2003, with extended warranty. £2500 (£3750). Tact M1250 digital amp, purchased September 2003, £2300 (£3800). Cardas Golden Cross 0.5m with Eichmann Bullets £300. Tel: 0131 225 9002, Email: S.Hussain@ed.ac.uk (Mar/I)

NAIM AUDIO system. Preamp, NAC22 mono block, NAP135 x2. Super Hi-Cap, speakers Dynaudio Contour 5.0, all boxed and mint condition. Reasonable offers. Tel: 01293 866 832, mobile 07977 115 446 (Mar/I)

LUNDY SYSTEM for sale. Ikemis, Kudos, Kolektor, two LK140, Aktiv Ninkas. Mint condition. Black. Original packaging etc. £2800. Tel: 07941 175 025 6pm only or Email: lundysale@hotmail.com (Kent) (Mar/I)


CASTLE HARLECH floorstanders with pine plinths, yew finish, mint condition and boxed, £150. Both ono. Tel: 07941 923 881 anytime (Sussex coast) (Mar/I)

LOWTHTER FIDELIO speakers, gloss black finish, fitted with PMSA drive units in perfect condition, £1200. Tel: 01293 824 667 after 6pm or Email: JLC@beeb.net (Mar/I)

MERIDIAN 551 integrated amplifier, Meridian 506 CD player, £650 the pair. Mission 732 speakers, as new condition £165. Tel: 07778 895 257 or 01252 332 097 (Hampshire) (Mar/I)

CASTLE SEVERN 25E in cherry veneer plus speaker cables £295. Little used as brand new, sale due to new room furniture and decor. No offers. Tel: 01294 821 288 (Wiltshire) (Mar/I)

KRELL KRC3 pre-amp mint £1495. Theta Carmen CD/DVD transport mint £1395. Sonus Faber Signums mint £695. Teac VRDS7 fully Trichord modified £295. Tel: 0121 744 9733, mobile 0775 996 9324 (Mar/I)

MERIDIAN M60C centre speaker. Black, perfect condition, boxed, two years old, £500. Meridian 541 PreLogic pre-ampifier, £200. Tel: 07796 350 204 (Mar/I)

C.R. DEVELOPMENTS Romulus integrated valve amplifier, 30w per channel, sise/steel/black/gold (£1300) £600. Meridian 506 24bit CD player £600. Spenoor Prelude speakers £80. Tel: 01205 750 314 (Mar/I)

MERIDIAN M60C centre speaker. Black, perfect condition, boxed, two years old, £500. Meridian 541 PreLogic pre-amplifier, £200. Tel: 07796 350 204 (Cardiff) (Mar/I)

MUSICAL FIDELITY F22 valve pre-amplifier, lovely sound, as new, mint brushed aluminium fascia, £550. Tel: 01424 431 536 (Mar/I)

TLC MAESTRO 70S standmount speakers. 8 ohm 50watt bi-wireable. Solid cabinets in excellent condition and very musical. Two years old. Paid £300 will accept £200. Tel: 0113 273 3744 (Leeds) (Mar/I)

NAIM SBLs, black, boxed, current spec, immaculate, £900. Cyrus tuner, remote, alloy case, £100. Mission PCB 7000 CD, remote, £100. Thorens 160s, Linn LKV, £170. All boxed, will demonstrate. Tel: 01722 334 694 (Mar/I)

OFFERS INVITED. Homebound American selling two superb matched James Lansing 2-way speaker systems. Attractive pine finished JBL bass reflex enclosures. Inches 24x19x16 ono. Other components available. Tel: 020 8406 1666 (Mar/I)

MERIDIAN 551 integrated amplifier, Meridian 506 CD player, £650 the pair. Mission 732 speakers, as new condition £165. Tel: 07778 895 257 or 01252 332 097 (Hampshire) (Mar/I)

KRELL KRC3 pre-amp mint £1495. Theta Carmen CD/DVD transport mint £1395. Sonus Faber Signums mint £695. Teac VRDS7 fully Trichord modified £295. Tel: 0121 744 9733, mobile 0775 996 9324 (Mar/I)

RUSS ANDREWS power block (eight sockets) with 3' Reference Powercord £175 ono. Tel: 01249 821 288 (Calyne, Wiltshire) Tel: 01249 821 288 (Mar/I)

SPECIAL OFFER - Book a Private Classified Advert - Get One FREE! Plus one months FREE Internet advert. See Page 129 for order form. This offer is only open to Private Classified advertisers.

Dealers must not advertise in the Private Classified section. Monthly consecutive private ads £463 evenings (Market Place) Tel: 0858 462 061 or 525 0186 (Mar/I)

This offer is only open to Private Classified advertisers.
PINEWOOD MUSIC
of Winchester and Taunton

Good sound isn't necessarily good music, but hook your favourite speakers to this beautiful hybrid integrated and you'll feel instantly connected to your music - and probably lose that unsettling urge to upgrade. There's also a phone board option!

COPLAND CSA29

And what better digital source for the CSA29 than this? One of the nicest CD players at any price, this device represents superb value for money and will wring all the emotion from your recordings.

Ex-demonstration and part-exchange sale:

Krell KAV-300ii integrated £2250
Sonus faber Signum £750
Sonus faber Grand Piano Home £1350
Transparent XL cables £POA

THE PINewood MUSIC COMPANY
Winchester: 01962 776808 Taunton: 01460 54322
e-mail: brianriv@mac.com

Our agencies include: Krell, Sonus faber, Martin Logan, Copland, Transparent and finite-elemente.

COPLAND CDA822

And what better digital source for the CSA29 than this? One of the nicest CD players at any price, this device represents superb value for money and will wring all the emotion from your recordings.

Ex-demonstration and part-exchange sale:

Krell KAV-300ii integrated £2250
Sonus faber Signum £750
Sonus faber Grand Piano Home £1350
Transparent XL cables £POA

The agencies include: Krell, Sonus faber, Martin Logan, Copland, Transparent and finite-elemente.

CLASSIC SOUNDs, LEICESTER INC ONE THING.
VINTAGE, HI-FI & VALVE SPECIALIST
TEL: 0845 123 5137 (local mic rates only)

WANTED Vintage and modern hi-fi equip. Part exchange welcome.

For sale or power amplifier:

Quad 901 mono power amplifier x 2 £ 1250 paid £ 1500
Quad 905 mono power amplifier £ 1500 paid £ 2250
Quad 906 mkI power amplifier £ 1500 paid £ 2250
Quad 906 mkI power amplifier £ 1500 paid £ 2250
Quad 906 mkI power amplifier £ 1500 paid £ 2250
Quad 906 mkI power amplifier £ 1500 paid £ 2250

Classical Sounds, Leicester
113 South Street
Leicester, LE1 7AJ
0845 123 5137
Email: classic_sounds@yahoo.co.uk

Other items

SME 3009 tonearm (like new) £ 295 paid £ 449

Ring for info.

NEW: 1500 10% OFF 

NEw- RM 657 Electrostatic panels now undertaken. Price for one panel is £150.00

Reconditioned Quad ESL57 speakers from only £900.00. Why spend £4000? Have your ESL57 speakers standardised for £375.00, Ring for info.

Exchange/ recondition ESL57 base panel £130.00. £100.00. ESL57/ESL57 speaker stands, available in black or woodgrain at £175.00 a pair.

New socks for ESL57s £35.00. Many other spare parts available. Please ring.

"Classical Sounds serving the tastes of a quality to which they can hold their heads high", Jan Marks, Hi-Fi World, April 1999.

Full servicing facilities available.

Troughline 3 tuner service & realignment £150.00. (excludes valves. Rarely needed).

NEW— B&W DM70 Electrostatic panels now undertaken. Price for one panel is £150.00

Our Latest Products include: Krell, Sonus faber, Martin Logan, Copland, Transparent and finite-elemente.
4 GOOD USED GEC clear glass KT66 £150. 3 Good used Mullard GZ32 £30. 3 good used EF86 (Z729) £20. GKD Huntingdon cabinet £10. Garrard 4HF turntable/arm £50. Wharfedale Isodynamic headphones £20. Leak TL10 with pre-amp £250. Pair Super 8SIDD in LNB cabinets £75. Axiom 10 £25. Tel: 0773 309 7673 or Email: nnh@dmu.ac.uk (Mar/I).

LEAK TL12+ amps, refurbished pair, excellent valve sound £475 ono. Hellig Chameleon speakers HCl1000 walnut finish including dedicated stands £275 ono. Tel: 01304 823 121 ask for Roger. Email: rog.rem@btinternet.com £275 ono. Tel: 01304 823 121 or Email: nnh@dmu.ac.uk (Mar/I).

SNELL A LOUDSPEAKERS, sensational sound quality (£5000) £1250 ono. Pioneer S55 CD player, Trichord modified, Clock 4 superb sound, give-away £500. Miller Kreisel MX125 Mk1 subwoofer (£1500) £850 ono. Money back guarantee. Tel: Allan 0117 952 1341 (Bristol). (Mar/I).

MAGNUM AMPLIFICATION, P200 preamp, moving coil phono stage, four line inputs, CD monitor, separate power supply (£2400) £950 ono. A200 stereo power amplifier, 300 w.p.c. outperforms Krell (£2400) £950 ono. Money back guarantee. Tel: Allan 0117 952 1341 (Bristol) (Mar/I).


QUAD 33 pre-amp, mint and boxed. Quad 303 power-amp, excellent condition including leads £250. Tel: 020 8783 1250 or Email: anthonymurphy@blueyonder.co.uk (Mar/I).


MISSION 752 speakers, high gloss black ash finish, mint £235 ono. Origin Live DC turntable motor with custom power supply and oversize transformer £150. Tel: 01244 660 946 (Chester) (Mar/I).

HI-FI SYSTEM, Naim Audio NAC 82 preamp, Naim Audio input boards, Naim Audio HiCap power supply, Naim Audio NAP180 power amplifier, Naim Audio CD1 CD player, Naim Audio Powercap passive crossover for above, Yamaha DSP EB00 processor (current valuation £4450 ono) Tel: 020 8300 3265 (Mar/I).

Klipshorn corner speakers, superb, awesome (£6200) £3000. 1980's B & O system, turner/amp, cassette deck, record deck, four-way speakers, £200. Bargain. Croft Duo mono preamplifier, recent service £200. Tel: 01202 388 688 or Email: terrymason.innerpeace@cwrv.net (Mar/I).


Kimber SELECT 1011 interconnect cables. 2 pairs £200 each (£367). I Russ Andrews Purifier Block. 8 outlets RA Powercord £300 (£500). Tel: 01604 410726 (Northampton) (Mar/I).

JBL Ti5000 speakers, 3 years old, black, perfect condition £1800 (£4000) Tel: 07773 788 317 (Mar/I).

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## CD players DACs & Transports

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<thead>
<tr>
<th>Model</th>
<th>Was</th>
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<tbody>
<tr>
<td>Arcam FMJ CD23 Silver S/H</td>
<td>1200</td>
<td>699</td>
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<tr>
<td>Audio Research CD2 S/H</td>
<td>3499</td>
<td>1795</td>
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<tr>
<td>Audio Research CD3 x-demo</td>
<td>4999</td>
<td>4249</td>
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<tr>
<td>dCS Elgar 24/192 Non Firewire S/H</td>
<td>8500</td>
<td>3999</td>
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<tr>
<td>dCS Purcell Upsampler Non Firewire S/H</td>
<td>2999</td>
<td>1695</td>
</tr>
<tr>
<td>Krell KAV2BCD x-demo</td>
<td>3999</td>
<td>3250</td>
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<tr>
<td>Mark Levinson N360s x-demo</td>
<td>7495</td>
<td>4995</td>
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<tr>
<td>Musical Fidelity Pre 24 CP Player S/H</td>
<td>2000</td>
<td>1199</td>
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<tr>
<td>Naim CD2 Player S/H</td>
<td>1695</td>
<td>995</td>
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<tr>
<td>Theta Carmen CD/DVD Transport S/H</td>
<td>3499</td>
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<td>Theta Data Basic Transport S/H</td>
<td>2397</td>
<td>995</td>
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<tr>
<td>Theta Generation V Balanced S/H</td>
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<tr>
<td>Thule Spirit CD balanced xIP x-demo</td>
<td>1200</td>
<td>649</td>
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<tr>
<td>Wadia 830 CD Player S/H</td>
<td>3000</td>
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<tr>
<td>Wadia 301 CD Player S/H</td>
<td>3650</td>
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## Turntables Tonearms & Cartridges

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<tr>
<th>Model</th>
<th>Was</th>
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<tbody>
<tr>
<td>Densen DP0 2 MC Phono Stage S/H</td>
<td>499</td>
<td>275</td>
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<tr>
<td>Gryphon Legato SAP Phono Stage x-demo</td>
<td>7895</td>
<td>5999</td>
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<tr>
<td>Kuzma Stablio/6 Turntable New&amp;Boxed</td>
<td>1297</td>
<td>1093</td>
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<tr>
<td>Lehmann Audio Black Cube SE New&amp;Boxed</td>
<td>650</td>
<td>449</td>
</tr>
<tr>
<td>Michell Gyro SE DC Turntable S/H</td>
<td>875</td>
<td>699</td>
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<tr>
<td>McCormack Phono Stage New and Boxed</td>
<td>650</td>
<td>399</td>
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<tr>
<td>Rega RB600 &quot;origin live.&quot; Tonearm S/H</td>
<td>460</td>
<td>299</td>
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<tr>
<td>Roksan Artereoxes X MC/MM Phono Stage S/H</td>
<td>450</td>
<td>299</td>
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<tr>
<td>Roksan Cognosceni Xeres Piano lacquer Tabrizi</td>
<td>N/A</td>
<td>175</td>
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<tr>
<td>Corsix Black S/H</td>
<td>2700</td>
<td>799</td>
</tr>
<tr>
<td>Well Tempered Ref/Reference Arm &quot;Fountainhead&quot; S/H</td>
<td>6500</td>
<td>3999</td>
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## Preamplifiers

<table>
<thead>
<tr>
<th>Model</th>
<th>Was</th>
<th>Now</th>
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<tbody>
<tr>
<td>Conrad Johnson Premier 16 &quot;Mini Art&quot; S/H</td>
<td>8000</td>
<td>3999</td>
</tr>
<tr>
<td>Electrocompaniet EC 4.7 Preamp x-demo</td>
<td>1295</td>
<td>955</td>
</tr>
<tr>
<td>Gryphon Sonatas Allegro 2 box preamp x-demo</td>
<td>9739</td>
<td>5995</td>
</tr>
<tr>
<td>Naim Audio NAC62 (old style) with phono stage S/H</td>
<td>N/A</td>
<td>175</td>
</tr>
<tr>
<td>Naim 72 L Preamplifier S/H</td>
<td>789</td>
<td>349</td>
</tr>
<tr>
<td>Roksan L2 preampifier S/H</td>
<td>1295</td>
<td>299</td>
</tr>
<tr>
<td>Spectral DMC12 Line New&amp;Boxed</td>
<td>4292</td>
<td>2999</td>
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<tr>
<td>Spectral DMC12s Phono x-demo</td>
<td>4750</td>
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## Amplifiers

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<tr>
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<tr>
<td>Audio Research D100.2 x-demo</td>
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<tr>
<td>Cyan Straightline Amplifier S/H</td>
<td>549</td>
<td>175</td>
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<tr>
<td>Denon AVC A-106E Amplifier Processor DTS/7.1 S/H</td>
<td>1800</td>
<td>993</td>
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<tr>
<td>Graaf GM100 Valve Power Amplifier x-demo</td>
<td>4500</td>
<td>3250</td>
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<tr>
<td>Gryphon S100 Class A power amplifier S/H</td>
<td>6000</td>
<td>2500</td>
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<tr>
<td>Gryphon Calisto 2200 integrated S/H</td>
<td>4800</td>
<td>3299</td>
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<tr>
<td>Lamm LIK140 power amplifier S/H</td>
<td>799</td>
<td>499</td>
</tr>
<tr>
<td>Naim Audio NAP140 (old Style) power amplifier S/H</td>
<td>N/A</td>
<td>299</td>
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<tr>
<td>Naim Audio NAP180 S/H</td>
<td>1199</td>
<td>599</td>
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<tr>
<td>Spectral DMA100s Power Amplifier x-demo</td>
<td>4750</td>
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## Loudspeakers

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<tr>
<th>Model</th>
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<tr>
<td>Avalon Eclipse Maple x-demo</td>
<td>9800</td>
<td>6995</td>
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<tr>
<td>Definitive Technologies 2002 Centre S/H</td>
<td>599</td>
<td>349</td>
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<tr>
<td>Indigo Model Two Centre Channel Cherry S/H</td>
<td>199</td>
<td>99</td>
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<tr>
<td>JM Lab Micro Utopia be Classic 6 months old S/H</td>
<td>4300</td>
<td>3399</td>
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<tr>
<td>Living Voice Avatars OBX-R Ebony x-demo</td>
<td>4000</td>
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<tr>
<td>Martin Logan CL50th Anniversary Electrostatics 7 months Old S/H</td>
<td>6700</td>
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<td>ProAc Response 1SC Cherry S/H</td>
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<td>Sonus R4 Stands S/H</td>
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<tr>
<td>Verity Audio Fidelio Piano Lacquer x-demo</td>
<td>7995</td>
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## Cables & Accessories

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<tr>
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<td>Acoustic Zen Silver Signature Balanced 12H S/H</td>
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<td>Argento Copper 1m RCA-RCA new&amp;boxed</td>
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<td>119</td>
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<td>Canton Neutral Reference 1m RCA-BNC S/H</td>
<td>550</td>
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<td>Cogan Hall EM-0.6 S/H</td>
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<tr>
<td>Finite Elemente HD02 MR 3 Tier Reference Table S/H</td>
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<td>Madrigal CZ Gel 1.5m Balanced new&amp;boxed</td>
<td>599</td>
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<tr>
<td>Madrigal MDC 1pc 1m AES/EBU</td>
<td>319</td>
<td>159</td>
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<tr>
<td>Digital cable new&amp;boxed</td>
<td>319</td>
<td>159</td>
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<tr>
<td>Madrigal MDC 2 1m Fatboy Digital cable new&amp;boxed</td>
<td>319</td>
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<tr>
<td>Madrigal MDC 2 0.5m Fatboy Digital cable new&amp;boxed</td>
<td>279</td>
<td>139</td>
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### Midland Audio X-change is looking for:—

- **Audio Research**
- **Krell**
- **Mark Levinson**
- **Naim Audio**
- **Dcs**
- **Wadia**

**Bargains Under £100**

- Arcam Alpha II CD Player S/H

**Non Firewire S/H**

**Preamp**

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<tr>
<th>Model</th>
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<tr>
<td>AKG C1000 Condenser Mic S/H</td>
<td>241</td>
<td>110</td>
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<tr>
<td>Magnum Dynalab FT-R Remote Switcher for</td>
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<tr>
<td>FT101A/Elude (New&amp;Boxed)</td>
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**Preamplifiers & Accessories**

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<td>dCS</td>
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**Loudspeakers**

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**Cables**

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<td>Argento Copper 1m RCA-RCA new&amp;boxed</td>
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<td>Madrigal MDC 2 1m Fatboy Digital cable new&amp;boxed</td>
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"Chanting The Mantra"

Vinyl's all the rage right now, but it's still very much a hobbyist thing. The eighties was analogue disc's last stand as a mass music carrier, and spawned a variety of affordable and interesting turntables such as Manticore's Mantra. Dominic Todd remembers it...

The fact that there is nothing outstanding about the Manticore Mantra might make you wonder the reason for its inclusion here. After all, there was nothing ground-breaking, sonically or in engineering terms, about the Mantra when introduced in the mid 1980s. Yet, despite its very ordinariness, it was important at the time.

During the late '80s, turntable sales were still reasonably strong, and there were various stalwarts already well established. Essentially, if you were on a budget you'd get a NAD 5120, Ariston Q-Deck or Dual CSS05. A little more would get you a Rega Planar 2 or 3. If you were really into your vinyl then, likely as not, you'd be demo-ing a Linn LP12, Roksan Xerxes or Michell GyroDec. A little more would get you a Rega Planar 2 or 3. If you were really into your vinyl then, likely as not, you'd be demo-ing a Linn LP12, Roksan Xerxes or Michell GyroDec. The trouble here is that there was something of a gap between these two latter market sectors, and it's here where Manticore stepped in.

Yes, there was the Systemdek ILX and Linn Axis, but neither was really a great step up from the Regas. The Mantra's construction was totally conventional. The real wood veneered plinth covered a steel subchassis, isolated by three springs. The Nylatron sub platter sat on a standard, but finely made bearing. On top of this was a glass platter and felt mat. Things didn't get a great deal more exciting with the motor: the Airpax (Philips) 24-Pole AC synchronous motor was standard fare at the time, however it could be upgraded. Indeed one of the best aspects of Manticore ownership was the stream of Linn LP12-like improvements that could be made - for £120 the upgraded motor unit featured improved mountings and was encased in Acetal to reduce vibration and promote smoothness. Another upgrade centred around the power supply. For £220, Manticore would supply you with a 'pure synthesised' 50Hz outboard, twin speed, power supply in its very own veneered box, just like the big boys! Unlike most other decks though, the beauty of the Mantra was that the PSU upgrade could be just plugged in without any further modification needed. This was a user friendly upgrade in a very user friendly deck. Yet, don't for one moment think that this meant average in terms of sound quality. True, the standard Manticore couldn't match the LP12, Xerxes or GyroDec, but it came closer than you might think. With a Rega RB250 or 300 arm the sound was neutral and detailed. It was only really in the frequency extremes that the Manticore became a little ragged and even then, compared to the brash Linn Axis, was sweetness itself.

Moving to the matching Musician tonearm sweetened the sound still further, yet not in an overly euphonic way. This beautifully made arm was something of a bargain at the time, retailing for just £170 in 1989. The Linn type cut out makes it adaptable to many decks, and today its anonymity makes it, on its own, a used bargain. It shouldn't cost much more than a Rega RB250, yet offers so much more in terms of detail. Feeling a bit flash? If you really couldn't stop upgrading your Mantra, then there was always the Magician arm. At £575 it was far more than the deck itself yet, with its polished silver finish, looked gorgeous. The van den Hul cabling did its bit and this was a very tidy sounding tonearm, but then at nearly £100 more than an SME 309 of the time, it needed to be!

Needless to say a fully spec'd Mantra could happily trade punches with a basic LP12, Xerxes or Gyro. There really was very little criticism that was levelled at it at the time, and its unassuming manner made it a beguiling bit of kit to listen to. I happily lived with one during the late eighties, and was sad to see it ousted by the more 'reviewer friendly' (i.e. taut and precise) Xerxes/Artemiz combo that replaced it in 1992. Yet because it never had the image, Mantras now go for less than their true worth. Get a good basic one for under £200, and you've a decent step up from the Rega standard. If you manage to track one down with all the bells and whistles, then you're in for a real treat, in fact at its likely price now, an exceptional one.
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